RELATIONSHIP BETWEEN PERSONALITY FUNCTIONING AND RELAPSE RISK AMONG SUBSTANCE USE INDIVIDUALS IN TREATMENT CENTERS IN LANGATA SUB COUNTY, NAIROBI KENYA

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NAIROBI

DECLARATION

I do declare that the thesis is original work and that it is not because of any collaborative effort. It has not been presented previously to any other institution. All the sources used for this work have been cited properly and acknowledged fully.

Susan Ndinda Kivuva

Signature……. Date ……

We hereby confirm that the research thesis is an original study and that it fulfills the university conditions.

Supervisor

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Signature……..... Date ……...

Supervisor

Dr Lydia Kimanzi

Signature……..... Date ……...

DEDICATION

This thesis is dedicated to my children, Thomas and William, my supportive family and dedicated friends, for all the continuous support in my studies and research undertaking.

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I express my deep gratitude to God for his grace daily, for good health of body, mind and soul that enabled me to undertake this research seamlessly. Thank you, my dedicated supervisors, Dr Br. Pius Muasa and Dr Lydia Kimanzi, for your insightful direction and timely observations that greatly shaped this work of research. My gratitude also goes to the administration and teaching staff at the Institute of Youth Studies, Department of Counselling Psychology, Post Graduate Program, for their dedicated guidance and efforts to make us world-class scholars. Thank you, my family, for the kind understanding of my academic journey, your unwavering support and assistance. I am greatly indebted to the love, support and advice you offered along the way. May God bless you.

ABSTRACT

Substance use rehabilitation among individuals in recovery is significant to parents, peers, therapists and other stakeholders across the globe. Despite advances in addiction treatment, relapse rates remained extremely high in Langata sub-county. This study examined the relationship between personality functioning and relapse risk among substance use individuals undergoing treatment in Langata sub-county, Nairobi, Kenya. The objectives of the study were to examine the levels of personality functioning and relapse risk among substance use individuals undergoing treatment in Langata sub county, to investigate the relationship between personality functioning and relapse risk and to establish the significance of demographic characteristics of age, gender, marital status, admission criteria and relapse risk. The study was grounded by Interpersonal theory and Relapse prevention theory. The study employed a correlational research design, with a target population of 144 individuals. The Census method was used to include the whole population, giving a sample size of 144 participants. This study utilized two standardized tools, the Levels of Personality Functioning Scale (LPFS) and the Stimulant Relapse Risk Scale (SRRS), to collect data. The data was analyzed using descriptive statistics (percentages, frequencies) and inferential statistics and particularly Pearson Correlation coefficient, t-test and One Way ANOVA. The results showed that 57.6% (72 respondents) scored on category of healthy functioning. There were 15.2% (19 respondents) who scored on the category of mild or subclinical level of personality functioning, 12% (15 respondents) fell into the category of clinically dysfunctional and 5.6% (7 respondents) were severely dysfunctional and 9.6% (12 respondents) were extremely dysfunctional. Furthermore, the results showed that 2.4% (3 respondents) were in the category of low level of stimulant relapse risk. There were 56.8% (71 respondents) who were in the category of moderate level of stimulant relapse. There were 40.8% (51 respondents) who scored in category of high level of stimulant relapse risk. Moreover, the results showed strong positive relationship ($n = 125$, $r = .683$, $p = .000$) between personality functioning and stimulant relapse risk among the substance use addicts. Finally, there was a significant difference between demographic characteristics and relapse risk. There was a significant difference in the scores for relapse risk between Male ($M = 98.11$, $SD = 28.24$) and Female participants ($M = 113.00$, $SD = 32.47$) at conditions, $t (123) =. -2.21$, $p = .03$. The results showed that there was significance difference between age and relapse risk ($r = .434$, $p. \geq .05$). Also, the results showed there was a significant difference between marital status and relapse risk ($r = .013$, $p. \geq .05$). The descriptive statistics emerging from the results suggested that there was a significant difference in the scores for relapse risk between Voluntary ($M = 98.22$, $SD = 26.49$) and Involuntary participants ($M = 103.36$, $SD = 32.44$) at conditions $t (123) =.052$, $p = .033$. The study recommended that addiction counselors to tailor individualized treatment plan for each client in line with their personality functioning and levels of risk of relapse.

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ABBREVIATIONS AND ACRONYMS

AA: Alcoholic Anonymous

APA: America Psychologists Association

AMATEM: Alcohol and Substance Addiction Treatment and Training Center

AMPD: Alternate Model for Personality Disorders

ARRS: Alcohol Relapse Risk Scale

ASATREP: Alcohol and Substance Abuse Treatment and Rehabilitation Program

ASSIST: Alcohol Smoking Substance Involvement Screening Test

AUD: Alcohol Use Disorder

AUDIT: Alcohol Use Disorder Identification Test

AWARE: Advance Warning for Relapse

CATSS: Child and Adolescent Twin Study – Sweden

CSI: Coppersmith Self Esteem Inventory

DAST: Drug Abuse Screen Test

DASES: Drug Avoidance Self Efficacy Scale

DUDIT: Drug Use Disorder Identification Scores

EE: Expressed Emotions

ICP: Icyizere Psychotherapeutic Center

KCPA: Kenya Counselors and Psychologists Board

LMIC: Low- and Medium-Income Countries

NA: Narcotics Anonymous

NACADA: National Authority for the Campaign of Alcohol and Drug Abuse

NACOSTI: National Commission for Science, Technology and Innovation

NIDA: National Institute of Drug Abuse

NSDUH: National Survey on Drug Use and Health

MOH: Ministry of Health

PDCTS: Temptation of Post Detoxification Cravings Questionnaire

R-UCLA: Inventory and Revised University of California Los Angeles Loneliness Scale

SAMHSA: Substance Abuse and Mental Health Services Administration

SIFS: Self and Interpersonal Functioning Scale

SRU: Substance Rehabilitation Unit

SSA: Sub Saharan Africa

SUD: Substance Use Disorder

TPB: Theory of Personality Behavior

UNODC: United Nations office of Drugs and Crime

VSAM: Vulnerability Stress Adaptation Mode

WHO: World Health Organization

OPERATIONAL DEFINITIONS OF WORDS

Personality functioning: This is the way drug addicts perceive, feel, think, and behave in various situations. It includes a range of psychological traits and characteristics that shape how a person engages with the world around them. Healthy personality functioning typically involves a balanced and adaptive way of dealing with life's challenges, while maladaptive personality functioning can lead to difficulties in relationships, work, and overall well-being. Understanding personality functioning is crucial for psychological assessments, treatment planning, and personal development.

Relapse Risk: This is the probability or the likelihood that a drug addict may possibly relapse, meaning return to active substance use after a period of abstinence. In this context, relapse risk is a prediction of possible fallback to active use after recovery, and this could be influenced by factors that are triggers, emotional stress, support systems and severity of addiction. Poor coping can influence increased stress levels and lead an individual back to substance addiction.

Substance use rehabilitation: Is a structured and supportive program designed to help drug addicts recover from substance use disorders, which includes addiction to drugs and alcohol. The primary goal is to enable individuals to stop substance use and lead a healthy, productive life.

Addict: A person who is physically or psychologically dependent on a substance or activity. This dependency significantly impacts their daily life, relationships and overall health.

OPERATIONALIZATION OF CONCEPTUAL VARIABLES

Levels of Personality Functioning: The Levels of Personality Functioning Scale (LPFS-BF 2.0), as indicated in Section III of the DSM-5, by Weekers et al. (2019), is a brief tool made to measure levels of personality functioning. The tool will be used to measure the levels of personality functioning, the first variable in the current study. The LPFS BF 2.0 provides a set of 12 items, scored accordingly with 1 denoting very false or often false, and 4 denoting very true or often true. LPFS BF 2.0is divided into two higher order domains which are self-functioning (identity and self-direction and interpersonal functioning (empathy and intimacy).

Stimulant Relapse Risk Scale: The stimulant relapse risk scale (SRRS) will be used to measure the level of stimulant relapse risk which is the second variable in the current study. The scale was developed by Ogai et al. (2007) in Japan, and the self-rate scale has a total of 35 items with 6 subscales as listed: a. Anxiety with intention to use substances (AI) 8 items. b. Emotionality problems (EP) 8 items, c. Compulsivity to use drugs (CD) 4 items, d. Positive expectancy and lack of control (PL) 6 items, e. Negative expectancy for the drug (NE) 4 items and f. Lie scale: Insight of own problem, 5 items. The tool is scored on a 5 – point Likert scale ranging from 1 = strongly disagree, to 5 = Strongly agree.

CHAPTER ONE

INTRODUCTION

1.1 Introduction

This chapter will give the study overview, beginning with a background, followed by the statement of the problem and the purpose of the study. It further outlines the study objectives and significance and the assumptions underlying this research.

1.2 Background to Study

Substance use rehabilitation and treatment failure constituted significant public health concerns impacting the individuals, family members, and their communities globally. The World Health Organization (2018) identified substance use disorders and mental health as the foremost worldwide cause of disability. Data from the National Survey on Drug Use and Health (2018) and the Substance Abuse and Mental Health Services Administration (SAMHSA, 2019) estimated that approximately 20.3 million Americans faced challenges that were alcohol and drug related or use.

Despite the availability of advanced treatment modalities, relapse rates persisted at around 40-60% within the first-year post-treatment. Contributing factors to recovery outcomes included relapse risk, the intense craving for substance use during rehabilitation, and anxiety, which frequently acted as a relapse trigger. SAMHSA (2019) highlighted the inconsistency in the healthcare system's approach, where patient relapses in substance use were often viewed as treatment failures. Notably, the rates and risk of relapse symptoms for substance use disorders were high all-time, as stated by National Institute on Drug Abuse (2018). Despite this, substance use rehabilitation remained a complex process which was influenced by various psychological and behavioral factors. Among these, personality functioning had a crucial role in determining relapse risk of an individual. It was therefore important to understand the

intricacies of personality functioning and relapse risk in substance use rehabilitation to be able to develop effective strategies that will improve treatment outcomes.

Consequently, personality functioning was regarded as a critical factor in the relapse risk and the recovery process for individuals with substance use disorders (SUD). In recent research by DeLucia et al. (2024) that involved 205 participants at a treatment facility in South Florida, USA, findings indicated that low self-esteem and low self-worth significantly heightens the risk of relapses, as negative self-perceptions can exacerbate substance use behaviors, fostering a detrimental relationship between self-worth, addiction and relapse tendency. Further findings by Xia et al. (2022) in a research done in China conducted among 282 SUD recoverees from two rehabilitation centers suggested that additional factors including age, education levels, and marital status, may also influence individual self-esteem levels, thereby increasing the risk of relapse. Implementing effective interventions to bolster self-esteem and promote a positive self-image was essential for enhancing resilience in substance use recovery and improving overall mental health outcomes.

Relapse risk is defined as the likelihood of resuming alcohol or drug use after a period of abstaining, influenced by different factors such as emotional distress, triggers, and the availability of support networks. A study by Anderssen et al (2018), conducted in Norway with 188 participants in a residential rehabilitation facility indicated that relapse risk remains a substantial challenge in the recovery from substance use disorders (SUD), with rates of relapse ranging between 40% and 60% within the first year following residential treatment.

Similarly, another quantitative study conducted in Australia by Wang (2022), among 42 participants in a recovery facility, the findings identified deficient coping mechanisms and elevated stress levels as key contributors to relapse. Recently, research by Nichols et al. (2021) found increased focus on integrating social treatment approaches, such as group therapy, family-centered interventions, and peer support systems, into the biomedical and psychological

treatment paradigms for SUD. In another study, Mills et al. (2022) argued that such interventions enhanced personality functioning and mitigate feelings of isolation, which exacerbated cravings and relapse risk. Furthermore, research conducted in Japan by Yamashita et al. (2021), with 52 participants indicated that improved communication within personality functioning facilitated emotional regulation, thereby reducing cravings and anxiety associated with relapse. Tracy and Wallace (2016) found that sustained interpersonal support during treatment significantly decreases the risk of relapse and cravings.

In Poland, Chmielowiek and Boron (2020) conducted a study to examine individual dimensions of personality in the context of relapse risk. The study comprised of 301 individuals addicted to psychoactive drugs and who were receiving treatment in two addiction therapy centers in Poland. Participants were divided into two groups, those who had one prior admission, and those who had been admitted at least twice for rehabilitation. Findings among those with one prior admission had varying percentages of neuroticism (NF NEUR) as follows: 8.55% exhibited lower-level intensity, 40.13% moderate level intensity, and 51.32% high level intensity. Elevated scores on the Nervousness Scale of the NEO-FFI inventory significantly influence the intensity of addiction and the likelihood of relapsing.

In Manila, Philippines, Ronquillo et al. (2024) conducted a study aimed at developing a deeper understanding of personality typologies and the relapse risk among Filipinos with SUD in rehabilitation facilities. The mixed method study involved both descriptive and phenomenological designs. NEO-Personality Inventory 3 (NEO-PI-3) was used to measure Nervousness, and Stimulant Risk Relapse Scale (SRRS) was used to measure SUDs. The study included 161 participants, between ages 18 to 69 ($M = 34.8$; $SD = 9.1$). Findings of the study revealed four themes associated with risk of relapse: Avoidance coping, resistance to change, a preference for social interactions, and perceived lack of social support.

Furthermore, research conducted in Greece by Papamalis et al. (2020), explored the impact of personality functioning on both the initiation of substance use and relapse, while also examining whether specific personality traits predicted sustained sobriety, treatment retention, or relapse. The study utilized a sample of 340 individuals receiving inpatient treatment. Findings indicated that dysfunctional characteristics of personality, such as deficits in self-control and social concordance, were strongly related with an increased risk of relapse. Specifically, individuals exhibiting low self-regulation, reduced tolerance, heightened impulsivity, and impaired emotional regulation were three times at relapse risk post-discharge in comparison to those who had greater self-regulatory capacities. The findings underscore the predictive role of personality functioning in SUD recovery and relapse, highlighting the importance of early assessment of personality traits to enhance long term recovery and treatment outcome prospects.

The escalation of relapse risk in Africa represents significant public health concern. There is increasing recognition that personality functioning is crucial for treatment outcomes. Research across various African countries has highlighted the importance of personality functioning in influencing relapse risk. A regional study conducted in South Africa by Dzikiti et al. (2020) sought to determine whether personality functioning was associated with successful substance use rehabilitation and retention of recovery among substance use addicts. The site used was Weskoppies Hospital, at the Substance Rehabilitation Unit (SRU) offering a 6-week treatment plan. All individuals admitted at the SRU were included (n = 119). Findings showed that 39 individuals who were admitted involuntarily, and another 112 who were unmarried were most challenged with the completion and retention of treatment outcomes. The findings suggested that dysfunctional family relationships may be linked to increased substance use and relapse.

Similarly, in Nigeria, Adejoh et al (2018), conducted a study among substance use addicts under treatment at the Federal Neuro-psychiatric Hospital Lagos, to establish the association between personality characteristics and risk of relapse after treatment. The qualitative study included 40 substance use addicts. The findings of this study showed that successful recovery depended on their own perception of the state of their condition, how the individual deals with their own issues, their thought processes, feelings and behaviors. Treatment outcomes also depended on the relationship the individual had with the clinical team.

In Uganda, Kalani et al. (2021), conducted a study to establish the prevalence of AUD relapse and its association to social support and self-efficacy. The study at Butabika Hospital included 269 respondents who were undergoing treatment for AUD between January 2016 and December 2017. All the participants were tested for AUD relapse with SCID-5 scale. The results indicated that participants who had higher perceived social support had less likely chance of AUD relapse. The findings showed a prevalence of relapse to 63.3% (170), with 167 relapsed (98%) to severe AUD. The findings also indicated that married participants were at higher risk of relapse than those who were single. These findings also were an indicator showing that poor interpersonal relationships and social isolation are predictors of increased cravings and relapse risk among individuals in rehabilitation.

Studies in Kenya indicated that relapse rates among individuals undergoing treatment for SUDs varied widely. A study in Nairobi conducted by NACADA (2019) revealed that 39.2% of inpatient alcohol rehabilitation patients were readmitted within a year of completing treatment. Broader estimates indicate the rate of relapse range between 20% to 80%, in accordance with the factors such as what type of substance the individual used, treatment duration, and the quality of rehabilitation programs. Contributing factors included inadequate follow-up care, social stigma, unemployment, peer pressure, and family-related stress.

Structured aftercare programs have shown promise in reducing relapse rates by addressing triggers and promoting social support. Furthermore, studies in Kenya highlighted the significance of personality functioning during substance use recovery.

A quantitative study conducted in Kiambu County by Wainaina (2020) sought to examine factors that influence alcohol relapses among the individuals in the ASATREP program. The case control study design included 134 relapsed individuals and 134 individuals who did not relapse in a 6-month period after study. Study findings showed that individuals who had relapsed back to alcohol abuse exhibited a significantly high Penn alcohol craving score (PACS) (mean 25.3) in comparison to those who had not relapsed (mean 8.8), $p<0.001$. The study findings therefore concluded that relapse individuals have an extremely high craving score for alcohol and that there was need for AUD intervention.

Similarly, another local quantitative study by Kibera (2023) conducted in Nairobi examined the relationship between resilience in families and the risk of relapse among individuals discharged from substance use rehabilitation and attending support groups in Nairobi. The study, using cross-sectional research design, involving 93 participants, also selected those who were attending after care services of AA programs within Nairobi. The sampling method used Family Resilience Scale and AWARE tools for data collection. Findings showed that individuals with high resilience had lower relapse risk for alcohol and substance use disorders (ASUD).

The topic under study was not fully researched in Langata Sub County. There remained a clear gap in understanding the relationship between personalities functioning with relapse risk among individuals undergoing residential substance use treatment in Langata Sub-County. This study sought to address the gap by establishing the relationship between personality functioning and relapse risk among individuals who are recovering from SUD within Langata Sub County.

1.3 Statement of the Problem

According to WHO (2021) Substance use rehabilitation programs aim to provide comprehensive treatment for over 35 million individuals worldwide grappling with substance use addiction and recovery. In a typical recovery process, the risk of relapse is expected to decline over time as individuals gain coping skills after structured rehabilitation and become contributing members of society.

However, despite progress in therapeutic interventions and rehabilitation programs, relapse rates remain alarmingly high, with global statistics suggesting that over 60% of individuals experience relapse within the first year of recovery (Tabugan et al. 2025). Similarly, Kabisa et al. (2021) states that relapse vulnerability is influenced not only by environmental and social triggers but also by psychological and personality-related factors. Similarly, data from the National Authority for the Campaign Against Alcohol and Drug Abuse (NACADA, 2022) highlights that while rehabilitation services are available, their efficacy is undermined by elevated relapse rates.

If this continues, relapse will remain a persistent barrier to sustained recovery among substance use addicts in Langata sub county, leading to repeated treatment admissions, emotional distress and long-term health consequences, (Kinyua,2019). Additionally, chronic relapse will create risks for the community, including increased crime rates and social instability (Muthuri 2020). Similarly, relapse causes a waste of resources as the costs associated with treatment are substantial and recurring. Moreover, Kabira (2019) states that caregivers and family members of the SUD addict experience heightened stress and emotional burden, which further impacts the social fabric of the community.

Unless treatment programs actively enhance relapse prevention and long-term sobriety, their efforts, along with family resources, and the individual's determination to

overcome addiction, may be insufficient to prevent relapse. The study will therefore investigate the relationship between personality functioning and relapse risk in Langata Sub County.

1.4 Purpose of the Study

The purpose of this study was to assess the relationship between Personality functioning and Relapse risk among substance use individuals in treatment centers in Langata Sub County, Nairobi Kenya.

1.5 Objectives of the Study

The study was guided by one general objective and four specific objectives.

1.5.1 General Objectives

The objective of this study was to establish the relationship between Personality functioning and Relapse risk among substance use individuals in treatment centers in Langata Sub County, Nairobi Kenya.

1.5.2 Specific Objectives

Specific objectives were:

i. To examine levels of Personality functioning among substance use individuals 'in treatment centers in Langata Sub County, Nairobi County, Kenya.

ii. To assess the level of relapse risk among substance use individuals in treatment centers in Langata Sub County, Nairobi County, Kenya.

iii. To establish the relationship between Personality functioning and Relapse Risk among substance use individuals in treatment centers in Langata Sub County, Nairobi Kenya.

iv. To investigate the significance of the demographic characteristics of age, gender, marital status and admission criteria on relapse risk in substance use individuals in treatment centers in Langata Sub County, Nairobi County, Kenya.

1.6 Research questions:

i. What were the levels of personality functioning among substance use individuals in treatment centers in Langata Sub County, Nairobi County, Kenya?
ii. What were the levels of relapse risk among substance use individuals in treatment centers in Langata Sub County, Nairobi County, Kenya?
iii. What was the relationship between personality functioning and relapse risk among substance use individuals in treatment centers in Langata Sub County, Nairobi County, Kenya?
iv. Is there a significance difference between demographic characteristics of age, gender, marital status and admission criteria on relapse risk in substance use individuals in Langata sub county?

1.7 Significance of the Study

This study had significant value for the following individuals and groups: The research findings provided invaluable insights for individuals in recovery, helping them recognize the pivotal role of personality functioning of self and interrelationships with parents and significant others in fostering recovery and reducing relapse risk.

Mental health professionals working in treatment centers would benefit from the study's findings by gaining a clearer understanding of relapse risks and how healthy interpersonal relationships served as protective factors for individuals vulnerable to relapse. It also gave more insights into enhancing treatment programs to increase post recovery sobriety and efficacy against relapse risk.

The study's insights would also guide the Ministry of Health in developing strategies to combat chronic relapse through evidence-based interventions. These findings could inform policies and programs, as well as budgetary allocations aimed at improving treatment outcomes, promoting sustained sobriety, and supporting long-term recovery post-treatment.

1.8 Scope and Delimitations of the Study

This study was conducted within Langata Sub County, in Nairobi County, an area with 10 residential rehabilitation facilities. It specifically focused on the two variables under study which were: relationship between personalities functioning and relapse risk in substance use rehabilitation. The study covered the specified geographical location and focused only on individuals in SUD rehabilitation programs, aged between 18 – 69 years. The study also included both male and female individuals undergoing substance use rehabilitation The study did not focus on individuals attending day care recovery programs. The study was limited to those in residential rehabilitation focusing within a 90-day residential treatment program that included the 12-step treatment plan in the rehabilitation centers.

1.9 Assumptions of the study

The assumptions of the study are: -

(i) The respondents freely participated and gave honest answers

(ii) That the sample population was representative of individuals in substance use treatment in similar facilities and the researcher may generalize findings.

(iii) Those participants in the study experienced similar treatment, interventions and therapeutic network.

(iv) The questionnaires that were completed and returned and accurately represented the respondents' real opinions.

1.10 Summary of the Chapter

This chapter provided an introduction and focused on the study background, and a comprehensive overview of study's context, outlining its general and specific areas of focus. Additionally, the chapter highlighted the significance of this study to both the community and nation, as well as its potential contribution to future research. The objectives and research

questions were clearly articulated, serving as a guide for the study's central focus. This study then proceeded to chapter two.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Chapter two will review empirical literature to provide a basis for this current research. The chapter will begin by giving the theoretical framework and thereafter, the chapter will discuss the conceptualization of the constructs which are relapse prevention and interpersonal theory. In the process of reviewing literature, empirical studies will present as part of this chapter in accordance with the objectives of the current research. The chapter will also state the study gap by presenting the conceptual framework and finally the chapter will give a concise summary of the chapter.

2.2 Theoretical Framework

Two theories made this study's theoretical framework: Relapse Prevention Theory (RPT), developed in the year 1985 by Gordon Marlatt and Judith Gordon, and the Interpersonal Theory (IPT) developed in the year 1953 by Harry Stack Sullivan.

2.2.1 Relapse Prevention Theory

The Relapse prevention theory (RPT) is a theory that adopts a cognitive behavioral approach and aims to understand and prevent relapses. The central concept of RPT is to identify and manage highly risky situations that may increase the risk of relapses. This theory was developed by Gordon Marlatt and Judith Gordon in the year 1985. RPT principle focuses on identifying high risk situations of relapse and developing coping strategies that will foster a lifestyle balance that supports long term recovery (Marlatt & Gordon,1985).

The key assumption of RPT is that high risk situations almost always involve negative emotional states, that result in interpersonal conflicts and social pressure. Marlatt and Gordon (1985) emphasized that recognizing these triggers is essential for recovery and relapse prevention. For example, a person recovering from alcohol dependence may find social

gatherings with alcohol particularly challenging to attend. Another key concept by Marlatt and Gordon, is the emotional and cognitive response to a lapse referred as Abstinence Violation Effect (AVE), which can escalate to a full relapse if it is not managed effectively. AVE involves feelings of guilt, shame and perceived failure, which may lead individuals to abandon their recovery efforts. According to Marlatt and Gordon (1985) to address AVE includes reframing lapses and looking at them as learning opportunities rather than catastrophic failures.

RPT puts emphasis on the individual developing effective coping strategies to manage high risk situations. The situations can be social and emotional behavioral techniques which may help the individual reframe their thoughts to increase self-efficacy, as well as mindfulness practices. Witkiewitz and Marlatt (2004) suggest other behavioral techniques like problem solving and assertiveness can greatly enhance interpersonal relationships and build healthy behaviors instead of addictive ones. RPT conceptualizes maintaining a balanced lifestyle as the cornerstone of building physical, emotional and social wellbeing through exercise, working on healthy relationships and managing stress. These lifestyle adaptations, as stated by Kabisa et al., (2021) are held to reduce vulnerability and risk of relapses by promoting overall resilience on addictive behaviors and enhancing coping mechanisms.

The theory is most applicable to the current study, as it helps to build effective relapse prevention after assessing the individual's triggers, the high-risk situations and relationships, while enhancing their coping resources. Similarly, Marlatt and Gordon (1985) state that the theory will set a good platform, because the assessments done at the treatment centers will predict and help clinicians, families and the individuals set realistic goals of recovery, and design personalized strategies of intervention to manage potential challenges. Furthermore, since the theory is centered on relapse prevention, it can help in enhancing initial treatment plans to be more effective and mitigation of relapse risk.

Strength of the theory is that it is widely used for various addictive behaviors, which include substance use disorders, gambling and food addiction. Marlatt and Donovan (2005) indicated that it is effective in reducing relapse rates and improving long – term outcomes when it is combined with other therapeutic interventions.

However, RPT has shown weakness in that this theory places more responsibility on the individual, thereby overlooking systemic and environmental factors influencing relapse. To mitigate this weakness in RPT, this study also introduced the interpersonal theory by Harry Stack Sullivan to bridge the gap of social and environmental effects of interpersonal functioning on relapse.

2.2.2 Interpersonal Theory

Interpersonal Theory is the most appropriate for this study and was developed in the mid-20th century by Harry Stack Sullivan. The theory diverged from psychoanalysis, focusing more on social interactions rather than intrapsychic processes. Sullivan's theory laid the foundation for interpersonal psychotherapy (IPT) that addresses interpersonal problems contributing to mental health issues. The theory is a significant framework in psychology that emphasizes the role of interpersonal relationships in shaping personality and mental health. Sullivan (1953) believed that personality cannot be understood in isolation but must be viewed within the context of interpersonal dynamics. IPT helps individuals to identify and modify maladaptive patterns in their relationships, thereby alleviating symptoms and improving overall functioning. (Weissman et al.,2000).

One of the key concepts of IPT is the self-system which Sullivan viewed as a collection of self-perceptions shaped by interactions with significant others. The self-system includes both positive and negative evaluations that are greatly influenced by experience of approval or rejection. Sullivan proposed that the self-system works to protect individual from anxiety, by avoiding situations that threaten their self-esteem (Chapman,1976). IPT assumes anxiety as

one of its central concepts, arguing that anxiety is not intrinsic but arises from disruptions in relationships. According to Evans (1996) when a person feels more secure in their relationships, their anxiety is greatly diminished, and the individual will experience emotional stability which is crucial in the prevention of the risk of relapse. IPT puts a lot of emphasis on personalities where it implies that personality is not a fixed entity but evolves through interactions with others. According to IPT, mental health issues stem from disturbances in interpersonal relationships, meaning that social isolation and dysfunctional relationships can contribute to substance abuse and risk of relapse after treatment. Evans (1996) therefore recommends therapeutic interventions that improve communication skills and foster healthier relationships.

The strength of this theory is that it provides insights into the social nature of human interactions and influences modern therapeutic practices in prevention of relapse risk. IPT therefore is a cornerstone in understanding the social and environmental influences on mental health. The weakness of Interpersonal Theory is its heavy emphasis on social relationships as the primary driver of psychological well-being, potentially overlooking biological, cognitive, and internal emotional factors that also contribute to mental health.

The weakness of this theory is that while it effectively highlights how interpersonal relationships influence personality development and mental health conditions, it may not fully address individual differences in temperament, genetic predispositions, or internal cognitive processes that shape behavior. Additionally, its focus on external social interactions can make it less applicable in cases where individuals experience psychological distress that is not directly linked to their relationships, such as conditions with strong neurobiological tendencies.

2.3 Empirical Literature Review

Empirical literature gives detailed information on what has been studied in the past, and the conditions under which that study was done. In this manner, the researcher will present the study from the known to the unknown, clearly opening the door for identifying research gaps. Therefore, the researcher, through empirical literature review, may develop the topic under study well and avoid unnecessary and unintended duplication (Mugenda & Mugenda,2003). As a result, this section presented empirical studies that demonstrated their relevance to the context of the study. The results were presented while considering the author(s), the targeted population, the year of study, the sampling and the methodology used in the study.

Recently, there had been an increase in interest to examine how personality functioning related to physical, emotional and mental wellbeing, as stated by Aldridge and Gore (2016). However, few studies had taken keen interest in considering the levels of personality functioning in association with relapse risk among substance use addicts in recovery. As a result, the literature review gave empirical data in line with the current study objectives.

2.3.1 Levels of Personality Functioning among substance use addicts

Personality functioning pertains to an individual's capacity to interact and forge relationships within various social contexts effectively. It involves the ability to establish, maintain, and navigate both personal and professional relationships while managing social roles, communication, and emotional connections. In therapeutic or psychological settings, personality functioning is frequently assessed to comprehend an individual's relational strengths and internal challenges, as elucidated by Macina et al. (2024). This concept includes impairments in self-functioning (identity and self-direction) and interpersonal functioning aspects (empathy and intimacy). Likewise, Huber et al. (2020) posits that enhancing personality functioning levels in substance use disorder treatment may help individuals mitigate relapse risks and achieve long-term sobriety. Research seems to indicate that healthy personality functioning entails the development of higher self-capacities and high interpersonal relations,

whereas deviations from the healthy trajectory potentially manifesting as maladaptive behaviors

Personality functioning includes a range of skills critical for effective communication, emotional management, and empathy in social interactions. Deviations from healthy personality development can manifest as varying degrees of personality pathology. Improved personality functioning is essential for enhancing communication skills (Atta et al., 2024) and managing emotions in interactions with others (Di Fabio et al.2018), as it fosters greater empathy and understanding of others' emotions. According to research by Sharp and Wall (2021), higher levels of personality functioning aid individuals in navigating disagreements by employing problem-solving skills to maintain relationships. Enhanced personality functioning also plays a crucial role in understanding and managing expectations within various types of relationships, including familial, peer, and professional contexts (van Aken et al. 2018). Secure meaningful bonding and attachment, characterized by profound trust and reliability, are vital (Hollaway, 2021). Individuals with a strong self-concept are fully aware of their own boundaries and understand the roles and values of others. They are adept at adapting to diverse social situations and comfortably adjusting to change over time.

In a study conducted in Belgium by Rosi and Diaz-Batanero (2023), the research sought to investigate the relational and structural differentiation of self and interpersonal aspects of personality functioning by use of the LPFS-BF 2.0. This study involved 1,074 participants, including 717 community adults and 357 individuals. Community adults were required to be over 18 years old, while patients needed to receive treatment for at least one mental health issue. Exploratory Structural Equation Modeling was employed to analyze both functioning and maladaptive traits. Findings showed that self-function was closely associated with negative affect domains of personality, which contributed to functional impairment beyond personality facets. The predominant findings comprised depressive disorders at (35.87%),

anxiety disorders at (31.31%), and Trauma with stressor-related disorders (23.40%). On the other hand, the interpersonal functioning aspect was closely linked to several traits of antagonistic personality, with 42% impairment considered severely dysfunctional. The study focused on personality functioning and maladaptive traits while the current research focused on personality functioning and relapse risk in Langata sub county.

A recent study by Janczak and Soroko (2025) conducted in Poland sought to investigate the level of personality functioning and maladaptive personality traits in relation to depression and anxiety symptoms among middle and older adults. The quantitative cross-sectional study used a sample size of 530 middle and older adults to collect data. The tools used for this study were Self and Interpersonal Functioning Scale (SIFS), Personality Inventory for ICD-11 (PiCD), Generalized Anxiety Disorder Questionnaire (GAD-Q) and Patient Health Questionnaire (PHQ). Using Regression Analysis, the key findings of the study showed that there were moderate symptoms of personality impairment at 32%, with identity impairment being linked to predict depressive mood, Overall, women had higher levels of empathy at 50% and higher levels of intimacy at 45% than men.

In another study carried out in Greece by Papamalis et al. (2021), researchers explored the association of personality functioning and engagement of therapy in drug treatment programs. The objective was to determine to what extent personality adaptations either facilitated or impede treatment engagement and influence the risk of relapse. Utilizing a quantitative method with a multi-site cross-sectional survey, the study included 338 participants, of whom 287 (84.9%) were men and 51 (15.1%) were women, whose mean age of 33.4 years. In a sample of 338 individuals, 57.1% (n = 193) completed treatment successfully, whereas 42.9% (n = 145) discontinued treatment. Treatment completers exhibited substantially higher levels of emotional regulation (M = 2.66, SD = 0.47), Similarly, completers demonstrated significantly greater mean levels of stable self-image (M = 2.38, SD = 0.56), as

well as higher levels of self-respect (M = 2.66, SD = 0.59). Furthermore, concerning relational capacities, the dropout group exhibited more maladaptive outcomes relative to treatment completers. This was evident in lower mean scores for intimacy (M = 2.58, SD = 0.46), and enduring relationships (M = 2.55, SD = 0.50). While the study was conducted on global population, the current study focused on local context on personality functioning in substance use rehabilitation.

In a study published in Quebec, Canada by Angehrn et al. (2023), the study sought to investigate the level of personality functioning and protective factors of resilience among police officers. The study employed a quantitative, cross-sectional correlational design, with a sample size of 380 trained and practicing police offers, of which, 44% were women. Regression modeling to identify predictors of resilience was used, as well as gender comparisons on personality dysfunction and experiences of harassment. The study used LPFS-BF 2.0 to assess personality functions of self and interpersonal functioning. Resilience scale was used to measure psychological resilience. Sexual harassment inventory was used to capture harassment experiences and Protective Factors Questionnaire was used to evaluate coping and support mechanisms. Study findings indicated that 47% (~47% ($\beta = -0.465$) of the participants had low levels of resilience, 55% of the men had high levels of personality dysfunction, while women 45% had moderate levels of personality functioning. The study concluded that impairment in functioning strongly predicted poor resilience among the police officers and strongly advocated for emotional regulation and self-appraisal interventions to foster resilience and wellbeing in law enforcement settings. While this study investigated personality functioning with resilience among law enforcement officers, the current study focused on study personality functioning in relation to relapse risk.

Another study conducted in Houston, Texas by Sharp and Cervantes (2023), sought to investigate levels of personality pathology and maladaptive functioning among adolescents.

The quantitative method study used a cross-sectional design with Participants: N = 419 youth (50.4% female), aged 10–14 years (Mean age = 11.91, SD = 1.19). Inclusion criterion was being an adolescent aged between 1- 18 and attending regular school. Maladaptive self- and interpersonal functioning was evaluated using the Levels of Personality Functioning 12-18 (LoPF-Q 12-18). To assess general psychiatric severity, the Brief Problem Monitor (BPM) and Assessment of Identity Development in Adolescence (AIDA maladaptive functioning incrementally contributed to personality pathology, with specific findings). Key findings indicated that those who completed school had significantly higher levels of self and interpersonal functioning at 45%, moderate psychopathology among completers at 27% and low increase of borderline traits at a low of 6%. The study therefore concluded that the level of personality functioning was crucial in understanding psychiatric severity and clinically meaningful in early adolescence. While the study focused on adolescents and level of personality functioning, the current study focused on personality functioning among adult population from the age of 18 years and above.

Extensive empirical evidence has indicated that personality related dysfunction has a negative impact on social, occupational and daily functioning, (Skodol, 2018). The psychosocial functioning and personality disorders strongly cause impairment and impact personality functioning (Hastrup et al,2018). A study conducted in Norway by Christensen, et al. (2019), sought to investigate the level of personality functioning as a predictor of psychosocial functioning. The quantitative method, correlational study used a cross-sectional design, utilized a sample size of 317 participants, including 282 clinical patients and 192 diagnosed with a personality disorder and 35 non-clinical participants. The tools used for this study were Level of Personality Scale Personality functioning; SCID-5-AMPD Module, and Work and Social Adjustment Scale (WSAS); Findings in the total sample indicated that 16.1% showed little or no impairment (Level 0); 24% - low impairment; 35% - moderate impairment;

21% - severe impairment; and 4% - extreme impairment. Regarding the different variables of psychosocial functioning, there was a clear tendency: the more impaired personality functioning rated by the LPFS, the more severe psychosocial impairments were indicated by all other clinical variables.

Regionally, in Nigeria, a study carried out by Olagunju et al. (2022) aimed at exploring the relationship between personality impairment in alcohol and substance use disorders (ASUD) with antisocial personality disorder (ASPD) among incarcerated individuals. This quantitative, cross-sectional study involved 250 incarcerated participants, diagnosed with SUD and ASPD by use of Mini International Neuropsychiatric Inventory (MINI). Most participants were male (97.6%), and a mean age of 35.4 years (SD=13.5). The level of personality impairment rates of SUD and ASPD among the participants were 57.6% and 11.2%, respectively. Among those with SUD diagnosis, 35.2% had poly-SUD, while 22.4% had mono-SUD. The study found that ASUD and risk of relapse were relatively higher (54%) among individuals convicted of robbery and subsequently imprisoned, whereas ASPD was prevalent (46%) among those with past long-term imprisonment. This study focused on one aspect of personality, while the current study focused on both intra and interpersonal functioning in relation to risk of relapse.

In Fez, Morocco, Qassimi et al. (2023) conducted a study investigate the levels of personality functioning and alexithymia (complex emotions) in substance use disorder (SUD). This cross-sectional research was undertaken at the Addictology Center of the university hospital of Fez and involved 54 patients diagnosed with SUD. The study used TAS-20 scale for alexithymia and PDQ-4+, for personality assessment. The participant's average age was 27.07 ± 8.22 years. Approximately 93% of the samples were poly-substance users. Alexithymia was present in 48% of the participants. The results indicated a substantial association between

alexithymia and SUD severity (p = 0.033). A total of 89% of the participants had at least one specific personality disorder. The severity scale revealed that 85% of participants had severe SUD an indicator of higher relapse risk, 13% had moderate severity disorder and moderate risk of relapse, and only 1.8% had mild disorder and low risk of relapse. Additionally, only 7% of the patients were in early remission. While the study focused on emotional prevalence in SUD, the current study also included the aspect of identity and self-direction

Despite the valuable insights provided by these studies into personality functioning within African contexts, they did not specifically utilize the LPFS BF – 2.0. The lack of LPFS-specific research in Africa indicated the necessity for additional studies aimed at assessing and adapting this scale for use in these regions. Such efforts would consider cultural contexts to ensure their relevance and applicability across diverse populations.

In a local study conducted in Eldoret, Kenya, Kinyanjui and Sum (2023) investigated the levels of personality characteristics on substance use among students in higher education institutions, with a particular emphasis on self-control. This quantitative study employed a cross-sectional descriptive design and utilized WHO Model Core and Big Five Inventory scale to collect data from students in university and colleges in Eldoret. A total of 400 students, which comprised of 100 participants from each institution, were selected using stratified multi-stage random sampling and consented to take part in the study. The average age of the sample was 21 years and approximately half of the participants, 203 (50.8%), were male. The majority, 335 participants (83.8%), resided in urban areas, with only 28 individuals (7%) employed. The prevalence of substance use among the participants was 41.5%, and the lifetime prevalence of alcohol use was 36%. Findings showed that higher personality characteristics of neuroticism levels and lower levels of agreeableness are highly associated with increased substance use and relapse risk, with a p-value of ≤ 0.05 being statistically significant. While the study investigated

personality characteristics, the current study focused on relationship between personality functioning on relapse risk in SUD recovery.

Subsequently, researchers have pointed out the importance of screening for cognitive impairments in the treatment stage, given the high prevalence or relapse after recovery. A study conducted in Kiambu by Mwihaki et al (2024), sought to identify levels of neurocognitive disorders (NCD) among individuals admitted in rehabilitation centers in Kiambu county. The study employed a cross-sectional design, collecting data between 2023 and 2024. A total of 250 individuals aged 18 – 65 years were recruited using nonprobability sampling technique. Collection of data used self-administered questionnaires and the Montreal Cognitive Assessment (MoCA) tool. Findings of personality functioning showed that overall level of cognitive impairment was at 34.8%, and levels were observed for primary substances indicating alcohol at (37%), cannabis at (22%), and khat at (22%). Therefore, the argument that early detection and intervention is important for optimizing the choice of treatment and prevention of relapse risk may be correct

The scarcity of studies done using Levels of Personality Functioning Scale (LPFS BF 2.0) in Kenya presents a valuable opportunity for this study and future research. This study provided important insights into personality functioning within the Kenyan context and enhance the global understanding of the LPFS's applicability across diverse cultures. Targeted research addressing this gap would improve personality functioning during SUD rehabilitation in the region. This research aimed to fill this gap and contribute empirical knowledge on personality functioning in relation to relapse risk among individuals with substance use disorders.

2.3.2 Levels of Relapse Risk among Substance Use Addicts

Relapse risk is a crucial concern in addiction treatment, as relapses may arise from a range of psychological, physical, and environmental triggers. Prior research by Sinha (2024)

identified several factors contributing to relapses, including the severity of addiction, comorbidities with other mental health disorders, and the individual's age and gender. Additionally, poor social support (Nickmanesh, 2017), socio-economic factors (Kabisa et al., 2021), treatment duration (Decker, 2017), and aftercare practices (McKay, 2021) are notable contributors. Substance use addiction poses a substantial global health challenge, with profound social, economic, and personal repercussions. A primary concern for healthcare professionals and policymakers is the high relapse rate among individuals recovering from substance use disorders (SUDs). Deepening the understanding of substance use rehabilitation and risk of relapse is vital for effective intervention in treatment and recovery.

Several studies have interrogated the importance of self-functioning regarding the internal capacities and how the related factors impact the relapse risk in patients with SUDs. Yamashita et al. (2021) carried out a quantitative method study using cross-sectional survey in Japan to explore resilience and levels of relapse risk. Participants were recruited from one medical center and three rehabilitation facilities that supported therapy groups within Chugoku and Kinki areas. Fifty-two participants completed self-administered questionnaires from February to April 2015, for sociodemographic characteristics, Bidimensional resilience scale and Stimulant relapse risk scale. A total of 52 responses were obtained, with a response rate of 65%. The results indicated that stimulants were the most frequently used substances associated with SUDs, (n=26,21.7%). The findings of the study demonstrated a significant correlation between resilience and relapse risk, with higher levels of resilience being strongly linked to a reduced likelihood of relapse ($r = -0.314$, $P < 0.01$). This study used a low number of respondents; the current study collected data from a larger number of participants.

Sohrabpour et al. (2024), in a study conducted in Shiraz, Iran, sought to identify levels of SUD relapse using Theory of Planned Behavior (TPB) among male SUD users undergoing recovery in Southern Iran. This quantitative study used a cross-sectional design with 400

participants from the treatment centers between 2021 and 2022. Data was collected using a researcher-developed questionnaire, with validity assessed through the Lawshe index. All items that scored 0.56 or higher were retained, and most items scored above 0.70. The overall reliability, determined by Cronbach's alpha, was 0.89. The TPB constructs of awareness had a reliability score of 0.82, attitude at0.89, subjective norms at0.89, perceived behavioral control at 0.88, and behavioral intention had reliability scores of 0.87and 0.82respectively. Findings indicated that 342 participants (85.5%) experienced previous relapses, and 172 of them (50.29%) experienced between 1 to 5 relapses. The study used a self-developed questionnaire; and the current study used two tools that are validated and standardized for data collection

In subsequent research conducted in Kandahar, Afghanistan, by Stanikzai and Wahidi (2023), evaluated the bio-psycho-social profile of individuals with SUD relapse who were being treated at 3 designated facilities. The facility-based cross-sectional analysis was carried out among individuals with SUDs under care at three designated recovery centers from November to December 2022 with 586 respondents. The average age of respondents was 34.41 years (± 10.10 SD). A significant number of participants' physical health (81.2%) was rated as extremely good or fair, with two-thirds of the majority (73.4%) reporting high levels of social support. Among the subjects, 541 (87.1%) showed high depression levels, 569 (91.6%) high levels of anxiety, and 442 (71.2%) experienced high levels of stress. Notably, severe depression was prevalent at 34.8%, anxiety at 65.8%, and stress was at 27.3%. Several characteristics of individuals with SUD were significantly associated with higher relapse risk with total scores such as lower level of social support ($\beta=-0.35$, $p=<0.001$). This study focused more on a larger population of incarcerated individuals while the current study focused on individuals undergoing substance use rehabilitation.

Rasmewak et al. (2020) in Mauritius sought to determine the prevalence and causation of relapse risk among male addicts. This quantitative cross-sectional study was carried out over

a period of six months, involving 180 male addicts admitted at a public facility. The tools used for this study were Resistance to Peer Influence Scale (RPIQ) and The Rosenberg self-esteem scale. The study findings indicated a huge number (92%) of the respondents experienced relapse after recovery. Specifically, 29% relapsed after three months, and only 17% were abstinent between one to three years. Across the different levels, 59% were unable to maintain sobriety for more than a year. The study was conducted only among one gender of participants; the current study used both men and women who are in substance use rehabilitation.

In a regional study conducted in Rwanda by Kabisa et al. (2021) investigated the levels of relapse in substance use at the Psychotherapeutic Centre of Icyizere (IPC). This quantitative cross-sectional survey included 391 individuals with SUD at IPC. Most participants were male (84.1%), with majority (54.1%) between ages 18 and 30 years, and average age of 33 (SD=11.9 years). Findings revealed that relapse was more prevalent among individuals with SUD with58% relapsing withing two weeks to three months after treatment. High levels of relapse (90%) were found in consumption of a single drink post treatment. Equally, overall high score of relapse rate was at 59.9%, and 11.2% relapse for treatment period below 3 months. While this study focused more on the determinants of relapse, the current study focused on personality functioning and whether they affect increased risk of relapse or not.

In a recent study by Abdulla, (2021), in Unguja, Zanzibar, the researcher aimed at identifying key contributors associated with relapse among recovering SUD addicts in the urban area. The study targeted a population of 90 individuals from three sober houses, comprising every recovering addict who had relapsed and 12-step program therapists at selected treatment facilities. The study employed mixed methods cross-sectional research design and collected qualitative as well as quantitative data from 74 recovering drug addicts who had relapsed at least once during their recovery journey. Recovering addicts were selected based on their relapse experiences, providing valuable insights drawn from their personal life

experiences. Data collection tools included questionnaires and semi-structured interviews. Findings revealed that issues related to self-regulation, such as the inability to control their drinking habits, failure to learn from the past, not learning from consequences, and not adhering to their own standards, were significant factors contributing to risk of relapse. Regression analysis results confirmed a significant positive correlation between associated social risk factors and relapses, with all p-values being less than 0.05. Furthermore, the regression analysis indicated a significant relationship between self-regulation and relapse, with a p-value of 0.028. The study used mixed method approach in data collection, while this current study focused mainly on quantitative method.

In Mombasa, Kenya, a study supported by NACADA, conducted by Kuyeya (2021) aimed to evaluate the efficacy of rehabilitation programs and level of relapse risk in SUD recovery. The research used mixed-method approach (quantitative and qualitative methods), with a cross-sectional design to assess 80 participants from three treatment facilities. Data collection methods included questionnaires, as well as in-depth interviews, and observations. The study identified a relapse rate of 38.9%, with non-participation in support groups being a significant factor (OR=3.25, p=0.04). The study focused on the efficacy of rehabilitation; the current study focused on risk of relapse among addicts in rehabilitation.

Another local study in Nairobi County investigated the pivotal factor of communication and its contribution to relapse risk. Namukoa and Githae (2021) conducted a study assessing the correlation between communication of spouses and levels of relapse risk in individuals undergoing SUD treatment and recovery, and its implications for treatment. Data collection used the Advance Warning of Relapse (AWARE) tool, targeting a purposive sample of individuals admitted to rehabilitation facilities within Nairobi County. The findings revealed that 37.41% of the individuals in spousal relationships experienced a relapse. Moreover, conflicted communication with the spouses was identified as a contributing factor to increase

in substance abuse, with a moderate score risk of relapse at 37.4%. Statistical analysis indicated a significant correlation between spousal communication and relapse occurrence among individuals with SUD ($r = .016$, $p = .002 < 0.05$). While the study brought out the importance of interrelationships in SUD recovery, the current study also focused on positive self-relationship as protective against risk of relapse.

Locally, Kibet et al. (2023) carried out mixed-method research to explore the levels of relapse risk was among individuals with AUD in Eldoret County. Using Structural Family Therapy, the study used both quantitative and qualitative methods. The quantitative component adopted a causal-comparative research design, whereas the qualitative approach was grounded in a phenomenological research framework. The target population comprised 360 individuals, including 174 participants diagnosed with SUD, 174 family members, and 12 counselors from six alcohol and drug rehabilitation centers accredited by NACADA. Stratified techniques and systematic random sampling techniques were employed to identify 38 participants with SUD and 38 family members, then purposive sampling was utilized to identify 12 relapsed clients and 4 counselors. The findings revealed that most of the individuals with SUD, 30 (78.9%), were previously in residential rehabilitation before the current admission indicating they had relapsed. The current study also showed extremely high levels of relapse rates of more than 79% were attributed to the overarching effects of the Covid-19 pandemic. The focus for the study was on both the individuals, family members and therapists, while the current study focused on the individuals in rehabilitation.

The literature reviewed on relapse risk had a gap in the studies measured levels of relapse in relation to other psychological variables and mainly focused on external functions of personality. This current study filled in the gap by looking at relapse risk in relation to the self and interpersonal functions of personality. Similarly, the study also provided a concrete theoretical framework by use of relapse prevention theory and interpersonal theory because the

two theories consider internal processes of personality that are crucial in substance use outcomes.

2.3.3 The Relationship between Personality Functioning and Relapse Risk Among Substance Use Addicts.

Groundbreaking research by Steingrimsson et al. (2020) in Sweden assessed the relationship between AUD relapse and characteristics of Cooperativeness (CO) and self-directedness (SD) among a cohort of twins and their parents. This research involved 6,917 adolescents, with 58% being female. Participants completed the AUDIT questionnaire and the DUDIT questionnaire, alongside the (TCI), which included SD and CO subscales to assess individual goals, values, life direction, and character maturity. The study results revealed that total AUDIT scores were negatively correlated with SD ($r = –0.18$, $p < 0.001$) and CO ($r = –0.15$, $p < 0.001$), as were total DUDIT scores with SD ($r = –0.11$, $p < 0.001$) and CO ($r = –0.08$, $p < 0.001$). Higher AUDIT scores (>15) and DUDIT scores (>7) were significantly associated with low SD scores (ORs 4.1 and 4.5, $p < 0.001$) and low CO scores (ORs 3.5 and 4.5, $p < 0.001$). The study concluded that individuals with low levels of self-directedness and lower cooperativeness levels are most likely to engage in substance use, supporting the hypothesis that characteristics of personality may be used in identifying individuals at high risk of relapse in AUD. The study shows similarities with the current study; however, the current study investigated deeper on personality functioning including interrelationships of empathy and intimacy.

Zeng and Tan (2021) carried out a study in China to assess the association between family functioning, psychological capital and the tendency for relapse risk in individuals battling drug addiction. Using a quantitative cross-sectional survey, the researchers collected data from 900 participants at three mandatory isolation centers, achieving 842 returned responses, which corresponds to a recovery rate of 93.56%. The study sample consisted of 594

men and 248 women, with average age of 34.56 years (SD = 8.29). The findings suggested that family functioning was significant and negatively predicted relapse tendency ($\beta = -0.12$, $p < 0.001$) and significantly positively predicted psychological capital ($\beta = 0.15$, $p < 0.001$). Moreover, psychological capital significantly negatively predicted relapse risk tendency ($\beta = -0.23$, $p < 0.001$). While the study focused on familial interactions, the current study included self-functioning and intra-relations as indicators of personality functioning

An example of research carried out in the United Arab Emirates (UAE), by Mhaidat et al. (2024) assessed relapse risk and resilience among 368 patients treated at The National Rehabilitation Center (NRC) in Abu Dhabi with 27.2% readmitted at least once. Researchers used a quantitative, cross-sectional correlational survey to evaluate the relationship between relapse risk and resilience in individuals battling SUD. All outpatients and admitted individuals at the NRC from June 2022 to March 2023 participated, yielding an approximately 40% participation rate. A total of 286 Emirati individuals with SUD completed the questionnaires. The findings indicated a mean resilience score of 72.92 (SD=16.99) and a mean relapse risk score of 59.07 (SD=12.23). There was correlation between relapse risk and resilience as findings showed a negative, low-to-moderate significance in all subscales (r=-0.486). While the study focused on the aspect of resilience in substance use rehabilitation, the current study included self and interpersonal aspects of functioning.

In Sub-Saharan Africa, research on the influence of personality functioning on intimate relationships is limited. However, there is a study by Woolf-King et al. (2019) from South Africa that examined the impact of alcohol use on relationship behaviors that could elevate risks of HIV infections and other harms, such as domestic violence and relapse risk to AOD. This dyadic analysis involved 443 heterosexually active couples (886 participants) from rural South Africa. The study investigated the relationship between the male partner's alcohol intake (categorized as abstinent, hazardous and nonhazardous) and both reports from partners of

relational trust, intimate engagements, mutual communication, and marital satisfaction. The findings indicated that women with male partners who drank hazardously demonstrated notably greater levels of intimacy ($p < .05$) relative to abstainers, alongside a marked increase in demand/withdraw communication patterns ($p < .001$). Conversely, men classified as hazardous drinkers exhibited substantially lower levels of relational trust ($p < .01$) when compared to abstainers. The study did not indicate the level of hazardous drinking, and how less communication was a contributor to relapse. The current study interrogated the relationships of constructs within the self and interpersonal functioning.

In Ghana, West Africa, Nkyi and Ninnoni (2020) conducted a regional study to investigate the relationship between depression, anxiety, loneliness and purpose in life among individuals receiving treatment at Ankaful Psychiatric Hospital. This quantitative study utilized the Beck Depression Inventory-II, PIL, Beck Anxiety Inventory and Loneliness Scale (R-UCLA). A descriptive and correlational design, targeting 200 individuals, with 192 respondents completing the instruments. The findings of the study revealed that there was no statistically significant correlation between depression and loneliness ($r = 0.030$, $p = 0.567$). Nonetheless, a significant negative association was observed between purpose in life and depression ($r = -0.514$, $p < 0.001$), while a statistically significant positive relationship emerged between loneliness and purpose in life ($r = 0.147$, $p = 0.004$).

A similar investigation by Nyamoma et al. (2024) in Kakamega County explored the relationship between personality traits on the efficacy of substance use disorder (SUD) prevention strategies among secondary school students. Using a mixed-method approach, this study was grounded in social cognitive theory and adopted a cross-sectional research design. The sampling framework incorporated multistage, simple random, and purposive sampling techniques, encompassing a study cohort of 381 students, 108 teachers, 53 Heads of Guidance and Counseling Departments, and 12 sub-county directors. Data collection instruments

included structured questionnaires, focus group discussion guides, and interview guides. Findings demonstrated a statistically significant association between personality characteristics and the effectiveness of SUD prevention measures, as evidenced by the statistical results [F (1, 269) = 80.959, $p < .05$] and [F (1, 58), $p < .05$]. Moreover, the study highlighted the critical role of teachers in providing emotional support to students, significantly contributing to the success of substance abuse prevention efforts in secondary schools. This study was conducted in a school setting; the current study was conducted in rehabilitation centers.

Similarly, another Kenyan study conducted by Wagithi and Ndurumo (2020) in Limuru Sub- County, looking at the relationship between familial support, and the risk of relapse or recidivism and self-efficacy in drug use among youths in rehabilitation treatment was examined. This quantitative study employed a correlational research design, recruiting 80 youths recovering from drug addiction through snowball sampling across five recovery centers. Data collection used questionnaires, specifically the Family Support and Strain tool and the Drug Avoidance Self-Efficacy Scale. In the study, 65% of participants were male, while 35% were female. A significant relationship was identified between family support and self-efficacy ($\chi^2 = 19.446$; $p = 0.026 < 0.05$). Furthermore, family support demonstrated a notable negative correlation with relapse ($r = -0.628$; $p = 0.032 < 0.05$), underscoring the critical role of familial support in mitigating the risk of relapse. Further analysis revealed that increasing family support raised the youths' self-efficacy by 40.7% and decreased the chances of relapse by 38%. While the study focused more on efficacy of interrelationships, the current study also included self-identity and self-direction as indicators of self-functioning.

Family environment significantly influences treatment outcomes for the addict with alcohol use disorders (AUD) and can also serve as a potent trigger for relapse risk. Studies suggest that familial environments characterized by highly expressed emotion (EE) and high levels of criticism contribute to the individual’s ability to maintain abstinence or face relapse

risk post-treatment. A local study conducted by Githae (2019), conducted in Kiambu examined the relationship between harmful and non-harmful criticisms as predictors of relapse risk among individuals diagnosed AUD. This quantitative, cross-sectional study focused on the treatment goals of AUD patients in an inpatient facility in Kiambu County. The target population consisted of 137 individuals, resulting in 119 participants. Participants were assessed using AUDIT tool. Pearson correlation analysis revealed there was a statistically significant relationship of harmful criticism ($p=0.000<0.05$) and a strong predictive value ($r^2=.285$) to risk of relapse. Although the study focused on self-functioning alone, the current study explored more positive interrelationships and how they enhance sobriety post recovery from SUD treatment.

Even though there are many studies locally on relapse risk, there is scarcity of literature that deals explicitly with personality functioning and relapse risk. Most empirical studies have included either variable with other personality constructs therefore focusing on a different study outcome. Equally, most studies on personality functioning have been conducted mainly on western populations and not in Africa, or on Kenyan context. Similarly, few studies have focused exclusively on personality functioning and relapse risk among substance use addicts. This current study filled the gap by conducting empirical study focusing on the above-mentioned variables. This study consequently filled the knowledge gap and improved treatment outcomes in the targeted treatment centers in Langata sub county.

2.3.4 Demographic Characteristics of marital status, gender age and admission criteria on relapse risk among Substance Use Addicts

This section of chapter two examined the demographic characteristics of age, gender, marital status, and admission criteria of substance use addicts in rehabilitation. The researcher explored the variables and the factors influencing these variables, with a focus on demographic

characteristics. The study examined the significance of age, gender, education and admission criteria.

A study conducted in Kathmandu, Nepal, by Poudel and Gautam (2017), sought to examine the age of onset of substance use and psychosocial problems is substance use. The study employed descriptive cross-sectional research design and was conducted between August and September 2015. A Probability Proportional to Size (PPS) sampling technique was used to select seven drug rehabilitation centers, yielding 221 diagnosed participants. Findings revealed that the age of onset of substance use was significantly correlated with psychosocial problems. A total of 141 early-onset users (≤17 years) and 80 late-onset users (≥18 years) completed the questionnaires, achieving a response rate of 98.6%. The groups differed significantly in most characteristics, with early-onset users being younger (mean age: 25.77 ± 8.83 years), predominantly male, and economically inactive, compared to late-onset users (mean age: 34.16 ± 8.72 years). Early-onset users exhibited significantly higher psychosocial problem scores across various DUSI-R domains, even after adjusting for potential confounding variables.

A regional study by Okonkwo et al. (2020) in Nigeria examined the socio-demographic characteristics, including marital status, age, education levels and family history of substance use, and its relation to relapse risk among individuals with SUDs in Lagos. This quantitative study utilized a cross-sectional survey design, involving 228 individuals (213 males and 15 females) who were receiving inpatient and outpatient treatment at the Federal Neuropsychiatric Hospital in Yaba, Lagos. Data collection involved the use of a socio-demographic questionnaire and the review of medical records, with analysis conducted through descriptive statistics, t-tests, and chi-square tests. The participants mean age was 29.6 years (SD = 9.19), with the majority (72%) being inpatients and predominantly male (93.4%). The study reported a relapse

prevalence rate of 51.3%. Participants with a history of relapse exhibited a lower mean age (M = 27.06, SD = 7.35, n = 111) compared to those without a history of relapse, who displayed a higher mean age (M = 31.98, SD = 10.11, n = 117). These findings highlighted a significant relationship between age, substance use disorders (SUDs), and relapse risk, indicating that younger participants were more likely to experience relapse.

A study conducted in Mombasa by Kaithuru (2020) provided empirical evidence indicating that demographic characteristics, particularly age, may influence the management of SUDs and treatment outcomes. The mixed-method study (used quantitative and qualitative approach), grounded in the REBT Theory and employed mixed design. The population included 220 individuals, comprising individuals undergoing SUD treatment, caregivers, and counselors at three NACADA-accredited sites in Mombasa. The study included 152 participants who were identified using stratified and simple random sampling. Findings revealed that individuals aged 30-35 years had a relatively high mean score in life skills (mean=3.9074; SD=1.04666), as did those aged 35-40 years (mean=4.0278; SD=0.68748), while recovering addicts aged 25-30 years' mean score was lower (mean=3.7719; SD=0.58850). The uptake of life skills was highly popular among most of the recovering addicts. Additionally, those aged 35-40 years scored high in adherence to treatment (mean=3.3611; SD=0.77345), whereas those aged 25-30 years scored lower in treatment adherence (mean=3.0476; SD=0.74516). The age factor suggested that older participants had a stronger inclination to sustained recovery mechanisms compared to younger participants, which predisposed younger individuals to a higher risk of relapse. The current study focused on establishing the significance of the age of the individual and its' influences on relapse risk.

Gender variables have been found to be a key factor in influencing various psychological and behavioral outcomes. Gender differences have been known to impact personality functioning and relapse risk in different ways. For example, men and women may

exhibit distinct coping mechanisms, treatment responses and relapse patterns which is all due to biological, psychological and socio-cultural factors. The study examines the gender role in relapse risk among substance use addicts. Understanding gender variances in personality functioning may provide deeper insights into recovery and tailored rehabilitation strategies aligned to gender variance.

A study conducted in Finland by Hoijer et al. (2021), investigated gender differences in personality and emotional problems among individuals with single use and polysubstance use. The quantitative cross-sectional study used a population of 164 individuals, with 97 men and 67 women who took neuropsychological evaluation on verbal capacity, speed in processing, inhibitory capacity, memory, perceptual reasoning, learning and executive functioning. Personality measures used the Minnesota Multiphasic Personality Inventory (MMPI) and the associations in neuropsychological measures, personality and gender differences used multiway analysis of covariance. The study was mediated by years of substance use, substance use onset, poly use and level of education. Findings showed that men had more severe personality and emotional issues than women, even after the mediation of level of education, onset of regular use and polysubstance use. Similarly, men also had high value indicators of somatic issues and emotions of anxiety and depression much higher than women. These findings may indicate that men with SUD may experience more intense personality -related challenges during rehabilitation than women showing a variance from previous findings, that women may not be more vulnerable in substance use. The study examined gender differences in emotionality capacities, the current investigated gender differences and relapse risk in substance use rehabilitation.

From a regional perspective, Baloyi and Khosa (2025) conducted a study in South Africa's, Limpopo Province, to investigate the barriers encountered by women in accessing treatment services for substance use disorders (SUDs). The research utilized a qualitative

methodology with an exploratory research design, employing semi-structured interviews. The study sample consisted of 20 social workers from the Social Development Department: all aged between 30 and 45 years. These participants served as coordinators for SUD treatment services across 13 municipalities within Limpopo Province, focusing on the provision of early interventions, prevention and reintegration after SUD treatment. Findings from this study revealed that women encountered specific personal barriers including lack of motivation to change, denial on substance use problem alongside external obstacles such as shortage of facilities that include women in treatment programs and limited government support in female SUD treatment.

Local research has examined gender characteristics in relation to recovery from substance use disorders (SUDs) and associated outcomes. Anundo et at., (2019) conducted a study in Nairobi County to investigate the prevalence of depression among female injecting drug users (FIDUs). The study employed a cross-sectional research design and purposive sampling to select 149 participants, all of whom were over the age of 18. The majority of respondents were aged between 26 and 40 years, single, and unemployed. The findings revealed a high prevalence of injectable drug use among women, which significantly increased their vulnerability to a persistent risk of relapse.

While specific studies examining the relationship between marital status and risk of relapse in substance use disorder (SUD) rehabilitation within North or West Africa are limited, research from other regions provides valuable insights into how marital status influences relapse rates. For instance, studies show that marital status can significantly influence relapse tendency among individuals undergoing SUD treatment. Married individuals often exhibit lower relapse rates compared to their unmarried counterparts, potentially due to increased social support and stability associated with marriage. Conversely, individuals experiencing

marital discord or those who are divorced may face higher relapse risks, possibly due to stress and reduced social support.

Prior research has highlighted a significant correlation between adults' relationship status, and their levels of substance use risk and relapse. A significant study done by Blair and Menasco, in Buffalo, USA in (2016). The study looked at the relationship between marital status, substance use, and relapse risk among adults. It included data from the 2012 National Survey on Drug Use and Health (NSDUH) to analyze substance use patterns and relapse risk within a nationally representative sample comprising 14,715 adults. Among remarried individuals, men demonstrated significantly higher alcohol and marijuana consumption than women, reported substance use rates were 6.32 compared to 4.22 for alcohol and 0.91 compared to 0.51 for marijuana, respectively. Furthermore, never-married individuals, particularly those in early adulthood - a stage often correlated with elevated substance use- demonstrated significant levels of marijuana consumption. Approximately 11.2% of never-married men and 5.3% of never-married women reported using marijuana 20 or more times within the past month, reflecting a habitual usage pattern and increased relapse risk.

Ongaro et al. (2022) carried out a study in Nairobi and Kajiado aimed at evaluating the prevalence of risky and hazardous substance use disorders (SUDs) across genders among individuals admitted for treatment and examining the relationship between these patterns and relapse risk. The research was carried out in six accredited treatment centers, involving a sample of 120 respondents aged between 18 and 40 years. Data was collected using socio-demographic questionnaires and assessment tools including AWARE, ASSIST AND AUDIT tools. Findings from the study indicated that relapse risk in alcohol was rampant across the gender divide, indicating that males had higher dependency (61%) more than females (39%). More singles had higher dependency (40%), than those in marital relationships along the

marital status demographic. Use of tobacco was significantly associated with marital status (p = 0.018)

Sant'Anna et al. (2020) conducted a cross-sectional study in Brazil to explore the association between relapse rates and admission types (voluntary versus involuntary) among individuals with substance dependence. The study was carried out at a therapeutic community specializing in addiction treatment, located in São Paulo, Brazil. Data collection included various sociodemographic variables and employed instruments such as the University of Rhode Island Change Assessment Scale (URICA), Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES), Beck Anxiety Inventory (BAI), Beck Depression Inventory (BDI), and the Structured Clinical Interview for DSM-IV (SCID). The results indicated that relapse was significantly associated with lower family income (P = .006) and the contemplation stage of motivation (P < 0.05). However, no significant differences in relapse rates were observed between involuntarily admitted individuals (64%) and voluntarily admitted individuals (54%) (P = 0.683).

Regionally, Mkhize and Gutura (2021) conducted a study in the Uthungulu District, situated in the northeastern region of KwaZulu Natal Province, South Africa. The study aimed to explore substance dependency and treatment challenges, focusing on the perspectives and experiences of relapsed involuntary service users. A qualitative methodology was employed to explore and elucidate the experiences of involuntary service users. The study's target demographic included youth aged 18 to 35, alongside social workers serving as key informants. Findings showed emergent themes causing the underlying causes of relapse to be lack of motivation to change, lack of aftercare services and psychological factors.

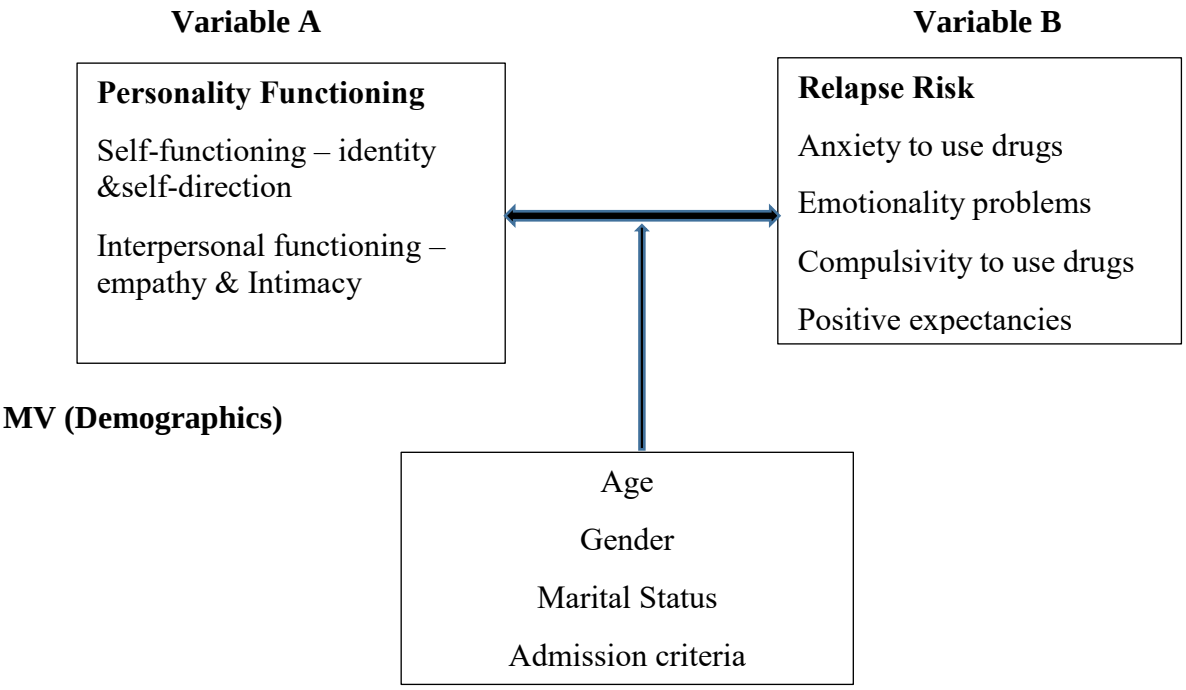
While there is scarcity of studies that examined involuntary admissions in the Kenyan context, The above studies indicate that while compulsory treatment programs aim to reduce substance use and associated behaviors, relapse rates remain high. The efficacy of such

programs may be affected by other factors, such as the standard of treatment provided, the availability of support systems, and the individual's preparedness and willingness to engage in the process of change.

2.4 Conceptual Framework

The conceptual framework for the study suggested a possible correlation between personality functioning (Variable A) and Relapse Risk (Variable B). In addition, the layout of the conceptual framework included the implication of moderating variables (MV). The framework of the study is illustrated below: -

Figure 1:. Correlation between Personality Functioning and Relapse Risk



Source: Researcher (2025)

Figure 1 indicated the study's variables. The main purpose of the current research was to examine the relationship between personality functioning and relapse risk, determining whether a change in one variable's level will influence the level of the other variable. This conceptual framework therefore aimed to find out if there is a relationship between variable A and Variable B. Personality functioning was the self-functioning attributes of identity, self-direction, empathy and intimacy, while the other functioning attributes were individual engagement with others, valuing and managing interrelationships. On the other hand, relapse risk included anxiety to use drugs, emotionality problems, compulsivity to use drugs And Positive expectancies. This conceptual framework had used the moderating influence of age, gender, marital status and admission criteria as factors that possibly contributed to the relationship between the two main variables of personality functioning and relapse risk.

2.5. Chapter summary.

This chapter presented the theoretical framework, highlighting the knowledge and benefits of the mentioned theories as well as their gap in light with the study. The chapter also presented the empirical literature review in line with the variables used for this study, drawing out the missing knowledge (gap) from the considered literature and validating the study aims. The chapter also illustrated the conceptual framework and exhibited how the variables interact with each other and are correlated. The study then proceeded to chapter three.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The chapter will describe the methodological framework which includes the research design, and the research site, the target population, the sampling method as well as instruments that will be used during data collection. The chapter will also provide a strategy to be used in pretesting for this study. In addition to that, this chapter will enlighten the data collection process, research procedures, data analysis methodology, ethical considerations, validity and reliability of the tools, and procedure used for the study. The chapter will finally outline the envisaged outcomes from the study and present a concise summary of the entire chapter.

3.2 Epistemology

Epistemology refers to the philosophical inquiry into the nature, sources, and limits of knowledge, serving as a lens through which research is conceptualized and interpreted from multiple perspectives (Sol & Heng,2022). It provides a foundational framework that distinguishes validated knowledge from subjective beliefs, assumptions, and ideological biases, emphasizing the importance of evidence-based understanding. In this study, a positivist epistemological stance has been adopted, grounded in the premise that knowledge is best acquired through objective observation, measurement, and empirical analysis. This approach facilitates the systematic investigation of phenomena by quantifying variables and rigorously testing hypotheses to produce reliable and generalizable findings.

3.3 Research Design

This study employed a quantitative method for data collection and analysis. This approach incorporated a systematic scientific framework regarding data collection, analysis and reporting. Since the study aimed to investigate the relationship between the two variables,

the researcher employed a correlational survey design. The design was chosen because it entailed linking or contrasting variables through measurement to produce numerical and measurable data, which was then analyzed using statistical techniques.

3.4 Location of the Study

This study was conducted in Langata Sub County, a constituency of the larger Nairobi Metropolitan. Langata Sub County is an electoral division within Nairobi City County, which encompasses the southern and southwestern regions of Nairobi. Langata Sub County was purposively sampled because it had a good presentation of middle-class population with substance use issues and from whom data was gathered for the current study. Langata had a population of 2,143,254 million as reported in the last Census (2019). According to Ochungo et al. (2019), Langata Sub County covers an area of 196.80 Kms (76.0 sq mi), is located at approximately 1.3666° S latitude and 36.7332° E longitude and is so far the largest sub county in Nairobi. The political wards under Langata Sub County include the affluent suburb of Karen and Langata suburb which is predominantly middle class. Other political wards under Langata are Nairobi West, South C, Mugumoini and Nyayo Highrise Wards. There were many rehabilitation centers located in Langata subcounty, making the sub county a convenient choice. Besides, there were admissions from other sub counties and counties who refer individuals for treatment in these treatment centers. Bearing in mind all the above-mentioned reasons, Langata Sub County offered the right location for the current study.

3.5 Target Population

The study population comprised of substance use individuals admitted in rehabilitation centers within Langata Sub County. The target population was justified by the concentration of substance use among emerging young adults in urban locations in Nairobi. Substance use individuals undergoing treatment are distributed in different treatment centers within Langata subcounty, with a target population of 144 addicts in rehabilitation. The demographic of

Langata Sub County aligned well with the study objectives, as it was representative of the broader population of Nairobi County.

3.6 Sampling Design

The researcher used nonprobability sampling using a census method to include the whole population giving a sample size of 144 participants. This design choice was informed by the population size; the sample size was to be representative of the whole population. This section therefore covered the sampling framework by detailing the participant list, the chosen sampling methods, and the rationale for determining the sample size. The researcher adopted a survey method and therefore excluded the sampling technique and the sample size determination.

3.6.1 Sampling Frame

For this study, the sampling frame included the qualifying list of participants in Langata Sub County.

Table 1: The Targeted Population of the Research Study

Name of treatment centers	Target population	Sample size
Asumbi Main Karen	38	38
Nairobi Place	22	22
Tumaini	18	18
Sober House	17	17
Asumbi ladies	8	8
Optimum Center	15	15
Mariakani	14	14
Dove International	12	12
Total	**144**	**144**

Source: Researcher (2025)

3.6.2 Sampling Techniques and Sample Size Determination

This study employed the census sampling method for data collection, which involved using the entire population as the sample. Given the small size of the target population, neither alternative sampling techniques nor sample size calculations were utilized in this investigation. With only 144 substance use individuals at the recovery centers, data was collected from all the individuals in rehabilitation. The rationale for including the entire population was based on several considerations. The study included all the treatment centers registered under NACADA and offering treatment services within Langata sub county. The number of individuals at each of the facilities was low, hence the reason to include all those who were in treatment. Some of the individuals may have been discharged, others going through an illness and unable to participate, and others were illiterate and could not fill out the questionnaires. All the individuals were free to exercise their autonomy and withdrew voluntarily from

participating in the study. These considerations justified the decision to include the entire population in the study on the data collection process.

3.7 Research Instruments

This study employed standardized questionnaires to gather information on the two variables of interest. The selection of these standardized instruments was driven by the aim of the researcher in obtaining reliable and valid data concerning the levels of personality functioning and relapse risk among individuals in substance use recovery in Langata Sub County. The questionnaires comprised of two primary sections: the first section sought to gather demographic information which included age and gender, marital status and admission criteria, while the second section contained the questionnaires as indicated in the tools. The data collection tools utilized in this study were the Levels of Personality Functioning Scale Brief 2.0 and the Stimulant Relapse Risk Scale.

3.7.1 Levels of Personality Functioning Scale BF 2.0

The Level of Personality Functioning Scale – Brief Form 2.0 (LPFS-BF 2.0), was developed by Weekers, Sellbom, Hutsebaut, Simonsen and Bachin 2019. This instrument is self-reporting and developed to evaluate the severity of personality pathology by examining two critical dimensions: self-functioning which includes identity and self-direction and interpersonal functioning which includes empathy and intimacy. The scale primarily measures self-functioning (items 1 to 6) and the interpersonal functioning (items 7 to 12) as separate but related constructs. Comprising 12 items, each rated on a 4-point scale, ranging from 1 = very false or often false, 2 = sometimes or somewhat false, 3 = sometimes or somewhat true and 4 = very true.

The LPFS BF 2.0 provides a scoring system for the set of 12 items, divided into two higher order domains which are self-functioning (identity and self-direction and interpersonal functioning (empathy and intimacy). Respondents are required to rate the 12 items on the

questionnaire on a 4-point Likert scale from 1 = very false or often false, 2 = sometimes or somewhat false, 3 = sometimes or somewhat true and 4 = very true.

In scoring LPFS-BF 2.0, both sum – and the mean scores are calculated, with a maximum 25% missing's allowed for each scale. Missing items can be replaced with mean score. Total scores under 25 are considered healthy, scores between 26 and 31 are considered mild or subclinical, scores of 31 - 35 and above are considered clinically dysfunctional and moderate, while those between 36 – 40 are considered as severely dysfunctional and 40 – 48 the scores are extremely dysfunctional.

3.7.2 The Stimulant Relapse Risk Scale

The second tool is the stimulant relapse risk scale and was developed by Ogai et al (2007), in Japan, and is designed for evaluation of drug treatment program. The self-rate scale has a total of 35 items with 6 subscales as listed: a. Anxiety with Intention to use substances (AI) 8 items. b. Emotionality problems (EP) 8 items, c. Compulsivity to use drugs (CD) 4 items, d. Positive expectancy and lack of control (PL) 6 items, e. Negative expectancy for the drug (NE) 4 items and f. Lie scale: Insight of own problem, 5 items. The tool is scored on a 5 – point Likert scale ranging from 1 = strongly disagree, 2 = Disagree. 3 = Neither agree nor disagree, 4 = Agree and 5 = Strongly agree.

Scoring of the self-rating scale is used to measure the risk of substance reuse in the 5 dimensions namely: - Stimulus -induced vulnerability, emotionality problems, compulsivity for alcohol, lack of negative expectancy of alcohol and positive expectancy of alcohol. The SRRS includes 5 items to measure insight into mental condition. The Likert scale has indicators, 1 – 5, with 1= (strongly disagree),2 = (disagree), 3 = (Neither agree nor disagree), 4 = (Agree), and 5 = (Strongly agree). The 35 items scores are added up for the numbers marked to give a total score. The lowest totals a person can score is 35 meaning the respondent totally disagreed with each of the statements and the highest is 175 which means the respondent

strongly agreed with all the statements in the questionnaire. The score is evaluated as follows: 1 – 35 (low score), 36 – 105 (moderate score) and 106 – 175 (High score) indicating high risk of relapse.

3.8 Pre-testing of Research Instruments

Accordingly, the researcher conducted a pretest of selected instruments prior to the actual study to ensure clarity and consistency in the respondents' interpretations. Piloting of the tools was conducted on substance use individuals undergoing substance use treatment at Hope and Care Rehabilitation Centre, in Ongata Rongai, Ngong sub county. The treatment facility had a capacity of 45 individuals who are in the process of treatment, and 14 participants were selected for pretest. The rationale for choosing individuals undergoing treatment was their similarity to the individuals in treatment at the recovery centers in Langata subcounty.

3.8.1 Validity

The validity of LPFS BF 2.0 was conducted by Stone et al (2021) in USA aiming to establish convergent validity of LPFS-BF 2.0 and its relationship with anxiety, interpersonal functioning and normative personality traits among older adults. A total of 130 older adults (mean age = 64.61) completed the LPFS-BF 2.0, Geriatric Anxiety Scale, Circumplex Scales of Interpersonal Problems (CSIP), and Big Five Inventory–2 (BFI-2). Internal consistency, as measured by Cronbach's alpha, ranged from acceptable to good for all the LPFS-BF 2.0 scales (Self, $\alpha = .74$; Interpersonal, $\alpha = .85$; Total Personality Functioning, $\alpha = .79$). Correlations between the LPFS-BF 2.0 scales and the Geriatric Anxiety Scale, CSIP, and BFI-2 revealed significant associations in the expected directions. Further, regression analyses indicated that the CSIP and BFI-2 scales predicted each of the LPFS-BF 2.0 scales, accounting for significant variance and identifying predictors consistent with theoretical expectations. These findings provide initial yet robust psychometric support for the LPFS-BF 2.0 as a reliable assessment tool for measuring personality functioning among older adults. Consequently, this measure may

be instrumental in identifying key personality features within comprehensive assessments of personality pathology

The validity of Stimulant Relapse Risk Scale was conducted in Japan by Ogai et al. (2007) as a multidimensional tool for evaluating relapse risk associated with stimulant use among individuals with a history of substance use in Japan. A sample of 100 participants (71 males, 29 females), consisting of inpatients and outpatients with a history of stimulant abuse, was recruited with informed consent. Participants completed the SRRS, along with the Visual Analogue Scale for drug craving (VAS) and the Addiction Severity Index for Japanese (ASI-J). Relapse data were collected at three-month and six-month follow-ups to evaluate the predictive validity of the SRRS. Exploratory factor analysis (EFA) identified five distinct factors of anxiety and intention to use drugs, Emotional dysregulation, compulsivity, positive expectancies and lack of negative expectancies, accounting for 48.3% of the total variance. Internal consistency was found to be adequate, with Cronbach's alpha coefficients ranging from .55 to .82 for individual subscales and .86 for the overall SRRS.

3.8.2 Reliability

Reliability of LPFS Brief 2.0 conducted in Norway at the de Viersprong by Weekers et al. (2019), in evaluating and treating adolescents and adults who personality disorders (PD), at a care center, that specializes in mental healthcare. (PDs) and involved two subsamples. The initial group of 201 participants filled out the LPFS-BF 2.0 as part of the standard requirement for admission, with data collecting occurring from April 2016 to February 2017. Clinical characteristic data was missing for 18 participants. Most participants (90.7%) met the criteria for having at least a PD, with the most prevalent being borderline PD followed by PD not otherwise specified (PD-NOS).

The other sample comprised 47 respondents who took the LPFS-BF 2.0 test at the beginning of a 3-month inpatient treatment program. Results for internal consistency of the

LPFS-BF 2.0 were high, with $\alpha = 0.82$ for the total scale for levels of self and personality functioning, and self-functioning at $\alpha = 0.79$ and Interpersonal functioning at $\alpha = 0.71$ respectively. Correlation between the sub scale of self-functioning and the sub scale of interpersonal functioning was moderate ($r = 0.44$). The LPFS-BF 2.0 indicators showed high internal consistency and good construct validity. Sensitivity to change after 3 months of treatment was high. The LPFS-BF 2.0 proved to be user-friendly, and high ability to provide fast assessment of personality pathology.

Reliability of SRRS was conducted in Iran by Yamini and Shamir (2024), to examine the psychometric properties of SRRS among Iranian populations. The study employed a correlational research design on 150 incarcerated individuals in Chenaran. Data collection used the Stimulant Relapse Risk Scale (SRRS) and the Temptation of Post-Detoxification Cravings Questionnaire (PDCTS). Findings of the study showed Internal consistency analysis demonstrated total correlation range of 0.32 and 0.70. Subsequent second order confirmatory factor analysis yielded a statistically significant factor loading ($P < 0.05$), and Cronbach's alpha values for the subscales were in the range of 0.92 to 0.95, while the overall scale yielded a reliability coefficient of 0.86. Split-half reliability analysis further confirmed high internal consistency, with scores between 0.92 and 0.96 for subscales and 0.84 for the full scale.

3.9 Data Collection Procedure

Upon successful defense of the proposal, and after securing permissions and approvals from the program leader of Tangaza university Ethics committee and NACOSTI, the researcher then obtained clearance from Program Officers in the respective rehabilitation cites. The researcher then pretested the study instruments at Hope and Care Rehabilitation Center in Ongata Rongai Sub County, Kajiado. The pre-test ascertained the suitability of the questionnaire and the reliability of the scales to measure what they were intended to measure.

Using multiple sites for data collection, the researcher planned exclusive time for each rehabilitation site for data collection and brought along a research assistant. Once the researcher was on site, they were guided by site supervisors on the suitable timings for data collection, and the site supervisors also informed the respondents about the proposed data collection process beforehand.

On the day of data collection, the site supervisor introduced the researcher to the participants, who then briefly explained what the research was about, and the purpose of the study. The researcher then stepped aside, and the assistant distributed the consent forms to the participants prior to the research session, with detailed written and verbal instructions. The participants were then granted time and space to read and sign the consent form independently, without the presence or influence of the researcher. The assistant guided as a neutral observer overseeing the process to ensure ethical compliance. Questions and clarifications were addressed beforehand during the briefing.

Participants were briefed using the information sheet provided explaining their rights and responsibilities, the confidentiality measures taken for any information shared, and their voluntary participation in the study. The information sheet also communicated clearly that refusal or withdrawal from participation at any stage of the study would carry no penalty to the participant. The participants were assured of the availability of psychological support that would possibly arise from participation in the study.

When the consent forms were properly filled, the questionnaires were then distributed. During the exercise of filling in the questionnaires, the observer monitored any signs of distress expressed. To mitigate this, the participants were informed of their right to skip any question they felt uncomfortable responding or terminate participation at any time. Should the study questions cause any potential emotional discomfort triggered by questions about the

participant's personal experiences, the researcher had made prior arrangements with the clinical teams in respective rehabs for provision of debriefing and psychological support to the participants if needed.

Once the questionnaires were duly filled, and the data collection exercise was concluded, the questionnaires were collected for safekeeping by the principal researcher. The data collected was anonymized by assigning numerical codes to the participants. Identifying information was stored separately and any access restricted to the principal researcher to ensure further confidentiality. The anonymized data was then used for data analysis. Once the study was concluded, a copy of the findings would be distributed to all participating rehabilitation centers.

3.10 Data Analysis

The current data collection yielded quantitative data, and the researcher employed descriptive as well as inferential statistical processes in the analysis. Table 2 further illustrated the detailed data analysis.

Table 2*: Data Analysis*

Data analysis of:	Variable type	Purpose of the test	Type of the test
Objective One	One scale	To measure the levels of personality functioning	Descriptive statistical score
Objective Two	One scale	To measure the levels of relapse risk	Descriptive statistical score
Objective Three	Two Scales	Test relationship between personality functioning and relapse risk	Pearson's Correlation Coefficient
Objective four	Categorical scale and one scale	Demographic characteristics of age, gender, marital status and admission criteria and relapse risk	t-test, One Way ANOVA

Source: Researcher (2025)

According to the Table above, the data collected in the current study was presented in percentages and frequencies. Regarding the study's two first objectives on the degree of personality functioning and relapse risk, the levels were obtained using descriptive statistical scores (percentages, mean, average and total scores), bearing in mind the criteria of interpretation of the scoring that each scale had. The third objective used the bivariate analysis which determined the correlation between personality functioning and relapse risk using the Pearson correlation coefficient. The data for objective four was analyzed using t-test and One Way ANOVA. The SPSS IBM Statistics 25 Version, through its variable and data view, was used to help in the interpretation of the data using percentages, frequencies and averages by way of using tables, figures and graphs.

3.11 Ethical Considerations

Research requires that studies are conducted in an ethical manner, putting into consideration the rights, values and expectations of all participants. Once the researcher defended the proposal, the researcher approached Tangaza University Research Ethics Committee (TUREC) and proceeded to process other ethics documents needed. When the TUREC permit was granted, the researcher then proceeded to NACOSTI to seek for a permit to move to the field for data collection. After being granted the second permit, the researcher then proceeded to the administrators of the rehabilitation centers who guided the researcher and granted access to the participants.

The researcher took note of the situational vulnerability of the participants, and therefore to avoid imposing herself on the participants, the researcher observed a researcher-participant relationship and employed a research assistant to support the data collection process. At the data collection sites, the researcher met and explained briefly to the participants what the research was all about, and what its purpose was. The participants were briefed using the information sheet explaining to them their rights and responsibilities. The participants were also informed of all confidentiality measures to be taken by the researcher and the team, and they were guided to fill in the questionnaires anonymously to minimize exposure and protect privacy by not writing their names or any identifying marker.

Consent forms were provided including detailed written and verbal instructions. Secondly, the participants were not required to include their names, and this was to keep the participants' identity anonymous. Participation was voluntary, and no one was forced to participate. Participants were informed that refusal to participate or withdraw from study at any stage would not attract any penalty. Participants were informed that there would be no monetary gain, and that their participation was out of their own free will. The participants received a free debriefing session after participation to address any concerns of emotional discomfort caused

by the study exercise. Questions or clarifications were addressed beforehand during the briefing and not while participants are actively deciding whether to participate in the data collection or not. All participants were then given time and space to read and sign the form independently, without the presence or influence of the researcher. Instead, the research assistant and a neutral observer were responsible for overseeing the process to ensure ethical compliance.

Regarding any psychological risks, the study acknowledged there could be potential discomfort triggered by questions about personal experiences or emotional regulation. Such risks were highlighted to the participants such as the possibility of triggering unhealed memories from their past. To mitigate this, participants were informed of their right to skip any question they may find difficulty responding to, or they may terminate participation at any time. Psychological intervention and debriefing were provided for support if needed, and further referral to a counselor was available free of charge, if the participants needed further support at no cost.

Coding and anonymization of the accrued data was very crucial, and participants were guided not to inscribe their names on the questionnaire. Neither the researcher nor the assistant was to share the data of another participant to avoid bias in responding to the questionnaire. Numeric codes were assigned to participants and not actual names to identify the participants. All identifying information was stored separately in encrypted files only accessed by the principal investigator. The collected data was presented with sincerity and objectivity without manipulation. Thirdly, the participants were assured and informed that all collected data would be used for the purpose of research only and will only be presented in aggregated form and not for individual findings. The research was carried out in a safe environment, for both the participants and for the researcher, and the researcher put effort into ensuring no respondent was put in any legal, physical or psychological danger, during the data collection process.

On the other hand, the researcher ensured all material that the researcher cited in this study was appropriately referenced. The researcher also submitted their work for plagiarism as per academic requirement and compliance. All the data generated out of this study was coded for privacy and anonymity, stored safely and easily accessible only to the principal researcher for reference during the research period. On the other hand, all raw data would not be destroyed until after a period of one year and only after the submission of the work. This is because the researcher may want to go back and refer to something or maybe need to check the authenticity of the study findings.

Lastly, the findings were insightful for the researcher, but also for the recovery centers and the researcher would share free copies of the findings with the administrators of the centers for knowledge and recommendations.

3:12 Summary of The Chapter.

This chapter presented research design, the location of the study, and also included the target population of the study. The chapter also highlighted the sampling design of the study, the sampling frame, techniques and sample size determination. The chapter included the research instruments used. Data collection procedures as well as ethical considerations of the study. The study then proceeded to chapter three.

CHAPTER FOUR

RESULTS

4.1 Introduction

This chapter presents the findings of the study based on the objectives. The study had had four objectives which were: firstly to examine levels of personality functioning, secondly, to assess the level of relapse risk, thirdly, to establish the relationship between personality functioning and relapse risk and finally, to investigate the demographic characteristics of age, gender, marital status and admission criteria among substance use addicts in Langata Sub County, Nairobi County, Kenya. Before presenting the findings of the in the order of the objectives, the study presents the response rate, reliability of the instruments used in the study and the demographic of the participants.

4.2 Response Rate

This section presents the return rate of the questionnaires given to the respondents. The questionnaires were given at once, and after respondents answered, the questionnaires were returned and counted to find out how many were returned. The analysis of the completed questionnaires was tabulated as shown in Table 3.

Table 3: Response Rate

Sample size	Distributed	Returned	Invalid	Valid	Percentage (%)
All Students	144	125	0	125	86.8

In the current investigation, the sample size was determined to be (N = 144). After being distributed, only 125 complete questionnaires were returned due to the fact that some participants declined to participate in the data collection exercise, while others were found to be illiterate and therefore could not read and write, and one participant was found to be underage at 17 years and therefore disqualified since there was no parental consent. From the returned 125, only 8 questionnaires had missing entries, which were replaced using SPSS

analysis, and hence 125 were considered valid for overall data analysis. Therefore, the response rate was 86.8%.

4.3 The Reliability of the Scales

In this study, there were two variables considered, which were measured on two independent and standardized scales: the Personality Functioning Scale (LPFS-BF 2.0) was used to measure personality functioning. The tool was used to measure the levels of personality functioning, the first variable in the current study and Stimulant Relapse Risk Scale (SRRS) was used to measure stimulant relapse risk. Therefore, the inter-rater reliability carried out on the two scales generated results that were summarized and presented in Table 4.

Table 4: Reliability of the Instruments of Measure

No.	Scale	Items	Cronbach's Alpha	Skewness	Kurtosis
1	LPFS	12	0.891	-0.484	-0.501
2	SRRS	35	0.938	-0.005	-0.438

Table 4 shows the Cronbach's which were: LPFS BR 2.0, (α) = 0.891 and SRRS, (α) = 0.938. Since the results were above the alpha figure of 0.7, the two instruments showed internal consistency and therefore were good to be used among participants in Langata sub county, Nairobi, Kenya. Furthermore, the Skewness and Kurtosis were used to check the normality of the distribution of the study data. In principle, when Skewness is between -0.5 and 0.5, the data are said to be symmetrical, and if the Kurtosis is close to 0, then a normal distribution is often assumed (mesokurtic) (Hatem et al., 2022). According to results in table 4, the Skewness and Kurtosis of LPFS-BF fell within the stated range, which confirmed that the data of both scales were of normal distribution. The histogram was used to ascertain the way the distribution was done for the two variables, and the illustration was shown in Figures 2 and 3, respectively.

Figure 2*: Distribution of Personality Functioning*

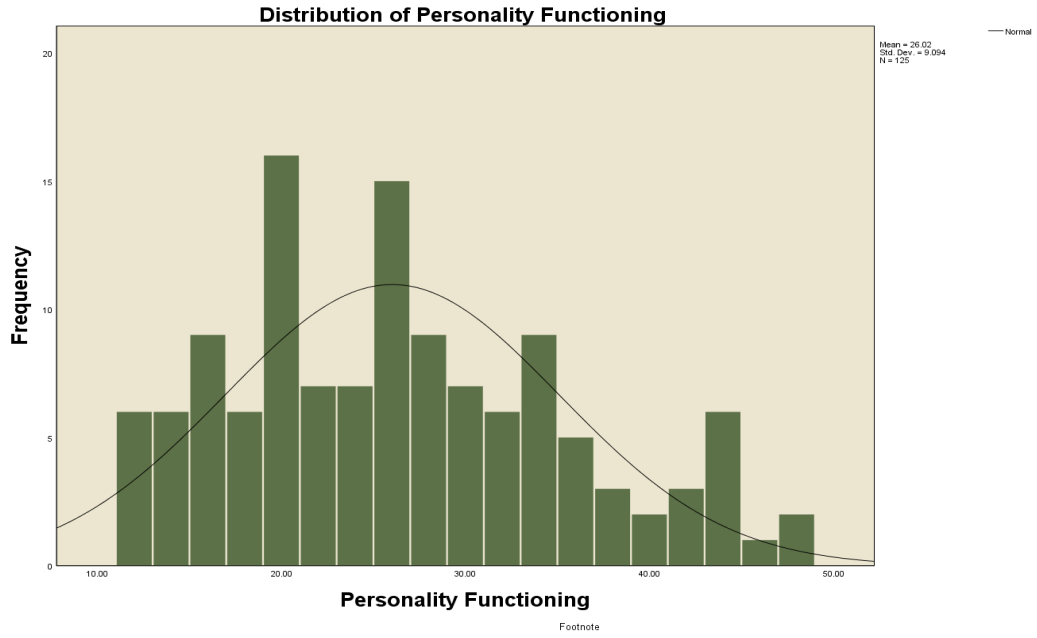
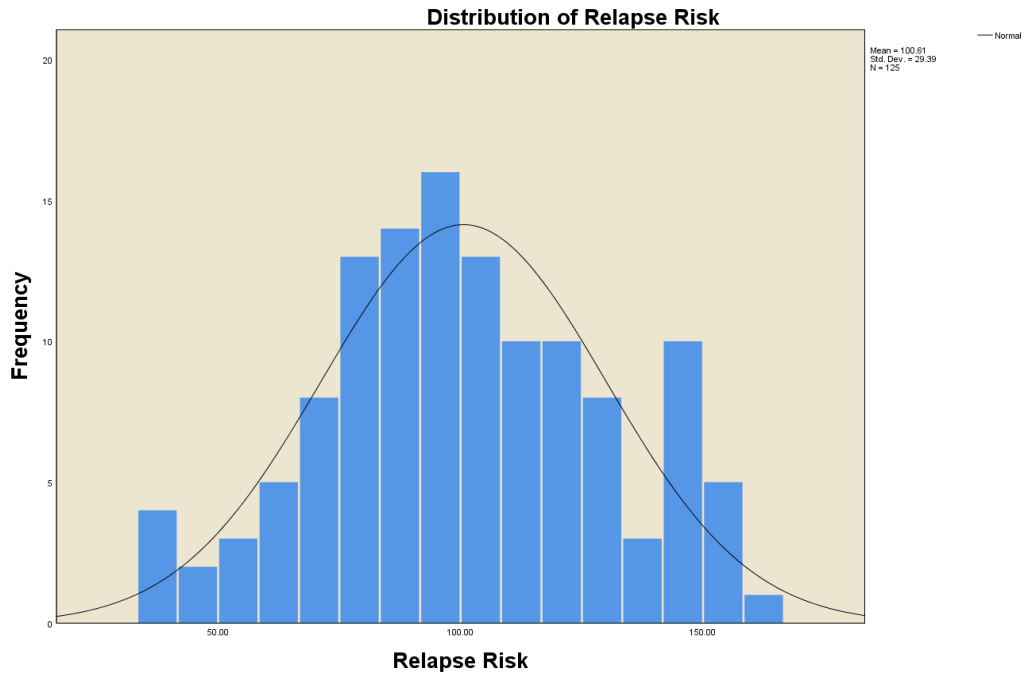


Figure 3*: Distribution of Relapse Risk*



The two histograms in Figure 2and Figure 3 ascertained the data distribution for both variables, personality functioning and relapse risk and confirmed that the data were normally distributed and not even skewed to any side, rendering the data distribution symmetrical. Therefore, this gave confidence and validated the reliability of the research tools and thus prompted permission to go ahead with further data analysis of the study.

4.4 Demographic Details of Participants

The researcher used the descriptive method to analyze the four demographic variables generated from the demographic profiles of the participants. The analysis was carried out on the four variables: age, gender, marital status and admission criteria. Thus, the social demographic characteristics were summarized and presented accordingly in Table 5.

Table 5: Social Demographics of Participants

Variables	Frequency	Percentage
	Age	
18-40	108	86.4
41-64	14	11.2
Above 65	3	2.4
	Gender	
Male	104	83.2
Female	21	16.8
	Marital Status	
Single	82	65.6
Married	30	24
Divorced	13	10.4
	Admission	
Voluntary	67	53.6
Involuntary	58	46.4

The results in Table 5, in regard to the age distribution, data showed that the frequency of the respondents aged 18 - 40 years was higher at (n = 108) 86.4% as opposed to 41 - 64 years at (n = 14) 11.2% and above 65 years at (n = 3) 2.4%. Regarding classification of the Gender, the male participants were more, 104 (83.2%), followed by female,21 (16.8%). Concerning marital status, the data showed that 65.6% (*n* = 82) were single and 24 % (*n* = 30) were married, and 10.4% (*n* = 13) were divorced. About admission, 53.6% (*n* = 67) voluntarily went to a rehabilitation center as opposed to 46.4 (*n* = 58) who went there involuntarily.

4.5 Levels of Personality functioning among substance use addicts in Langata Sub County, Nairobi Kenya

The first objective was to find out the levels of personality functioning among substance use addicts in Langata Sub-County, Nairobi, Kenya. The descriptive statistics that considered the frequencies, percentages and ranges were applied, and the levels of personality functioning generated were presented in Table 6.

Table 6: Levels of Personality Functioning

Levels	Range	Frequency	Percentage
Healthy	1 - 25	72	57.6
Mild or Subclinical	26 - 32	19	15.2
Clinically Dysfunctional and Moderate	31 - 35	15	12
Severely Dysfunctional	36 - 40	7	5.6
Extremely Dysfunctional	41 - 48	12	9.6
Total		125	100

Table 6 presents the levels of personality functioning among substance use addicts of Langata Sub-County, Nairobi, Kenya. Following the criteria of scoring of the developers of the scale, the data interpretation showed that there were 72 (57.6%) respondents who scored between 1 to 26, and these belong to the category of healthy personality. There were 19 (15.2%) respondents who scored between 26 to 32; these belong to the category of mild or subclinical level of personality functioning. 15 respondents (12%) fell into the category of clinically dysfunctional and moderate with a score between 31 and 35, while 7 (5.6%) were severely dysfunctional and 12 (9.6%) were extremely dysfunctional. According to this study, the vast majority of respondents (n = 72) indicated healthy personality functioning.

4.6 Levels of Stimulant Relapse Risk among substance use addicts in Langata Sub County, Nairobi Kenya

The descriptive analysis was employed to find out the levels of stimulant relapse risk following the criteria for interpretation. The maximum score for the entire test was 175, while the lowest possible score was 35. The interpretation of levels of stimulant relapse risk was carried out according to the proposed criteria of the developers of the instrument, and as such, it was evaluated at a low level of relapse risk (1 – 35), the moderate level of relapse risk (36 - 105) and the high-level of relapse risk (106 - 175). The results were presented in Table 7.

Table 7: Levels of Stimulant Relapse Risk

	Range	Frequency	Percentage
Low level of Stimulant Relapse Risk	1 – 35	3	2.4
Moderate level of Stimulant Relapse Risk	36 – 105	71	56.8
High level of Stimulant Relapse Risk	106 – 175	51	40.8
		125	100

Table 7 presents the levels of stimulant relapse risk among substance use addicts of Langata Sub-County, Nairobi, Kenya. Following the criteria of scoring of the developers of the scale, the data interpretation showed that there were 3 (2.4%) respondents who scored between 1 to 55, and these are in the category of low level of stimulant relapse risk. There were 71 (56.8%) respondents who scored between 36 to 105, and these are the category of moderate level of stimulant relapse. There were 51(40.8%) respondents who scored between 106 and175, and these are the category of high level of stimulant relapse risk. According to this study, a significant proportion of respondents (n = 71) expressed a moderate level of stimulant relapse risk.

4.7 Relationship between Personality Functioning and Relapse Risk among substance use addicts in Langata Sub County, Nairobi Kenya

Pearson's Correlation Analysis was employed to analyze objective three, which sought to establish the relationship between personality functioning and relapse risk. The outcome of Pearson’s correlation coefficient summarized and presented in a Scatter plot in Figure 4.

Figure 4: Correlation between Personality Functioning and Relapse Risk

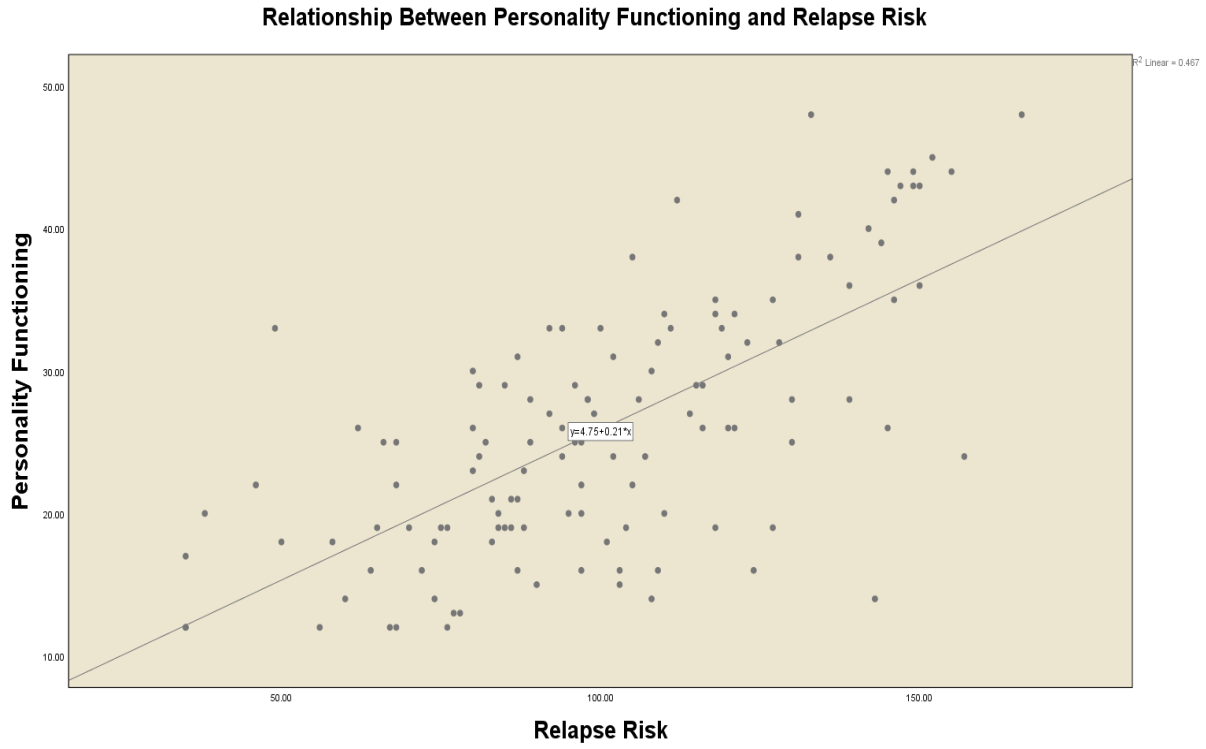


Figure 4 showed that the data were scattered and posed a low challenge in exactly determining the relationship between personality functioning and relapse risk. The scatter plot alone could not establish whether the two variables were positively or negatively correlated, nor establish the significance of that relationship. Pearson's Correlation Coefficient was computed, and statistical data generated by that test were presented in Table 8.

Table 8: Correlation between Personality Functioning and Relapse Risk

		Personality Functioning	Relapse Risk
Personality Functioning	Pearson Correlation	1	.683**
	Sig. (2-tailed)		.000
	N	125	125
Relapse Risk	Pearson Correlation	.683**	1
	Sig. (2-tailed)	1.7184E-18	
	N	125	125

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

Table 8 showed that, in terms of strength, there existed strong positive relationship (n = 125, r = .683, p = .000) between personality functioning and stimulant relapse risk of substance use individuals in treatment centers in Langata sub-County, Nairobi, Kenya. These results showed that the intention to embrace personality functioning among respondents correlated strongly with their stimulant relapse risk. The additional information attached to Table 8 explained that the Correlation was significant and was at the 0.01 level (2-tailed). Since p = .000 is smaller than p = .01, a strong positive correlation (r = .683, equivalent to r = .70) was significant because it was based only on a 0.0 % chance. The results indicate that the changes in personality functioning bring about changes as well as stimulant relapse risk.

4.7 Demographic Characteristics on Relapse Risk among substance use addicts in Langata sub county, Nairobi Kenya.

To examine whether there was a significance difference between demographic characteristics (age, gender, marital and admission criteria), and relapse risk, the t-test and One-Way ANOVA were conducted, and results were presented in Tables 9 and 10, respectively.

Table 9*: Results of the T-Test on Gender and Relapse risk*

Group Statistics

Gender	N	Mean	Std. Deviation	Std. Error Mean

Relapse Risk	Male	104	98.1058	28.24062	2.76922
	Female	21	113.0000	32.46999	7.08553

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Relapse risk	Equal variances assumed	1.566	0.213	-2.149	123	0.034	-14.89423	6.93079	-28.61331	-1.17515
	Equal variances not assumed.			-1.958	26.457	0.061	-14.89423	7.60745	-30.51845	0.72999

The descriptive statistics emerging from the results suggested that there was a significance difference in the scores for relapse risk between Male participants (M = 98.11, SD = 28.24) and Female participants (M = 113.00, SD = 32.47) at conditions, t (123) =. -2.21, p = .03).

Table 10*: Results of t-test on Admission Criteria and Relapse Risk*

Group Statistics

Admission		N	Mean	Std. Deviation	Std. Error Mean
Relapse Risk	Voluntary	67	98.2239	26.48603	3.23578
	Involuntary	58	103.3621	32.44088	4.25970

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Relapse Risk	Equal variances assumed	3.837	0.052	-0.975	123	0.332	-5.13819	5.27219	-15.57	5.10
	Equal variances not assumed.			-0.961	110.100	0.339	-5.13819	5.34933	-15.74	5.46

The descriptive statistics emerging from the results suggested that there was a significance difference in the scores for relapse risk between Voluntary admission participants

(M = 98.22, SD = 26.49) and Involuntary admission participants (M = 103.36, SD = 32.44) at conditions t (123) =.052, p = .033).

The study further examined the significance of relapse risk and age by using One-Way ANOVA analysis. The results were summarized and presented in Table 11.

Table 11*: One Way ANOVA Results on Age and Relapse Risk*

ANOVA					
Relapse Risk					
	Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Between Groups	1454.780	2	727.390	0.840	0.434
Within Groups	105653.012	122	866.008		
Total	107107.792	124			

Table 11 showed that the significance p-value of relapse risk was p = .434. Since p. ≥ .05, there was a significant difference in means between age and relapse risk of the substance use addicts of Langata, Nairobi, Kenya. Therefore, the statistical difference between group means as determined by one-way ANOVA was [F (2,122) = .840, p = .434].

Lastly, the study also examined the significance between relapse risk and marital status by using One-Way ANOVA analysis. The results were summarized and presented in Table 12.

Table 12*: Results of One Way ANOVA on Marital Status and Relapse Risk*

ANOVA					
Relapse Risk					
	Sum of Squares	**Df**	**Mean Square**	**F**	**Sig.**

Between Groups	7311.393	2	3655.696	4.469	0.013
Within Groups	99796.399	122	818.003		
Total	107107.792	124			

Table 12 showed that the significance p-value of relapse risk was p = .013. Since p. ≥ .05, there was a significance difference in means between marital status and relapse risk of the substance use addicts of Langata, Nairobi, Kenya. Therefore, the statistical difference between group means as determined by one-way ANOVA was [F (2,122) = .4.469, p = .013].

4.8 Chapter Summary

This chapter presented the findings of the study by first looking at the response rate and showing the manner of the distribution of the data by subjecting the data to Skewness and Kurtosis analysis. The Cronbach test results were used to find out the reliability of the two scales used in the study, and then the presentation of the demographic details of the participants was done systematically. Further, the outcome of the research about the four objectives of the study was presented in the given Tables. The next chapter discusses the findings of the study.

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CHAPTER FIVE

DISCUSSION OF FINDINGS

5.1 Introduction

The chapter presents the discussion of the findings based on the objectives of the study. The study was guided by four objectives: To examine levels of Personality functioning among substance use addicts in Langata Sub County, Nairobi Kenya; to assess the level of relapse risk among substance use addicts in Langata Sub County, Nairobi Kenya; to establish the relationship between Personality functioning and Relapse Risk among substance use addicts in Langata Sub County, Nairobi Kenya and to investigate the demographic characteristics of age, gender, marital status and admission criteria among substance use addicts in Langata Sub County, Nairobi Kenya. The discussion of the conceptual framework was revisited based on the findings of the study. The chapter concluded with the summary.

5.2 Levels of Personality functioning among substance use addicts in Langata Sub County, Nairobi Kenya.

The results showed that there were 57.6% (72 respondents) who scored between 1 to 25, and these belong to the category of healthy personality. There were 15.2% (19 respondents) who scored between 26 to 32; these belong to the category of mild or subclinical level of personality functioning. 12% (15 respondents) fell into the category of clinically dysfunctional and moderate with a score between 31 and 35, while 5.6% (7 respondents) were severely dysfunctional and 9.6% (12 respondents) were extremely dysfunctional. According to this study, most respondents (n = 72) indicated healthy personality functioning. The findings contradicted the findings of Janczak and Soroko (2025) who conducted a cross-sectional study in Poland to investigate the level of personality functioning and maladaptive personality traits in relation to depression and anxiety symptoms with a sample size of 530 middle and older adults and the results showed that there were moderate symptoms of personality impairment at 32%,with 34.8% identity impairment being linked to predict depressive mood. In addition, the findings were not in agreement with findings of Angehrn et al. (2023), who conducted a study in Canada to investigate the level of personality functioning and protective factors of resilience

with a sample size of 380 trained and practicing police offers and findings indicated that 47% (~47% ($\beta = -0.465$) of the participants had low levels of resilience, 55% of the men had high levels of dysfunction, while women 45% had moderate levels of functioning.

The findings of this study were not in line with findings of Olagunju et al. (2022) who conducted a study to examine the relationship between alcohol and substance use disorders (ASUD) with antisocial personality disorder (ASPD) among incarcerated individuals and findings reported the prevalence rates of SUD and ASPD among the participants were 57.6% and 11.2%, respectively. Among those with SUD diagnosis, 35.2% had poly-SUD, while 22.4% had mono-SUD. The study found that ASUD and risk of relapse was more prevalent among individuals convicted of robbery and subsequently imprisoned, whereas ASPD was prevalent among those with past long-term imprisonment. Likewise, the findings of this study were not supported by the findings of Qassimi et al. (2023) who conducted a study in Morocco conducted a cross-sectional study to investigate the potential link between alexithymia (complex emotions), personality characteristics, and SUDs severity and relapse risk among 54 patients diagnosed with SUD. The results indicated a substantial association between alexithymia and SUD severity ($p = 0.033$). A total of 89% of the participants had at least one specific personality disorder. The severity scale revealed that 85% of participants had severe SUD an indicator of higher relapse risk, 13% had moderate severity disorder and moderate risk of relapse, and only 1.8% had mild disorder and low risk of relapse.

Though many studies from global and regional perspectives contradicted the findings of this study, the findings of were consistent with the findings of Mwihaki et al (2024), who conducted a study in Kiambu to identify levels of neuro-cognitive disorders (NCD) among individuals admitted in rehabilitation centers and found overall level of cognitive impairment was at 34.8%, and levels were observed for primary substances indicating alcohol at (37%), cannabis at (22%), and khat at (22%). The findings of this current study suggest a more positive

outlook on personality functioning within my sample, which may reflect cultural, contextual and methodological differences with other previous studies.

5.2 Levels of relapse risk among substance use addicts in Langata Sub County, Nairobi Kenya.

The results showed that there were 2.4% (3 respondents) who scored between 1 to 55, and these are in the category of low level of stimulant relapse risk. There were 56.8% (71 respondents) who scored between 36 to 105, and these are the category of moderate level of stimulant relapse. There were 40.8% (51 respondents) who scored between 106 and 175, and these are the category of high levels of stimulant relapse risk. According to this study, a significant proportion of respondents (n = 71) expressed a moderate level of stimulant relapse risk. The findings contradicted the findings of Sohrabpour et al. (2024), who conducted a study in Shiraz, Iran, sought to identify levels of SUD relapse with 400 participants from the treatment centers between 2021 and 2022 and findings indicated that 342 participants (85.5%) experienced previous relapses, and 172 of them (50.29%) experienced between 1 to 5 relapses. Furthermore, the findings were not in agreement with the findings of Rasmewak et al. (2020) who conducted a study in Mauritius to determine the prevalence and causation of relapse risk among male addicts over a period of six months, involving 180 male addicts admitted at a public facility and findings indicated a huge number (92%) of the respondents experienced relapse after recovery. Specifically, 29% relapsed after three months, and only 17% were abstinent between one to three years. Across the different levels, 59% were unable to maintain sobriety for more than a year.

In addition, the current findings were not supported by the findings of Kabisa et al. (2021) who conducted a study in Rwanda to examine the prevalence of relapse in substance use at the Psychotherapeutic Centre of Icyizere (IPC). Findings revealed that relapse was more

prevalent among individuals with SUD with 58% relapsing within two weeks to three months after treatment. High levels of relapse (90%) were found in consumption of a single drink post treatment. Equally, overall high score of relapse rate was at 59.9%, and 11.2% relapse for treatment period below 3 months. On the other hand, the findings were consistent with the findings of Kuyeya (2021) who conducted a study in Mombasa to evaluate the efficacy of rehabilitation programs with risk of relapse in SUD recovery and identified a relapse rate of 38.9%, with non-participation in support groups being a significant factor (OR=3.25, p=0.04). The findings were affirmed by the findings of Namukoa and Githae (2021) who conducted a study assessing the correlation between communication of spouses and relapse risk incidences in individuals undergoing SUD treatment and recovery, and its implications for treatment and the findings revealed that 37.41% of the individuals in spousal relationships experienced a relapse. The findings were also consistent with the findings of Kibet et al. (2023) who conducted a study to examine how prevalent relapse risk was among individuals with AUD in Eldoret County and findings revealed that most of the individuals with SUD, 30(78.9%), were previously in residential rehabilitation before the current admission indicating they had relapsed. These results highlight a concerning trend towards moderate to high relapse risk, underscoring the need for targeted interventions on the individuals in substance use treatment.

5.3 Relationship between Personality functioning and Relapse Risk among substance use addicts in Langata Sub County, Nairobi Kenya.

The results showed strong positive relationship (n = 125, r = .683, p = .000) between personality functioning and stimulant relapse risk of substance use individuals in treatment centers in Langata sub-County, Nairobi, Kenya. These results showed that the intention to

embrace personality functioning among respondents correlated strongly with their stimulant relapse risk. The results entail that the changes in personality functioning bring about changes as well as stimulant relapse risk. The findings were consistent with the findings of Nyamoma et al. (2024) who conducted a study in Kakamega County to establish the relationship between personality traits and efficacy of substance use disorder (SUD) among a cohort of 381 students, 108 teachers, 53 Heads of Guidance and Counseling Departments, and 12 sub-county directors. Findings demonstrated a statistically significant association between personality characteristics and the effectiveness of SUD prevention measures, as evidenced by the statistical results [F (1, 269) = 80.959, $p < .05$] and [F (1, 58), $p < .05$). Furthermore, the findings were in line with findings of Githae (2019), who conducted a study in Kiambu to examine the relationship between harmful and non-harmful criticisms as predictors of relapse risk among individuals diagnosed AUD and revealed there was a statistically significant relationship of harmful criticism ($p=0.000<0.05$) and strong predictive value ($r^2=.285$) to risk of relapse. In addition, the findings were in agreement with findings of Kinyanjui and Sum (2023), who conducted a study in Eldoret to investigate the levels of personality characteristics on substance use among 400 students, which comprised of 100 participants and found prevalence of substance use among the participants, was 41.5%, and the lifetime prevalence of alcohol use was 36%. The study found that students with higher neuroticism levels and lower levels of agreeableness are highly associated with increased substance use and relapse risk, with a p-value of ≤ 0.05 being statistically significant. The results therefore emphasize the critical role of personality functioning in influencing relapse risk, highlighting its potential as key focus in designing effective substance use treatment strategies.

5.4 Demographic variables of age, gender marital status, admission criteria and Relapse Risk among substance use addicts in Langata Sub County, Nairobi Kenya.

Results showed a significance gender and relapse risk among substance use addicts. There was a significant difference in the scores for relapse risk between Male participants (M = 98.11, SD = 28.24) and Female participants (M = 113.00, SD = 32.47) at conditions, t (123) =. -2.21, p = .03. The findings were affirmed by findings of Hoijer et al. (2021), who conducted a cross-sectional study in Finland with a sample size of 164 individuals, with 97 men and 67 women to investigate gender differences in personality and emotional problems among individuals with single use and polysubstance use. Findings showed that men had more severe personality and emotional issues than women, even after the mediation of level of education, onset of regular use and poly-substance use. Similarly, men also had high value indicators of somatic issues and emotions of anxiety and depression much higher than women. These findings may indicate that men with SUD may experience more intense personality -related challenges during rehabilitation than women showing a variance from previous findings, that women may not be more vulnerable in substance use.

Furthermore, the results were supported by the findings of Anundo (2019) who conducted a study in Nairobi County with a sample size of 149 participants to investigate the prevalence of depression among female injecting drug users (FIDUs) and the findings revealed a high prevalence of injectable drug use among women, which significantly increased their vulnerability to a persistent risk of relapse. Moreover, the results were in agreement with the findings of Ongaro et al. (2022) carried out a study in Nairobi and Kajiado with an aim of evaluating the prevalence of risky and hazardous substance use disorders (SUDs) across genders with a sample size of 120 respondents aged between 18 and 40 years and findings from the study indicated that relapse risk in alcohol was rampant across the gender divide, indicating that males had higher dependency (61%) more than females (39%). More singles had higher dependency (40%), than those in marital relationships along the marital status demographic. Use of tobacco was significantly associated with marital status (p = 0.018). The study findings

suggest that female participants may face higher relapse risk, pointing to the importance of gender-responsive approaches in substance use treatment.

The results showed that there was significance difference between age and relapse risk. The significance p-value of relapse risk was p = .434. Since p. ≥ .05, there was a significant difference in means between age and relapse risk of the substance use addicts of Langata, Nairobi, Kenya. Therefore, the statistical difference between group means as determined by one-way ANOVA was [F (2,122) = .840, p = .434]. The findings were supported by the findings of Kaithuru (2020) who conducted a study in Mombasa with a sample size of 220 individuals undergoing SUD treatment, caregivers, and counselors at three NACADA-accredited sites and findings revealed that individuals aged 30-35 years had a relatively high mean score in life skills (mean=3.9074; SD=1.04666), as did those aged 35-40 years (mean=4.0278; SD=0.68748), while recovering addicts aged 25-30 years' mean score was lower (mean=3.7719; SD=0.58850). The uptake of life skills was highly popular among most of the recovering addicts. Additionally, those aged 35-40 years scored high in adherence to treatment (mean=3.3611; SD=0.77345), whereas those aged 25-30 years scored lower in treatment adherence (mean=3.0476; SD=0.74516). The age factor suggests that older participants have a stronger inclination to sustain recovery mechanisms compared to younger participants, which may predispose younger individuals to a higher risk of relapse. Although the results indicated a difference in relapse risk across the age groups, this suggested that relapse risk may be be influenced by other factors, rather than age alone.

The descriptive statistics emerging from the results suggested that there was a significance difference in the scores for relapse risk between Voluntary (M = 98.22, SD = 26.49) and Involuntary participants (M = 103.36, SD = 32.44) at conditions t (123) =.052, p = .033. On the other hand, the results contradicted the findings of Sant Anna et al. (2020) conducted a cross-sectional study in Brazil to examine the association between relapse rates

and admission types (voluntary versus involuntary) among individuals with substance dependence and found there was no significant differences in relapse rates were observed between involuntarily admitted individuals (64%) and voluntarily admitted individuals (54%) (P = 0.683). The findings of this current study suggest that the type of admission may indeed influence relapse risk, highlighting the potential impact of personal agency in treatment outcomes.

Also, the results showed there was a significance difference between marital status and relapse risk. The results showed that the significance p-value of relapse risk was p = .013. Since p. ≥ .05, there was a significant difference in means between marital status and relapse risk of the substance use addicts of Langata, Nairobi, Kenya. Therefore, the statistical difference between group means as determined by one-way ANOVA was [F (2,122) = .4.469, p = .013]. The findings were in agreement with the findings of Blair and Menasco, in Buffalo, USA in (2016), who conducted a study to examine the relationship between marital status, substance use, and relapse risk among adults. It included data from the 2012 National Survey on Drug Use and Health (NSDUH) to analyze substance use patterns and relapse risk within a nationally representative sample comprising 14,715 adults and the findings revealed remarried individual men demonstrated significantly higher alcohol and marijuana consumption than women, reported substance use rates were 6.32 compared to 4.22 for alcohol and 0.91 compared to 0.51 for marijuana, respectively. Furthermore, never-married individuals, particularly those in early adulthood - a stage often correlated with elevated substance use-demonstrated significant levels of marijuana consumption. Approximately 11.2% of never-married men and 5.3% of never-married women reported using marijuana 20 or more times within the past month, reflecting a habitual usage pattern and increased relapse risk. The findings of this study therefore indicate that marital status may play a meaningful role in influencing relapse risk, suggesting that social

support systems and relationship dynamics should be considered in the design of more effective and personalized treatment interventions.

5.5 Suggestions for Improving the Theories of the Study

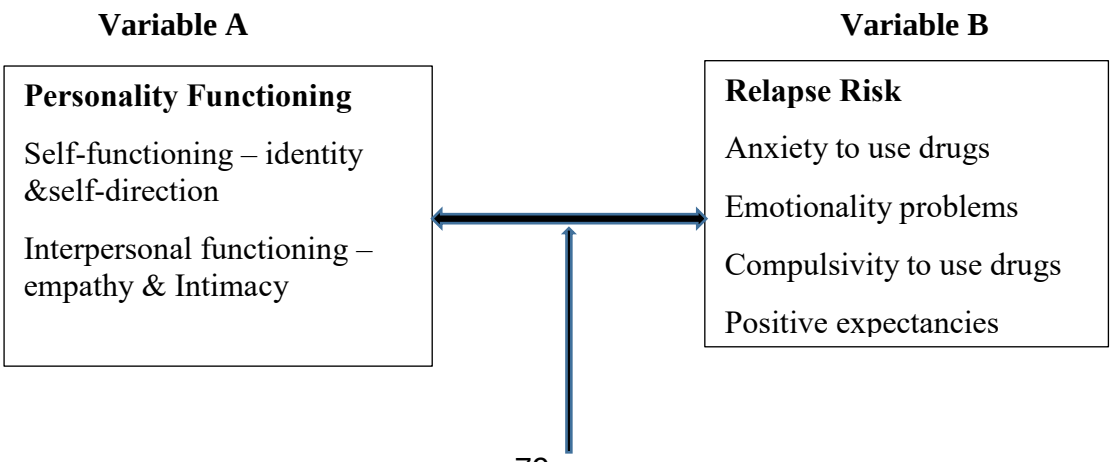
The relapse prevention theory was used in the current study. Briefly, the theory affirms that lapses and setbacks can be used to learn and recommit and should not be viewed as failure. Identifying triggers and building self-efficacy skills helps develop stronger coping to improve behavior change in addiction relapse risks. The theory stated that self-awareness and coping mechanisms help one manage high risk exposure, and that relapse is a predictable process that is influenced by behaviors and one's emotions.

In this study, a significant proportion of respondents (n = 71) expressed a moderate level of stimulant relapse risk. To improve the Relapse Prevention Theory in the context of substance use rehabilitation, the theory could be expanded to specifically integrate individual differences in personality functioning as a core component influencing relapse risk. While the theory had traditionally emphasized identifying high-risk situations and developing coping strategies, incorporating a deeper understanding of personality functioning and dysfunction levels would enhance the personalization of interventions. For example, tailoring relapse prevention plans to address specific personality dysfunctions—such as impulsivity or emotional dysregulation—was found to improve resilience against triggers. Additionally, incorporating dynamic feedback loops that continuously assessed changes in personality functioning throughout recovery would enable therapists to adjust strategies in real time, rendering relapse prevention more adaptive and effective.

According to this study, levels of personality functioning showed that most respondents (n = 72) indicated healthy personality functioning. Regarding the Interpersonal Theory, it could

be enhanced through deeper exploration and focusing on enhanced social support and bonding through increased rewarding activities, exploration and enhanced communication which was considered to be a protective factor within family and relationships. The theory could be expanded to incorporate a biopsychosocial framework that contextualizes interpersonal behaviors within broader social and cultural environments, which has proved to be especially relevant in diverse settings such as Langata sub county. Furthermore, the integration of digital or technology-assisted social support tools are likely to improve interpersonal connections, addressing isolation and social stressors that often-precipitated relapse. By emphasizing culturally sensitive and context-specific interpersonal dynamics, the theory would provide a more robust foundation for designing social interventions that support sustained recovery.

5.6 Revisited Conceptual Framework



MV (Demographics)

Age
Gender
Marital Status
Admission criteria

Source: Researcher (2025)

Based on the conceptual frame, the study found that majority of the participants had healthy functioning personality. Majority of the participants scored moderately in relapse risk. The relationship between personality functioning and relapse risk was confirmed by the findings since there was a strong correlation between Variable A and Variable B. The results also reported a significant difference between the demographic variables of age, gender, marital status and form of intake with relapse risk.

5.7 Chapter Summary

The chapter presented the discussion of the findings based on the objectives of the study. The study was guided by four objectives: To examine levels of Personality functioning among substance use addicts in Langata Sub County, Nairobi County, Kenya; to assess the level of relapse risk among substance use addicts in Langata Sub County, Nairobi County, Kenya; to establish the relationship between Personalities functioning and Relapse Risk among substance use addicts in Langata Sub County, Nairobi Kenya and to investigate the demographic characteristics of age, gender, marital status and admission criteria among substance use addicts in Langata Sub County, Nairobi County, Kenya. Finally, the discussion of the conceptual framework was revisited based on the findings of the study.

CHAPTER SIX

SUMMARY OF THE FINDINGS, CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

The chapter presents the summary of the findings, conclusion, recommendations of the study and suggestions for further study.

6.2 Summary of the Findings

6.2. 1 Levels of Personality functioning among substance use addicts in Langata Sub County.

The results showed that there were 57.6% (72 respondents) who scored between 1 to 25, and these belong to the category of healthy personality. There were 15.2% (19 respondents) who scored between 26 to 32; these belong to the category of mild or subclinical level of personality functioning. 15 respondents (12%) fell into the category clinically dysfunctional and moderate with a score between 31 and 35, while 5.6% (7 respondents) were severely dysfunctional and 9.6% (12 respondents) were extremely dysfunctional. According to this study, most respondents (n = 72) indicated healthy personality functioning.

6.2.2 Level of relapse risk among substance use addicts in Langata Sub County.

The results showed that there were 2.4% (3 respondents) who scored between 1 to 55, and these are in the category of low level of stimulant relapse risk. There were 56.8% (71 respondents) who scored between 36 to 105, and these are the category of moderate level of stimulant relapse. There were 40.8% (51 respondents) who scored between 106 and 175, and these are the category of high level of stimulant relapse risk. According to this study, a significant proportion of respondents (n = 71) expressed a moderate level of stimulant relapse risk.

6.2.3 Relationship between Personality functioning and Relapse Risk among substance use addicts in Langata Sub County, Nairobi Kenya.

The results showed strong positive relationship (n = 125, r = .683, p = .000) between personality functioning and stimulant relapse risk of substance use addicts of Langata sub-

County, Nairobi, Kenya. These results showed that the intention to embrace personality functioning among respondents correlated strongly with their stimulant relapse risk. The results entail that the changes in personality functioning bring about changes as well as stimulant relapse risk.

6.2.4 Demographic variables of age, gender marital status, admission criteria and Relapse Risk among substance use addicts in Langata Sub County, Nairobi Kenya.

Results showed that there as a significance gender and relapse risk among substance use addicts. There was a significant difference in the scores for relapse risk between Male (M = 98.11, SD = 28.24) and Female participants (M = 113.00, SD = 32.47) at conditions, t (123) =. -2.21, p = .03. The results showed that there was significance difference between age and relapse risk. The significance p-value of relapse risk was p = .434. Since p. ≥ .05, there was a significant difference in means between age and relapse risk of the substance use addicts of Langata, Nairobi, Kenya. Therefore, the statistical difference between group means as determined by one-way ANOVA was [F (2,122) = .840, p = .434]. Also, the results showed there was a significant difference between marital status and relapse risk. The results showed that the significance p-value of relapse risk was p = .013. Since p. ≥ .05, there was a significant difference in means between marital status and relapse risk of the substance use addicts of Langata, Nairobi, Kenya. Therefore, the statistical difference between group means as determined by one-way ANOVA was [F (2,122) = .4.469, p = .013]. The results showed that there was significance difference between age and relapse risk. The significance p-value of relapse risk was p = .434. Since p. ≥ .05, there was a significant difference in means between age and relapse risk of the substance use addicts of Langata, Nairobi, Kenya. Therefore, the statistical difference between group means as determined by one-way ANOVA was [F (2,122) = .840, p = .434]. The descriptive statistics emerging from the results suggested that there was

a significant difference in the scores for relapse risk between Voluntary (M = 98.22, SD = 26.49) and Involuntary participants (M = 103.36, SD = 32.44) at conditions t (123) =.052, p = .033.

6.3. Conclusion and Summary

The study concluded that majority of the participants had healthy personality functioning despite having the problem of substance use. Also, the majority of the participants scored moderately in relation to relapse risk. The study established there was a strong correlation between personality functioning and relapse risk among the substance addicts in Langata Sub-County Nairobi. In addition, the study concluded that there were significance differences between the demographic characteristics of age, gender, marital status and admission criteria on relapse risk.

6.4 Recommendations of the Study

Since the study found that majority of the participants had healthy personality functioning, the study recommends to substance addiction counselors to explore the underlying issues to addiction among substance use addicts brought to rehabilitation centers in Langata Sub-County. This is because it would be expected that people with healthy personality are likely not to have problems with substance use relapse. The addiction counselors also need to be aware of the role demographic characteristics plays in relapse risk when they are carrying out assessment and offering counseling services to substance use clients.

The study recommends rehabilitation centers in Langata Sub-County to ensure follow ups of their clients' progress through after care programs in order to reduce the chances of relapsing. The rehabilitation centers also need to provide family counseling in order to deal with family issues that could be contributing to substance abuse and also high risk of relapsing. Also, to

reduce the chances of relapse among the substance use addicts, there is a need to encourage addicts to see the importance of going through treatment without forcing them. Families also need to be encouraged to create a favorable environment that would allow substance use addicts to have lower chances of relapsing after going through treatment and counseling.

6.5 Suggestions for Further Research

The study recommends future studies to employ mixed method approach in examining the relationships between personality functioning and relapse risk among the substance use addicts. The mixed method approach will help the researcher to understand the lived experiences of substance use addicts. For instance, understanding the reason behind substance use and relapsing when individuals have healthy personality functioning. It would also help to get lived experiences on the connection between admission criteria and relapse risk.

The study also recommends a follow-up study using the same respondents to assess how they fared on after discharge, aftercare attendance and their engagement to sobriety or relapse risk levels. This would give more insights on building sustainability programs in substance use rehabilitation and treatment outcomes and therefore enable practitioners to formulate individualized treatment plans.

Also, the study recommends future researchers to examine the factors that would contribute to substance use and relapsing when individuals have well-functioning personality. In addition, researchers could evaluate the effectiveness of rehabilitation centers in addressing substance use addiction problems which can have a great influence on risk relapse. Finally, researchers can find out the role of family functioning in substance use and risk relapse among the substance use individuals.

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APPENDICES

Appendix A: Information Sheet and Informed Consent Form for Participants

RESEARCH QUESTIONNAIRE

Informed Consent Form for Participants **Tangaza University**
Title of Research: Relationship between Personality Functioning and Relapse Risk Among Substance Use Addicts in Langata Sub-County, Nairobi County.

Tangaza University College's MA Proposal in Counselling Psychology programme requires the completion of this project as a requirement.

- The study has been approved by the supervisors (contact: iysba@tangaza.org)

  This study involves no known risk to participants and contains no deception. It takes approximately 45-60 minutes to take part in the present phase of the study.

- The task requires a participant to answer a series of questions.

- All respondents are treated as strictly confidential. No participant's results will be presented individually, but only in aggregate form.

- Participation in this study is voluntary, and there is no monetary or any other kind of compensation. Withdrawal from participation in the study does not lead to any individual being penalized in any way, and all participants have the right to withdraw themselves and their data from the study at any time.

Name of the researcher: Susan Ndinda Kivuva

Position of the researcher: M.A. student in Counselling Psychology.

Address of the University College: Tangaza University, 15055 -00509, Langata South Rd, Kenya. Tel: +254 722204724

Contact/s of the Program Leader:

Signed by researcher……...**Date**……..…

Statement to be signed by the participant

I confirm that the organiser has explained fully the nature of the project and the range of activities which I am asked to undertake, and that I have received an information sheet. I confirm that I have had an adequate opportunity to ask questions about this project.

- I understand that my participation is voluntary and that I may withdraw at any time during the project, without having to give a reason

• I agree to take part in this project by participating in the interviews
Signed by participant……. **Date**…….

Section B: Demographic Details of the participants

1. Age [ ]

You are required to tick the most appropriate answer to the following question

2. Gender

   i. Male [ ]

ii. Female [ ]

3. Marital status (i) Single [ ]

(ii) Married [ ]

(iii) Divorced [ ]

4. Admission criteria (i) Voluntary [ ]

(ii) Involuntary [ ]

Appendix B: Levels of Personality Functioning Scale Brief 2.0

To what extent do these statements apply to you at this moment

Report for each of the following statements to what extent they apply to you at this moment.		Very false or Often False	Sometimes or Somewhat False	Sometimes or Somewhat True	Very true or often True
1	I often do not know who I am	1	2	3	4
2	I often think very negatively about myself	1	2	3	4
3	My emotions change without me having a grip on them	1	2	3	4
4	I have no sense of where I want to go in my life	1	2	3	4
5	I often do not understand my thoughts and feelings	1	2	3	4
6	I often make unrealistic demands on myself	1	2	3	4
7	I often have difficulty understanding the thoughts and feelings of others	1	2	3	4
8	I often find it hard to stand it when others have a different opinion	1	2	3	4

9	I often do not fully understand why my behaviour has a certain effect on others	1	2	3	4
10	My relationships and friendships never last long	1	2	3	4
11	I often feel very vulnerable when relations become more personal	1	2	3	4
12	I often do not succeed in cooperating with others in a mutually satisfactory way	1	2	3	4

Stimulant Relapse Risk Scale

Please describe your state during the past week. For each statement below, please circle one answer that best describes you. For the word (drug) that appears in the statements, think about the drug you currently abuse.

1 = Strongly disagree, 2 = Disagree, 3 = Neither agree nor disagree, 4 = Agree

5 = Strongly agree

	Circle one answer that best describes your state during the past week	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1.	The feeling I used to have while using the drug sometimes comes back	1	2	3	4	5
2	There are times I want to use the drug	1	2	3	4	5

3	I feel a constant need to put something in my mouth	1	2	3	4	5
4	I can stop using the drug by myself	1	2	3	4	5
5	I am annoyed by words from others	1	2	3	4	5
6	I am anxious about reusing the drug	1	2	3	4	5
7	I am irritated	1	2	3	4	5
8	I would do almost anything to use the drug	1	2	3	4	5
9	I feel easier than before	1	2	3	4	5
10	I am not motivated to do anything	1	2	3	4	5
11	I would be fine without the drug	1	2	3	4	5
12	Thinking about my family, I can no longer use the drug	1	2	3	4	5
13	I have already recovered from drug abuse	1	2	3	4	5
14	I am afraid of hallucinations due to drug use	1	2	3	4	5
15	I am confident that I would not use the drug again	1	2	3	4	5
16	I feel lonely	1	2	3	4	5
17	I would not be able to control myself if I used the drug	1	2	3	4	5
18	If someone held the drug under my nose, I would not be able to refuse it	1	2	3	4	5
19	I am anxious about my future	1	2	3	4	5
20	I would use the drug if I were alone	1	2	3	4	5
21	If I use the drug, it would badly influence my study/work	1	2	3	4	5
22	If my friend gives me the drug, I would use it even in the hospital	1	2	3	4	5
23	I cannot control my feelings	1	2	3	4	5

24	If the drug were placed in front of me, I would use it	1	2	3	4	5
25	I feel tired due to impatience	1	2	3	4	5
26	I think I am an addict	1	2	3	4	5
27	If I have a large sum of money, I want to buy drugs	1	2	3	4	5
28	I would do anything to get money for the drug	1	2	3	4	5
29	If I use the drug, I would be less nervous	1	2	3	4	5
30	If I use the drug, I will feel everything is going well	1	2	3	4	5
31	I want the drug even if I have to steal	1	2	3	4	5
32	If I use the drug, I will feel invigorated	1	2	3	4	5
33	I will use the drug shortly	1	2	3	4	5
34	I want to obtain the drug even if I work illegally	1	2	3	4	5
35	Even though I know I will be arrested, I would use the drug	1	2	3	4	5

Appendix C: Authorization

LPFS-BF2.0

Susan Ndinda Kivuva <ys79000472023@tangaza.ac.ke>
to laura.weekers@deviersprong.nl

Dear Laura

My name is Susan Ndinda Kivuva, a student of Masters in Counseling Psychology at Tangaza university , Nairobi Kenya.

I am currently undertaking research on the Relationship between Personality Functioning and Relapse Risk among Substance Use Addicts.

I wish to request for a copy of The Level of Personality Functioning Scale Brief 2.0 as well as your permission to use in my research project.

I believe the tool will greatly enhance the study outcomes.

Looking forward to your response.

Kind regards.

Laura Weekers
to me

Dear Susan,

You have our permission to use the scale in research. Attached you'll find the questionnaire and scoring instructions.
Good luck with your research!

Kind regards,
Laura Weekers

de viersprong
specialist in persoonlijkheid, gedrag en gezin

SRRS Scale

Do you consider using the SRRS?

- You are free to use the SRRS without permission from the developer (Tokyo Metropolitan Institute of Medical Science) in case of intended purpose for academic, clinical setting, and research.
- However, please refrain from commercial use.
- You can use the following link to download the file of the SRRS.
- Please cite the following reference in conference presentations or articles. The results of standardization of the SRRS are described in the following article.

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Development and validation of Stimulant Relapse Risk Scale for drug abusers in Japan.
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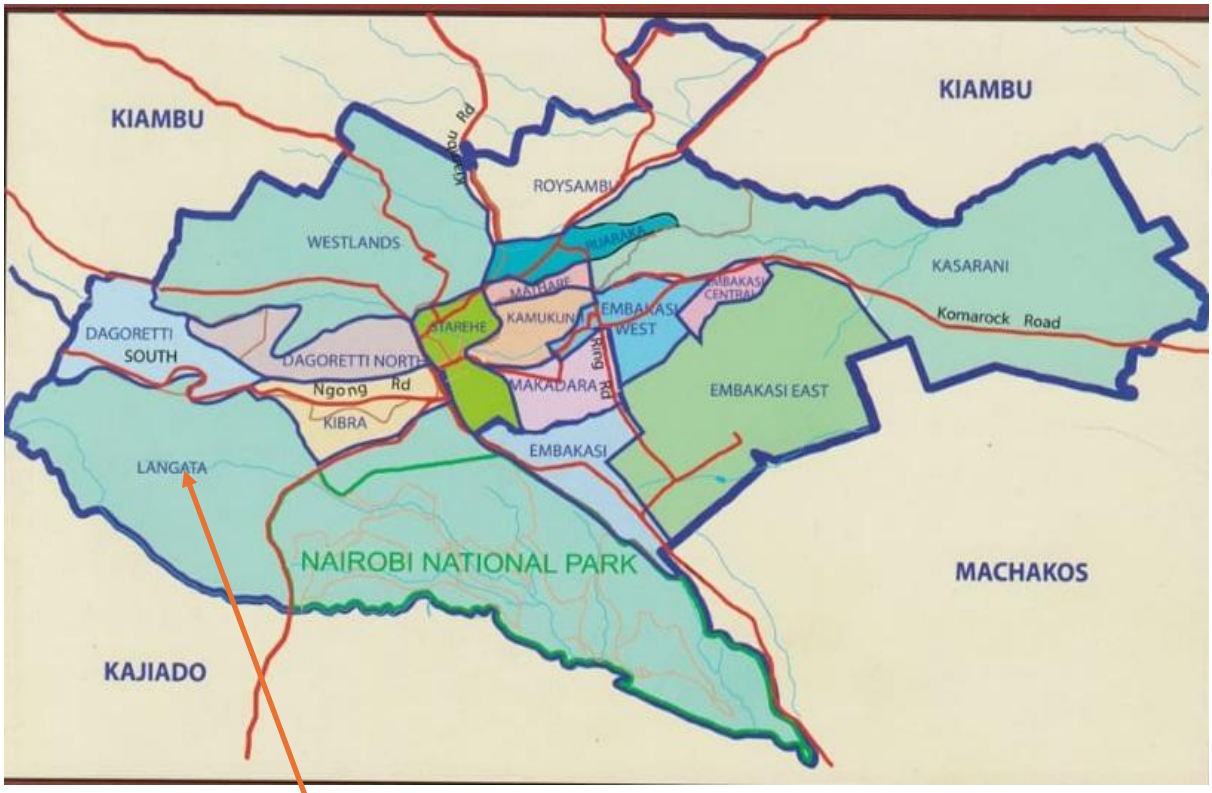
Appendix D: Scoring

The LPFS provides a set of 12 items, divided into two higher-order domains, which are self-functioning (identity and self-direction and interpersonal functioning (empathy and intimacy). Respondents are required to rate the 12 items on the questionnaire on a 4-point Likert scale from 1 (completely untrue), 2 (Untrue), 3 (True) and 4 (completely true). In scoring LPFS-BF 2.0, both the sum and the mean scores are calculated, with a maximum of 25% missing allowed for each scale. Missing items can be replaced with the mean score. Total scores under 26 are considered healthy, scores between 26 and 31 are considered mild or subclinical, scores of 31 - 35 and above are considered clinically dysfunctional and moderate, while those between 36 – 40 are considered severely dysfunctional and 40 – 48 the scores are extremely dysfunctional.

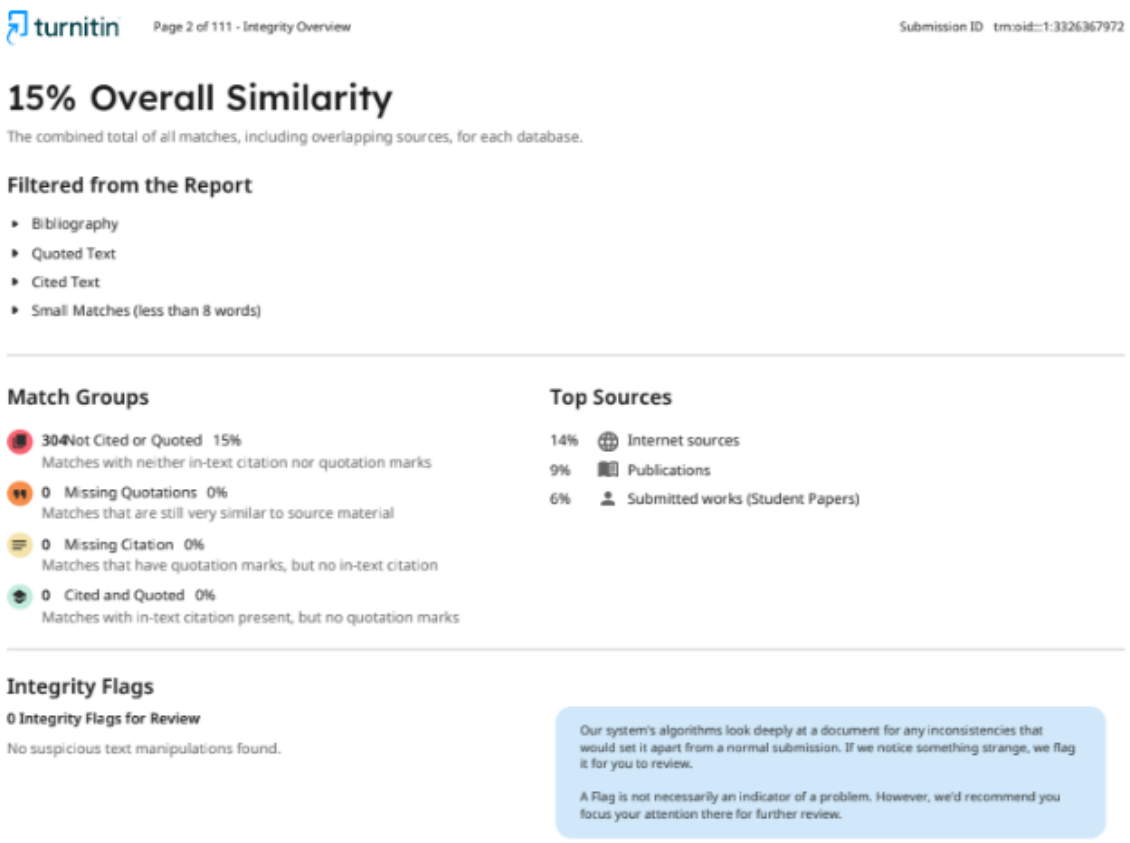
The SRRS self-rating scale is used to measure the risk of substance reuse in the 5 dimensions, namely: - Stimulus-induced vulnerability, emotionality problems, compulsivity for alcohol, lack of negative expectancy of alcohol and positive expectancy of alcohol. The SRRS includes 5 items to measure insight into mental condition. The Likert scale has indicators, 1 – 5, with 1= (strongly disagree),2 = (disagree), 3 = (Neither agree nor disagree), 4 = (Agree), and 5 = (Strongly agree). The 35-item scores are added up for the numbers marked to give a total score. The lowest total a person can score is 35, meaning the respondent disagreed with each of the statements, and the highest is 175, which means the respondent strongly agreed with all the statements in the questionnaire. The score is evaluated as follows: 1 – 35 (low score), 36 – 105 (moderate score) and 106 – 175 (High score), indicating high risk of relapse.

Appendix E: Map of Langata Sub-County, Nairobi



Research Area (Langata Sub-County)

Appendix F: Plagiarism Report



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APPENDIX G: Nacosti Permit

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