INFLUENCE OF ADVERSE CHILDHOOD EXPERIENCES ON ALCOHOL AND DRUG ABUSE AMONG CLIENTS IN SELECTED REHABILIATTION CENTRES IN KIAMBU COUNTY, KENYA

MAURIFIXITEN KAMAU NJURU

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Declaration

This thesis is my original work and has not been presented for award of degree or any other award in any other University.

Signature_____Date_____

MAURIFIXTEN.K. NJURU MACP/01/18768

This thesis has been submitted for review with our approval as university supervisors.

Signature_____ Date_____

Prof. Margaret Mwenje, Phd

Department of Psychology

Pan Africa Christian University

Signature_____Date:_____

Dr.. Perminus Githui, Phd,

Department of education Taita Taveta university

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Dedication

This thesis is dedicated to my wife for her encouragement to pursue academic excellence. I want to acknowledge my parents and siblings also, who have encouraged and supported me throughout studies. May the Lord bless you for your genuine encouragement, that I so needed even as I trusted God to see my vision and dream come to true.

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Abstract

The purpose of this study was to establish the influence of Adverse Childhood Experience (ACEs) on alcohol and drug abuse among clients in selected rehabilitation centers in Kiambu County Kenya. The objectives were: to find out the prevalence of adverse childhood experiences among ADA (alcohol and drugs) clients in selected rehabilitation centers in Kiambu County; to determine the influence of physical abuse during childhood on alcohol and drug abuse; to evaluate the influence of emotional neglect during childhood on alcohol and drug abuse; to establish the influence of sexual abuse during childhood on alcohol and drug abuse; and to find out the influence of parental separation during childhood on alcohol and drug abuse among clients; and finally, to find out sustainable measurers that would help mitigate the prevalence of ACEs among clients in selected rehabilitation centers in Kiambu County, Kenya. A sample size of 181 clients was selected using Krejcie and Morgan sampling formula (1970) from a total population of 355 clients in the 13 registered rehabilitation centers in Kiambu County. Purposive sampling technique was used to select 5 Lead Counselors and 5 Psychiatric Physicians in the five selected rehabilitation centers in Kiambu County. The Attachment Theory and the Psychoanalytic Social Theory formed theoretical framework for the study. The study used a descriptive survey research design. Method for data collection included: face-to-face interviews and structured-questionnaires such as adverse childhood experience questionnaire (ACE-Q). The ACE-Q questionnaire has internal consistency of Cronbach's alpha of 0.7. The study adhered to content validity that aligned with the objectives of the study. The collected data was analyzed using two approaches; quantitative data which was analyzed using descriptive and inferential statistics through the aid of SPSS software Version 26.0, while qualitative data was analyzed thematically. The researcher adhered to ethical consideration before embarking on the research such as obtaining informed consent from participants. The results of the study indicated that physical abuse, emotional neglect, sexual abuse and parental separation/divorce correlated positively with alcohol and drug abuse at ($r=0.458$, $p<0.001$; $r=0.696$, $p<0.001$; $r=0.477$, $p<0.001$ and $r=0.627$, $p<0.001$ respectively). Moreover, the study established that 34.6% of ADA among clients in selected rehabilitation centers may be attributable to ACEs. The implication is thus ACEs are potent factors that are precursor to alcohol and drug abuse. Therefore, this study recommends an intense awareness of ACEs as a potent cause of ADA. Moreover, counselors in rehabilitation centers be equipped with skills of addressing ACEs. Further studies to be done on the remaining components of ACEs to establish their effects on ADA among clients in rehabilitation centers in Kiambu County, Kenya. The findings of this study may be of benefit to ADA addicts, families of addicts, psychologists, parents and teachers among others.

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Abbreviations and Acronyms

ACEs:	Adverse Childhood Experiences
ACE-Q:	Adverse Childhood Experiences Questionnaire
ADA:	Alcohol and Drug Abuse
CADP:	County Annual Development Plan
CDCP:	Center for Diseases Control and Prevention
CSA:	Childhood Sexual Abuse
DALYs:	Disability – Adjusted Life Years.
GBD:	Global Burden of Disease
IPV:	Intimate Partner Violence
IWM:	Internal Working Model
LMICs:	Low- and Middle-Income Countries
MNTRH:	Mathari National Teaching and Referral Hospital
NACADA:	National Campaign Against Drug Abuse
NCDs:	Non- Communicable Diseases
NIDA:	National Institute on Drug Abuse
NIAAA:	National Institute on Alcohol Abuse and Alcoholism
NSDUH:	National Survey on Drugs Use and Health
PTSD:	Posttraumatic Stress Disorder
SUD:	Substance Use Disorder
UNODC:	United Nations Office on Crime and Drugs
UNICEF:	United Nations Children Education Fund
WHO:	World Health Organization

Operational Definition of Terms

Adverse Childhood experiences: Refers to plethora of negative events occurring in childhood phase (Petruccelli et al., 2019). In this study, adverse childhood experiences referred to four constructs; sexual abuse, physical abuse, emotional neglect and parental separation risk factors that may contribute to ADA.

***Alcohol*:** A psychoactive substance with dependence –producing properties and it has acceptance of usage from diverse cultures for centuries [World Health Organization] (WHO, 2014). In this study, alcohol referred to a coping mechanism as a result of ACEs.

***Drug abuse*:** Use of specific chemicals with the intention of producing pleasure in the brain (Beconi et al., 2015). In this study, it referred to a maladaptive way of dealing with ACEs.

Clients: A recipient of interventions or treatment that takes place with a counseling milieu (Colman, 2015). In this study, clients refer to selected persons in rehabilitation centers with issues of ADA.

***Counselor*:** This refers to A person that has acquired professional training from various disciplines such as psychology or counseling and is deployed to work in such areas as rehabilitation, relationships or vocational counselling (American Psychological Association, 2015). In this study, counselor referred to a professionally trained individuals who works with selected clients in offering addiction counselling services within the identified rehabilitation centers in Kiambu County.

Divorce/ Separation: is defined as the legal dissolution of a socially and legally recognized marital relationship that alters the obligations and privileges of the two persons involved (Yadav, & Narayan, 2024). In this study divorce/separation was viewed as an Adverse Childhood Experience (ACEs). Adverse childhood experiences

are “traumatic events that occur throughout a child's lifespan between the ages of 0-17 years” (CDC, 2020).

Psychiatrists: This refers to A physician that has acquired professional training majoring in areas such as study of mental illness, diagnosis, treatment among others. (American Psychological Association, 2015). In this study, psychiatrist refers to professionally trained physicians working within rehabilitation centers in helping the clients with the issues of ADA.

Rehabilitation*:* This encompasses interventions that are designated to improve the functioning of an individual and enhance their engagement with immediate environment. (WHO, 2017). In this study, rehabilitation referred to interventions given to people that have experienced ACEs; for example, trauma informed care, resilience skills, self-management skills among others.

Chapter One: Introduction and Background to the Study

Introduction

This chapter consists of the following; introduction and background to the study, statement of the problem, purpose of the study, objectives, research questions, research hypothesis, justifications and significance of the study, assumptions, scope, limitations and delimitations and finally chapter summary.

Background to the Study

Alcohol is defined as a psychoactive substance with dependence –producing properties that has acceptance of usage cross diverse cultures for centuries (WHO, 2014). According to Connor et al. (2016), alcohol is a sedative hypnotic drug that acts as a depressant to the central nervous system at high dosage. Bagnardi et al. (2015) asserts that when alcohol is consumed in low doses, it performs like a stimulant inducing effects of euphoria and talkativeness; however, when consumed in high doses, it may lead to consequences such as drowsiness, respiratory depression, coma or ultimately death. Drug abuse delineates use of psychoactive chemicals with the intention of producing pleasure (Beconi et al., 2015). According to Mandal (2021), there is an estimate of 190 million drug users globally, majority of whom are young adults. Consequently, 10.6% of the population above the age of 12 years has abused at least one illicit drug in their life (Rezahosseini et al., 2014).

Alcohol and drug abuse is a global phenomenon, which not only goes beyond affecting an individual and a family, but also undermines the political, social and cultural foundation of countries (Britannica, 2021). Indeed, alcohol and drug abuse contribute to 3.7% of Global Burden of Disease (GBD) (Degenhardt et al., 2018). Moreover, alcohol and drug abuse are argued as contributing agents for disability, premature death and loss of life. In addition, abuse of drugs has other auxiliary negative impacts such as health burden, law enforcement costs and

loss of productivity that is caused by affecting the most productive segment of the population (Erskine et al., 2015).

Globally, an estimate of 6.43 litres of pure alcohol per capita (100,000 people), were used by a population of people above the age of 15 years; one –fifth of these population had heavy episodic drinking (WHO, 2016). It was noted that Central, Eastern and Western Europe reported high alcohol consumption per capita (11.64, 11.55 and 11.13 liters respectively), in addition to reporting heavy episodic drinking among the consumers (49.5, 46.9 and 40.2%, respectively) (Peacock et al., 2018). Those that reported lower consumption of alcohol per capita (0.9 liters' pure alcohol) as well as lowest of heavy episodic drinking (15.4%) were North Africa and Middle East. On the other hand, Central and Sub-Saharan Africa depicted unconventional results, (78.9%) reported heavy episodic drinking despite having lower per capita consumption (4.14 liters) (Peacock et al., 2018).

Globally, the most abused illicit drugs were noted to be cannabis (3.8%) by people above the age of 15 years, followed by amphetamine (0.77%), opioids (0.37%), and cocaine (0.35%), this is according to United Nations Office on Crime and Drugs [UNODC] (2018). It was also reported that in Europe and South East Asia, the prevalence of smoking was higher than the global prevalence. There were 933.1 million people who were identified as daily tobacco smokers. China had 268.3 million, India had 104.2 million, and Indonesia 53.7 million, these three countries had the largest numbers of tobacco smokers which accounted for 45.7% of daily smoker globally. In America, an estimate of 139.8 million abused alcohols and in totality, 164.8 million people above 12 years abused both legal and illicit drugs (Hasin et al., 2015).

On the other hand, Low- and Middle-Income Countries (LMICs) account for 80% of GBD for drug abuse (Schutte et al., 2021). An estimate of 1.3 million users of tobacco lives in these LIMICs (WHO, 2020). South Africa is reported as the nation where alcohol accounts for

the highest cause for Non-Communicable Diseases (NCDs) as well as alcohol ranked among the top ten risk factor for NCDs (Obot, 2013). In addition, South Africa is estimated that 7.06 % of the population has used narcotic once in a life time and one in 14 people uses it regularly. Africa is engulfed by the use of Alcohol and Drug Abuse (ADA), underpinned by studies done in universities in Nigeria, Uganda, Ethiopia and South Africa, indicated a prevalence 27.7% and 62% respectively (Nwanna et al., 218).

Alcohol and drug abuse is a major cause of myriads of negative effects which include; psychological dependence, physiological dependence, social problems, legal and work problems, educational, relational and health problems (Daley, 2013). Psychological dependence entails behaviors that emanate out of consistent exposure to ADA. Through continuous abuse of ADA, the mind and the body become accustomed to depend on these psychoactive substances for normal functioning. On the other hand, physical dependence occurs also from numerous exposures to ADA, and the body adapts to the intake of ADA. Physical dependence has the potential to lead to tolerance and craving for the ADA.

The difference between psychological dependence and physical dependence is anchored on the symptoms that each cause; psychological dependence causes emotional and motivational impairment, while physical dependence causes much of somatic symptoms such as increased heart rate, sweating and tremor (Volkow et al., 2016). The use of ADA not only affects the physical and psychological aspect of the abuser, but also the social functioning, according to Daley (2013). Some of the social problems that result from ADA include; sexual behaviors, unemployment, criminal activities, housing instability and homelessness among others.

Kenya is not exceptional on the matter of ADA, according to National Campaign against Drug and Abuse (NACADA,2017); 10% of Kenyan population above age of 15 were suffering from Substance Use Disorder (SUD). Consequently, the survey also showed that 20%

of the primary school going children have at least abused a drug in their lifetime (Jaguga et al., 2021). Kenya is ranked third in Africa, as the nation with the highest number of people with Disability Adjusted Life Years (DALYs) as a result of alcohol use disorder (NACADA, 2019). Prevalence of alcohol abuse estimated at 12.2%, tobacco; 8.3 %, khat, 4.2 %; bhang 1.0% and hashish 0.1% among people within the age bracket of 15-65 years (NACADA, 2017). One of the major risk factors that can be attributed to this increase in prevalence of ADA is Adverse Childhood Experiences (ACE). Rokita et al. (2018), reported a link between early exposure to ACEs as a major causal factor that may be attributed to adulthood ADA.

ACEs, encompasses multiple forms of negative events that occur prior to 18years old (Petruccelli et al., 2019). Public Health Scotland (2019) defined ACEs to include any stressful or traumatic life events that would occur prior to 18years of age. According to Center for Disease Control (CDC, 2019), ACEs encompasses abuse and household dysfunction whose consequences lead to physical, social, and psychological consequences that have potency to cause addictive risk behaviors such as ADA. In one of the major hallmark studies conducted with 214, 157 among US adults reported that half of the participants 61.55% experienced at least one ACE (Merrick et al., 2018). ACEs is a global phenomenon, according to Giano et al. (2020). They noted that during childhood, there is a chance that 57.8% will be exposed to ACEs, whereby 22.9% would report one, 12.8% reporting two, and 21.5% reporting three or more ACEs.

Traumatic events that constitute ACEs can be categorized into three; first, is abuse that would either take any form of physical abuse, emotional abuse or sexual abuse (Abajobir et al., 2017). Secondly, is neglect that would be perpetrated in two ways; either as physical neglect or emotional neglect. Thirdly, is household dysfunctions which is characterized by the following features; living with a parent that is experiencing mental health problems such as depressions or a parent with a substance use problem, experiencing parental separation or

incarceration as well as experiencing domestic violence or intimate partner violence as a child (Bellis et al., 2015).

Perpetration of ACEs prior to age of 6 years has been argued to be a cause of externalizing behaviors and this was linked with an earlier need to abuse ADA (Proctor, 2017). ACEs have been found to continue to increase in number. There is an estimation that a child would have a probability of 57.8% to experience at least one ACE, 22.9% to report one, 12.8% to report two, and 21.5% to report three or more ACEs (Giano et al., 2020). For example, in UK, a child has a chance of 46.4% to report one ACEs, and 8.3% to report four or more ACEs (Bellis et al., 2014); this coincided with an increase rate in ADA.

Physical abuse according to Fortson et al. (2016), constitutes a plethora of non-accidental physical injuries towards a child that has the potent to lead to severe fractures or death. These non-accidental physical injuries may be perpetrated through the following ways; punching, beating, kicking, biting, shaking, throwing, stabbing, choking, hitting with a hand, stick, strap, or other object, burning, or otherwise harming a child, that is inflicted by a parent, caregiver, or other person who has the responsibility for the child. Consequently, children who have been physically abused may end up engaging in ADA later in life, as a mechanism to deal with their inner wounds of abuse (Metzler et al., 2017).

Sexual abuse delineates sexual act that is coercively perpetrated on a child, a man or woman without any consent given (Rich et al., 2016). Sexual abuse towards a child may involve behaviors such as sodomy, penetration and engaging the child in indecent exposure such as pornography and production of the same (Peterson et al., 2018). Sexual abuse is arguably a cause that may lead to psychological and behavioral difficulties such as depression, anxiety, aggressiveness that have long-term consequences in that child's life becoming a major cause for ADA (Rich et al., 2016). The third form of abuse that may be carried out towards a child is emotional abuse. Emotional abuse underpins any behavior that impedes or impairs

emotional development and developing of self-worth of a child through behaviors such as rejection, demeaning a child, and isolating a child among others (Peterson et al., 2018). The implication of rejection, withholding love, support and guidance makes a child to internalize that they are a failure, and produce in them a distorted self-concept. This results in ADA as a means of coping, feeling good about themselves and numbing their inner negative feelings.

Where emotional abuse becomes repetitive, it has the potency to negatively affect a child's personality structure, cognition, adjustment and perception (Dye, 2019). In addition, when emotional abuse is constantly repeated, it escalates to psychological abuse which has a longer- term consequence on the child's development (Dye, 2019). Emotional or psychological abuse is an underlying cause that may lead to mental illness such as posttraumatic stress disorder (PTSD). Consequently, these conditions may lead the victim to turn to ADA as a form of coping or relieving themselves from emotional pain and hurt (Fellmeth et al., 2018).

Neglect as a form of ACEs entails parents absconding their responsibility of meeting salient needs of a child (Bick & Nelson, 2016). Neglect may be carried out in two various ways; through physical neglect encompassing failure for provision of basic needs such as food, shelter, appropriate supervision, medication, education and special needs of a child (Fortson et al., 2016). The second form of neglect is emotional neglect which refers to failure by a parent, guardian, caregiver or significant others to provide psychological care or engaging in behaviors such as permitting usage of drugs like alcohol and others by a child (Fortson et al., 2016).

According to Rich et al. (2016), emotional neglect is one of the abuses that has a higher rate accounting for (78.5%), followed by physical abuse at (17.6%) and finally sexual abuse (9.1%). Children who are neglected emotionally are reported to have a high risk for ADA; in addition, neglect negatively affects the brain of an adolescent because it hinders important brain development resulting to behavioral need for ADA (Lipari et al., 2017). Neglected people may

therefore feel the need to isolate themselves, withdraw from close family members and engage in self-destructive behaviors such as ADA (Tracy, 2018a).

Rusby et al. (2018) observe that parental involvement and monitoring of their children is of paramount importance as a preventative measure against ADA among the adolescents. However, where parents are less involved in their children well-being and there is no supervision, this has been linked with worse ADA among the adolescent (Berge et al., 2016). It is of salient importance therefore that the parents be involved and take interest in the growth and development of their child, because parental neglectful behaviors are a major cause for ADA. Parental use of ADA and constant conflict have been argued also as major reasons that may fuel child's emotional neglect.

According to Barthassat (2014), where there is a negative pattern from the parents, this likewise has the potential of causing a negative behavior on the part of children. In addition, children exposed to emotional neglect experience psychosocial difficulties that become a major reason later in adulthood to engage in ADA as a means of dealing with the negative feelings of abandonment and neglect. In a study done in Kenya to examine the effects of parental emotional neglect on youth behavior on ADA, it was noted that parental emotional neglect has the ability to predict maladaptive behavior among the youth. Parents are an important socializing agent that has the potential to affect their children's future (Wayaki, 2020). The study aimed at evaluating the role parents would have played, in propagating emotional neglect among identified clients that would have predisposed them to ADA as a coping mechanism to deal their unmet needs of children growing up in their families. This study therefore sought to investigate whether there is a relationship between emotional neglect and ADA among clients in selected rehabilitation centers in Kiambu County, Kenya.

Lastly, household dysfunctionality as a form of ACEs includes a child experiencing parental divorce, being subjected to negative effects of substance abuse from a parent, experiencing domestic violence or criminality at home and living with parents suffering from mental illness before the age of 18 years (Merrick et al., 2018). Children exposed to house hold dysfunctionality have high need of self-harm and poor school performance (Anda, 2015). Parental separation/ divorce, incarceration or substance abuse makes the parents less likely to be effective and efficient in their parental role because much of the time and family resources is spent seeking for drugs (Xerxa et al., 2020). The outcome of this is child neglect, physical, and emotional abuse which leads to need for ADA later in life as a way of dealing with inner pain, anger and hurt (Lipari et al., 2017)

ACEs are an emerging factor that contributes to increase of ADA. Individuals who have been subjected to one or more ACEs during their childhood or adolescence are susceptible to poor coping skills whose consequences result in drug abuse (Shin et al., 2018). According to WHO (2017), one in four adults have been subjected to physical abuse as a child globally. This pervasive exposure to adverse experiences has potency to change the neural network, impair nervous, endocrine and immune systems as a consequence, resulting to chronic physiological dysfunction and damage. These dysfunctions become a breeding ground for ADA as a means of coping (Shin et al., 2018).

Globally, there is a dearth of research done to ascertain the prevalence of ACEs (Hughes et al., 2020). The few researches that have been done were conducted in high-income countries such as the United States where it was reported that 61% of the population had experienced at least one ACEs, while 16% were reported to have experienced four or more prior to 18 years of age (Merrick et al., 2019). On the other hand, there is limited ACEs data because of fewer studies done from (Lower- and Middle-Income Countries) LMICs and Kenya in particular. In Kenya, a study conducted by Kiburi et al. (2018), at Mathari National Teaching and Referral

Hospital (MNTRH) in Kenya, showed that ACEs had a positive correlation to ADA. Physical abuse in particular, was found to lead to cannabis use and where there was more than five or more ACEs, it was associated with the tendency to use sedatives drugs. This study sought to bridge the gap through exploring the influence of ACEs on ADA among clients in selected rehabilitation centers in Kiambu County.

Merrick et al. (2017) posit that ACEs, in-addition to causing negative development and psychological consequences such as depression, anxiety, high risk-behavior and PTSD, is a major cause for ADA. Sacks and Murphey (2018) agreed with this view and added that children who were exposed to ACEs were more susceptible to ADA later in life. While gender is of a critical importance when examining the influence of ACEs, both genders have been shown to relate with alcohol abuse problem; however, males are arguably more affected. Consequently, sexual abuse and physical abuse have been found to lead to direct need of alcohol abuse by females (Salokangas et al., 2018)

The more prolonged the ACEs is, the more it leads to early onset of excessive use, binge drinking and regular abuse of alcohol among the adolescents (Wadji et al.,2017). Longitudinal research carried out within the US population by Fergusson et al. (2008) among the adolescents, child physical abuse was reported to lead to alcohol abuse, marijuana abuse and other drugs in young adulthood. Moreover, childhood emotional abuse was poised as a major cause of adults to engage in ADA (Choi et al., 2017).

According to Seth et al. (2018), Europe prevalence of ACEs is on the increase with emotional abuse noted as leading at 29.6% followed by physical abuse at 22.9%. In Brazil, Bellis et al. (2015) noted a higher prevalence of 85% among the adolescents. Females were reported among the highly affected group experiencing more than one ACEs. While in Vietnam, ACEs prevalence of 76% was reported for university students who had experienced at least one ACE. In addition, a study conducted in South Africa among the adolescents

reported 18.3% and 19.5% on physical and emotional abuse respectively (Meinck et al., 2015). This high prevalence of ACEs is believed to positively correlate with ADA as a way of coping with the abuse.

In Uganda, according to Ashaba et al. (2022), child abuse was reported the highest perpetrated ACEs more than any other. A survey conducted by Devries (2014) revealed that in children aged 8-18 years of age, prevalence of physical abuse was at 98% and sexual abuse at 76%. Consequently, this high rate of ACEs is noted as a precursor that informs Uganda as the nation in Africa with the highest level of alcohol consumption. A similar survey conducted in Uganda, Kenya and Ethiopia reported young women as mostly affected by physical abuse at a prevalence of 94% (Ashaba et al., 2022). Parental heavy episodic drinking is considered as a major cause for domestic violence or separation; children exposed to these toxic experiences in their families will tend to abuse ADA later in life (McGavock & Spratt, 2017).

In Kenya, a study conducted by Kiburi et al. (2018) at Mathari National Teaching and Referral Hospital (MNTRH) in Kenya, showed that adverse childhood had a positive correlation to ADA. In a sample of 134 patients, 93% of these had experienced at least one ACE; emotional abuse, living with someone with mental illness, physical abuse and neglect were among the rampant ACEs among the respondents. Physical abuse in particular was found to lead to cannabis use and where there was more than five or more ACEs, it was associated with tendency to use sedatives drugs. There is paucity of information on the influence of ACE on ADA especially in Kiambu County, Kenya, which has prevalence rate of 15% of its residents between the age of 15-65 years dependent on ADA (NACADA, 2017). In addition, Kiambu County is reported among the counties in Kenya leading in ADA and alcohol-related physical injuries (NACADA, 2017). This research sought to bridge this gap by exploring four constructs of ACE; sexual abuse, emotional neglect, physical abuse and parental separation and their influence on ADA in Kiambu County, Kenya.

Statement of the Problem

The World Health Organization (WHO, 2016) identified ADA as the top risk for poor health. Globally, due to uncontrollable abuse of alcohol, it led to some 3 million deaths accounting for 5.3% of the aggregate deaths worldwide and 132.6 million Disability-Adjusted Life Years (DALYs) (Degenhardt et al, 2018). In Kenya, despite efforts by government to reduce alcohol and drug abuse through institution such as NACADA, alcohol abuse among population age between 15- 65 years stands at 12.2%, tobacco; 8.3%, khat 4.1%; and bhang 1.0% (NACADA, 2016). These are still alarming rates of prevalence of ADA. Kiambu County has continued to register high rate of ADA among its population. A study done by NACADA and Kiambu County Government established that 15% of Kiambu County residents above the age of 15years are dependent on ADA.

This delineates that Kiambu's prevalence rate of ADA surpass that of National prevalence rate within the same group of 15-65 years which is at 10% (Jaguga et al., 2017). Consequently, Kiambu County is residence to majority of leading rehabilitation centers with significant number of clients (Muriithi 2018). The county has tried to employ measurers such as enacting Kiambu County Alcoholic Drink Control Act, 2017 in a bid to curb the increase of ADA in the county. Moreover, ADA has continued to lead to loss of life as well as loss in work productivity.

ACEs is one of the major emerging causes of ADA that have not been studied to explore its influence especially in Kiambu County. Majority of research done to examine the influence of ACE on ADA has been conducted in the developed world and the few research that has been conducted in Africa, associated ACE with need to abuse ADA (Kiburi et al.,2018) ACEs have been linked to poor health throughout an individual's life span. Children who grow with ACE are vulnerable to experiencing mental health problems during their adolescence and adulthood and develop tendency towards ADA as well as experience premature death (Bellis et al., 2015).

Given the limited research done to examine the influence of ACEs on ADA in Kiambu County, this research sought to fill the gap through evidence-based research on the influence of ACE on ADA in Kiambu County. This study helped to identify healthy ways of dealing with ACEs rather than ADA. Secondly, the study intended to develop recommendations that would help mitigate the impact of ACEs.

Purpose of the Study

The purpose of the study was to establish the influence of ACEs on ADA among clients in selected rehabilitation centers in Kiambu County, Kenya.

Objectives of the Study

The objectives of this study were:

i) To find out the prevalence of adverse childhood experiences among clients in selected rehabilitation centers in Kiambu County, Kenya.
ii) To determine the influence of physical abuse during childhood on alcohol and drug abuse among clients in selected rehabilitation centers in Kiambu County, Kenya.
iii) To evaluate the influence of emotional neglect during childhood on alcohol and drug abuse among clients in selected rehabilitation centers in Kiambu County, Kenya.
iv) To establish the influence of sexual abuse during childhood on alcohol and drug abuse among clients in selected rehabilitation centers in Kiambu County, Kenya.
v) To find out influence of parental separation during childhood on abuse of alcohol and drug abuse in clients in selected rehabilitation centers in Kiambu County.
vi) To find out the sustainable measures that would help to mitigate the prevalence of adverse childhood experiences among clients in selected rehabilitation centers in Kiambu County, Kenya.

Research Questions.

i. What is the prevalence of adverse childhood experiences among clients in selected rehabilitation centers in Kiambu County, Kenya?

ii. What is the influence of physical abuse during childhood on alcohol and drug abuse among clients in selected rehabilitation centers in Kiambu County, Kenya?

iii. How does emotional neglect during childhood influence alcohol and drug abuse among clients in selected rehabilitation centers in Kiambu County, Kenya?

iv. What is the influence of sexual abuse during childhood on alcohol and drug abuse among clients in selected rehabilitation centers in Kiambu County, Kenya?

v. How does parental separation during childhood lead to alcohol and drugs abuse among clients in selected rehabilitation centers in Kiambu County, Kenya?

vi. What are the sustainable measures that would help mitigate the prevalence of adverse childhood experiences among clients in selected rehabilitation centers in Kiambu County, Kenya?

Hypothesis

i) $H0_{1:}$ There is no statistically significant difference in physical abuse, emotional neglect, sexual abuse and parental separation among clients in selected rehabilitation center in Kiambu County.

ii) $H0_2$: There is no statistically significant influence of physical abuse during childhood on alcohol and drug abuse among clients in selected rehabilitation center in Kiambu County.

iii) $H0_{3:}$ There is no statistically significant influence of emotional neglect during childhood on alcohol and drug abuse among clients in selected rehabilitation center in Kiambu County.

iv) $H0_{4:}$ There is no statistically significant influence of parental separation on alcohol and drug abuse among clients in selected rehabilitation centers in Kiambu County.

v) $H0_{5:}$ There is no statistically significant influence of sexual abuse during childhood on alcohol and drug abuse among the clients in selected rehabilitation centers in Kiambu County.

Assumption of the Study

i. The study assumed that there is a high prevalence of ACEs among clients in selected rehabilitation centers in Kiambu County, Kenya. This assumption was ascertained that indeed, there was high prevalence of ACEs (34%) among ADA clients in selected rehabilitation centers in Kiambu County.

ii. An assumption was made that ACEs is among the major causes of ADA among clients in selected rehabilitation centers in Kiambu County.

iii. That the proposed intervention measurers are effective in mitigating the effects of ACEs and; thus, would reduce the increasing curve of ADA in Kiambu County.

iv. An assumption is made that the research participants once assured of adherence to ethical code by the researcher shall share their delicate information especially on sensitive matters such as sexual abuse during childhood.

Justification of the Study

There is a global increase of alcohol and drug abuse as noted by World Health organization on alcohol and drug abuse (WHO, 2018). Moreover, it has been noted by WHO that some 3 million people lost their lives as a result of ADA in 2016, signifying a percentage of 1 in every 20 deaths. Conversely, alcohol has been considered a major psychoactive substance that is abused in the world (Ritchie & Roser, 2018). An estimate prevalence of substance use of 25.5% was reported with alcohol and cannabis among the highest abused

substances in Kenya (Ndegwa et al., 2017). According to a study by Shin et al. (2018), adults were reported to being subjected to abuse or neglect, as children were seen to engage in multiple risk behavior such as abuse of tobacco, drugs and alcohol. One hallmark research on ACEs done by Center for Disease Control (CDC), in collaboration with Kaiser Hospital in San Diego indicated that individuals who were exposed to four or more types of ACEs were predisposed at 4 or 12-fold-increase to the need for ADA (Felitti et al., 1998).

Kiambu County in particular has been noted as one of the counties in Kenya with the highest cases of ADA (Mary et al., 2021). A survey conducted by NACADA (2017), in conjunction with Kiambu County Government showed that 15% of Kiambu County's population aged 15 to 65 years old were dependent on ADA. Moreover, there is dearth of research done in Kiambu County to examine the influence of ACEs on ADA. This study sought to establish whether ACE has any correlation with the increasing curve of ADA on selected clients in rehabilitation centers in Kiambu County. This study helped to identify the intervention measurers that need to be put in place to help clients cope with ACEs instead of turning to ADA as a way of coping.

Significance of the Study

This study is important in creating more awareness on appropriate interventions measurers towards ADA such as trauma –informed care. The beneficiaries for this study may therefore include; counselors, parents, clients and mental health institutions such as rehabilitation centers. The study may help counselors to gain insights into the underlying causes that may need to be explored when dealing with issues of alcohol and drug abuse among clients. Understanding ACEs would also improve intervention and treatment options offered by counsellors enabling them to respond appropriately to clients with ADA in rehabilitation centers from a well trauma –informed perspective.

Abuse of alcohol and drugs affects the whole family; therefore, improving treatment options for the clients delineates that the family would regain its functioning and balance. The families may also benefit from the insight, awareness and knowledge helping them to provide a safe environment for children that would facilitate a child's learning potency, capacity to self-regulate and to form satisfying relationship that curb the onset of ADA. Through this study, rehabilitation centers would improve on its screening and assessment with a wider spectrum of the underlying cause of ADA; thereby, improving on the rate of recovery and minimizing relapse occurrences.

Scope of the Study

This research was conducted within Kiambu County which is located in the central region of Kenya and covers a total area of 2,543.5 Km2. Kiambu County borders Nairobi and Kajiado Counties to the South, Machakos to the East, Murang'a to the North and North East, Nyandarua to the North West, and Nakuru to the West. There are 13 registered treatment and rehabilitation centers by NACADA in Kiambu County. Simple random sampling was used to select five of the rehabilitation centers used in this study. Kiambu County has many registered rehabilitations comprising of people from different parts of Kenya, this makes it reliable to examine the prevalence of ACEs. This is according to Kiambu County Annual Development Plan **(**[CADP], 2021/2022).

The study focused on examining the influence of ACE on ADA among the selected clients in the identified rehabilitation centers in Kiambu County. The research targeted ADA clients only in selected rehabilitation centers in Kiambu County. The research was limited to four constructs of ACEs: sexual abuse, physical abuse, neglect and parental separation and their influence on ADA. The underpinned reason to choose the four constructs is because considering all constructs of ACE would make this research study unattainable. The study was informed by the Attachment Theory (Bowlby, 1977), and the Psychoanalytic Social Theory

(Horney, 1950) that are salient in creating understanding of adults' psychopathology from early interactions, adopted adaptations and the current contextual issues (DeKlyen, 2016).

Limitation of the Study

The study sought to establish the correlation between ACEs and ADA; however, correlation does not delineate causal relationship between the two variables. Secondly, the study was carried out within a rehabilitation setting and the participants may negatively influence each other to drop –out of the research, which would greatly influence the outcome of the research. Therefore, the researcher was aware of group dynamics and ensured that confidentiality was highly maintained.

Thirdly, though rehabilitation centers have a specified number of clients that they can accommodate, this number may fluctuate and affect the sample size expected for the study. The researcher in this regard considered only those rehabilitation centers with ability to accommodate a higher number of clients within Kiambu County.

Lastly, Participants for this study were limited to clients identified within selected rehabilitation centers in Kiambu County having issues of ADA. This implies that the findings from this study may not be generalizable to all the 47 Counties in Kenya

Delimitation of the Study

This study considered the male gender only; therefore, the outcome of this study could not be generalized on both genders and as such, the effects of ACE on ADA on both genders need to be done. The rationale underpinning focus on the males only is because Kiambu County has insignificant rehabilitation centers that accommodate female clients (Wairimu & Bwisa, 2012). According to Wairimu and Bwisa 65% of the Kiambu rehabilitation centers are male dominated while only 35% accommodate female clients.

Secondly, the study considered only four constructs of ACE; sexual abuse, physical abuse, emotional neglect and parental separation and thus limited to understand the influence

on ADA only on these identified constructs. There are many determinants of ADA but this study focused only on ACEs.

Chapter Summary

In the recent past, ACEs has become an interesting factor of consideration that is believed to be a leading cause of ADA (Bekerman et al., 2017). This chapter explored four ACE construct and how they may be a cause of alcohol and drug abuse among clients in selected rehabilitation centers in Kiambu County, Kenya.

Chapter Two: Literature Review

Introduction

This chapter presents the review of studies done on ACEs and its influence on ADA through the lenses of the Attachment Theory and Psychoanalytic Social Theory. The chapter also includes theoretical and conceptual framework on ACEs and ADA.

Literature Review

The aim of this chapter is to identify relevant literature review that has been conducted on the four component of ACEs that is, physical abuse, emotional neglect, sexual abuse and parental separation/ divorce and their influence on alcohol and drug abuse (ADA). This section also reviewed the prevalence of these four components and offered as well sustainable measurers that would prevent high prevalence of ACEs.

Prevalence of Adverse Childhood Experiences among Alcohol and Drug Abusers

ACEs have been found as an emerging risk factor that contribute to increase of ADA. ACEs underlie majority of negative health outcomes and various health risk behavior such as ADA, psychiatric disorders, and attempted suicides (Campbell et al., 2016). According to Figueiro-Braga et al. (2021), people that had been exposed to ACE experience difficulties to deal with stress and emerging health- risk presented by the Covid-19 pandemic and as a coping mechanism engaged in ADA. Across the globe, over half of the children are exposed to various forms of ACEs (Hill et al., 2016). Those children that have been exposed to ACEs tend to engage early in alcohol abuse. They also engage in faster or binge drinking, have alcohol related problems and suffer from ADA during their young adulthood (Leung et al., 2016).

Though ACEs studies have been conducted in developed countries, evidence point spread of ACEs as higher in countries that have lower per capita income (Campbell et al., 2016). ACEs, besides being a major cause for ADA, negatively affect an individual's psychological well-being (Charry et al., 2020). In addition, individuals whose psychological

well-being has been disrupted are not able to engage in health-related behaviors and practices that result in a meaningful life and purpose (Nurius et al., 2015); hence, the need for ADA. There are multiple studies that have noted positive correlation between ACEs and ADA through the use of Adverse Childhood Experience Questionnaire (ACE-Q) (Forster et al., 2019).

Children exposed to ACEs tend to internalize their feeling as a result of experiencing difficulty in expressing them in a hostile family environment. This causes subsequent problems in emotional regulations and psychological distress leading to risky behaviors such as ADA (Weissman et al., 2019). Marchica et al. (2020) argued the more a child scores higher in ACE-Q, the more vulnerable one is to ADA. According to Hughes et al. (2017), ACEs underlie the reason why majority of young adolescents and adults result to ADA as a means of coping with the repercussions caused by the abuse such as neglect and anxieties.

The prevalence of ACEs globally was reported "about 20% of women and 5–10% of men report being sexually abused as children, while 25–50% of all children reported being physically abused" and "many children are subject to emotional abuse and to neglect (WHO, 2016)''. The same global report also showed that, those adults who were subjected to multiple ACEs as children were more prone to poorer mental health and behavioral problems such as ADA. In a cross-sectional, population-based survey in Bangkok, 38% of young residents reported experiencing some type of ACEs: 5.8% sexual penetration, 11.7% physical abuse, and 31.8% emotional abuse (Nie et al., 2015). In another population-based survey of young people in a suburban community in Thailand, the prevalence of ACEs was approximately 30%: 15% physical abuse and 12% sexual abuse (Tran et al., 2015). A study done in Serbia, Europe to examine the prevalence of ACEs reported a prevalence of 17.1% emotional abuse among the university students and physical abuse was reported at 1.8% (Vukomanovic et al., 2017).

A study conducted through a combined analysis using data from UK cross-sectional studies postulated a relationship between the number of ACEs and the risk of ADA. It was noted that ACEs accounted for 58.8% of ADA in Welsh and English sample (Hughes et al., 2020). A similar more recent systematic review and meta-analysis using data from 17 studies which was conducted in 13 European countries; UK, Romania, Lithuania, Latvia, Russia, North Macedonia, Turkey, Montenegro, Serbia, Ukraine, Czech Republic, Poland and Moldova, established that there is positive relationship between ACE and ADA. The study argued that with 1 ACE, there was 59% increase risk to ADA, while those that were exposed to 2 or more ACEs, there were 163% increased rate to ADA (Hughes et al., 2021). It is estimated that globally, emotional neglect prevalence is at 36%; prevalence nationally, 11% in USA, 23% in England, 23% in Canada, and 34% in Australia. Moreover, the rate was seen to be higher in two main regions; East Asia, 31.3% and 68.5% in Korea and China respectively (Adelman et al., 2017). In developing countries, there is still paucity of information concerning neglect. In Sub-Saharan Africa in particular, there are still fewer studies conducted to offer evidence – based prevalence of neglect (Stoltenborgh et al., 2015).

A hallmark study by Center for Disease Control and Prevention (CDCP), conducted in partnership with United Nations Children Education Fund (UNICEF) in Haiti, found that a higher number of females experienced sexual abuse in their early years before 18years of age (CDC, 2014). Due to these traumatic consequences of CSA, it leads these women to engaging in ADA as a way of coping. Rehan et al. (2017) reported that women who were subjected to CSA were more prone to ADA, than women who have no history of CSA. According to Garey et al. (2015), women who have suffered from CSA, use ADA as way of dealing with aversive emotional turmoil, and in so doing, the use of ADA as a strategy of dealing with these negative emotions is reinforced. On the other hand, men who experience CSA, had higher level of

psychological distress which becomes the major cause for their engaging in ADA (Garey et al., 2015).

In the Sub-Saharan Africa, children that are subjected to ACEs have been reported to record a poorer physical and mental health outcome compared to other children. These poorer outcomes include; increased risk for HIV infection, bullying, higher levels of depression and suicidal ideation that form the bedrock for the need of ADA (Meinck et al., 2016). A study on ACEs done in Uganda reported the highest number of children between the age of 8-18 years who had experiences of ACEs. Both physical and emotional abuse accounted for 98%, while on the other hand, sexual abuse was noted to account for 76% (Devries 2014). Uganda has been argued as a country that registered the highest rate of ADA, with a consumption of 23.7L. This corresponded with 5.8% of Uganda's children aged 15 years and above suffering from alcohol use disorder (W.H.O 2018). Sexual abuse has equally been found to be rampart in Sub Saharan Africa, in particular South Africa reported higher cases of CSA, estimated at 500,000 annually (Machisa et al., 2017). It is argued that a third of children in South Africa would be sexually abused prior to 18 years of age.

This rate in South Africa is estimated to be 36.8% for boys and 33.9% for girls; rates that are argued to be higher than those of United States; 26.6% for girls, the United Kingdom at 18.6% and Australia at 20% (Artz et al., 2016). These high rates of CSA in South Africa have been correlated with increased cases of mental health problems and ADA for a population between the age of 15-24 years (Kuringe et al., 2019). Another study conducted in South Africa reported a prevalence of physical abuse at 18.2%; emotional abuse, 12.1%; sexual abuse, 5.3 % and other victimization, 68.7% (Meinck et al., 2016).

In Kenya, ACEs have been documented to be high, more especially among the university students with a prevalence of physical abuse 59% and neglect at 42% (Herzog & Schmahl, 2018). A survey done in Kenya to established the prevalence of ACEs according to

Rieder et al. (2019) noted the following; 32% of female and 18% males had experienced sexual violence. On the other hand, 66% of female and 73% were noted to have experienced physical violence. The high prevalence of ACEs among University students can be correlated with high prevalence of ADA among the same population. According to Ndegwa et al. (2017), there has been a high increase in ADA among the university students.

In Kenya, cases of CSA have been reported to be lower estimates at 22% and 17% for male and female respectively. According to UNICEF (2014), 10% of Kenyan females experience CSA before the age of 19 years. According to the same report by UNICEF, 37% of those victims were abused before the age 10 years; in addition, UNICEF reported that 24% of male victim of CSA experienced the abuse before the age of 14 years. In Kenya, the prevalence of ACEs according to a study done by Samia et al. (2020), among the university students reported Physical abuse at 59% and neglect at 42%. Moreover, a national representative household survey reported 32% of females and 18% of males having experienced sexual abuse, while 66% of females and 73% of males experienced physical abuse.

According to research done by Menja et al. (2021) among girls of 15-19 in Limuru Sub-County, Kiambu County in Kenya, a sample of 301showed that 15% of girls had experienced forced CSA. Moreover, a National Survey on Drugs Use and Health Report [NSDUH, 2016] in Kenya showed that there has been an increase in death rate of 8% in the last decade due to ADA. There has been little research undertaken in Kiambu County to explore the underlying causes of the increase in ADA. Kiambu County has been designated as among counties with higher population suffering from ADA (Mary et al., 2021). A Survey conducted by NACADA in conjunction with Kiambu County Government showed that 15% of Kiambu County population between the age of 15 to 65years of age were suffering from ADA. This research sought to fill this gap through evidence-based research on the influence of ACE on ADA in Kiambu County.

Influence of Emotional Neglect during Childhood on Alcohol and Drug Abuse

Emotional neglect would be conceptualized as entailing acts that disregard or deprive a child a sense of worth, acceptance and esteem. These acts would include; rejecting, demeaning and ostracizing the child (Longman et al., 2015). Emotional neglect is characterized by acts of omission such as unconsciously or consciously ignoring the child's psychological needs; for example, affirmation and acknowledgment or commission where the parent or the significant others fail to provide important basic needs of a child such as food, shelter and medication. This negatively harms the child's well-being, causing emotional distress and abnormal behavior in a child; such as, ADA (Stiefelhagen, 2015).

Additionally, emotional neglect occurs when the caregivers or the parent overlooks or underrate the need to give the child attention and comfort. The caregivers; thus, fail to attend to the psychological needs of a child; such as, the need for love, belonging, support and nurturance (Schimmenti et al., 2015). Emotional neglect may be perpetrated intentionally or unintentionally where the caregiver or the parents withhold love from the child, reject the child or withhold from expressing positive feelings towards the child (Sharon et al.,2017)

Neglect as a form of ACEs is noted to increase over time, and is chronic in nature because of the component of repetition (Korbin & Krugman, 2014). Neglect is argued as the most ignored, but rather fatal form of ACEs than others (Korbin & Krugman, 2014). Emotional neglect is arguably the most prevalent of ACEs; it has been linked with depression, anxiety, ADA among adult outpatients (Salokangas et al., 2020). Adults that were subjected to emotional neglect are reported to have higher rate of depression, anxiety and anger control issues. They are more prone to impulsivity that makes them vulnerable to problematic behavior of ADA as a way of numbing the uncomfortable emotions. Emotional neglect has been argued to damage the area of the brain that is responsible for controlling or balancing the emotions; therefore, adults that were subjected to emotional neglect are more impulsive and experience

difficulty in making rational decisions. The impulsive behaviors are the underlying causes for ADA (Sharon et al.,2017)

Children that are exposed to emotional neglect are reported to be 25% more vulnerable to internalizing and externalizing behavioral problems such as low self-esteem, mood swing, delinquency and ADA (Bhatia et al. 2020). According to Tamara et al. (2016), emotional neglect had a positive correlation with externalizing behaviors such as aggression, impulsivity, criminality and ADA. Fortier et al. (2020), made similar observation that emotional neglect reduces the child's self –esteem, it is a salient cause of interpersonal related problems in adulthood. Consequently, emotional neglect has been reported to proliferate the adverse effects of mental health, loneliness and hinder self-consciousness development. These are the underlying causes that lead to need for ADA.

Globally, a study done by Gallo et al. (2018), in terms of prevalence indicated the following rates of ACES as follows; 12.7% for sexual abuse, 16.3% for physical neglect, 18.4% for emotional neglect, 22.6% for physical abuse, and 36.3% for emotional abuse. In similar studies by Hans et al. (2018), the rate of emotional neglect was shown to be at 11% in USA, 23% in England, 23% in Canada and 34% in Australia. These studies brought out the subtle high prevalence of emotional neglect, though they were rarely considered as a major ACEs. Emotional neglect has been linked to depression, anxiety and ADA (Derin et al., 2022). In a study conducted in Sweden, emotional neglect was reported to be a major cause of mental health and behavioral problems among young adolescents such ADA (Hadborg et al., 2017).

The rate was demonstrated to be slightly higher in East Asia and the Pacific Region for 31.3% and 68.5% for Korea and China respectively (Longman-Mills et al., 2015). A study done by U.S Department of Justice, Office of Justice Programs, National Institute of Justice (2017), argued that children who have been subjected to emotional neglect at an earlier age are highly vulnerable to ADA, in addition to participating in criminal activities.

According to Positive Parenting Malaysia (2014), it was observed that emotionally neglected children are also vulnerable to self-destructive behavioral problems that include anxiety, depression, chronic lying, temper tantrums and extreme risk such as ADA. Emotional neglect has been reported as difficult to study because of its nature to co-occur with other ACEs; however, emotional neglect has been argued as the most salient of all ACEs that is responsible for the need for ADA more than even physical abuse that is most studied (Afifi et al., 2020). Emotional neglect has been reported to affect the child's sense of self; something that is major to those affected by ADA.

Emotional neglect affects all domains of development that encompasses; physical, psychological, behavioral and social development. Adults that were subjected to emotional neglect tend to develop insecure attachment with their parents or caregivers; the caregivers who should be the source of safety, protection and comfort Soares et al. (2016). Consequently, the child exposed to emotional neglect tend to engage in early ADA as a way of dealing with persistence occurrences of anxiety and anger.

According to LeTendre and Reed (2017), adults that had been subjected to emotional neglect are at a higher risk for ADA than adults that have not been subjected to emotional abuse. Emotional neglect has been presented as a risk factor that greatly contributes to health-risk behavior such ADA (Halpern et al., 2018). According to Berge et al. (2016), parents or guardians that exhibit neglectful behaviors to their children were linked to ADA especially among the adolescents.

Emotional neglect has been argued as a major cause that leads to poor development; an underling factor for ADA, low self-esteem and in additional to psychopathology in adulthood such as depression and anxieties (Humphreys et al., 2020). This research sought therefore to establish whether there is influence of emotional neglect among identified clients with ADA in selected rehabilitation centers in Kiambu County Kenya.

Influence of Sexual Abuse during childhood on Alcohol and Drug Abuse

Childhood Sexual Abuse (CSA), is a global problematic phenomenon with an overarching negative effect. It refers to engaging a child in sexual activities which leads to violation of the law or social taboo of the society (Finkelhor et al., 2014). Lev-Wiesel (2015) conceptualized that CSA occurs where an adult takes advantage of a child sexually, exploiting the child sexually towards one's own sexual gratification. CSA is considered one of the abuses that cause an intense trauma that is predicated on powerlessness among the victim. This overwhelming trauma is because the child is both biologically and psychological not matured (Stoltenborg et al., 2015).

Diehl et al. (2019) argued that 40-90% of people with issues of ADA are victims of childhood abuse. Consequently, because of this early abuse during childhood, these individuals have been shown to be twice vulnerable to ADA as compared to those that did not experienced abuse (Diehl et al., 2019). Moreover, CSA was found to be a major predictor of persistent dependence on alcohol (Diehl et al., 2019). According to Smith et al. (2015), childhood abuse, such as CSA, indeed, increases the likelihood of ADA and increases as well the chance of psychopathological comorbidity such as depression, suicide, anxiety among others. CSA was noted to be a major cause for early onset of ADA, estimated to start at around 11-13 years as well as causing severity in dependence on alcohol, nicotine and other drugs.

Childhood sexual abuse; in addition, has been noted to contribute also to a myriad of other aversive health outcomes such as mental illnesses (Afifi et al., 2014). CSA is such a rampant phenomenon affecting considerably a big percentage of children; it is estimated that 10% of adults would have experienced abuse by age 16 years old (Fuller-Thomson & Brennenstuhl, 2016). This study sought to explore if there would be any cases of childhood sexual abuse on ADA clients in selected rehabilitation centers in Kiambu County. Childhood sexual abuse has been found to cause a number of serious problems such as negatively affecting

survivor's mental health, education, marriage and parenting, employment and ADA among other problems (Kathrine et al., 2016).

According to Fuller-Thomson and Brennenstuhl (2016), childhood sexual abuse is a major cause associated with abuse of nicotine, alcohol and drugs in addition to be a catalyst that causes early need to engage in ADA. Skinner (2016) noted similar observation that childhood sexual abuse is an etiology for ADA in adulthood. In addition, sexual abuse during childhood is associated with psychopathologies such as PTSD, depression and low self-esteem (Chaplo et al., 2015). These mental conditions become the underlying causes for ADA to ensue as a coping mechanism. The current study explored if CSA would be the underlying cause for ADA among clients in selected rehabilitation centers in Kiambu County, Kenya. According to Fenton et al. (2013), CSA is argued as leading to negative outcomes such as ADA, and early onset and increased rate of alcohol use disorder. It was noted that CSA is a leading cause of increased rate of ADA among women as compared to men.

According to Hoertel et al. (2015) CSA is a major cause of trauma on the individual as well as being an underlying cause of majority of mental challenges that are pervasive to adulthood. CSA is argued as unique and distinct form of ACEs, because it requires a unique prevention effort. Children that suffer from CSA experiences; fear, shame, guilt and self-blame, and because CSA cases are rarely reported these children go most of the time without support (Assini-Metytin et al., 2020). Thus, ADA becomes an option for these victims of CSA as a way of coping. Experiencing CSA, has the potency of affecting the victim's way of thinking, acting and feeling, for a very longtime in life. The consequences of CSA are thus, short-term and long-term affecting the individual's holistic well-being especially when no help has been given. Some of the behaviors that a victim of CSA many adopt as a way of coping include; ADA, risk sexual behaviors and suicide or suicide attempts (Letourneau et al.,2018).

Those subjected to sexual abuse during childhood are arguably more prone to ADA, especially among the female population (Devries et al., 2014). According to Sullivan et al. (2016), when those that suffered from sexual abuse during adulthood encounter stressful life event, these circumstances act as a trigger that leads to need for ADA abuse as a coping mechanism. The victims of sexual abuse; thus, may find themselves in a vicious cycle of need for ADA, every time they encounter stressful life event. Child sexual abuse has been reported to lead to long term negative effects such as stress and anxiety (Chang et al., 2019). The sexually abused victim experiences heightened fear, body issues problems such body dysmorphic, eating disorder long after the experience of abuse ceased; these become the negative issues that makes one prone to ADA (LeTendre & Reed, 2017).

These negative effects are noted to be pervasive to adulthood; meaning though CSA occurs during the formative years, the negative impacts of this continues to occur even during adulthood; thus, becoming a potent reason for ADA (LeTendre & Reed, 2017). Moreover, majority of the victims of CSA may result in ADA as a negative coping mechanism of dealing with violation. Additionally, CSA is a major cause of psychological and behavioral difficulties that are pervasive into adulthood such as depression, PTSD, risky sex, suicide attempts and ADA (Rich et al., 2016).

Childhood sexual abuse has been argued to cause an early onset to ADA. A study done by Berg et al. (2017) found that CSA was a predictive factor for user of Methylsulfonylmethane (MSM than on non-users. In another study, Levine et al. (2018) posit that there was an association between CSA, high risk alcohol consumption and Latino Methylsulfonylmethane (MSM) in New York. There seems to be an explicit link between CSA and ADA and because there has been very few research done in Kiambu County to examine whether similar association would be counted for the increased ADA in the region, this study sought to fill this

research gap by examining whether there would be similar association between CSA and ADA in Kiambu County.

Influence of Physical Abuse during Childhood on Alcohol and Drug Abuse

Physical abuse encompasses non-accidental physical injury which has the potential to lead to severe fractures or death. Physical abuse may be perpetrated through different means such as through punching, beating, kicking, biting, shaking, throwing, stabbing, choking, hitting with a hand stick, strap, or other object, burning, or otherwise harming a child, that is inflicted by a parent, caregiver, or other person who has responsibility for the child (Fortson et al., 2016). Physical abuse can also be defined as any action that harms or has the potential to incur physical injury to a minor according to the US Department of Health and Human Services [DHHS, 2018]. Physical abuse is viewed as acts of commission meaning, there is intentionality for the perpetrator to commit the act.

Physical abuse during childhood has been argued as having potency of causing growth problems, developmental delay, and mental difficulties; for example, anxieties which underlies the need for ADA (Deutsch et al., 2015). Physical abuse has been linked as a major cause of psychopathology which may include major depression, bipolar disorder, anxiety disorder, attempted suicide, PTSD, and ADA Schückher et al. (2019). In a study conducted in Kajsa Centre in central Sweden for both sexes to examine the prevalence rate of physical abuse among people with ADA, reported emotional abuse prevalence rate of 47.5%, physical abuse 38.9% and sexual abuse 21.1% (Schwandt et al., 2013). This indicates that physical abuse was among the highest underling cause for people suffering from ADA. Moreover, Wisdom and Wilson (2015) similarly reported a strong association that links physical abuse to ADA. This study therefore, sought to examine whether there were any physical abuse factors as underlying causes for ADA in clients selected in identified rehabilitation centers in Kiambu County.

The effects of physical abuse during childhood are pervasive to adulthood. According to Chen at al. (2016), adults who were subjected to physical abuse during childhood experience more health problems and behavioral mal-adaptations such as ADA during adulthood compared to adults who did not suffer physical abuse in their childhood. Physical abuse during childhood affects the child's ability to emotionally self-regulate; this lack of emotional regulation is a vulnerable factor that leads to ADA later during adulthood (Banducci et al., 2014). Therefore, one may cope through the ADA as a means of escaping from the painful trauma experience. Secondly, one uses ADA as a means of dealing or reducing feelings of isolation and loneliness, through forming relationship with other users of ADA. Lastly, one may use ADA as a means of blocking the negative memories of physical abuse (Carliner et al., 2016).

Augustyn et al. (2019) found similar result that physical abuse may lead to trauma in children who were abused during their childhood. Later on, during these children's adult stage, they turn to the abuse of ADA as a means of dealing and coping with their childhood trauma. Augustyn argued that physical abuse occurring within the first five years of child's growth and development had been seen to predict to subsequent abuse of ADA later in life. A study conducted in South Africa to examine the influence of childhood physical abuse and the need to abuse alcohol during their adolescence and adulthood established a positive association between physical abuse and ADA as a means of coping (KonKoly et al., 2017). This study sought to examine whether physical abuse was a factor that influence the ADA among clients in selected rehabilitation centers in Kiambu County.

Women who were physically abused during childhood have been founded to be 1.58 times more likely to abuse drugs as compared to those that did not experience physical abuse, even after controlling the family history of ADA (Letourneau et al.,2018). In a longitudinal study done in the US, physical abuse was found to be a major predisposing factor towards

adolescent's abuse of alcohol, marijuana, among others drugs (Rich et al., 2016). Moreover, the study found that physical abuse is also a salient cause of early onset of smoking, an increased likelihood of smoking during adulthood as well as producing nicotine dependence or withdrawal (Schückher, 2019).

Childhood physical abuse has been reported to be a cause that leads to early onset to ADA. In turn, the early onset to ADA becomes a major factor that may contribute to a pervasive use of ADA during adulthood (Chung et al., 2023). Moreover, physical abuse has been shown to lead to negative emotional, psychological and physical effects that predisposes one to ADA. According to Chandler et al. (2015), children exposed to adverse condition such as physical abuse are more prone to suffer from mental health; for example, depression that simultaneously make them more likely to ADA and develop drug dependence as a means of coping with their emotional distress. Children with a history of physical abuse and other ACEs such as emotional neglect and parental separation have been reported to have great likelihood of polysubstance use; that is, abuse of more than one drug and also to have high drug dependence problems (Charak et al., 2015).

According to Charak et al. (2015), they posit that for children exposed to physical abuse have a high likelihood of being exposed to other ACEs. The consequence of this is that, as the number of ACEs increases so does the risk of using ADA increase. This prolonged abuse of ADA subsequently leads to psychological, physiological, social, and negative health effects (Chung et al., 2023). Similar findings were reported by Lotzin et al. (2016) that physical abuse has the potency to increase the severity, course and duration of ADA psychological dependence and physiological dependence among other negative effects. In addition, childhood history of physical abuse has been found to contribute 48% more likelihood of leading young adults to participate in ADA (Lotzin et al. 2016)

Additionally, childhood physical abuse contributes to compounded negative effects according to Braga et al. (2017). Physical abuse is reported as a cause for mental health difficulties such as suicide attempts, risk for psychiatric disorder, for example PTSD, depression ADA, and mood disorder. Consequently, mental health difficulties lead to social problems, financial difficulties and legal problems because most of the victims of physical abuse are prone to antisocial behavior that makes them vulnerable to engage in crime. Physical abuse therefore may lead to an overarching negative effect that affects the individuals social, educational, mental health and physical health, leading to a huge burden to the society and community at large (WHO, 2014).

Influence of Parental Separation during Childhood on Alcohol and Drug Abuse

Parental divorce is one of the core traumatic events that compose ACEs, whose effect has the potent to increase the risk for ADA across the adolescence and adult life of a child (Jackson et al., 2016). Parental divorce or separation has been strongly linked with increased child and adolescent adjustment problems which include; academic difficulties, disruptive behaviors such as ADA and depressed mood (D'Onofrio, & Emery 2019). According to Statistika (2018), when parental divorce or separation occurs, its traumatic consequences may be pervasive into adulthood becoming the vulnerable factor that leads to ADA. Elwenspoek et al. (2017) observe that traumatic stress that occurs especially before 18years can impact the stress system of a child in a long run and thus affecting the coping ability of a child later in life (Elwenspoek et al., 2017).

Parental divorce exacerbates the mental ill-health to children leading to depression, anxiety, ADA, social problems and aggressive behaviors (Tebeka et al., 2016). Consequently, children who have been exposed to separation or divorce of their parents tend to be at risk of problematic behaviors such ADA. Moreover, due to the marital conflict that usually accompanies separation, it equally leads to lower social competence which is another risks

factor for ADA (Alonzo et al., 2014). The environment during separation and divorce has been argued to be very hostile and dangerous to children characterized by less affection, less responsiveness from parents and punitive leading to emotional insecurity to children (Forest, 2014).

As a result of toxic environment during divorce, children tend therefore to perceive their homes as unpredictable and uncontrollable; thus, creating a fertile ground to start abusing ADA as a way of dealing with emotional insecurities. In addition, parental divorce is a core factor for poorer mental well-being in children (Grant et al., 2015). The ripple effect of these early life poor mental well –being would be the underlying cause for depression, anxiety and bipolar (Bergström et al., 2015). Where interventions are not appropriated because of these poor health outcomes, these may lead one to start abusing ADA as a way of coping.

Bowlby (1982) conceptualized parental separation or divorce as a loss that has the ability to increase the vulnerability to future adversity (Lamela et al., 2016). This study sought to comprehend the influence of pre- and post-divorce/separation influence on a child's well-being. Numerous cross-sectional studies have identified interpersonal conflict as the consistent factor that accounts for vulnerability in child's adjustment leading to a risky behavior such as ADA (Hara et al., 2021; Xerxa et al., 2020). The overall impact of parental divorce or separation according to Grant et al. (2015), has shown to predict early onset on ADA occurring from as early as 13 years. Waldron et al. (2014) argued that parental divorce or separation when a child is below the age of 18years was associated with an earlier onset of ADA, throughout the adolescence period. This delineates that parental involvement and monitoring of their children acts as a preventative measure against ADA (Rusby et al., 2018). Therefore, when divorce or separation occurs, it increases vulnerability for early onset of ADA.

Clyde et al. (2019) study on the rate of parental divorce in the United State showed that 40-50% of the first-time marriages and 60% of the second marriages end up in divorce. This

explicitly shows that majority of children's life would be shaped by their parents' state of marriage. The study echoes Wolf et al. (2016) who explored that parental divorce and separation in USA is a major cause for mental illnesses such as depression which negatively affects the social functioning of the adolescents. These underlying conditions inform the causes of ADA among the adolescents and later on in their adulthood.

According to Ortiz-Ospina and Roser (2020) on the state of marriage in U.S.A, among children age 0 – 5years, 12% of them live with a single parent, and they argued in totality 13% of all households are single parents. The impact of these parental divorce and separation leads to a broad spectrum of problems to children; children have to do so much in their emotional adjustment, parental relationship and majority of them have an early onset of ADA (Gatin at al., 2013). A study conducted by Sanayeh (2022) in Lebanese after dramatic collapse in basic services and the increase in poverty and unemployment rates, Lebanon faced a 101% increase in parental divorce rates between 2006 and 2017. The study noted that children who experienced parental divorce showed social, psychological and behavioral disruption. Consequently, this increased risk behaviors like smoking and water-pipe addiction. In a similar study, Jabbour et al. (2020) noted that Lebanese, European and American studies reported higher rates of nicotine addiction in adolescents who experienced parental divorce at an early age, when compared to those who lived with both parents.

According to Tullius et al. (2021), there are high levels of emotional and psychological distress following the period of divorce. Early parental divorce or separation was associated with higher levels emotional and psychological distress than a divorce or separation that occurs late in life (Auersperg et al., 2019). These psychological distress and emotional dysregulations underlie the major causes of ADA. In Kenya, Wambua et al. (2021) in a study examining the effects of parental divorce on psychological well-being of secondary school students in Kajiado North Sub- County, established that parental divorce and separation has the propensity to cause

negative effects on the adolescent's psychological well-being. The children exhibited restlessness, overactive, emotional dysregulation problems, isolation, easily distracted and poor concentration in school. These symptoms indirectly form the fertile ground for ADA as a means of dealing with negative effects of parental divorce and separation.

Parental divorce exposes children to negative peer pressure; children face neglect of supervision, they experience difficulties in developing healthy coping skills, support-seeking skills and esteem focused skills, inadvertently and this predisposes children to early onset of ADA (Grant et al., 2015). During parental divorce, it is reported that there is heightened conflict that is ensued by poor parental monitoring and there is also faulty communication between the child and the parent. This condition makes the adolescent vulnerable to ADA, a behavior that continues to early adulthood. Children from single-parents are argued as more vulnerable to ADA, because they have to adjust to new environment and living sometimes in a constrained parent's income (Waldron et al., 2014).

According to a study done by Van Dorsselaer et al. (2017), Netherlands was reported as one of the countries with the highest number of youth population that were involved in ADA in their underage period. Though the youth argued that they abuse ADA as a form of having fun, or to escape social rejection, parental divorce was shown as the most stressful situation that was the underlying cause for most youth that made them vulnerable to ADA. Children subjected to parental divorce have 10% higher chance to engage in binge drinking and ADA between the age of 12 and 18 years of age. Parental divorce was considered by Basyoni et al. (2021) to be among other familial risk factors such as neglect, childhood abuse, poor parent relationship that have the potent to lead to ADA among the emerging adults

Parental separation/ divorce is a major source that enhances risk for ADA and increase psychological and emotional difficulties among adolescents and young people (Pourmovahed et al., 2021). The adolescents that lived with both biological parents, the presence of parents

acted as a protective factor against ADA, while adolescents from single-parent families were shown to more prone to ADA (Pourmovahe et al., 2021). Men who were subjected to their parental divorce as children between the age of seven and 16 are more prone to smoke as adults; moreover, males who were exposed to parental divorce are vulnerable to ADA. On the other hand, women exposed to parental divorce during their childhood between the age of seven and 16 are reported to be more prone to smoking and heavy drinking (Waldron et al., 2014).

Theoretical Framework.

The study adopted the Attachment Theory and Psychoanalytic Social Theory as foundational theories in understanding ADA.

Attachment Theory

The Attachment Theory emerged as a collaboration between John Bowlby and Mary Salter Ainsworth. However, it was not until 1950 that the Attachment Theory was propounded through John Bowlby work with World Health Organization (WHO) (Ainsworth, 2015). The Attachment Theory is an elaborate theory that seeks to understand personality and how social development ensue from the birth of a child until death occurs. (Bowlby, 1979). The Attachment Theory, moreover, seeks to accentuate that the etiology of myriads of psychopathologies emanates from the failure to provide the salient needs of a child from early in life such as the need for emotional connection, protection from harm, and love (Wang, 2016). Consequently, these psychopathologies such as depression and loneliness become a major reason that drives ADA, causing an early onset or later ADA (Wang, 2016).

The perpetration of ACEs within a family causes the caregiver to be unsupportive thus affecting the development of secure attachment (Cooke et al., 2019). The children that grew up subjected to insensitivity, inconsistent caregiving as a result of ACEs develop insecure attachment that underlies the need to ADA later in life (Corcoran & McNulty, 2018). Children that developed insecure attachment as a result of ACEs struggle with forming parental bonds,

trust and close relationship as adults. Consequently, this becomes a recipe for depression, isolation, withdrawal and thus, one ends up using ADA as a means of coping with underlying mental illness such as depression (Dagnino et al., 2017).

Attachment is conceptualized as a bi-directional process that facilitates building of emotional connection between a child and the parent. This connection is salient because it influences the holistic development of a child such as cognitive, emotional and physical development among others (Association for Treatment and Training in the Attachment of Children ([ATTACh, 2015). According to the Attachment Theory children tend to thrive under a warm environment that is characterized by nurturance, love and protection that spur the child to engage in self-exploration (Nakazawa, 2018). In the absence of such a secure attachment bond it impedes the growth of a child and thus, makes the child vulnerable to ADA as a means of dealing with disrupted holistic development (Corcoran & McNulty, 2018).

The Attachment Theory is salient in understanding past psychopathology that may underlie ADA, through provision of a model that helps comprehend development of a child within formative relationships (Ainsworth, 2015). Through a healthy interaction with a caregiver, a child develops what Bowlby called an Internal Working Model (IWM) of attachment or rather a set of mental representation of the self, the caregiver and the world (Sherman et al., 2015). The importance of this IWM is that it operates across the lifespan acting as a guiding compass that promotes survival, individual expectations and explorations of the social and physical environment (Zeanah et al., 2015). This IWM is also ideal in acting as a buffer through creation of healthy self-image, self-worth and self- respect; components that are important in preventing an individual from engaging in ADA.

The perpetration of ACEs during childhood is a major cause that makes a child vulnerable to ADA later in life (Ellis et al., 2017). According to Bowlby (1973), availability of attentive and consistent caregiving is a precursor for the development of a healthy internal

working model that helps an individual to develop a secure attachment of resilience, trust and positive outlook of life that are a protective factor against ADA later in life. According to Ellis et al. (2017), those children that were subjected to ACEs because of experiencing parental divorce or violence are more vulnerable to ADA later in life because they were not able to establish a secure bond. Corcoran and McNulty (2018) argued that due to ACEs, a child develops anxious attachment styles that make them more prone to psychological distress, criminal activity, poverty; unemployment factors that underlies the need for ADA later in life.

Attachment, according to Schores (2014), provides an environment that maintains survival, safety and security. Secondly, he stated that attachment assists in learning how to calm and self-soothe or self-regulate and thirdly, attachment fosters a lasting impression of our caregiver, our relationship, and the world of relationships. Therefore, it is imperative for parents to ensure a stable environment for their children. The Institute of Medicine and National Research Council (2014) defined safety as entailing emancipating the child from any form of fear and mental harm; stability conceptualized as creation of an environment where the child will be able to count for consistency and predictability which in turn promotes the child social, emotional and physical growth. Lastly, nurturing regards to a person is available to sensitively respond to salient needs of a child. Attachment; therefore, becomes as a protective buffer against perpetration of ACEs and thus helps to mitigate the negative outcome of ADA.

These three components; safety, stability and nurturing, when they are absent, they expose a child to maladaptive behavior of ADA, which acts as a mechanism to deal with unmet attachment needs, according to the Institute of Medicine and National Research Council (2014). The infancy period of 0-3years is a very critical stage for attachment according to Newman et al. (2015). This stage is characterized by rapid growth and critical brain growth which facilitate the development of salient neurodevelopmental capacities that would underlie late psychological and emotional well-being. Therefore, when ACEs is perpetrated, it hinders

this critical brain growth and development; therefore, setting a stage for a fertile ground for future ADA.

Schores (2015) noted that environmental influences at infancy stage is very critical, emphasizing the need to establish a secure attachment with a child that has critical importance in shaping the holistic growth and development of a child. Failure to establish secure attachment would negatively affect psychological and emotional functioning of a child. Individuals who did not experience sufficient attachment with their caregiver develop insecure attachment, a precursor for developing negative internal working model (IWM) of self, and others as well as experiencing difficulties in building relationships. Insecure attachment is attributed as a major factor for ADA, as well as an underlying cause for many of mental disorders (Suchman &DeCoste, 2018).

According to Bowlby (1977), insecure attachment (anxious, avoidant, and disorganized), is an underlying cause for emotional distress such as anxiety and isolation. Insecure attachment has been argued as a contributing factor to various personality pathology as well as being a cause of various psychiatric diseases, such ADA (Rahmanian et al., 2015). Moreover, insecure attachment negatively affects the establishment of nurturing relationship with other people. Consequently, ADA, becomes an attractive coping mechanism that the individual uses to deal with their stress, loneliness and emotional distress (Schindler & Broning, 2015).

According to the Attachment Theory, ADA is referred to as an attachment disorder. This is because the act of, ‘self-medication’ is conceptualized as a strategy to cope with failure to satisfy the attachment needs such as warmth, love and nurturance (Schindler, 2015). Moreover, ACEs have been reported as a major cause that leads to insecure attachment style. People that developed insecure attachments are more prone to emotional dysregulation and depression factors that underlie ADA (Ruocco et al., 2018).

The Attachment Theory is in tandem with the Psychoanalytic Social Theory by Karen Horney that emphasizes a need for a healthy social environment during childhood that enables meeting of the salient needs of children, such as; love, safety, satisfaction, nurturance, validation, affirmation among others. Failure to this may result in neurosis or basic anxiety ensuing negative coping strategies such as ADA in order to numb their unmet social needs (Widiger & Oltmanns, 2017).

Psychoanalytic Social Theory

Psychoanalytic Social Theory by Karen Horney (1937-1950 emphasizes social and cultural condition during childhood in shaping one's personality. This theory accentuates the importance of providing safety and satisfaction as the salient needs for children (Horney, 1950). According to Psychoanalytic Social Theory, social context or environment during childhood determines how the child grows rather than the intrinsic factors. Karen Horney poised that in order for children to explore their real self, it is imperative to create an environment of freedom, warmth and free expression of feelings (Vanacore, 2020). Failure to provide a healthy social environment for children during childhood may lead to what Karen Horney termed as 'intrapsychic conflict', distorting the formation of real self and ensuing the formation of idealized self and self-hatred (Horney, 1946).

The core concept of Psychoanalytic Social Theory includes; the real and idealized self, basic anxiety, self –defeating cycles and the three movement of people. This study considered how ACEs relate to these concepts proposed by Karen Horney to eventually being a cause for ADA. The perpetration of ACEs within a family denies a child the opportunity to develop real self. Real- self according to Horney (1950) is the alive, unique, personal center of ourselves. It is the intrinsic potentialities such as talents, capacities and predisposition that require an environment of love, warmth and favorable to develop. The attainment of real –self according to Karen Horney give rise to meaning of life without which it may lead to what is termed as

'psychic death'. The perpetration of ACEs; therefore, ensues the formation of intrapsychic conflict and the child copes by developing idealized self and self –hatred. Idealized self is characterized by; grandiosity, neurotic pride and neurotic claims, while self- hatred is characterized by self-contempt and alienation from self (Horney, 1946). This idealized self-image and self-hatred are the salient factors that underpin the need for ADA later in life.

The Psychoanalytic Social Theory conceptualizes six ways that people portray their self-hatred; through relentless demands on the self, self-accusation, self-doubt, self-frustration, self- torture and finally self-destruction actions and impulses such as ADA (Horney, 1950). Idealized self and self-hatred are the inner critical voices that underlie the need for ADA. According to Psychoanalytic Social Theory, childhood experience shapes the later life of an individual. Karen Horney conceptualized what she termed as 'basic anxiety' arising from ACEs that is orchestrated by adverse social environment. Adverse social environment impedes a child to grow according to his or her needs and possibilities.

This adverse social environment that negatively affects an individual from childhood includes; parents who are dominant of their children to succeed, unpredictable parenting that oscillates between smothering love and intimidation, tyranny and glorification, comradeship and authoritarianism. Parents that coerce a child to take one parent's side over another makes a child feel that his or her entire purpose on the planet is to live up to their expectations. Additionally, parents that enhance their own prestige, or blindly serve their needs at the expense of their children, denies the children ability to recognize their existence as separate identity with distinct rights and responsibilities. Children exposed to this corrosive and toxic environment develop negative coping mechanism such as ADA later in life (Nickerson, 2022).

Karen Horney theorized that people can move using three styles of interactions which include; moving toward people, moving against people, or moving away from people (Nickerson, 2022). Moving towards people is a negative coping mechanism employed when

an individual experiences a neurotic need to protect themselves as a result of helplessness. For example, this may take a form of placating or becoming a 'yes' person losing one's power for assertiveness in order to protect oneself. Secondly, moving against is a negative coping mechanism of adopting aggressiveness, toughness and ruthlessness prompted by inner anxiety and thirdly, moving away from people encapsulate the need to detach oneself as a negative coping mechanism of dealing with conflict of isolation. For example, a person chooses to withdraw and isolate because of the belief that his or her need to connect and intimacy will never be met.

Adults who were exposed to ACEs during childhood are prone to use the three styles of interaction in a compulsive manner, irrespective of the needs of the self. Horney conceptualized these three styles as compliant, aggressive and the detached personality (Horney, 1945). Indeed, these three maladaptive strategies are very appealing or creates a conducive environment for ADA as a means of escape (Widiger, & Oltmanns, 2017).

Sustainable Measures That Would Help Mitigate the Prevalence of Adverse Childhood Experiences among Clients in Selected Rehabilitation Centers in Kiambu County.

People that have been subjected to ACEs need to be provided with adaptive coping skills in order to deal with negative outcome of ACEs. According to Bethell et al. (2019), there is need to mitigate on the spread of ACEs and its negative outcome in order to have a healthy population for present and future generation. Four critical interventions were developed to help mitigate ACEs that included; supporting parenting or caregivers, establishing healthy relationships and resilience, ensuring prompt identification and accurately responding to ACEs (Di Lemma, 2019). Psychosocial support delineates a situation whereby an individual is empowered to functional normally and effectively through equipping them with necessary abilities to overcome the prevailing challenge; for example, increase their self-esteem and confidence (Choi et al., 2020). According to Choi et al. (2020), psychosocial support provides

a buffer against negative behaviors such as internalizing and externalizing behaviors following being subjected to ACEs. Moreover, there is a need not only to consider supportive measurers from the family members. Humphrey et al. (2020) observed that children that experience emotional neglect need to be helped to build connections and healthy relationships with other peers outside their homes.

Building resilience and relationships in childhood and adulthood has been presented as an intervention that has the potency to mitigate negative outcomes that may lead to ACEs (Bellis et al., 2017b). Resilience amongst adults has been shown to be a factor that helps the adults for example to participate constructively in their communities and to be in charge of their financial security (Hughes et al., 2018). Thus, strengthening resilience in children and adults is important to protect them against the impact of ACEs throughout the life course.

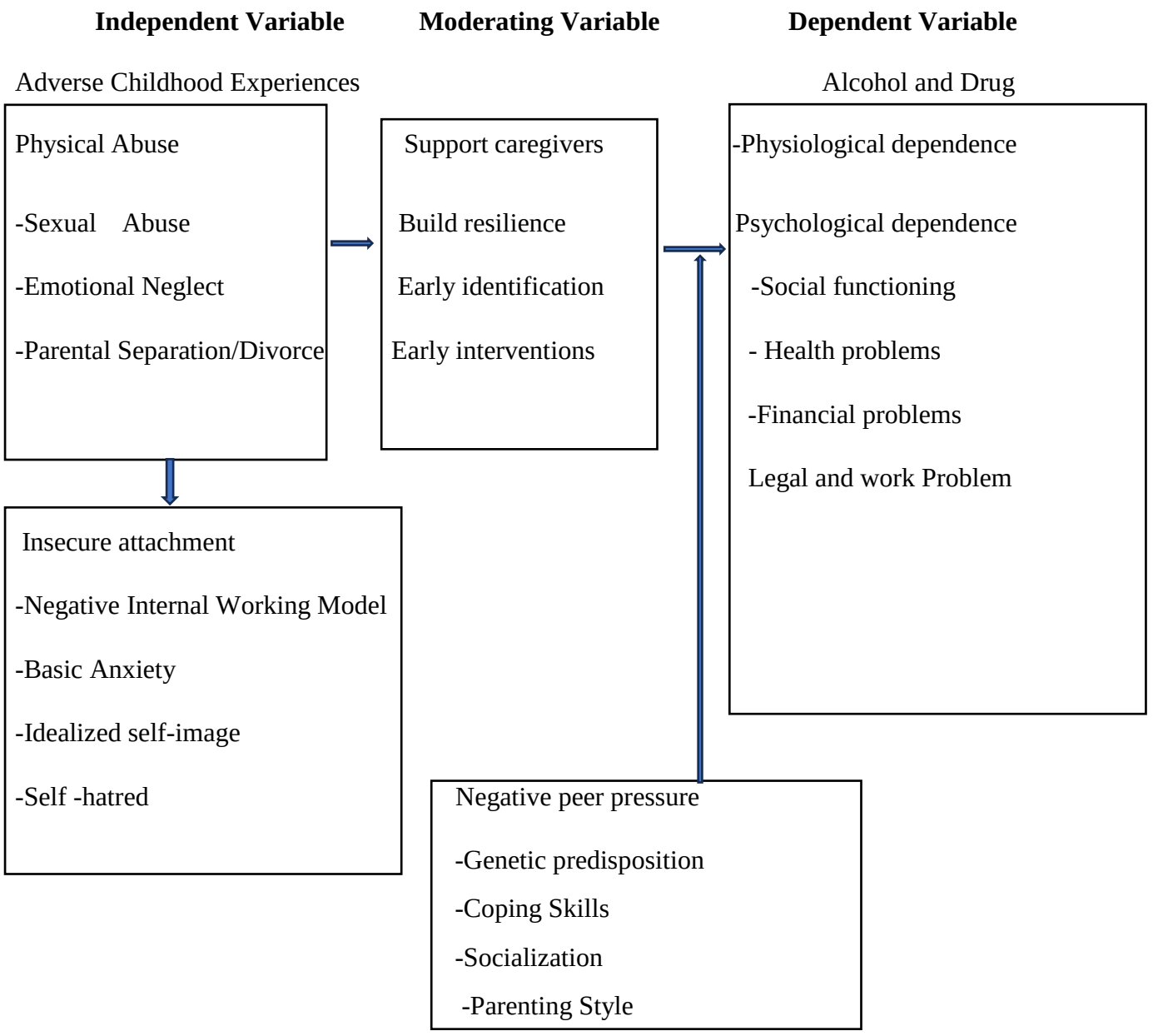
Prompt identification of ACEs coupled with effective treatment to specific ACEs are other interventions that are ideal to help both prevent and cope with ACEs. In this regard, there is need to conduct screening in pediatric setting and in rehabilitation setting. Through screening, it provides an opportunity for specific interventions and treatment; for the adults, screening informs the treatment approach that a mental health practitioner should engage such as trauma-informed care (Hughes et al., 2017). The four construct of ACEs that is, physical abuse, sexual abuse, emotional neglect and parental separation or divorce is thus explicitly clear that they have the ability to lead to ADA as established throughout the literature review.

Conceptual Framework

In this study, a conceptual framework illustrates the influence that Adverse Childhood Experiences (ACEs) which is the independent variable has on Alcohol and Drug Abuse (ADA), the dependent variable. The Attachment Theory by Bowlby and Psychoanalytic Social Theory by Karen Horney was used in the conceptualization to illustrate that, when ACEs were perpetrated during childhood, they led to insecure attachment, negative Internal Working

Model (IWM), basic anxiety and distorted real self that acts to drive the early onset of ADA and later influence during adulthood the continued behavior of ADA. There is a possibility that an individual may be exposed to ACEs but does not end up with ADA because of intervening factors such as spirituality, attachment with a caring figure, early identification and treatment, building relationship and resilience, among others.

Figure 1 ***Conceptual Framework***



Source: Maurifixten Kamau Njuru

Summary of the Chapter

The Attachment Theory as used in this study provided an in-depth understanding of the damage that occurs when attachment needs are not met. The theory provides a framework of understanding through IWM and insecure attachment that develops when attachment needs are not satisfied. This ensured an objective measurement for those that are suffering for ADA to explore how they view themselves, the others, and the world.

The Psychoanalytic Social Theory is also equally important in this study. This theory emphasizes on childhood experiences and their potency to change an individual personality. Where there is negligence to meet the salient need of a child for love and affection, it ensues formation of basic anxiety or neurosis and denies a child's ability to form their real self and instead forms idealized self or self-hatred. The Psychoanalytic Social Theory provides lenses through which to understand the underlying causes that drive the need for ADA.

The four ACEs constructs; sexual abuse, physical abuse, emotional neglect and parental divorce capture the core constructs of ACEs. This delineates therefore the presence of one or two of these core tenets of ACEs may indicate the presence of other forms of abuse or household dysfunctionality such as domestic violence. These four ACEs construct provides a good measurement for the client in the selected rehabilitation center to explore whether they have any influence ADA.

Chapter Three: Research Methodology

Introduction

This chapter consists of the following sections; philosophical paradigm, research design, target population, sample size, sampling method, types of data, data collection methods, instruments pre-testing, data analysis plan and ethical considerations.

Philosophical Paradigm

According to Lincoln et al. (2011), a paradigm can be conceptualized as philosophical assumptions or a set of beliefs that act as a guide for the researcher's actions and informs the worldview of the researcher on the phenomena under study. According to Davies and Fisher (2018), a paradigm is conceptualized as a set of practice and beliefs. This study was informed by pragmatic philosophical paradigm. Pragmatic paradigm conceives the possibilities of having multiple or single realities that are open for inquiry; it conceives the possibility of an objective reality to exist apart from human experience (Creswell & Clark, 2011). A pragmatic paradigm can combine both positivism and constructivism in conceptualization of realities. In this regard, pragmatism recognizes human interpretation of a phenomena as well as acknowledging scientific knowledge as one of the many sources of knowledge (Marsonet, 2017).

The researcher used pragmatic paradigm view of ACEs from both the empirical evidence and through other lenses such as constructivism that allows the subjective understanding and interpretation of ACEs through lenses of selected clients in rehabilitation centers in Kiambu County. Pragmatism paradigm supports that knowledge should promote the discovery of truth. One of the founders of pragmatism paradigm, John Dewey, asserted that the function of knowledge should be to create a positive change; moreover, pragmatism views realities as forming from a process (Visser, 2019). This underpins the researcher's intentionality on knowledge that would be gathered between ACEs and the dependent variable

ADA. The insight from this study is to enable positive change on the clients that are suffering from ADA and improve their lives. Consequently, the realities around ACEs are still changing because there is still ongoing research to the understanding the influence of ACEs on ADA.

Research Design

A research design signifies a master plan, blueprint, or rather the procedure of aligning research tasks and activities. It describes the plan that was employed by the researcher to collect, analyze and interpret the collected data (Sugiyono, 2014). This study used descriptive survey research design using both qualitative and quantitative methods. A descriptive survey research design is salient in exploring the underlying causes as well as creating insight into what may be the probable causes of the phenomenon (Apuke, 2017). In this regard the use of a descriptive survey research provided the researcher with better understanding of ACEs, and the extent to which ACEs may be a probable cause of ADA.

Location of Study

The study was conducted in rehabilitation centers in Kiambu County. Kiambu County is located in the central region of Kenya and it covers a total area of 2,543.5 Km^2. According to the Kenya National Bureau of Statistics [KNBS] (2019), Kiambu County has a population of 2,417,735 people. The county is ideal in relation to the study because of its unique feature of being 40% rural and 60% urban, in addition to being a cosmopolitan County. Kiambu County has 12 constituencies which are; Gatundu South, Gatundu North, Juja, Thika town, Ruiru, Githunguri, Kiambu, Kiambaa, Kikuyu, Kabete, Limuru and Lari.

The county has many rehabilitation centers; however, the study confined itself to only those centers that are accredited by NACADA. There are 13 registered treatment and rehabilitation centers in Kiambu County (Muriithi, 2018). These rehabilitation centers have the holding capacity of 355 clients who are admitted from all parts of the country. In addition, the rehabilitation centers contain respondents who are under a treatment program of ADA within

the guideline of NACADA and hence, they are reasonably assumed to be under professional guidance, supervision and grounding of underlying etiology, treatment and prognosis of ADA.

Target Population

A target population describes the group of individuals or participants with the specific attributes of interest and relevance to a study (Asiamah, 2017). According to Cooper and Schindler as cited in Njoya (2017), target population may be understood as the list of all elements from which the sample is drawn for the study. In this study, the target population included all clients in the 13 rehabilitation centers in Kiambu County that are registered by NACADA (NACADA, 2017). There are 355 clients in the 13 registered rehabilitation centers in Kiambu County with residential admissions for ADA as follows; Raphaelites (25), Lifetime Wellness Center (25), Asumbi Kent Mere (35), The Retreat (55), Wonder Peace (30), Blessed Talbot (45), Zawena (20), Jorg Ark Trust (20), Marylynne Bliss (15), Polka Dot Wellness (25), Primose Rehabilitation Center (20), Maranatha Restoration (15), Levuka Treatment Center (25).

In addition, the study also targeted the resident experts in the centers who included; lead counselors (13) and psychiatrist (13). Consequently, the study was comprised of 355 clients, 13 counselors, and 13 Psychiatrist making a total of 381 participants. Table 1 presents a summary of the target population.

Table 1 Target Population

Name of the Rehabilitation Center	Number of Clients	Number of Counselors	Number of Psychiatrists
1. Asumbi- Kentmere	35	1	1
2.The Retreat- Limuru	55	1	1
3. Wonder peace	30	1	1
4. Blessed Talbot	45	1	1
5. Raphaelites	25	1	1
6. Zawena Rehab	20	1	1
7. Marylynne Bliss	15	1	1
8. Jorgs Ark Trust	20	1	1
9.Polka Dots Wellness	25	1	1
10.Maranatha Restoration	15	1	1
11. Lifetime Wellness	25	1	1
12.LevukaTreatment Center	25	1	1
13. Primose Rehabilitation	20	1	1
Total	**355**	**13**	**13**

Sample Size and Sampling Procedure

A sample size refers to the number of individuals in a research study selected to represent a population (Frankline, 2021). Sampling on the other hand, underpins the process of selecting individuals to participate in a research study (Kindy et al., 2016). According to Creswell (2014), sampling refers to a method that is used in selecting participants for the study from a population to be studied.

The study employed multistage sampling technique comprising of both probability and non-probability sampling techniques in selecting the sample of the study. Kiambu County was purposively selected among 47 counties in Kenya because of high increase of ADA among its population. Moreover, Kiambu's semi-urban nature makes it likely to attract clients from other parts of the country. This was followed by conducting a simple random sampling technique in selection of five rehabilitation centers from the 13 registered rehabilitation centers. Orodho (2012) states that in descriptive studies, the sample size should be at least 10% for large populations and 30% when the population is small. Consequently, since the target population

was small, the upper limit (30%) was used, the researcher selected five rehabilitation centers which constituted 38.5%. The clients selected within the five registered rehabilitation centers belonged to a cluster of people between the ages of 15-65 years, considering male only for this study.

To identify the number of ADA clients to be sampled, the study used Krejcie and Morgan (1970) sampling formula. According to this formula, a population of 355 clients is adequately represented by a sample of 181 subjects. Therefore, in this study 181 ADA clients were sampled and included in the study. In addition, the lead counselors, and psychiatrists in the five sampled rehabilitation centers were purposively sampled for the study. Lead counselors and psychiatrist physicians were included as key informants. Through their expertise, they provided valuable information that enriched this study. Consequently, the targeted sample comprised of 5 lead counsellors, 5 psychiatrists, and 181 ADA clients making a total 191 respondents.

Types of Data

The study used primary data which was collected directly from the clients using instruments such as modified Adverse Childhood Questionnaires (ACE-Q) and structured interviews for the key informants. Secondary data was obtained from relevant journals, books and government publications through institutions such as NACADA.

Data Collection Methods

This study used the following tools in collection of the data; modified ACE-Q, and semi-structured interviews. The adapted ACE-Q which contained 20 items was used to collect data on the four constructs of ACEs that is; physical abuse, sexual abuse, emotional neglect and parental separation or divorce. On the other hand, semi-structured interviews were used to collect data from the selected expertise within the identified rehabilitation centers in Kiambu County.

Adverse Childhood Experience-Questionnaire

The study used a modified version of Adverse Childhood Experience Questionnaire (ACE-Q) by Felitti's (1985) to collect the data. ACE-Q have three sections; A, B and C. Section A, collected background information pertaining the respondents, Section, B, consisted of 20 items in a five-point Likert scale ranging from Strongly Disagree to Strongly Agree and sought to collect information on the four constructs of ACEs; that is, physical abuse, sexual abuse, emotional neglect and parental separation/ divorce. Lastly, Section C, collected information on the frequency of consumption of alcohol and drug abuse among the ADA clients. ACE-Q sought to quantify the instances of adverse or traumatic experiences that the clients were subjected to before the age of 18 years. Moreover, ACE-Q was administered to clients with ADA in the selected rehabilitation centers in Kiambu County. ACE-Q was important because of its ability to identify childhood abuse and family dysfunctions such as parental separation and divorce (Merrick et al., 2018). According to Hughes et al. (2017), ACE-Q has been instrumental in objectively revealing whether there is any relationship between ACEs and poor adult health such as ADA.

A five-point Likert scale ranging from 1-5 was used to collect data. It ranged from Strongly Agree (SA- 5), Agree (A- 4), Sometimes (S-3), Disagree, (D-2) and Strongly Disagree, (SD-1). The ACE-Q checked for the client's exposure to childhood psychological, physical, and sexual abuse in addition to household dysfunctions such parental separation/divorce (Meinck, 2017).

Semi- Structured Interviews

According to Showkat and Parveen (2017), interviews are salient for a researcher in gaining an in-depth understanding and a more detailed information on the subject under study. The researcher administered a semi-structured interview with the resident experts in the rehabilitation centers. They included; the lead counselor and the psychiatrics. The interview with the experts that is; lead counselors (5) and psychiatrists (5) provided objective answers that they drew through their assessment, screening, clinical interviews and observation of the client. According to Bryman (2016), semi-structured interviews are important because the researcher can have follow-up questions and also keep an open-mind with the interviewee.

Instruments Pre-testing

Pre-testing refers to a stage in research whereby the survey tools are subjected for testing to evaluate their reliability and validity before the final survey (Hu, 2014). Pre-testing has been fronted as a necessary exercise in improving on the quality of data collection and also saving on time and resources. The researcher used cognitive interviews in pre-testing the instrument; this involves one on one interviews to assess a questionnaire in terms of general understanding, questions and response wording, skip logic and visual aids (Willis, 2014).

Though there are no clear guide line in choosing a pre-test sample, Blair and Conrad (2011) suggest a number between a 0.05 and 0.10 of the sample size. On the other hand, Mugenda and Mugenda (2003) posit that a pre-test should be carried out using a sample of 1% and 10% of the study sample size. The sample size for the study was 181 respondents; thus, a pre-testing number of 9 participants was used representing 5% of the sample size. The researcher therefore, subjected the ACE-Q questionnaire for pre-testing with 9 participants and 2 professionals (a counselor and a psychiatrist) who were sufficient to identify any possible problem areas or flaws that the researcher needed to improve on. In addition, the participants of the pilot study were not included in the actual study. The pre-test of the research instruments

was conducted at Sober Living Rehabilitation Center in Ruiru Sub-County, Kiambu County, which was not included in the final study.

Reliability of Research Instruments

Reliability refers to the consistency or stability of a measurement. An instrument with a good reliability should be able to obtain the same score from respondents on repeated testing (Bornstein, 2018). ACE-Q has been used internationally and is recommended by WHO (Ford et al., 2014). ACE-Q has been recommended for having adequate internal consistency (Cronbach's alpha = .70) that meet the required threshold (Cronbach's alpha = .70) (Meinck, 2017).

Validity of the Research Instruments

Validity refers to the extent to which an instrument actually measures what it purports or is designed to measure (Hancock, 2019). The importance of validity is that it has been argued to increase transparency while ensuring that the bias of a researcher is minimized (Singh, 2014). The adapted ACE-Q was guided by content validity that refers to the degree to which an assessment instrument is relevant to, and representative of, the targeted construct that it is designed to measure. The instrument (the adapted ACE-Q) was presented to PAC University supervisors for verification.

Data Analysis

The data collected was analyzed and prepared through two approaches; thematic analysis for qualitative data and quantitative data analyzed using descriptive and inferential statistics aided by SPSS computer software Version 26.0. The inferential statistics comprised of ANOVA, Pearson correlation coefficient and regression analysis, while descriptive statistics comprised of frequencies, percent, mean scores and standard deviations.

Thematic analysis has been found useful in analyzing responses from the structured interviews, qualitative survey responses or any other qualitative data that may be generated

during the study (Terry et al., 2017). Thematic analysis is useful also in enabling the researcher to construct themes that are based on meaningful patterns that creates insights in interpretation of qualitative data set. Babbie (2020) posits that SPSS is efficient in a statistical analysis of numerical data, questionnaire and surveys, helping to analyze findings that assist in explaining a particular phenomenon. The findings of the study were be presented using tables, charts graphs and narrations.

Table 2 Summary of Data Analysis

	Objective	Independent Variable	Dependent Variable	Statistics
1.	To find out the prevalence of adverse childhood experiences among clients in selected rehabilitation centers in Kiambu County.	-	-	Frequencies, percent, mean scores, standard deviations, ANOVA
2.	To determine the influence of physical abuse during childhood on alcohol and drug abuse among clients in selected rehabilitation centers in Kiambu County.	Physical abuse	Alcohol and drug abuse	Frequencies, percent, mean scores, standard deviations, Pearson correlation coefficient regression model
3.	To evaluate influence of emotional neglect during childhood on alcohol and drug abuse among clients in selected rehabilitation centers in Kiambu County.	Emotional neglect	Alcohol and drug abuse	Frequencies, percent, mean scores, standard deviations, Pearson correlation coefficient regression model
4.	To establish the influence of sexual abuse during childhood on alcohol and drug abuse among clients in selected rehabilitation centers in Kiambu County.	Sexual abuse	Alcohol and drug abuse	Frequencies, percent, mean scores, standard deviations, Pearson correlation coefficient regression model
5.	To find out influence of parental separation during childhood on abuse of alcohol and drug abuse in clients in selected rehabilitation centers in Kiambu County.	Parental separation	Alcohol and drug abuse	Frequencies, percent, mean scores, standard deviations, Pearson correlation coefficient, regression model

Ethical Considerations

Ethical considerations describe a set of principles that should guide the researcher's design and practice. A researcher should confine him/herself within a speculated code of conduct while collecting data in the field (Bhandari, 2022). Informed consent is argued as core on matters that regard ethical consideration (Denzin & Lincoln, 2011). It is therefore imperative that participants be made aware of what will be asked of them and how that data will be used. The researcher sought permission from PAC University Graduate School Ethical Committee, seeking for introduction letter from the Graduate School to take to NACOSTI for application of a research permit. On the other hand, informed consent was sought form participants indicating their consent in taking part in the research. The researcher included participants' rights to access information and the right to withdraw at any point.

In addition, the researcher ensured anonymity as envisaged by Mugenda (2003), who conceptualized anonymity as prudence of a researcher to conceal personal data of the participants such as names and cultural orientation through ensuring that the participant confidential information was kept safe and secure. The study sought to explore very sensitive information from the participants and therefore the researcher was bound to provide anonymity to the respondents. The researcher ensured that there was no monetary gain for participating in the study, neither were there consequences for withdrawing from the study. The researcher also committed to making the findings from the study open or available for the subject matter expertise (lead counselors and psychiatric physicians) for their perusal.

Chapter Summary

The goal of this chapter was to outline the research method used to answer the research questions. A discussion of the procedure, study participants, data collection, and interview questions outlined the specifics of how the study was conducted and who participated in the

study. The goal of the next chapter, Chapter IV shall be to provide the study results and demonstrate that the methodology described in Chapter III was followed

Chapter Four: Results and Discussions

Introduction

This chapter comprises of presentation of results, data analysis, interpretation of the findings and discussions. The chapter also gives an overview of the demographics of the sample used in the study. The study sought to establish the influence of adverse childhood experiences on alcohol and drug abuse among clients in selected rehabilitation centers in Kiambu County Kenya.

The specific objectives that guided the study were; to determine the influence of physical abuse during childhood on alcohol and drug abuse among clients in selected rehabilitation centers in Kiambu County; to evaluate influence of emotional neglect during childhood on alcohol and drug abuse among client in selected rehabilitation centers in Kiambu County; to establish influence of sexual abuse during childhood on alcohol and drug abuse among clients in selected rehabilitation centers in Kiambu County; and finally, to find out influence of parental separation during childhood on alcohol and drug abuse among clients in selected rehabilitation centers in Kiambu County. The study also proposed sustainable measures that would help mitigate the prevalence of adverse childhood experiences among clients in selected rehabilitation centers in Kiambu County. The study further tested the following hypothesis;

$H0_{1:}$ There is no statistically significant difference in physical abuse, emotional neglect, sexual abuse and parental separation among clients in selected rehabilitation centers in Kiambu County.

$H0_2$: There is no statistically significant influence of physical abuse during childhood on alcohol and drug abuse among clients in selected rehabilitation centers in Kiambu County.

$H0_3$: There is no statistically significant influence of emotional neglect during childhood on alcohol and drug abuse among clients in selected rehabilitation centers in Kiambu County.

$H0_4$: There is no statistically significant influence of parental separation on alcohol and drug abuse among clients in selected rehabilitation centers in Kiambu County.

$H0_5$: There is no statistically significant influence of sexual abuse during childhood on alcohol and drug abuse among the clients in selected rehabilitation centers in Kiambu County.

Response Rate

The study sample comprised of 181 ADA clients sampled from 13 rehabilitation centers in Kiambu County, 5 resident counselors and 5 psychiatric physicians who worked in these rehabilitation centers, making a total of 191 respondents. All the required 181 ADA clients filled the ADA questionnaire; likewise the 5 counselors also responded to the counselors' interview schedule, and 4 psychiatrists also gave their views on the psychiatrist's interview schedule on ADA and ACE. This translated to 99.5% response rate indicating a high response rate. According to Groves et al. (2011), a response rate of over 70% is excellent for statistical analysis. Table 3 illustrate the respondent rate.

Table 3 Response Rate

Respondent Category	Target	Actual	Response Rate%
ADA Client	181	181	100%
Counselors	5	5	100%
Psychiatrist	5	4	80%

Demographic Profile of the Respondents

This section encompasses descriptive results of demographic findings, response rate and socio-demographic data from the respondents namely; gender, education level, duration of abuse of ADA, marital status, frequency of abuse among others.

Age Distribution of the Respondents

The study sought to find out the age of the respondents in this study. The study targeted participants from the age of 15 to 65years of age within the selected rehabilitation centers in Kiambu County.

Table 4 Age Distribution of the Respondents

Age in Years	Frequency	Percent	Valid Percent	Cumulative Percent
Below 19	3	1.7	1.7	1.7
20-29	67	37.0	37.0	38.7
30-39	60	33.1	33.1	71.8
40-49	42	23.2	23.2	95.0
50 and above	9	5.0	5.0	100.0
Total	**181**	**100.0**	**100.0**	

Table 4 shows that three (1.7%) of the clients were aged below 19 years, 67 (37.0%) of the respondents were aged between 20-29, 60 (33.1%) respondents were aged between 30-39 of age, 42 (23.2%) respondents aged between 40-49 years, and nine (5.0%) of the responded aged 50 years and above This indicates that majority of the respondents were in their early and middle adulthood stage of development. These findings are in tandem with Nawi et al (2021) that showed that alcohol is more prevalent among young people than the older people.

Respondents by the Level of Education

The study sought to examine the level of education for the participants of this study. There were four levels of education that was examined; Primary, Secondary, Tertiary and University.

Table 5 Education Level of the Respondents

Education level of the Respondents	Frequency	Percent	Valid Percent	Cumulative Percent
Primary	8	4.4	4.4	4.4
Secondary	59	32.6	32.6	37.0
Tertiary	70	38.7	38.7	75.7
University	44	24.3	24.3	100.0
Total	**181**	**100.0**	**100.0**	

Table 5 shows that 8 (4.4%) of the respondents attained primary level education; 59 (32.6 %) of the respondents attained secondary level of education; 70 (38.7 %) attained tertiary level of education and 44 (24.3%) attained university level of education. The findings on the education level suggest that the respondents who participated in the study were fairly literate. These findings correspond with the research conducted by Murugi and Ndetei (2013) that showed that there is a relationship between ADA and the level of education; arguing that the lower the level of education, the higher the level of heavy smoking and abuse of alcohol.

Employment Rate of the Respondents

The study sought to examine the employment status of the participants in the study. The employment status was measured using three levels: unemployment, self –employment and employment.

Figure 2 Employment Level of the Respondents

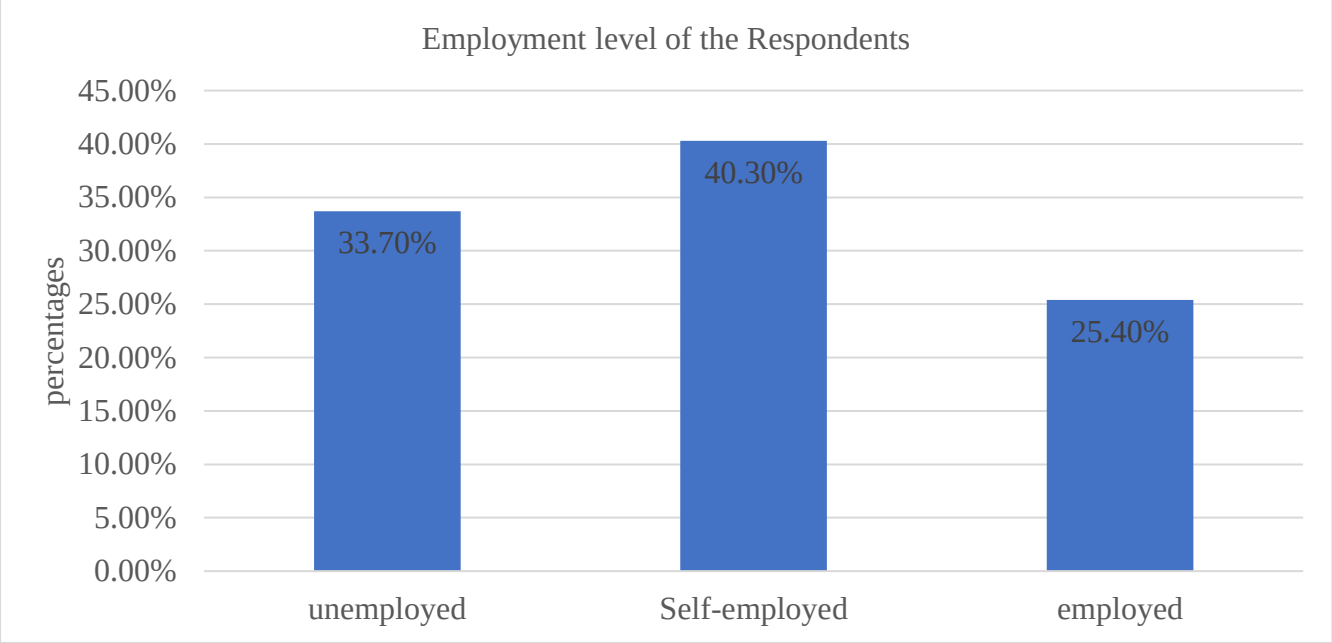


Figure 3 indicates the employment level of ADA respondents. 61 (33.7%) were unemployed, 73 (40.3%) were self-employed and 46 (25.4%), were employed. The findings suggest that a relatively high number of the respondents were not employed. A study by Nolte at al. (2023) revealed that a significant people who had issues of ADA were unemployed.

Religious Affiliation of the Respondent

The study examined the religious affiliation of ADA clients who participated in this study. This was measured on two variables; Christian or Muslim.

Table 6 Religious Affiliation of the Respondents

Religious Affiliation of the Respondents	Frequency	Percent	Valid Percent	Cumulative Percent
Christian	179	98.9	98.9	98.9
Muslims	2	1.1	1.1	100.0
Total	**181**	**100.0**	**100.0**	

Table 6 shows the religious affiliation of the respondents. There were 179 (98.9%) of the respondents who were Christians, and 2 (1.1%) were Muslims. The findings indicate that

the majority of the respondents who participated in this study were affiliated to Christian faith. The study on religiosity and ADA is more contradictory. Finding by Kim-Spoon et al. (2014), established that when focusing on members of the Catholic faith and Muslims, Catholic members were found to consume more of alcohol than the Muslims. On the other hand, a study done by Queiroz et al. (2015) showed that Catholicism provides mechanism against alcohol and drug abuse.

Marital Status of the Respondents

The research examined the marital status of the respondents in the study. This was conducted based on four categories that participants would indicate their status; married, single, separated or divorce.

Table 7 Marital Status of the Respondents

Marital Status	**N**	**%**
1.Married	96	53.0%
2.Single	22	12.2%
3.Separated	40	22.6%
4.Divorced	22	12.2%
Total	**180**	**100%**

Table 7 shows the marital status of the respondents who participated in the study. 96 (53.3%) were married, 22 (12.2%) singles, 40 (22.2%) separated and 22 (12.2%) divorced. These findings imply that majority of the respondents were married; however, there was also a relatively high percent that had experienced separation. A study done by Wenbin and Tanya (2012) argued that marriage acts as a buffer that helps to decrease the use of ADA; moreover, they asserted that single, divorced or separated people consumed more of ADA. Another study by Reczek and Umberson (2014) reported that divorced people were more likely to abuse alcohol and drugs in large amount than those married; however, this association was varied by country.

Age of Onset of Alcohol and Drug Abuse

The study examined the onset ADA among the respondents. This was clustered within two categories; those that onset was between 7-10 years, and those that had their onset from 11years and above.

Table 8 Age of Onset of Alcohol and Drug Abuse

Age of Onset	Frequency	Percent	Valid Percent	Cumulative Percent
7-10 years	16	8.8	8.8	8.8
11 years and above	165	91.2	91.2	100.0
Total	**181**	**100.0**	**100.0**	

Table 8 indicate that the age of onset to alcohol and drug abuse. Respondents that began the abuse between the age of 7 to 10 years were 16 (8.8%); while those who began to abuse from 11 years or more were 165 (91.2%). These findings indicate that a significant number of the respondents started to abuse alcohol and drugs at a very young and tender age. These findings are in agreement with a study by Poudel and Gautam (2017) who found out that ADA was more prevalent among the youth. They conducted their study in a rehabilitation center and the findings of the study showed that out of 221 sample; 74% onset of ADA was before age of 17years, 10.2% initiated at age 11 or younger. Another study conducted in Nepal among ADA clients revealed that majority, 95% initiated before 25 years, and 81.2% experienced ADA before the age of 20 years (Central Bureau of Statistics, 2013).

Duration of Abuse of ADA

The study also evaluated the duration that participants were in active ADA. The study presented two categories of measurement; those that used between 5-10 years and those that had used for over 10 years and above.

Table 9 Duration of Abuse of ADA

Duration of Abuse of ADA	Frequency	Percent	Valid Percent	Cumulative Percent
5-10 years	52	28.7	28.7	28.7
10 years and above	129	71.3	71.3	100.0
Total	**181**	**100.0**	**100.0**	

Table 9 illustrate the duration that the respondent had taken in active abuse of alcohol and drugs. There were 52 (28.7%) of the respondents who had abused alcohol and drugs for a period of 5-10 years; while 129 (71.3%) had abused for over 10 years and above. The findings of this study correspond with a study by Ohannessian et al (2015) which noted that, early onset of ADA was a strong predictor that increases the long duration of abuse of ADA due to the developed risk for alcohol severity and drug use disorders.

Drug of Choice among the Respondents

The study examined the various drugs that the participants had abused prior to their joining the rehabilitation centers. The drugs that were examined included; cocaine, cigarettes, marijuana, heroin and khat.

Table 10 Abuse of the drug of choice among the respondents

Drugs Abused	Responses		Percent of Cases
	Frequency	Percent	
Alcohol	170	36.5%	94.4%
Cocaine	4	0.9%	2.2%
Tobacco	127	27.3%	70.6%
Marijuana	91	19.5%	50.6%
Heroine	6	1.3%	3.3%
Khat	68	14.6%	37.8%
Total	**466**	**100.0%**	**258.9%**

Table 10 illustrates the distribution of drug of choice among the respondents. Alcohol accounted for 170 (36.5%); Cocaine, 4 (0.9%); Cigarettes 127 (27.3%); Marijuana 91 (19.5%); Heroine 6 (1.3%); and Khat 68 (14.6%). This implies that alcohol was the most abused, while tobacco, marijuana and Khat were considerably also abused by the respondents. A study conducted in Kenya to examine the prevalence of ADA by Okoya et al. (2022), using a sample 3600 people purposively chosen in four counties show that alcohol was the most abused at 745 (25.2%), tobacco 600 (20.3%), *changaa* 482 (16.3%), miraa 311 (10.5%), prescription drugs 163 (5.5%) bhang' 155 (5.2%) and *muguka* 147 (4.9%). The findings of this study agree with Okoya et al (2022) indicating the top three, alcohol, cigarettes and *bhang* as the most abused drugs.

First time Trigger to ADA among the Respondents

This study sought to establish the trigger that prompted the respondents to abuse ADA in the first time. The triggers that the respondents reported on are presented on Table 11.

Table 11 First time ADA Triggers among the respondents

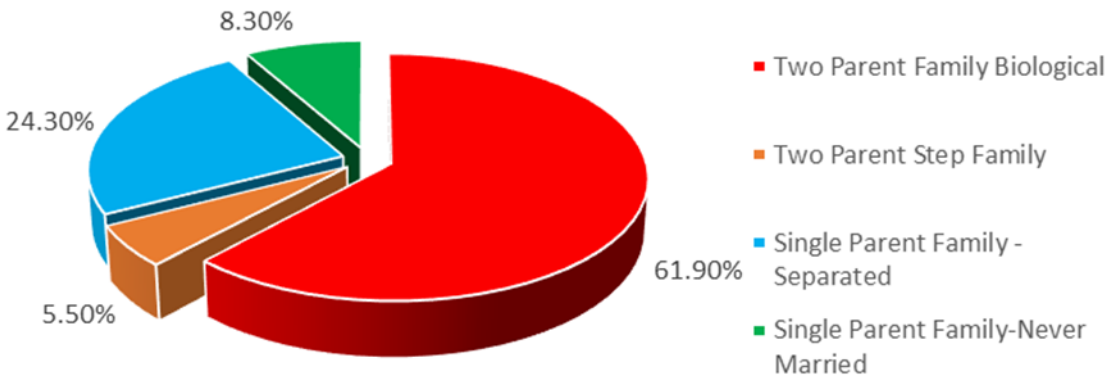
First Time Trigger	N	%
Negative peer pressure	112	61.9%
Availability	22	12.2%
Culture	9	5.0%
Anger	18	9.9%
Stress	20	11.0%

Table 11 show the triggers that would have caused the respondents to engage in ADA for the very first time. Among the triggers, negative peer pressure accounted for the highest 112 (61.9%); availability 22 (12.2%); culture 9 (5.0%); anger 18 (9.9%) and stress 20 (11.0%). These findings are in line with Nawi et al. (2021) who observed that negative peer pressure is among the salient risk factors to ADA.

Structure of Family of Origin of the Respondents

The study examined the family of origin of the participants in this study. The study sought to know the structure of the family of origin. Family of origin was structured in the following categories; two biological parent family, two parents step family, single parent family-separated or single parent – never married. Figure 3 provides a summary of the findings.

Figure 3 Structure of Family of Origin representation of the Respondents



The Figure 6 shows the structure of the family of origin of the respondents. Majority of the respondent came from two parents' family biological 112 (61.9%), two parents step family accounted for 10 (5.5%), single parent family separated 44 (24.3%), single parents never married 15 (8.3%). Family has been argued as a protective factor against ADA. Conversely, children or adolescents whose parents are separated are argued as poorer in health and likely to engage in ADA (Tara et al., 2023). In addition, living in an extended family with other or nonfamily members was also a risk factor for alcohol use. However, the finding of this study found majority of the clients came from biological two parents.

Prevalence of Adverse Childhood Experiences among ADA Clients in Selected Rehabilitation Centers

The first objective of the study sought to find out the prevalence of adverse childhood experiences among clients in selected rehabilitation centers in Kiambu County. Four subscales used to rate ACEs were; sexual abuse, physical abuse, emotional abuse and parental separation or divorce were measured using a Likert scales. The researcher computed the mean score ($\bar{x}$) and standard deviation (s) of each of the ACEs subscale from the collected data and used the findings to rate the prevalence of each of the ADA subscale.

Prevalence of Physical Abuse among the ADA Respondents

The study examined the prevalence of physical abuse, using a five items Likert scale that ranged from 1-5 as follows; Strongly Agree (1), Agree (2), Sometimes (3), Disagree (4) and Strongly Disagree (5). The researcher computed a mean score and standard deviation for each statement and aggregate mean score and standard deviation for all the five items and used them to rate the relevance of physical abuse. The computed mean scores were interpreted as follows; 1-1.8 very high; 1.8-2.6 high; 2.6-3.4 moderate, 3.4-4.2 low and 4.2-5.0 very low. Table 12 provides a summary of the findings.

Table 12 Physical Abuse among the ADA Respondents

Physical Abuse	n	$\bar{x}$	S
1. Did a parent or adult in your family ever hit, beat, kick, or physically hurt you in any way?	180	2.59	1.22
2. Did a parent, a care giver or an adult in your home ever choke you, punch, or try to stab you?	181	3.38	1.12
3. Has anyone in your family, ever had an intention of killing you or hurting you so badly?	181	3.57	1.12
4. Did you ever feel unsafe being at home?	181	3.17	1.08
5. Have you ever been taken to hospital/ emergency room because of burns, hurt or severe beating?	181	3.56	1.28
Aggregate mean score = 3.255, Std deviation = 0.90			

Table 12 illustrates the findings of physical abuse among the ADA respondents. The first item, 'Did a parent or adult in your home ever hit, beat, kick, or physically hurt you in any way? had a mean score of 2.59 and std. deviation of 1.22, indicating high prevalence of this attribute. On the second item, 'Did a parent, a care giver or an adult in your home ever choke you, punch, or try to stab you? had a mean score of 3.38 and std. deviation of 1.12, indicating that the prevalence was moderate. The third item under physical abuse, 'Has anyone in your family, ever had an intention of killing you or hurting you so badly? had a mean score of 3.57 and a std. deviation of 1.12, implying also that the prevalence was low. The fourth item, 'Did you ever feel unsafe being at home? Had a mean score of 3.17 and std. deviation of 1.08, that shows a moderate prevalence and lastly, the fifth item, 'Have you ever been taken to hospital/ emergency room because of burns, hurt or severe beating? had a mean score of 3.56 meaning and std. deviation of 1.28, indicating a low prevalence. The aggregate mean score for the prevalence of physical abuse was 3.25 and std. deviation of 0.90. This revealed that physical abuse had a moderate prevalence among the ADA clients.

According to a survey done in Thailand to establish the prevalence of ACEs in a suburban community, the results indicated that 30% of the population had experienced ACEs with 15% physical abuse and 12% sexual abuse (Tran et al., 2015). In another study done in Serbia, Europe to examine the prevalence of ACEs reported a prevalence of 17.1% emotional abuse and 1.8% of physical abuse among the university students (Vukomanovic et al., 2017). The findings of the current study are in agreement with these two studies that established a moderate prevalence of physical abuse.

Prevalence of Sexual Abuse among the ADA Respondents

The study sought to evaluate the prevalence of sexual abuse among the ADA clients. A Likert scale ranging from1-5 as follows; Strongly Agree (1), Agree (2), Sometimes (3), Disagree (4) and Strongly Disagree (5), was used to rate sexual abuse among the ADA clients. The researcher computed the mean score for each statement and for all the items that rated sexual abuse. The findings were interpreted as follows; 1-1.8 very high; 1.8-2.6 high; 2.6-3.4 moderate, 3.4-4.2 low and 4.2-5.0 very low. Table 13 provides a summary of the findings

Table 13 Prevalence of Sexual Abuse among the ADA Respondents

Sexual Abuse	N	$\bar{x}$	S
1. Has anyone ever touched your sex organs in a sexual manner and against your will?	181	3.46	1.40
2. Has anyone ever forced you to touch his or her sex organs in a sexual manner against your will?	181	3.53	1.34
3. Has anyone in your family, or another adult ever forced you to have sexual intercourse with him or her?	181	3.49	1.40
4. Did you experience indecent sexual exposure from a parent, guarding or caregiver during your childhood?	181	3.55	1.40
5. Did you ever engage in sexual intercourse because you were afraid what was happen to you?	181	2.86	1.58
Aggregate mean score = 3.38, Std. Deviation = 1.36			

Table 13 shows the findings of sexual abuse among clients with ADA. Item one, 'Has anyone ever touched your sex organs in a sexual manner and against your will? had a mean score of 3.46 and std. deviation of 1.40, meaning low prevalence. Item two,' Has anyone ever forced you to touch his or her sex organs in a sexual manner against your will? had a mean of score 3.53 and std. deviation of 1.34 implying low prevalence. Item three, 'Has anyone in your family, or another adult ever forced you to have sexual intercourse with him or her? Had a mean of 3.49 and std. deviation of 1.40 indicating a low prevalence. Item four, 'Did you experience indecent sexual exposure from a parent, guarding or caregiver during your childhood? had a mean score of 3.55 and std. deviation of 1.40, which indicated as low prevalence. The fifth item was, 'Did you ever engage in sexual intercourse because you were afraid what was happen to you? was the most prevalent with a mean score of 2.86 and std. deviation of 1.58 indicating moderate prevalence. These results are in agreement with a study

done in Bangkok by Nie et al. (2015) that reported sexual abuse as the least prevalence of ACEs among men as compared to the others such as physical abuse and emotional abuse.

Prevalence of Emotional Neglect among ADA clients

The study investigated the prevalence of emotional neglect using five items in a Likert scale ranging 1-5; Strongly Agree (1), Agree (2), Sometimes (3), Disagree (4) and Strongly Disagree (5). Each item measuring an attribute of emotional neglect, a mean score and standard deviation was computed and interpreted using the following mean scale; 1-1.8 Very High; 1.8-2.6 High; 2.6-3.4 Moderate, 3.4-4.2 Low and 4.2-5.0 Very Low. The findings are provided on Table 14.

Table 14 Prevalence of Emotional Neglect among ADA clients

Emotional Neglect	**N**	**$\bar{x}$**	**S**
1. Did you feel that no one in your family loved you or thought you were special?	181	3.54	1.38
2. Did you ever feel lonely, isolated, and misunderstood by your family members, parents or guardians?	181	1.98	1.10
3. Did you sometimes feel as though you do not belong with your family or loved ones?	181	1.80	.88
4. Did you find it difficult to share your feeling, or emotions with your parents, caregiver or guardian?	181	1.98	1.22
5. Did you sometimes feel empty inside and believed that nobody cared or loved you?	181	1.80	1.05
Aggregate mean score = 2.22, Std. deviation = 0.96			

Table 14 shows the descriptive analyses of emotional neglect on a Likert scale administered to ADA clients. The first statement, ‘Did you feel that no one in your family loved you or thought you were special? Had a mean score of 3.54 and std. deviation of 1.38 implying low prevalence among ADA clients. The second statement, ‘Did you ever feel lonely, isolated, and misunderstood by your family members, parents or guardians? Had a mean of 1.98 and std. deviation of 1.10 indicating a high prevalence. This indicates that majority of the

respondent agreed to feelings of loneliness, isolation and feeling misunderstood. The third statement, 'Did you sometimes feel as though you did not belong with your family or loved ones? Had a mean of 1.8 and std. deviation of 0.88 which would be interpreted as very high prevalence. The fourth item under emotional neglect was 'Did you find it difficult to share your feelings, or emotions with your parents, caregiver or guardian? Had a mean score of 1.98 and std. deviation 1.22 indicating a high prevalence among the clients. The last item was, 'Did you sometimes feel empty inside and believed that nobody cared or loved you? Had a mean score of 1.8 and std. deviation of 1.05 which can be interpreted as very high prevalence among the ADA clients. The aggregated mean for the five items was 2.2 with std. deviation of 0.96 implying high prevalence of emotional neglect among the ADA clients. These findings are in agreement with a study by Mwakanyamale et al. (2022) who reported that emotional neglect is the most prevalent form of ACEs and is increasingly recognized as an essential component of ACEs. Globally, the prevalence of emotional neglect is approximated agued to be 36% which indicates a high prevalence (Mwakanyamale et al., 2022). According to previous studies, the rate of emotional neglect was 11% in the USA, 23% in England, 23% in Canada, and 34% in Australia. The rate was demonstrated to be slightly higher in East Asia and the Pacific Region for 31.3% and 68.5% for Korea and China respectively (Longman-Mills et al., 2015).

Prevalence of Parental Separation/Divorce among ADA Respondents

The study evaluated the prevalence of parental separation/divorce among the ADA clients. In order to do this, four items that were used to measurer parental separation/ divorce were measured using a Likert scale ranging from 1-5 as follows; strongly agree (1), agree (2), sometimes (3), disagree (4). The mean score of each item was computed together with standard deviation in order to rate prevalence of parental separation or divorce among the ADA respondents. The following mean scale was used for interpretation; 1-1.8 very high; 1.8-2.6 high; 2.6-3.4 moderate, 3.4-4.2 low and 4.2-5.0 very low.

Table 15 Prevalence of Parental Separation/Divorce among ADA Respondents

Parental Separation/ Divorce	N	$\bar{x}$	S
1. Did you lose a parent through divorce, or separation?	181	1.86	1.14
2. Were you ever abandoned by your parents, guardian or caregiver during your childhood?	180	3.04	1.41
3. During your childhood, did you experience social, emotional or physical problems because of your parents' divorce or separation?	181	2.40	1.35
4. During your childhood did you have fear, worry or anxiety that your parent would divorce / separate and leave you?	181	2.56	1.41
Aggregate mean score = 2.45, std. deviation = 1.19			

The following are the four items that measured parental separation/divorce and their mean interpretation. The first statement, 'Did you lose a parent through divorce, or separation? Had a mean score of 1.86 and std. deviation of 1.14 indicating high prevalence. This denotes that majority of the respondents experienced parental separation or divorce. The second statement, 'Were you ever abandoned, by your parents, guardian or caregiver during your childhood? The response was 'sometimes' with a mean score of 3.04 and std. deviation of 1.41 indicating a moderate prevalence. On the third statement, 'During your childhood, did you experience social, emotional or physical problems because of your parents' divorce or separation? This had a mean score of 2.40 and std. deviation of 1.35 indicating a high prevalence. The fourth statement, 'During your childhood, did you have fear, worry or anxiety that your parent would divorce / separate and leave you? Had a mean score of 2.56 and std. deviation of 1.41 indicating a high prevalence. These results illustrate that majority of the respondents experienced high levels of anxiety related to parental separation or divorce. The findings of this study correspond with a study by Jackson et al. (2016) that reported that

parental divorce is a major ACEs whose effect has the potent to increase the risk for ADA across the adolescence and adult life of a child. A study done in the United States to examine the state of marriage by Clyde et al. (2019), indicated that 40-50% of the first-time marriages and 60% of the second marriages end up in divorce. This is such an alarming high prevalence of separation and divorce that has corresponded with the finding of this study, indicating an aggregate mean score of 2.45 showing a high prevalence of parental divorce or separation.

Descriptive Comparison Summary of ACEs among ADA Clients

The researcher computed a descriptive summary of the four subscales of ACEs in order to rate their prevalence among the ADA clients. The computed mean score from the four subscales was interpreted using the following scale; 1-1.8 very high; 1.8-2.6 high; 2.6-3.4 moderate, 3.4-4.2 low and 4.2-5.0 very low. Table 16 presents the findings.

Figure 16

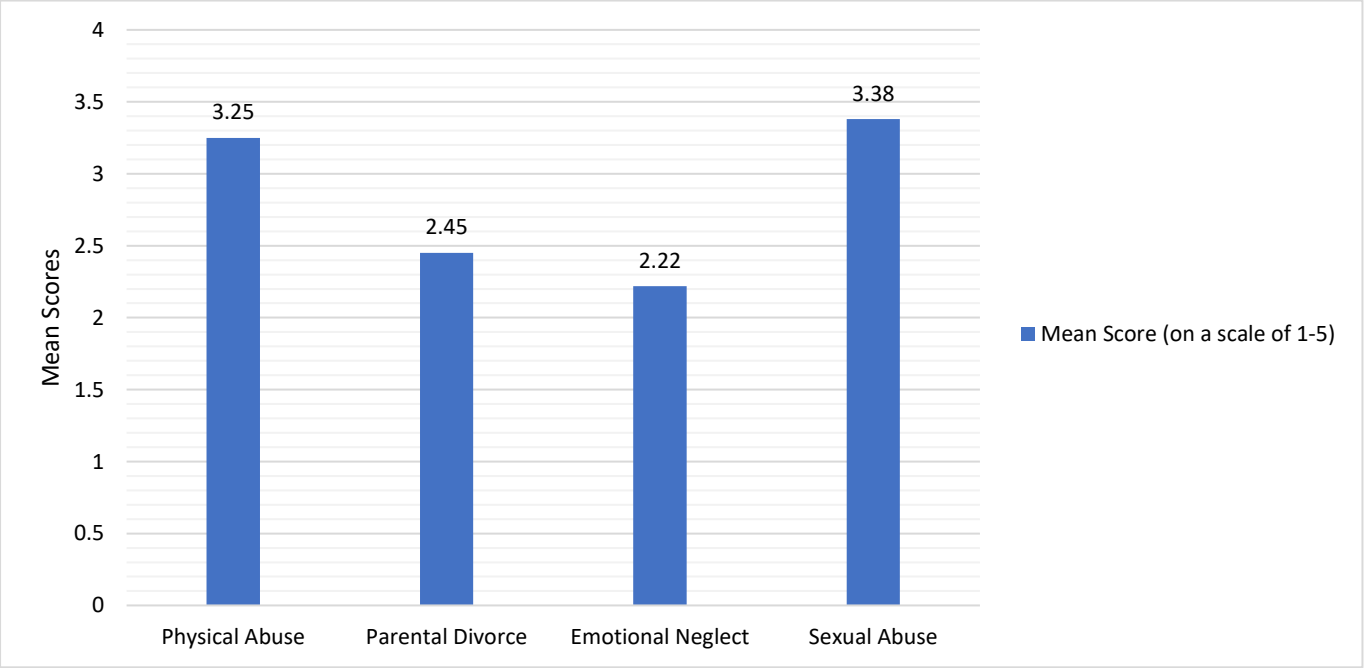


Figure 16 illustrates a summary of the four subscales of ACEs computed by the researcher in order to obtain their mean score and understand the rate of prevalence among the ADA clients. Emotional neglect had a mean score of 2.22 and std. deviation of 0.96 indicating a high prevalence. This means that majority of the ADA clients experienced high rate of emotional

neglect during childhood. The second was parental separation or divorce with a mean score of 2.45 and a std. deviation of 1.19 indicating an equally high rate of prevalence among the ADA clients. These results illustrate that a majority or a high number of the ADA clients experienced parental separation or divorce. The third most prevalent subscale of ACEs was physical abuse with a mean score of 3.25 indicating moderate prevalence and a std. deviation of 0.90. The least prevalent ACEs according to the finding of this study was sexual abuse with a mean score of 3.38 indicating moderate prevalence and std. deviation of 1.36 among the ADA clients.

Hypothesis Testing

The researcher conducted ANOVA test of the four ACEs subscale. These were; physical abuse, sexual abuse, emotional neglect and parental divorce or separation in order to ascertain the mean difference and to test the null hypothesis of the first objective which read; '*There is no statistically significant difference in physical abuse, emotional neglect, sexual abuse and parental separation among clients in selected rehabilitation center in Kiambu County.'* Table 17 presents the findings.

Table 17 ANOVA Summary for Comparisons of ACEs Mean Scores

	Sum of Squares	**Df**	**Mean Square**	**F**	**Sig.**
Between Groups	179.744	3	59.915	47.799	.000
Within Groups	899.985	718	1.253		
Total'	**1079.729**	**721**			

In order to establish which of the ACEs had statically significant differences, the research computed the multiple comparisons Tukey HSD test. The findings are presented in Table 18.

Table 18 Multiple Comparisons

Dependent Variable: Score
Tukey HSD

(I) Abuse	(J) Abuse	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Physical abuse	Emotional neglect	1.03456*	.11785	.000	.7311	1.3380
	Sexual Abuse	-.12234	.11785	.727	-.4258	.1811
	Parental Divorce/separation	.80333*	.11801	.000	.4994	1.1072
Emotional neglect	Physical abuse	-1.03456*	.11785	.000	-1.3380	-.7311
	Sexual Abuse	-1.15691*	.11769	.000	-1.4600	-.8539
	Parental Divorce/separation	-.23123	.11785	.203	-.5347	.0722
Sexual Abuse	Physical abuse	.12234	.11785	.727	-.1811	.4258
	Emotional neglect	1.15691*	.11769	.000	.8539	1.4600
	Parental Divorce/separation	.92568*	.11785	.000	.6222	1.2292
Parental Divorce/separation	Physical abuse	-.80333*	.11801	.000	-1.1072	-.4994
	Emotional neglect	.23123	.11785	.203	-.0722	.5347
	Sexual Abuse	-.92568*	.11785	.000	-1.2292	-.6222

*. The mean difference is significant at the 0.05 level.

Table 17 illustrate ANOVA analyses of the four subscales of ACEs. The p value < 0.05 indicate that there was significant mean difference between the subscale. Secondly, the F-value indicate whether or not a particular treatment (independent variable) has significant impact or

influence on dependent variable. Additionally, the F-value offers rationale for accept or reject a null hypothesis. In this regard, the F-value 47.799 was significant and it offered a basis for rejecting the null hypothesis and accepting the alternative hypothesis that states,' *There is statistically significant difference in physical abuse, emotional neglect, sexual abuse and parental separation among clients in selected rehabilitation center in Kiambu County''.* The subsequent table 18 of multiple comparison explicitly shows where the mean difference and significance exist.

Comparison between physical abuse and emotional neglect, there was mean a difference and significance with a p-value >0.000. In comparison between physical abuse and sexual abuse, there were no mean difference and no significance; the p-value 0.727 was greater than 0.05. The mean difference and significance were established by comparing the following subscales; physical abuse and parental divorce or separation, emotional neglect and physical abuse, emotional neglect and sexual abuse, sexual abuse and emotional neglect, sexual abuse and parental separation or divorce, parental separation or divorce and physical abuse and lastly parental separation or divorce and sexual abuse with a p-value of 0.000 less than 0.05.

These findings are in agreement with the currents research that indicated the prevalence of ACEs. According to Fernandes et al. (2021), 19% of the world's children live in India, and nearly half of these children are vulnerable because of exposure to ACEs. Additionally, research by Merrick et al. (2018), reported that more than 60% of American adults and 85 % of Brazilian adolescents were exposed to at least one type of ACEs in their life course. The study indicated that majority of ADA clients were subjected to emotional neglect and parental separation or divorce. Moreover, all ADA clients selected in rehabilitation centers were exposed to at least one ACEs.

Influence of Physical Abuse on Alcohol and Drug Abuse among Clients in Selected Rehabilitation Centers in Kiambu County

The second objective of the study was to determine the influence of physical abuse during childhood on alcohol and drug abuse among clients in selected rehabilitation centers in Kiambu County. The independent variable was physical abuse and the dependent variable was ADA. The physical abuse was measured using five items on a Likert scale 1-5 where; (1) strongly agree, (2) agree, (3), sometimes, (4) disagree and (5) strongly disagree. The aggregate mean score for physical abuse was 3.25 and std. deviation was 0.90 (see table 12, pg. 72). The dependent variable; ADA, was measured using a five item on a Likert scale 1-5 where (1) meant never, (2) monthly or less, (3) 2 to 4 times a month, (4) 2to 3 times a week and (5) 4 or more times a week. The high the score was an indication of a higher consumption. These researchers computed the aggregate mean score and standard deviation for ADA. The findings are shown in Table 18.

Table 19 Consumption of ADA.

ADA Consumption Among Clients	**N**	**$\bar{x}$**	**s**
1. How often do you have a drink containing alcohol?	181	4.40	1.14
2. How often do you use drugs?	181	4.62	0.51
3. How often do you have 5 or more drinks on one occasion? How often have you ended up using alcohol or drugs more than you had intended?	181	4.40	1.04
4. How often would you use more alcohol or drugs in order to get the effect you wanted?	181	4.45	1.02
5. How often have you used alcohol or drugs to a point of unconsciousness	181	2.25	0.80
Aggregate mean score 4.02 , std. deviation 0.90			

Table 19 shows the consumption rate among the ADA clients in selected rehabilitation centers in Kiambu County. The aggregate mean score of 4.02 implies that majority of the

clients abused ADA 2 to 3 times a week. This frequent abuse of ADA is significantly high, meaning the user is highly vulnerable to both mental and physical ill-health. This is in line with a study done by Degenhardt et al. (2018) that reported that alcohol and drug abuse contribute to 3.7% of the Global Burden of Disease (GBD). The findings similarly echo a study by schutte et al. (2021) that Low- and Middle-Income Countries (LMICs) account for 80% of GBD.

Figure 4 Scatter diagram between physical abuse and alcohol and drug abuse

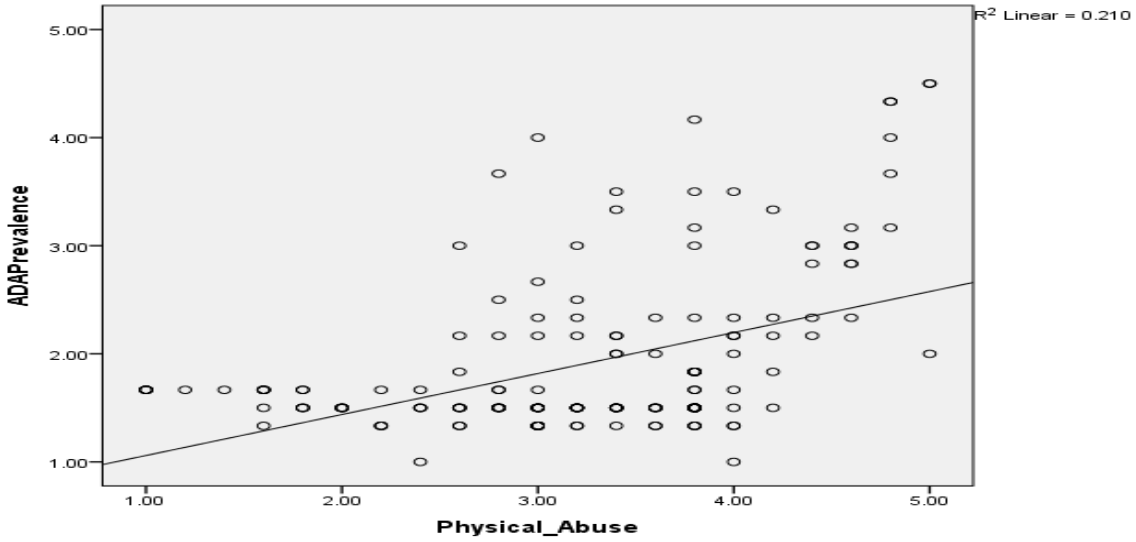


Figure 4 illustrates the linear relationship between physical abuse and ADA among clients in selected rehabilitation centers in Kiambu County. The scatter plots show that there was a general positive linear relationship between physical abuse and alcohol and drug abuse. This implied that an increase in physical abuse would also cause an increase in ADA. These findings are in support of Chen et al. (2016) who found that adults who were exposed to physical abuse during childhood were more vulnerable and used ADA as a means of coping than adults who did not suffer physical abuse in their childhood

The study carried out regression analysis between physical abuse and alcohol and drug abuse. In order to do this, there were five assumptions that had to be first ascertained before carrying out the regression analysis. These were: assumptions of linearity, normality, related pairs, no outliers and level of measurement of two variables (Roni & Djajadikerta, 2021).

Establishing the Assumption of Normality between Physical Abuse and Alcohol and Drug Abuse Datasets

This study sought to establish whether the two variables that is; physical abuse and alcohol and drug abuse were normally distributed. To do this, the researcher generated a histogram for each of the two datasets, shown on Figure 5 and Figure 6.

Figure 5 Histogram of Frequency of Physical Abuse

Deducing from dataset shown in Figure 5 and Figure 6, we can ascertain the assumption of normal distribution of the two variables, that is; physical abuse and alcohol and drug abuse. The implication of normality then indicates that regression analysis can be carried out between physical abuse and alcohol and drug abuse to ascertain their relationship.

Histogram Frequency of Physical Abuse

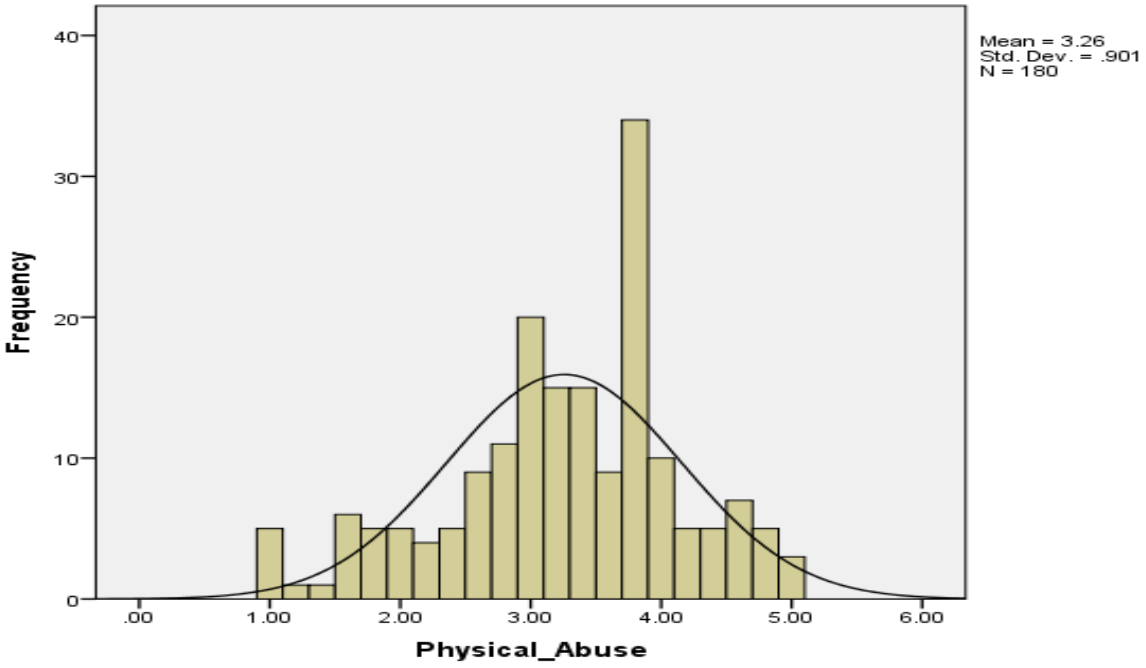
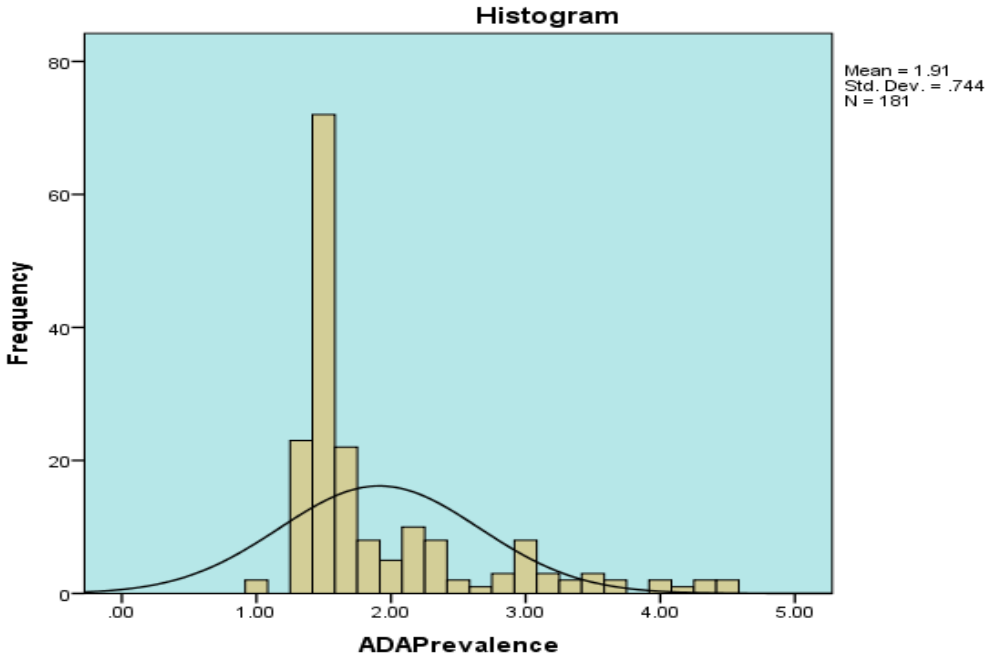


Figure 6 Histogram Frequency of Alcohol and Drug Abuse



Ascertaining Related Pairs in the Dataset

In order to check on the outliers or the skewness, a boxplot of each of the variables; adverse childhood experience dataset and alcohol and drug abuse dataset was done. It is important to ascertain that there were no outliers because, this would have the implication of distorting the observation of the whole dataset.

Figure 7 The Boxplot of Physical Abuse

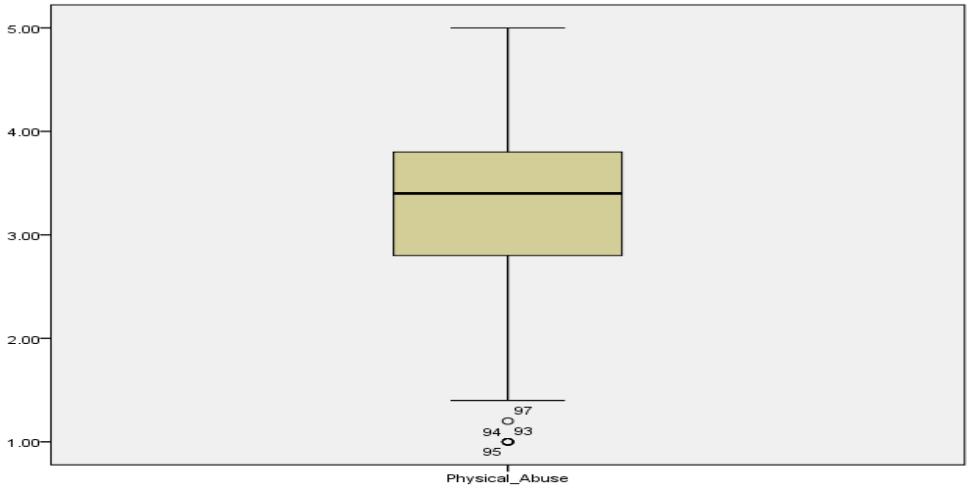
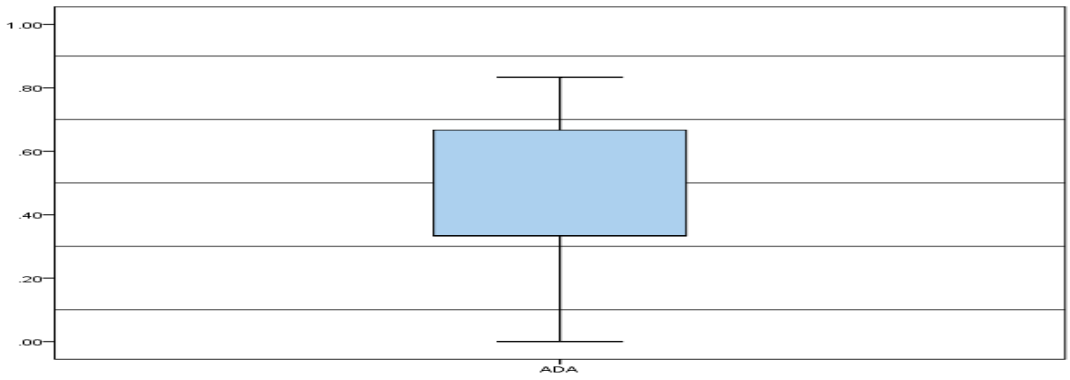


Figure 8 The Boxplot of Alcohol and Drug Abuse



Both Figure 7 and Figure 8 show the boxplot for physical abuse and for alcohol and drug abuse. From the two boxplots, the datasets show there were no extremes on any of the datasets and therefore, regression analysis would be conducted on the two variables to check on their relationship.

Ascertaining the Interval and Ration Level of Measurement

Through the use of the Likert scale, the ordinal values can be converted into interval and ratio data. The essence here is to convert the ordinal into categories where it is possible to measure them at ration level.

Regression Analysis of Physical Abuse and Alcohol and Drug Abuse

In order to test the hypothesis, regression analysis was done to test the perceived influence of physical abuse on alcohol and drug abuse among clients in selected rehabilitation centers in Kiambu County. The test was done at 95 percent confidence level with the level of significance being 0.05. The null Hypothesis stated:

$H0_2$: *There is no statistically significant influence of physical abuse during childhood on alcohol and drug abuse among clients in selected rehabilitation center in Kiambu County*.

Table 20 Model Summary for Physical Abuse and Alcohol and Drug Abuse

R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
				R Square Change	F Change	df1	df2	Sig. F Change
.458[a]	.210	.205	.66533	.210	47.213	1	178	<.001

The results of the study presented in Table 20 shows that there was a moderate positive correlation between physical abuse and alcohol and drug abuse at .210. This underpins that physical abuse had moderate positive influence on alcohol and drug abuse among clients in selected rehabilitation centers in Kiambu County. Physical abuse accounted for 21.0 % of variation on alcohol and drug abuse, the other 79% accounted for other factors not included in the study.

Table 21 ANOVA Model for Physical Abuse and Alcohol and Drug Abuse

The results presented in Table 21 indicate that the model is statistically significant with

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	20.900	1	20.900	47.213	<.001[b]
	Residual	78.794	178	.443		
	Total	99.694	179			

a. Dependent Variable: ADA Prevalence

b. Predictors: (Constant), Physical Abuse

a confidence level of 0.001 percent (100 percent) that is lower than the recommended 0.05 percent meaning that the model is statistically significant. This means that the model is a good predictor of the dependent variable.

Table 22 Regression Model for Physical Abuse and Alcohol and Drug Abuse

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.680	.186		3.651	<.001
	Physical Abuse	.379	.055	.458	6.871	<.001

a. Dependent Variable: ADA Prevalence

The results presented in Table 22 indicate that the p-value was less than 1.0 (p=0.001) leading to the rejection of the null hypothesis that stated:

$H0_2$: *There is no statistically significant influence of physical abuse during childhood on alcohol and drug abuse among clients in selected rehabilitation centers in Kiambu County*. The alternative hypothesis was accepted which stated that there is a statistically significant influence of physical abuse during childhood on alcohol and drug abuse. In terms of the influence that physical abuse had on alcohol and drug abuse determined by beta, the findings indicated a β value of 0.458 which is a positive influence. This means that an increase in physical abuse would cause an increase in alcohol and drug abuse. These findings are in support of Chen et al. (2016), who found that adults who were exposed to physical abuse during childhood, were more vulnerable and used ADA as a means of coping than adults who did not suffer physical abuse in their childhood. According to ADA Schückher et al. (2019), childhood physical abuse is a major cause that may lead to ADA later in adulthood. Augustyn et al. (2019) found similar results that children who were subjected to physical abuse during their childhood are more vulnerable to turn to ADA as a way of coping with repressed emotional pain.

These results can be collaborated by selected resident counselors who were interviewed in this study. Counselor ‘C3’ stated that physical abuse is a major contributor of trauma among clients in the rehabilitation centers. She observed that majority of the clients who were subjected to physical abuse during childhood suffered emotional wounds; as such, they used

ADA as a coping mechanism of relieving the emotional wounds and distress. On the other hand, a psychiatrist who works with clients among the selected rehabilitation centers, 'P2' reported that physical abuse can be a source of PTSD, anxiety and depression. He commented that children who were exposed to chronic physical abuse are highly vulnerable to depression and anxiety; the most underlying causes for ADA.

Influence of Emotional Neglect on Alcohol and Drug Abuse among Clients in Selected Rehabilitation Centers in Kiambu County

The third objective of the study evaluated the influence of emotional neglect during childhood on alcohol and drug abuse among clients in selected rehabilitation centers in Kiambu County. The independent variable was emotional neglect and the dependent variable was ADA. Emotional neglect was measured using five items on a Likert scale 1-5 where; (1) strongly agree, (2) agree, (3), sometimes, (4) disagree and (5) strongly disagree. The aggregate mean score for emotional neglect was 2.22 and std. deviation = 0.96 (see Table 14, pg. 76). The dependent variable, ADA, was measured using a five item on a Likert scale 1-5 where (1) meant never, (2) monthly or less, (3) 2 to 4 times a month, (4) 2to 3 times a week and (5) 4 or more times a week. The aggregate mean score for ADA was 4.02 and std. deviation 0.90 (see table 18, Pg. 84). The researcher generated a scatter diagram to evaluate whether there was any relationship between emotional neglect and alcohol and drug abuse. Figure 8 illustrates the scatter diagram.

Figure 9 Scatter diagram between emotional neglect and alcohol and drug abuse

Figure 9 shows the linear relationship between emotional neglect and ADA among clients in selected rehabilitation centers in Kiambu County. The scatter plots show that there was a general positive linear relationship between emotional neglect and alcohol and drug abuse. What can be drawn from the figure is that, an increase in emotional neglect would also cause an increase in ADA. These findings are in line with a study done by Sharon et al. (2017) that reported emotional neglect has potency to affect the area of the brain that is responsible for controlling or balancing the emotions. Therefore, adults that were subjected to emotional neglect are more impulsive and experience difficulty in making rational decisions. These negative implications underpin the reasons for ADA as a means of coping. Similarly, according to Tamara et al. (2016), emotional neglect had a positive correlation with externalizing behaviors such as aggression, impulsivity, criminality and ADA.

The study carried out a regression analysis between emotional neglect and alcohol and drug abuse; therefore, it was necessary to establish the five assumptions that must first be ascertained before carrying out the regression analysis; assumption of linearity, normality, related pairs, no outliers and level of measurement of two variables (Roni & Djajadikerta, 2021).

Establishing the assumption of Normality between Emotional Neglect and Alcohol and Drug Abuse

The study sought to establish whether the two variables; that is, emotional neglect and alcohol and drug abuse were normally distributed (see Figure 6, Pg. 87 for ADA histogram frequency)

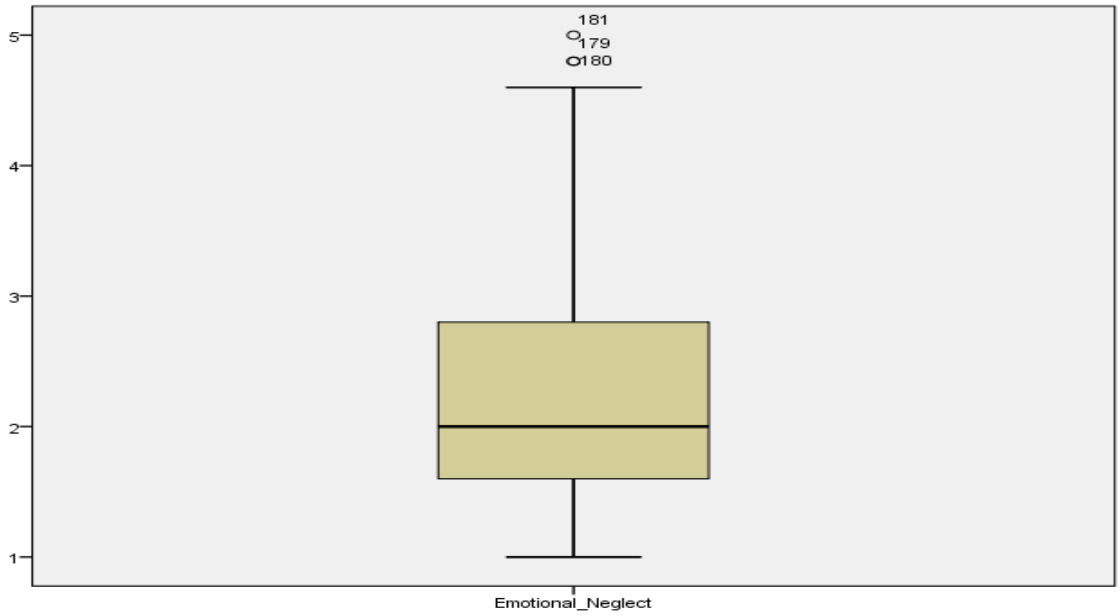
Figure 10 Histogram frequency for emotional neglect

We can ascertain the assumption of normal distribution of the two variables; that is, emotional neglect and alcohol and drug abuse from Figure 10. The implication of normality then indicates that regression analysis can be carried out between emotional neglect and alcohol and drug abuse to ascertain their relationship.

Ascertaining Related Pairs in the Dataset

In order to check on the outliers or the skewness, a boxplot of each of the variables; emotional neglect and alcohol and drug abuse dataset was done. A box plot for ADA had already been generated (see Figure 8, Pg. 88)

Figure 11 Boxplot for Emotional Neglect



The boxplot in Figure 11 shows there were no extremes and therefore, regression analysis would be conducted on the two variables to check on their relationship.

Ascertaining the Interval and Ration level of Measurement

Through the use of the Likert scale, the ordinal values can be converted into interval and ratio data. The essence here is to convert the ordinal into categories where then it is possible to measure them at ration level.

Regression Analysis between Emotional Neglect and Alcohol and Drug Abuse

In order to test the hypothesis, regression analysis was done to confirm the perceived influence of emotional neglect on alcohol and drug abuse among the selected clients in rehabilitation centers in Kiambu County. The test was done at 95 % confidence level, meaning that the level of significance was measured 0.05.

The null Hypothesis stated:

$H0_3$: *There is no statistically significant influence of emotional neglect during childhood on alcohol and drug abuse among clients in selected rehabilitation centers in Kiambu County*.

Table 23 Model Summary for Emotional Neglect and Alcohol and Drug Abuse

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.696[a]	.484	.481	.536

Predictors: (Constant), Emotional Neglect

The results presented in Table 23 indicate a positive relationship between emotional neglect and alcohol and drug abuse at 0.696. This was a strong and positive influence that emotional neglect had on alcohol and drug abuse at 0.696 %. This means that 69.6 % of variation in alcohol and drug abuse among clients can be explained by variations in emotional abuse. The remaining 30.4 % of influence would be due to other factors that are not included in this model. This supports the finding by Salokangas et al. (2020) who found that emotional neglect is arguably the most prevalent of ACEs.

Table 24 ANOVA Regression Results between Emotional Neglect and Alcohol and Drug Abuse

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	48.285	1	48.285	167.924	<.001[b]
	Residual	51.470	179	.288		
	Total	99.755	180			

a. Dependent Variable: ADA Prevalence

b. Predictors: (Constant), Emotional Neglect

The results presented in Table 24 indicate that the model is statistically significant with a confidence level of 0.001 % (100 percent) that is lower than the recommended 0.05 percent, meaning that the model is statistically significant. The F-value is also large which would imply that emotional neglect was perceived statistically important in predicting the influence on alcohol and drug abuse. This means that the model can be used in rehabilitation centers in Kiambu County to help reduce the influence on alcohol and drug abuse

Regression Model for Emotional Neglect and Alcohol and Drug Abuse

Table 25 Regression between Emotional Neglect and Alcohol and Drug Abuse

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.720	.100		7.176	<.001
	Emotional Neglect	.537	.041	.696	12.959	<.001

a. Dependent Variable: ADA Prevalence

The results presented in Table 25 indicate that the p-value was less than 1.0 (p=0.001) leading to the rejection of the null hypothesis which stated

$H0_{3:}$ There is no statistically significant influence of emotional neglect during childhood on alcohol and drug abuse among clients in selected rehabilitation center in Kiambu County. In terms of the influence that emotional neglect has on alcohol and drug abuse determined by beta, the findings indicated a β value of 0.696 which is a strong positive influence.

This means that an increase in emotional neglect would cause an increase in alcohol and drug abuse. The findings are in agreement with a study done by Cohen et al. (2017) that linked childhood emotional neglect as a cause for early onset and need for ADA among adults. Similar findings are recorded by Xie et al. (2018) that strongly linked childhood emotional neglect as a major cause for mental health problems that consequently are the underlying cause for ADA late in life. Emotional neglect is believed to be the most prevalent form of ACEs that has higher potency therefore to lead to ADA (Cohen et al., 2017).

These findings can be collaborated by site counselors in selected rehabilitation centers. According to a counselor assigned label 'C1' **'***There are many cases in my assessments that revealed signs of emotional neglect during the client's childhood'*. C1 mentioned that majority

of clients of emotional neglect become desensitized to the abuse after many years until they normalize the abuse; for example, majority of clients said it was normal for their fathers to miss important milestones in their lives such as school graduations, circumcision ceremonies, they became numb to any affirmation especially from their fathers. C4 mentioned similar observation that emotional neglect is so rampart especially among the young clients who often have no understanding that they experience emotional neglect during their childhood. According to a psychiatrist interview P3, childhood emotional neglect can lead to various mental health challenges, such as; depression, anxiety, and borderline personality disorder; that may underpin the reason for early onset of ADA in the affected victims.

Influence of Sexual Abuse on Alcohol and Drug Abuse among Clients in Selected Rehabilitation Centers in Kiambu County

The fourth objective of the study was to establish the influence of sexual abuse during childhood on alcohol and drug abuse among clients in selected rehabilitation centers in Kiambu County. The two variables were; sexual abuse which was the independent variable and ADA the dependent variable. Sexual abuse was measured using a five items on a Likert scale 1-5 where; (1) strongly agree, (2) agree, (3), sometimes, (4) disagree and (5) strongly disagree. The aggregate mean score for sexual abuse was 3.38 and std. deviation was 1.36 (see table 13, pg. 74). The dependent variable, ADA, was measured using a five item on a Likert scale 1-5 where (1) meant never, (2) monthly or less, (3) 2 to 4 times a month, (4) 2to 3 times a week and (5) 4 or more times a week. The aggregate mean score for ADA was 4.02 and std. deviation 0.90 (see table 18, pg. 84). The high the score was an indication of a higher consumption.

Figure 12 Scatter plot Between Sexual Abuse and ADA

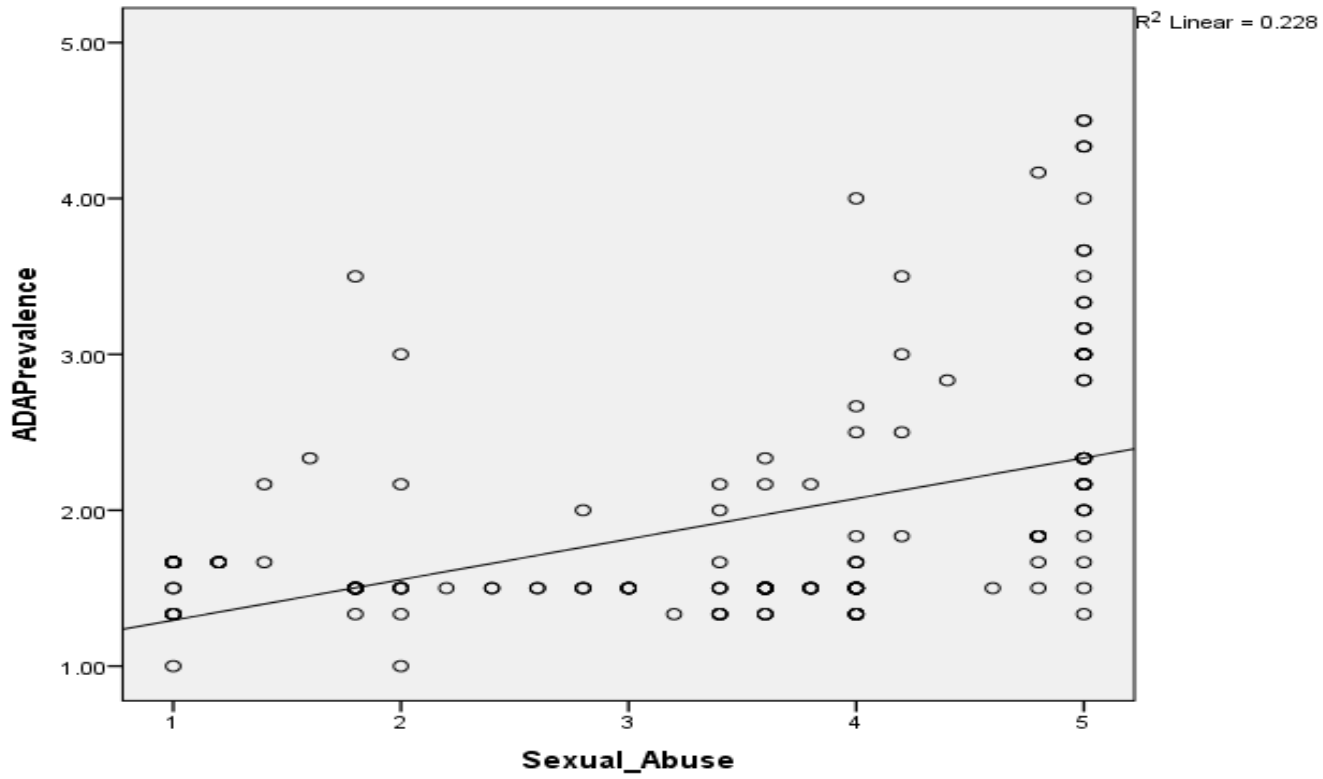


Figure 12 illustrates the linear relationship between sexual abuse and ADA among clients in selected rehabilitation centers in Kiambu County. The scatter plots show that there was a general positive linear relationship between sexual abuse and alcohol and drug abuse. This implied that an increase in sexual abuse would also cause an increase in ADA. Figure 12 corresponds to the findings by Diehl et al. (2019) that reported that 40-90% of people with issues of ADA were victims of sexual abuse. Moreover, victims of early sexual abuse have been shown to be twice vulnerable to ADA as compared to those that did not experience abuse. Additionally, CSA was found to be a major predictor of persistent dependence on ADA (Diehl et al., 2019).

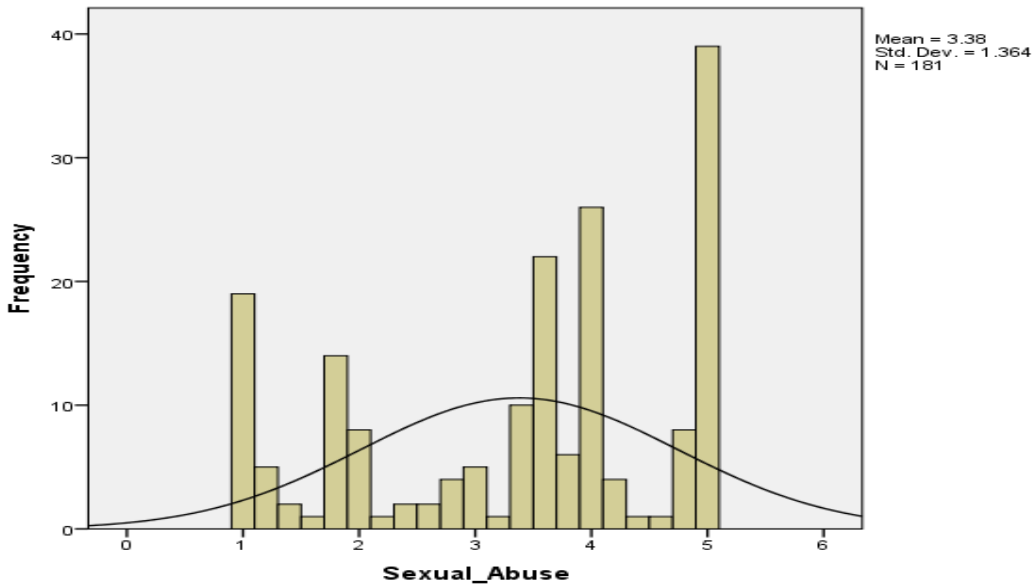
The study intended to carry out regression analysis between sexual abuse and alcohol and drug abuse. In order to do this, there were five assumptions that had first to be ascertained

before carrying out the regression analysis; assumption of linearity, normality, related pairs, no outliers and level of measurement of two variables (Roni & Djajadikerta, 2021).

Establishing the assumption of Normality between Sexual Abuse and Alcohol and Drug Abuse Datasets

The study sought to establish whether the two variables; that is, sexual abuse and alcohol and drug abuse were normally distributed. To do this, the researcher generated a histogram for each of the two datasets. Figure 13 is a histogram of sexual abuse, ADA histogram had already been computed (see Figure 6, pg. 87).

Figure 13 Histogram of Frequency of Sexual Abuse



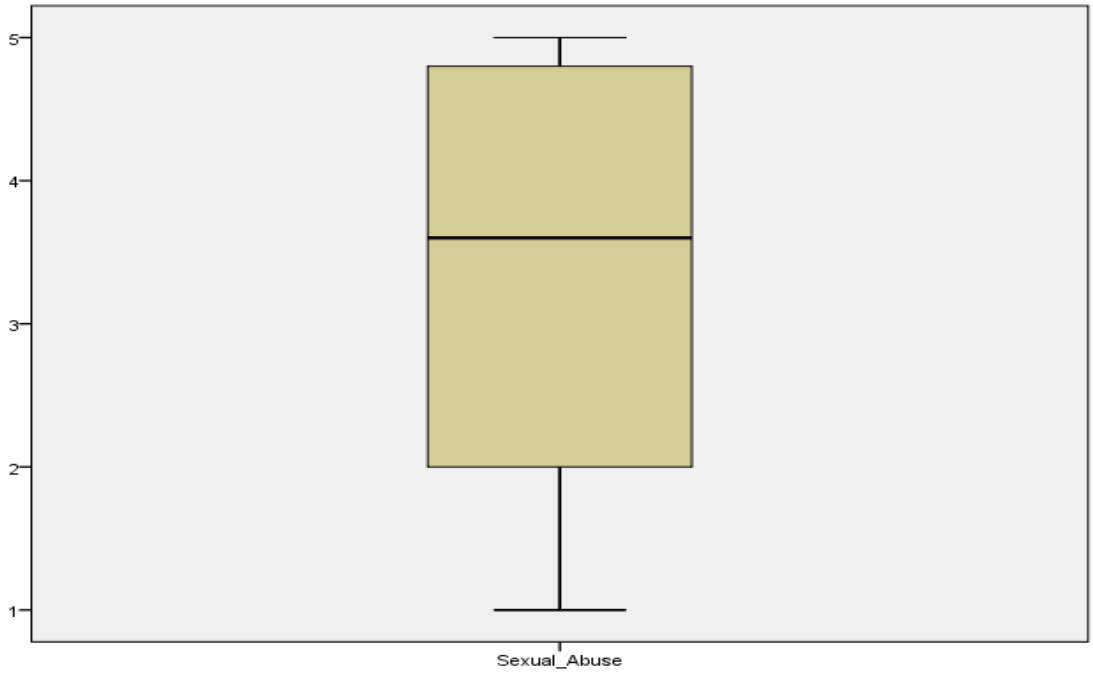
Deducing from the dataset shown in Figure 13, we can ascertain the assumption of normal distribution of the two variables, that is; sexual abuse and alcohol and drug abuse. The implication of normality then indicates that regression analysis can be carried out between sexual abuse and alcohol and drug abuse to ascertain their relationship.

Ascertaining Related Pairs in the Dataset

In order to check on the outliers or the skewness, a boxplot of each of the variables; sexual abuse dataset and alcohol and drug abuse dataset was done (See figure 8, pg. 88 for

ADA boxplot). It is important to ascertain that there were no outliers because, this would have the implication of distorting the observation of the whole dataset.

Figure 14 Boxplot for Sexual Abuse



The boxplot in Figure 14 shows there were no extremes and therefore regression analysis would be conducted on the two variables to check on their relationship

Ascertaining the Interval and Ration level of Measurement

Through the use of the Likert scale, the ordinal values can be converted into interval and ratio data. The essence here is to convert the ordinal into categories where then it is possible to measure them at ration level.

Regression Analysis between Sexual Abuse and Alcohol and Drug Abuse

In order to test the hypothesis, regression analysis was done to confirm the perceived influence of sexual abuse on alcohol and drug abuse among the selected clients in rehabilitation centers in Kiambu County. The test was done at 95 percent confidence level meaning that the level of significance was measured 0.05.

The null Hypothesis stated:

H0$_4$: *There is no statistically significant influence of sexual abuse during childhood on alcohol and drug abuse among clients in selected rehabilitation center in Kiambu County*.

Table 26 Model Summary for Sexual Abuse and Alcohol and Drug Abuse

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.477[a]	.228	.223	.65608

a. Predictors: (Constant), Sexual Abuse

The results presented in Table 26 indicate a positive relationship between sexual abuse and alcohol and drug abuse at 0.477. This is a moderate positive influence that sexual abuse has on alcohol and drug abuse at 0.228 percent. This means that 22.8 percent of alcohol and drug abuse among clients in selected rehabilitation centers in Kiambu County is attributable to sexual abuse. The remaining 77.2 percent of influence would be due to other factors that were not considered in this study.

Table 27 ANOVA Model for Sexual Abuse and Alcohol and Drug Abuse

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	22.707	1	22.707	52.752	<.001[b]
	Residual	77.049	179	.430		
	Total	99.755	180			

a. Dependent Variable: ADA Prevalence

b. Predictors: (Constant), Sexual Abuse

The results presented in Table 27 above indicate that the model is statistically significant with a confidence level of less than 1.0 percent (p= 0.001). The F value is also moderately large, implying that sexual abuse would be perceived as statistically significant in influencing alcohol and drug abuse in selected rehabilitation center in Kiambu County

Table 28 Regression between Sexual Abuse and Alcohol and Drug Abuse

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.034	.131		7.922	<.001
	Sexual Abuse	.260	.036	.477	7.263	<.001

a. Dependent Variable: ADA Prevalence

The results presented in Table 28 indicate that the p-value was less than 1.0 (p=0.001) leading to the rejection of the null hypothesis that stated ($H_{O4;}$) *There is no statistically significant influence of sexual abuse during childhood on alcohol and drug abuse among clients in selected rehabilitation center in Kiambu County,* while the alternative hypothesis was accepted. In terms of the influence that sexual has on alcohol and drug abuse determined by beta, the findings indicated a β value of 0.477 which is a moderate positive influence. This means that an increase in sexual abuse would cause an increase in alcohol and drug abuse. These findings can be collaborated by a study done by Letourneau et al. (2018) that reported that childhood sexual abuse may lead to both short-term and long-term effects that negatively affect the individual's holistic well-being. The consequences of this may result in risk behaviors such as ADA which acts as a coping mechanism more so where help is not immediately not appropriated. Similarly, Chang et al. (2019) observed similar findings that victims of CSA would be trapped into vicious cycles of ADA that is triggered when they encounter stressful life events. Berg et al. (2017) noted that CSA is a major cause that may lead to early onset of ADA.

According to site counselors that were interviewed in this study, similar observations was made. A counselor who was named, 'C1**'** explained that, '*In some cases, my assessments have revealed signs of sexual abuse. One of my clients opened to have been sexually molested by the house-help when the parents were away on work trip'.* These experiences, she explained especially among men, formed the underlying causes of ADA because of stigma, fear, anxiety

and depression where interventions and treatment is not given. Another Counselor ‘C5’, said that sexual abuse seems to be increasing but there were no good recordings or screening done to ascertain the prevalence especially among men; majority of them opened up after many years of ADA in attempt to cope with the aftermath negative effects of CSA.

Influence of Parental Separation during Childhood on Abuse of Alcohol and Drug Abuse among Clients in Selected Rehabilitation Centers in Kiambu County

The fifth objective of the study was to determine the influence of parental separation/divorce during childhood on alcohol and drug abuse among clients in selected rehabilitation centers in Kiambu County. The independent variable was parental separation and the dependent variable was ADA. Parental separation was measured using five items on a Likert scale 1-5 where; (1) strongly agree, (2) agree, (3), sometimes, (4) disagree and (5) strongly disagree. The aggregate mean score for parental separation was 2.45 and std. deviation was 1.19 (see Table 15, pg. 78). The dependent variable, ADA, was measured using a five item on a Likert scale 1-5 where (1) meant never, (2) monthly or less, (3) 2 to 4 times a month, (4) 2to 3 times a week and (5) 4 or more times a week. The aggregate mean score for ADA was 4.02 and std. deviation 0.90 (see Table 18, Pg. 84). The high the score was an indication of a higher consumption. The researcher generated a scatter diagram to evaluate whether there was any relationship between parental separation and alcohol and drug abuse. Figure 15 illustrates the scatter diagram.

Figure 15 Scatter plot between Parental Separation and ADA

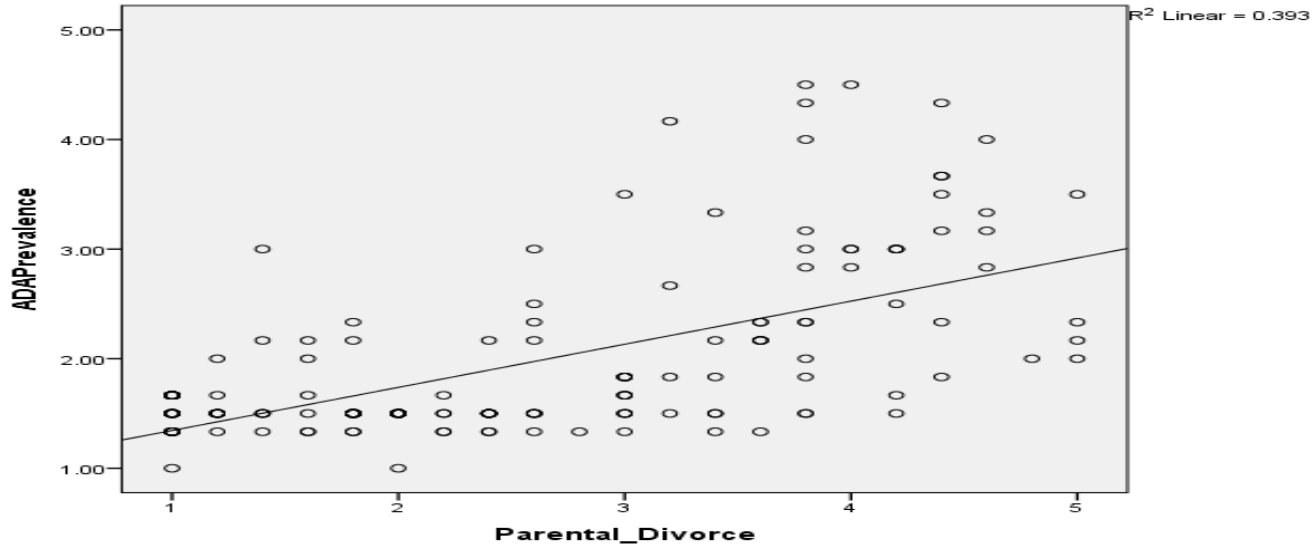
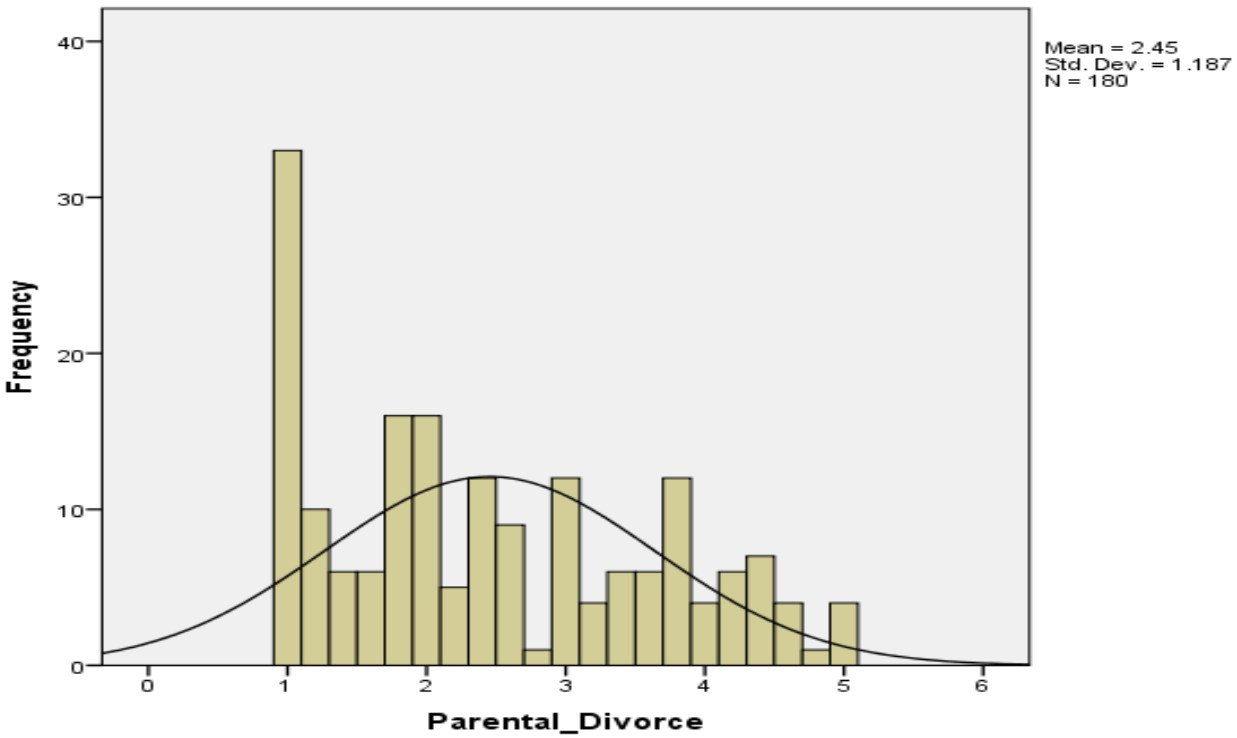


Figure 15 illustrates the linear relationship between parental separation and ADA among clients in selected rehabilitation centers in Kiambu County. The scatter plots show that there was a general positive linear relationship between sexual abuse and alcohol and drug abuse. The implication by the scatter diagram is that an increase in parental separation, would result as well in an increase in ADA. These findings that are observed in Figure 15 are in line with Tullius et al. (2021) who reported that there are high levels of emotional and psychological distress following the period of divorce that is corollary to ADA later in life. Similarly, childhood parental divorce or separation was associated with higher levels of emotional and psychological distress than a divorce or separation that occurs late in life (Auersperg et al., 2019). These psychological distress and emotional dysregulations underlie the major causes of ADA later in the adult life. The study intended to carry out regression analysis between parental separation and alcohol and drug abuse. In order to do this, there were five assumptions that had to first be ascertained before carrying out the regression analysis; assumption of linearity, normality, related pairs, no outliers and level of measurement of two variables (Roni & Djajadikerta, 2021).

Establishing the Assumption of Normality between Sexual Abuse and Alcohol and Drug Abuse Datasets

Thia study sought to establish whether the two variables that is, parental separation and alcohol and drug abuse were normally distributed. To do this, the researcher generated a histogram for each of the two datasets. Figure 16 is a histogram of parental separation, ADA histogram had already been computed (see Figure 6, pg. 87).

Figure 16 Parental Divorce/ Separation Histogram

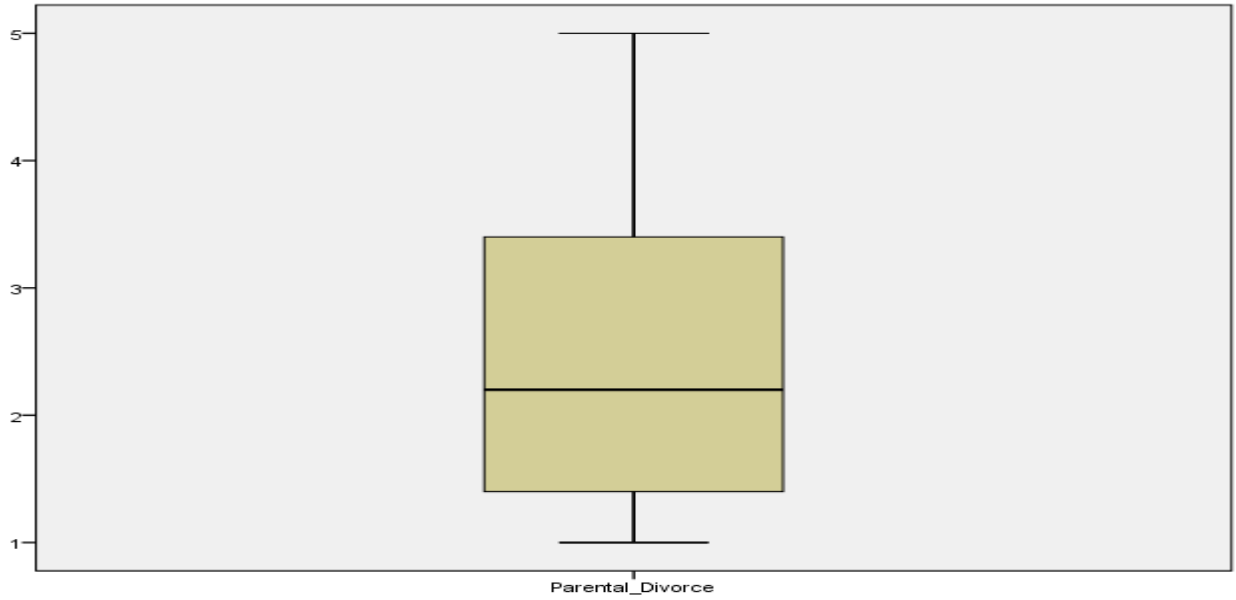


We can ascertain the assumption of normal distribution between parental separation and ADA. The implication of normality then indicates that regression analysis can be carried out between emotional neglect and alcohol and drug abuse to ascertain their relationship.

Ascertaining Related Pairs in the Dataset

In order to check on the outliers or the skewness, a boxplot of each of the variables; parental separation dataset and ADA dataset was carried out (See Figure 8, pg. 88 for ADA boxplot). It is important to ascertain that there were no outliers because this would have the implication of distorting the observation of the whole dataset.

Figure 17 Boxplot for Parental Separation/ Divorce



The boxplot in Figure 17 shows there were no extremes and therefore regression analysis would be conducted on the two variables to check on their relationship

Ascertaining the Interval and Ration level of Measurement

Through the use of the Likert scale, the ordinal values can be converted into interval and ratio data. The essence here is to convert the ordinal into categories where then it is possible to measure them at ration level.

Regression Analysis between Parental Separation and Alcohol and Drug Abuse

In order to test the hypothesis, regression analysis was done to confirm the perceived influence of parental separation on alcohol and drug abuse among the selected clients in

rehabilitation centers in Kiambu County. The test was done at 95 percent confidence level meaning that the level of significance was measured 0.05.

The null Hypothesis stated:

$H0_5$: *There is no statistically significant influence of parental divorce during childhood on alcohol and drug abuse among clients in selected rehabilitation center in Kiambu County*.

Table 29 Model Summary of Parental Separation and Alcohol and Drug Abuse

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.627[a]	.393	.389	.58230

a. Predictors: (Constant), Parental Divorce

The results presented in Table 29 indicate a positive relationship between parental separation/divorce and alcohol and drug abuse at 0.627. This is a strong positive relationship underpinning strong influence that parental separation/divorce has on alcohol and drug abuse at 0.393 percent. This means that 39.3 percent of alcohol and drug abuse among clients in selected rehabilitation centers in Kiambu County is attributable to parental separation/ divorce. The remaining 60.7 percent of influence would be due to other factors that are not considered in this study.

Table 30 ANOVA Model for Parental Separation/Divorce and Alcohol and Drug Abuse

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	39.062	1	39.062	115.201	<.001[b]
	Residual	60.355	178	.339		
	Total	99.417	179			

a. Dependent Variable: ADA Prevalence

b. Predictors: (Constant), Parental Divorce

The results presented in Table 30 indicate that the model is statistically significant with a confidence level of less than 1.0 percent (p= 0.001), which is lower than the recommended 0.05 percent implying that the model is statistically significant. The F value was also

moderately large implying that parental separation/divorce would be perceived as statistically significant in influencing alcohol and drug abuse in selected rehabilitation center in Kiambu County.

Table 31 Regression Model for Parental Separation and Alcohol and Drug Abuse

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.952	.100		9.536	<.001
	Parental Divorce	.393	.037	.627	10.733	<.001

a. Dependent Variable: ADA Prevalence

The results presented in Table 31 indicate that the p-value was less than 1.0 (p=0.001) leading to the rejection of the null hypothesis that stated;

There is no statistically significant influence of parental divorce during childhood on alcohol and drug abuse among clients in selected rehabilitation centers in Kiambu County, while the alternative hypothesis was accepted. In terms of the influence that parental separation/divorce has on alcohol and drug abuse determined by beta, the findings indicated a β value of 0.627 which is a strong positive influence. This means that an increase in parental separation would result in an increase in alcohol and drug abuse. These findings are in agreement with Grant et al. (2015) who reported that parental divorce exposes children to negative peer pressure, children face neglect of supervision, they experience difficulties in developing healthy coping skills, support-seeking skills and esteem focused skills, inadvertently. This predisposes children to early onset of ADA that is pervasive into adulthood. Parental divorce/ separation was considered by Basyoni et al. (2021) to be among other familial risk factors such as neglect, childhood abuse and poor parent relationship that has the potent to lead to ADA among the emerging adults.

These same observations can be collaborated by the qualitative interview gathered among counselors and psychiatrists who work in the selected rehabilitation centers in Kiambu County. According to P1, a psychiatrist, ‘‘*parental separation or divorce during childhood can have a profound emotional and psychological impact on individuals. The implication of childhood parental divorce would result into onset of anxiety, depression or adjustment disorder that may underlie early onset of ADA among the affected individuals’’.* C4 a counselor among the selected rehabilitation centers noted that, ‘‘*parental separation floods stress hormones throughout the child’s brain and body, leading to: difficulty sleeping, developmental regression, heart disease, hypertension, obesity, diabetes, and decreased longevity., depression, more suicide attempts, and more problems with ADA’’.* These assertions are in line with findings by Nusinovici et al. (2018) that associated parental divorce and separation as a cause for multiple negative effects such as perceived guilt, blame, stress and decrease motivation in children that may underlie ADA problems later in life. Jackson et al. (2016) reported that parental divorce and separation is associated with children abuse of alcohol. On another hand, Edwards et al. (2018), noted that parental divorce is a potent risk factor that may contribute to the early onset and maintenance of ADA.

Sustainable Measures that Would Help Mitigate the Prevalence of Adverse Childhood Experiences among Clients in Selected Rehabilitation Centers in Kiambu County

The sixth objective of the study was to find out the sustainable measures that would help mitigate the prevalence of adverse childhood experiences among clients in selected rehabilitation centers in Kiambu County. The sustainable measurers were drawn from semi structured interview with 5 resident lead counselors and 5 psychiatrists in the selected rehabilitation centers. According to a psychiatrist who shall be named ‘P1’ He stated that,’ understanding the trauma history of clients is crucial in providing a trauma-informed approach as the ideal intervention. P1 asserted that,’ it's essential to recognize the potential disabilities

stemming from childhood abuse and ensure that clients receive appropriate interventions during assessment and screening processes. The underpinned reasoning here is that there is need for resident counselors working in rehabilitation centers to conduct elaborate trauma history of ADA clients and offer appropriate trauma informed care as a treatment.

According to psychiatrist P2, 'ADA clients may require adjustments or support to participate fully in the process, while adhering to ADA guidelines. The espoused notion here is psychosocial support. There is need to incorporate the family while helping the identified patient who use the ADA. P2 stated that, 'majority of ADA clients are prone to self-sabotaging behavior and therefore there is need to help them adjust to the healing process. According to Counselor C1, provision of safe space, without bias, stigma and discrimination is salient in helping the ADA client unburden their emotional wounds and help them disclose sensitive information. The counselor stated that majority of ADA clients that were subjected to childhood trauma such as sexual abuse, have difficulty finding safe space to disclose the pain and hurt they have been carrying for long; hence, need for safe, unbiased and conducive environment to share.

In addition, Counselor C2, stated that there is need for provision of technical skills to equip the ADA clients which would enable them to be self-dependence. He stated that lack of technical skills such as carpentry, masonry, design and art among others would help the ADA clients to find means of supporting their families and themselves. Moreover, counselor C3 alluded that it is critical to help the ADA clients with adaptive coping skills especially in times of crisis. She noticed that majority of clients that she has worked with, were triggered by an emergency of a crisis that was overwhelming to the clients and hence, many of them ended up abusing ADA as a means of coping with their negative emotions.

Psychiatrist P3 emphasized the need for early identification and treatment as the best measure. Children exposed to childhood trauma, he stated, need immediate care that is

appropriate to their needs. P3 noticed that a good number of these ADA clients are taken to facilities such as children's homes without interventions done on the psychological and emotional healing. The consequence of this is that even after such interventions later in life as adults, one ends up in ADA. In addition, the foster families of children who were subjected to ACEs need support through creation of awareness and psychoeducation on the impact of short- and longer-term effects of ACEs.

On the other hand, Counselor C4 and C5 emphasized the need to equip young parents with positive parenting skills as a way of buffering and preventing abuse. They noted that most of the abuse happens within the family setting especially where parents are either also affected by ADA. In particular, Counselor C5 emphasized the need for family approach or counselling on subtle abuse such as emotional neglect. She commented that most parents have no insight on the damage caused by emotional neglect that is ignored more so by most of African cultures.

The sustainable measurers suggested by the resident counselors and psychiatrist can be collaborated by Di Lemma (2019), who proposed four salient interventions to help mitigate ACEs that included; supporting parenting or caregivers, establishing healthy relationships and resilience, ensuring prompt identification and accurately response to ACEs. Psychosocial support delineates a situation whereby an individual is empowered to functional normally and effectively through equipping them with necessary abilities to overcome the prevailing challenge; for example, increasing their self-esteem and confidence (Choi et al., 2020). Majority of the clients in the selected rehabilitation centers in Kiambu County had issues with low self-esteem and confidence that stem from ACEs in their families. Psychosocial support that may be implemented through such means as psychoeducation by the site counselors and the psychiatrists would help in mitigating the spread of ACEs.

Chapter Summary

This chapter has presented the results of descriptive, correlation and regression analysis based on the two variables which were; adverse childhood experiences and alcohol and drug abuse. The response rate from the respondents was 99.5% which was found to be within the accepted range of 70 % and above. The purpose of correlation analysis which is measured between -1 and +1 was to measure the strength of the relationship between the two variables. The results indicated that emotional neglect had the highest correlation (0.696), followed by parental separation/ divorce (0.627), sexual abuse (0.477) and lastly, physical abuse (0.458). This would underpin that emotional neglect had the highest influence to ADA than other variables, while physical abuse would account to have the lowest influence on ADA compared to other ACEs in this study.

In regard to the strength of the relationship measured using regression analysis, the results indicate that the four aspects of ACEs (physical abuse, emotional neglect, sexual abuse and parental separation) accounted for 21.0 %, 48.4%, 22.8% and 39.3% of ADA in selected rehabilitation centers in Kiambu County, Kenya. All the five null hypotheses derived from the objectives of the study were rejected after their confidence levels were more than 0.5 and the alternative hypotheses accepted. The following chapter discusses the summary of findings, conclusions and makes recommendations for further research.

Chapter Five: Summary of Findings, Recommendations, Areas for Further Research and Conclusions

Introduction

This chapter presents a summary of the study findings, the conclusions derived from these findings and recommendations made thereof. The conclusion of the study is based on the purpose of the study, research questions and the results of the study. Additionally, the implications of these findings and the resultant recommendations are also explained premised on the conclusion and the purpose of the study.

Summary of Findings

The broad objective of this study was to establish the influence of ACEs on ADA among clients in selected rehabilitation centers in Kiambu County, Kenya. In order to make the study manageable, the general objective was broken down into six specific objectives which were to:

1. To find out the prevalence of adverse childhood experiences among clients in selected rehabilitation centers in Kiambu County, Kenya.
2. To determine the influence of physical abuse during childhood on alcohol and drug abuse among clients in selected rehabilitation centers in Kiambu County, Kenya.
3. To evaluate the influence of emotional neglect during childhood on alcohol and drug abuse among clients in selected rehabilitation centers in Kiambu County, Kenya.
4. To establish the influence of sexual abuse during childhood on alcohol and drug abuse among clients in selected rehabilitation centers in Kiambu County, Kenya.
5. To find out influence of parental separation during childhood on abuse of alcohol and drug abuse in clients in selected rehabilitation centers in Kiambu County, Kenya.

6. To find out the sustainable measures that would help mitigate the prevalence of adverse childhood experiences among ADA clients in selected rehabilitation centers in Kiambu County, Kenya.

The summary of the findings was organized and presented based on the outlined specific objectives.

Prevalence of Adverse Childhood Experiences among ADA Clients

The first objective of this study was to find out the prevalence of adverse childhood experiences among ADA clients in selected rehabilitation centers in Kiambu County Kenya. In order to determine this relationship; descriptive, correlation and regression analysis were done on the study variables. The four components that were used to objectively measure the prevalence of ACEs, emotional neglect had the highest mean of M=2.22, followed by parental divorce or separation M= 2.45, physical abuse M= 3.25 and finally sexual abuse had the lowest mean of 3.38. This indicates that emotional neglect was the most prevalent among the ADA clients and sexual abuse was the least prevalent. A regression analysis further indicated an existence of a positive relationship between Adverse Childhood Experiences and Alcohol and Drug Abuse (R=.588). The model summary indicated that 34.6% of alcohol and drug abuse is caused by adverse childhood experiences and the rest 65.4% is cause by other factors.

Influence of Physical Abuse During Childhood on Alcohol and Drug Abuse

The second objective of this study was to determine the influence of physical abuse during childhood on alcohol and drug abuse among clients in selected rehabilitation centers in Kiambu County in Kenya. In order to determine this influence; descriptive, correlation and regression analysis were done on the study variables. The results indicated that the highest mean recorded in the statements that, ‘Did a parent or adult in your family ever hit, beat, kick, or physically hurt you in any way’ was 2.56. The lowest mean recorded in the statement, ‘Has anyone in your family, ever had an intention of killing you or hurting you so badly’ was 3.57.

On the correlation coefficient, the results indicated a positive correlation between physical abuse and alcohol and drug abuse (R=0.458). The results further indicated that 21.0% of alcohol and drug abuse among the clients in selected rehabilitation center in Kiambu County Kenya was explained physical abuse with the remaining 79 percent explained by other variables. These results imply that physical abuse has a significant influence on alcohol and drug abuse; therefore, ADA will increase in direct proportion to physical abuse.

Influence of Emotional Neglect during Childhood on Alcohol and Drug Abuse among ADA Clients

The third objective of this study sought to evaluate the influence of emotional neglect during childhood on alcohol and drug abuse among ADA clients in selected rehabilitation centers in Kiambu County Kenya. In order to establish this relationship, descriptive, correlation and regression analysis were done on the study variables. The highest mean was recorded in these statements, "Did you sometimes feel as though you did not belong with your family or loved ones?'' and 'Did you sometimes feel empty inside and believed that nobody cared or loved you' mean was M= 1.80. The lowest mean was recorded in the statement that,' Did you feel that no one in your family loved you or thought you were special' mean was 3.54. On the correlation analysis, the results indicated a positive correlation between emotional neglect and alcohol and drug abuse (R=0.696). The result further indicated that 48.4 % of alcohol and drug abuse among clients in selected rehabilitation centers in Kiambu County was explained by emotional neglect. The remaining 51.6% was cause by other variables. The significance of the model between emotional neglect and alcohol and drug abuse was statistically significant with an F value of 167.924. Both p-value and β value of 0.696 indicated that emotional neglect has both significance and influence on alcohol and drug abuse.

Influence of Sexual Abuse during Childhood on Alcohol and Drug Abuse among ADA Clients

The fourth objective of this study was to establish the influence of sexual abuse during childhood on alcohol and drug abuse among ADA clients in selected rehabilitation centers in Kiambu County Kenya. In order to establish this relationship, descriptive, correlation and regression analysis were done on the study variables. The highest mean was recorded in the question, 'Did you ever engage in sexual intercourse because you were afraid what was happen to you' was 2.86 and the lowest mean was recorded in the statement that,' Did you experience indecent sexual exposure from a parent, guarding or caregiver during your childhood' mean was 3.55.

On the correlation analysis, the results indicated a positive correlation between sexual abuse and alcohol and drug abuse (R=0.477). The results further indicated that 22.8 percent of alcohol and drug abuse among clients in selected rehabilitation centers in Kiambu County was explained by sexual abuse while the remaining 77.2 percent was caused by other variables. The significance of the model between sexual abuse and alcohol and drug abuse was statistically significant with an F value of 52.752. Both p-value and β value of 0.477 indicated that sexual abuse has both significance and influence on alcohol and drug abuse.

Influence of Parental Divorce /Separation during Childhood on Abuse of Alcohol and Drug Abuse among ADA Clients

The fifth objective of this study was to find out the influence of parental divorce/separation during childhood on alcohol and drug abuse among ADA clients in selected rehabilitation centers in Kiambu County Kenya. In order to establish this relationship, descriptive, correlation and regression analysis were done on the study variables. The highest mean was recorded in this statement, 'Did you lose a parent through divorce, or separation'

was 1.86 and the lowest mean was recorded in the statement that, 'Were you ever abandoned by your parents, guardian or caregiver during your childhood' was 3.04.

On correlation analysis, the results indicated a positive correlation between parental divorce/separation and alcohol and drug abuse (R=0.627). The results further indicated that 39.3 % of alcohol and drug abuse among clients in selected rehabilitation centers in Kiambu County was explained by parental divorce/separation, while the remaining 60.7 percent% was caused by other variables. The significance of the model between sexual abuse and alcohol and drug abuse was statistically significant with an F value of 115.201. Both p-value and β value of 0.627 indicated that parental divorce/separation has both significance and influence on alcohol and drug abuse.

Conclusions

Based on the results of the descriptive, correlation and regression analysis of the study variables, the following conclusions were made. The conclusions are based on the objectives in this study with regards to the influence ACEs on ADA among clients in selected rehabilitation centers in Kiambu County Kenya.

The results indicated that there is a significance prevalence of Adverse Childhood Experiences among ADA clients. The highest of the four-measuring components of ACEs was emotional neglect with a mean of 2.22, followed by parental divorce/separation with a mean of 2.45, followed by physical abuse with a mean of 3.25 and sexual abuse was the least prevalent with a mean of 3.38. It can also be concluded that Adverse Childhood Experiences is a predictor to ADA with a regression coefficient (R=0.588). Additionally, a significant number of ADA clients 34.6% is as a result of ACEs. The implication of these findings is that ACEs has potency to cause an increase to ADA if preventative measures are not put in place.

Physical abuse from the findings was the least most prevalent ACEs among the four components with a mean of 3.25 and a positive correlation R= 0.458. Physical abuse

contributed to 21.0 % to ADA among clients in selected rehabilitation centers in Kiambu County Kenya. It can be concluded that physical abuse has a moderate positive influence to ADA. Moreover, it also has a moderate significant percentage influence to ADA. The implication of this is thus, an increase in physical abuse would in direct proportion cause an increase in ADA.

Emotional neglect was established as the major ACEs from the study findings that is most prevalent among the ADA clients with a mean of 2.22 and a correlation R= 0.696. Emotional neglect contributed to 48.4 % of ADA among clients in selected rehabilitation centers in Kiambu County Kenya. The conclusion that can be made from this finding is that childhood emotional neglect is a strong predictor to ADA. Secondly, it has a significant influence contributing to 48.4 percent of the underlying cause that may lead to ADA. The implication of these findings is that emotional neglect has strong potency if intervention measures are not put in place to lead to ADA.

Parental separation / divorce was the second most prevalent ACEs with a mean of 2.45 and a correlation of R=0.625 from these study findings. Parental separation/ divorce contributed to 39.3 percent of the underlying causes towards ADA. This was equally a strong predictor that informed the need for ADA. The implication of this finding would indicate that majority of the clients from the selected rehabilitation centers in Kiambu County Kenya have experienced divorce or separation of their parents in their childhood.

Sexual abuse as a form of ACEs was indicated as the third most prevalent cause towards ADA with a mean of 3.38 and a correlation of R=0.477. Sexual abuse contributed to 22.8 percent of the causes that lead to ADA among clients in selected rehabilitation centers in Kiambu County Kenya. Though sexual abuse may be rated as a third most contributor of ADA in this study, its influence to ADA is still significant. The implication of these results is that

there are high possibilities that individual that are subjected to childhood sexual abuse would abuse ADA as a form of coping with the abuse.

Recommendations

It is evident that many rehabilitation centers do not conduct thorough screening and assessment of adverse childhood experiences as exemplified by that majority of ADA clients had not processed their childhood trauma caused by ACEs. According to the findings of this study, emotional neglect was the highest with a mean of 2.22. The study recommends therefore an in-depth training of influence of childhood emotional neglect on ADA among counselors in rehabilitation centers. Secondly, the findings of the study observed that parental separation and divorce had the second highest influence on ADA with a mean of 2.45. Thus, the study recommends a thorough intake of family history of clients with ADA to establish their family of origin structure.

The findings of the study established that physical abuse and sexual abuse were third and fourth in their influence on ADA, with a mean of 3.25 and 3.38 respectively. In this regard, the study recommends a thorough screening using such tool as adverse childhood assessment questionnaire to ascertain the level of adverse childhood score that the child would have.

Additionally, the study recommends that resident counselors in rehabilitation centers be well trained on how to screen, assess and offer relevant trauma –focused therapy to the affected clients.

Majority of the ADA clients in selected rehabilitation centers had clients who are now parents. This study recommends psycho-education on positive parenting among the ADA clients as a measurer to mitigate on ACEs.

Alcohol and drug abuse affects the whole family and cause an imbalance to the entire family. The study recommends that rehabilitation centers should enhance family-oriented

approaches when working with ADA clients, such as family therapy, in order to help the client and the family in restoring their functionality and balance.

Recommendations for Further Research

This study focused only on the four out of the ten components of ACEs as proposed by Felitti et al. (1998) namely; physical abuse, sexual abuse, emotional neglect and parental separation / divorce with a view to evaluating their influence on alcohol and drug abuse. There is therefore need for further research using the remaining six components of ACEs namely; emotional abuse, physical neglect, domestic violence, problematic substance use by a family member, mental health problem of a household member and imprisonment of a household member. The study limited itself to the ten items of adverse childhood experiences by Felliti (1998), however there is need to carry out research using the new improved adverse childhood experiences by World Health Organization that contains 31 items (Gette et al., 2022).

Contextually, this study was done within selected rehabilitation centers is Kiambu County in Kenya. There is need to expand the study to other facilities such as prisons, slum areas and universities. Moreover, there can be a longitudinal study done within a county in order to really objectively capture the influence of ACEs on alcohol and drug abuse.

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Appendices

Appendix I: Informed Consent Statement from Clients in Rehabilitation Centers

I understand that participation in this study is voluntary and that I am free to withdraw my consent to participate in this study at any time. I also understand that decline to participate or withdraw from this study will involve no penalty or benefit. Moreover, I have also been noticed that there shall be no monetary gain in participating in this study. Additionally, I have been given the opportunity to ask questions about the research, and received answers concerning the areas that I do not understand. I willingly consent to participate in this research.

_____ _____

Signature of Respondent Date

Appendices II: ADA Clients Questionnaire.

Introduction

My name is Maurifixten Kamau Njuru, I am a Masters degree student at Pan African Christian University under registration number MACP/18768/0/21. I am carrying out a research on **the Influence of Adverse Childhood Experiences on Alcohol and Drug Abuse among clients in selected Rehabilitation centers in Kiambu County, Kenya.** It is my humble request that you would accept to participate in this study. This questionnaire contains three sections: A, B and C, kindly engage with them honestly. Section A seeks brief information on the background of the ADA clients. Section B, seeks to understand your childhood background before the age of 18years, while the last section C explores your consumption of ADA.

Section: A Please tick where appropriate [√]

1. Gender:
   - Male [ ]
   - Female [ ]
2. What age bracket do you belong to?
   - Below 19 [ ]
   - 20-29 [ ]
   - 30-39 [ ]
   - 40-49 [ ]
   - 50 and above
3. What is your highest attained level of education?
   - Primary [ ]
   - Secondary [ ]
   - Tertiary [ ]
   - University [ ]
4. What is your employment status?
   - Unemployed [ ]
   - Self-employed [ ]
   - Employed [ ]
5. What is your religious affiliation? _____
6. What is your marital status?
   - Married [ ]
   - Single [ ]
   - Separated [ ]

Divorced [ ]

7. At what age did you start the use of alcohol or any other psychoactive drugs? _____
8. How long have you used ADA_____?
9. What is your drug of choice_____?

Alcohol	[ ]
Cocaine	[ ]
Cigarettes	[ ]
Marijuana	[ ]
Heroine	[ ]
Khat	[ ]
Other	[ ]

10. What triggered you to use drugs the first time? _____
11. What is the structure of the family that you come from?

Two parents' family (biological)	[ ]
Two parents- step family	[ ]
Single parent family – separated	[ ]
Single parent – (never married)	[ ]

Section B: Adverse Childhood Questionnaire

Below are 20 statement that concern your **childhood experiences before 18 years of age**. Kindly interact with the questions honestly and answer where appropriate. The questions follow a Likert scale of 1-5, where 1 stands for strongly agree, 2, agree, 3 sometimes, 4 disagree and 5 stands for strongly disagree. These questions can trigger some memories about your childhood experiences. (These experiences must have occurred before the age of 18years)

		Strongly Agree	**Agree**	**Sometimes**	**Disagree**	**Strongly Disagree**
1.	**Physical Abuse** Did a parent or adult in your home ever hit, beat, kick, or physically hurt you in any way?					
2.	Did a parent, a care giver or an adult in your home ever choke you, punch, or try to stab you?					

3.	Has anyone in your family, ever had an intention of killing you or hurting you so badly?					
4.	Did you ever feel safe being at home?					
5.	Have you ever been taken to hospital/ emergency room because of burns, hurt or severe beating?					
6	**Sexual abuse** Has anyone ever touched your sex organs in a sexual manner and against your will?					
7	Has anyone ever forced you to touch his or her sex organs in a sexual manner against your will?					
8.	Has anyone ever forced you to touch his or her sex organs in a sexual manner against your will?					
9.	Has anyone in your family, or another adult ever forced you to have sexual intercourse with him or her?					
10.	Did you experience indecent sexual exposure from a parent, guarding or caregiver during your childhood?					
11.	Did you ever engage in sexual intercourse because you were afraid what was happen to you?					
12.	**Emotional Neglect** Did you feel that no one in your family loved you or thought you were special?					

13.	Did you ever feel lonely, isolated, and misunderstood by your family members, parents or guardians?					
14.	Did you sometimes feel as though you did not belong with your family or loved ones?					
15.	Did you find it difficult to share your feeling, or emotions with your parents, caregiver or guardian?					
16.	Did you sometimes feel empty inside and believed that nobody cared or loved you?					
17.	**Parental Separation/ Divorce** Did you lose a parent through divorce, or separation?					
18.	Were you ever abandoned, by your parents, guardian or caregiver during your childhood?					
19.	During your childhood, did you experience social, emotional or physical problems because of your parents' divorce or separation?					
20.	During your childhood did you have fear, worry or anxiety that your parent would divorce / separate and leave you?					

Section: C Clients Frequency of Consumption of ADA

		Never	**Monthly or less**	**2 to 4 times a month**	**2 to 3 times a week**	**4 or more times a week**
21.	How often do you have a drink containing alcohol?					
22.	How often do you use drugs?					
23.	How often do you have 5 or more drinks on one occasion? How often have you ended up using alcohol or drugs more than you intended?					
24.	How often would you use more alcohol or drugs in order to get the effect you wanted?					
25.	How often have you used alcohol or drugs to a point of unconsciousness					

Appendix III: Counselor's Interview Schedule

1. In your assessment or screening, and based on the history of the clients, have you noticed any traces of physical abuse during childhood?
2. In your assessment or screening, and based on the history of the clients, have you noticed any presence of sexual abuse during childhood?.
3. In your assessment or screening, and based on the history of the clients, have you noticed any presence of emotional neglect from the parents, caregiver or guardians during childhood?.
4. In your assessment or screening, and based on the history of the clients have you notice whether the client's parents separated or divorced during the client's childhood phase (1-18 years)?.
5. In your assessment or screening, and based on the history of the clients, how prevalent would you say; (Use a Likert scale of 1-5; 1 Stand for Highly prevalent and 5 Stands for less Prevalent)
    - Physical abuse is experienced by clients with ADA.
    - Sexual abuse is experienced by clients with ADA.
    - Emotional neglect is experienced by clients with ADA.
    - Parental separation/divorce of parents of clients with ADA.

Appendix IV: Psychiatrist's Interview Schedule

1. In your assessment and screening, what is the implication of physical abuse during childhood, if any on clients ADA?

2. In your assessment and screening, what is the implication of sexual abuse during childhood, if any on clients ADA?

3. In your assessment and screening, what is the implication of emotional neglect during childhood, if any on clients ADA?

4. In your assessment and screening, what is the implication of parental separation/divorce during childhood, if any on clients ADA?

5. What is the prevalence in your own assessment of ACEs among clients with ADA?

Appendix V: Krejcie and Morgan Sampling Formula Table

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	200	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	1000000	384

N is the population size; S is the sample Size *Source: Krejcie & Morgan 1970*

Appendix VI:

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