

**FACTORS ASSOCIATED WITH ALCOHOL USE AMONG
PERSONS AGED 18-35 YEARS IN KANGUNDO NORTH
WARD, MACHAKOS COUNTY, KENYA**

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**Factors Associated with Alcohol Use among Persons Aged 18-35 Years
in Kangundo North Ward, Machakos County, Kenya**

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Degree Master of Public Health of the Jomo Kenyatta University of
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DECLARATION

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

Signature.....Date.....

Joseph Ndambuki Makau

This thesis has been submitted for examination with our approval as the University Supervisors

Signature.....Date.....

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DEDICATION

This thesis is dedicated to my wife Doris Mukami for her unconditional love and support and my parents Mr and Mrs Antony Makau Ilovi for their resilience and constant encouragement. May the Almighty God bless you. To my classmate Dr. Martin Owour, thanks a lot. I am greatly indebted to them who in various ways, their insightful comments, support, patience, motivation, enthusiasm, and encouragement led to the development of this thesis.

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ACRONYMS AND ABBREVIATIONS

ADA	Alcohol and Drug Abuse
AIDS	Acquired Immune-Deficiency syndrome
AUD	Alcohol Use Disorder
ARCR	Alcohol Research Current Reviews
DALYs	Disability Adjusted Life Years
HED	Heavy Episodic Drinking
HIV	Human Immunodeficiency Virus
JKUAT	Jomo Kenyatta University of Agriculture and Technology
NACADA	National Agency for the Campaign Against Drug Abuse
NACOSTI	National Council of Science and Technology
NAYS	National Adolescent and Youth Survey
STI	Sexually Transmitted Infections
STATA	Statistical Software Package for Social Sciences
UNODC	United Nations Office on Drugs and Crime
WHO	World Health Organization

DEFINITION OF OPERATIONAL TERMS

Alcohol	An intoxicating ingredient found in beer, wine, and liquor.
Alcohol use	Refers to the use of a drink that contains ethanol (ethyl alcohol)
Alcohol abuse	A condition manifested by continued alcohol use despite significant adverse consequences of drinking, such as problems with work, law, health or family life.
Alcoholism	Is a severe form of alcohol abuse and involves the inability to manage drinking habits.
Binge drinking	Refers to episodic excessive drinking pattern of drinking that brings a person's blood alcohol concentration to 0.08 grams percent or above. This happens when men consume 5 or more drinks, and when women consume 4 or more drinks, in about 2 hours.
Current drinking	Defined as drinking at least one standard drink of an alcoholic beverage during the past 30 days of the survey.
Life event	Defined as discrete experiences that disrupt an individual's usual activities, causing a substantial change and readjustment.
Psychoactive substance	Is a chemical substance that acts primarily upon the central nervous system where it alters brain function, resulting in temporary changes in perception, mood, consciousness and behaviour.
Standard drink	Defined as a can (330 cc) of beer, a glass (100 cc) of wine, or a small glass (30 cc) of whisky or spirits.

ABSTRACT

The study aimed to determine the factors associated with alcohol use among persons aged 18-35 years. It was conducted among residents of Kangundo North Ward, Machakos County where alcohol use is reported to be a serious concern. In addition, the study sought to establish the sociodemographic factors, community level and psychosocial factors that influence alcohol use. It adopted a mixed-method cross sectional study design where Quantitative data was collected using a structured questionnaire while qualitative data was collected using key informant interview and a Focus Group discussion guide. Sampling was done for 310 respondents. Data entry was done and analysed using SPSS version 23, descriptive statistics such as mean, standard deviation and proportion were used as first line exploratory analytic methods. Logistic regressions were used to explore the factors associated with alcohol use. Odds ratios were used to determine associations between psychosocial factors and use of alcohol. Further, multivariate and bivariate analysis were done to establish association between dependent and independent variables. Specifically, the study describes how sociodemographic, Community level and psychosocial factors influence alcohol use. This will help explore future research options. Four Key informants were interviewed and two FGDs were conducted. Alcohol use was more prevalent among males aged 18-24 years. Alcohol use was associated with age, gender, socioeconomic status, education, advertisement, gender-based violence, harsh childhood experiences and use of other psychoactive substances ($P < 0.05$). Male gender was significantly associated with alcohol use compared to females (AOR 2.1, 95% CI: 1.02-4.6). Having secondary education was significantly associated with alcohol use compared to a person who had no education (AOR: 3.44, 95% CI: 1.3-9.05). Having tertiary education was significantly associated with alcohol use compared to respondents who had no formal education (AOR 6.22, 95% CI 1.51-25.7). The study participants who earned between Ksh 10000 and Ksh 15000 were 4.8 times more likely to consume alcohol compared to those who earned below Ksh 5000 (AOR 4.8, 95% CI 1.4-6). Alcohol advertisement was significantly associated with alcohol use ($P < 0.05$). Respondents who saw Alcohol adverts through audio were 9 times more likely to use alcohol than respondents who knew it through the newspaper. Use of other psychoactive substances like Marijuana was significantly associated with alcohol use. The individuals who abused tobacco were 93 times more likely to use alcohol compared to marijuana users. This study recommends more Alcohol use sensitization programs for persons aged 18-35 years to create more Public Health awareness on alcohol targeting especially the male gender. The administration department may need to strengthen regulation of alcohol outlets and advertisements. In addition, Support for Gender based violence (awareness, screening and referral) needs to be enhanced. Moreover, substance abuse preventive programs should take into account use of other psychoactive substances such as cigarette and marijuana use. Mental Health programs should liaise with stakeholders to address psychosocial factors that lead to alcohol use.

CHAPTER ONE

INTRODUCTION

1.1 Background Information

Alcohol is a psychoactive substance with dependence-producing properties and widely used in many cultures for centuries. Globally, the harmful use of alcohol is a problem and has resulted in millions of deaths, injury and violence according to WHO. Some 2.3 billion people are current drinkers. Alcohol is attributed to 5.1 % of global burden of disease and 13.5 % of the total deaths in age group 20–39 years. As per WHO, the world's highest alcohol consumption levels are found in the developed world, including western and Eastern Europe. High-income countries generally have the highest alcohol consumption (World Health Organization, 2018).

According to World Health Organization (WHO), alcohol use is the world's third largest risk factor for disease and disability; in middle-income countries, it is the greatest risk. Alcohol is a causal factor in 60 types of diseases and injuries and a component cause in 200 others. Almost 4% of all deaths worldwide are attributed to alcohol, greater than deaths caused by HIV/AIDS, violence or tuberculosis (WHO, 2018). According to UNDOC, harmful alcohol and substance use has multiple direct effects on adolescents and youth. The likelihood of unemployment, physical health problems, dysfunctional social relationships, suicidal tendencies, mental illness and even lower life expectancy is increased by substance use in adolescence. In the most serious cases, harmful drug use can lead to a cycle in which damaged socioeconomic standing and ability to develop relationships feed substance use (United Nations Office on Drugs and Crime (UNODC), 2018).

According to the World Bank, the total population of sub-Saharan Africa in 2014 was about 973 million people. Almost half (43%) of the people living in that region were under 14 years old (World bank , 2016) and about 30% of the adult population drinking alcohol with expected increases in the number of potential new alcohol consumers, especially young people and women (WHO,2014).

In Africa, alcohol consumption is on the rise, the region has the highest prevalence of heavy episodic drinking with 46% of women and 59% of male drinkers engaging in it weekly. A significant proportion of the disease burden attributable to alcohol consumption arises from unintentional and intentional injuries, including road traffic crashes, violence, and suicides, and fatal alcohol-related injuries tend to occur in relatively younger age groups (WHO, 2018). A systematic review of alcohol use among youth (aged 15–24 years) in East Africa showed that, 47–70% of males and 24–54% of females reported ever using alcohol while 20–45% of males and 12–47% of female reported current alcohol use (Francis *et al.*,2014).

In Kenya, Use of alcohol and other substances is a social behaviour which is embedded in communities and cultures and is sustained by supply. The NACADA (2017) survey of revealed that 12.2% of respondents aged 15 – 65 years are currently using alcohol; 15.1% of respondents aged 25 - 35 years are currently using alcohol; 5.6% of respondents aged 15 – 24 years are currently using alcohol; and 0.9% of respondents aged 10 – 19 years are currently using alcohol. Nairobi region is leading in the prevalence of current usage of alcohol (17.5%) followed by Eastern 14.3% and Western 13.4% regions. Alcohol consumption in rural Kenya has been on the rise with a prevalence rate of 29.6 per cent compared to 31.7 per cent in urban area. The prevalence of alcohol use disorders among respondents aged 15 -65 years stands at 10.4% in 2017(NACADA, 2017).

According to a study by Kaithuru and others, alcohol is a major threat and a challenge to a progressive economic development. Most employees who abuse alcohol show irregularity in work attendance, low productivity, hangovers, stress, financial problems, and health and safety risks (Kaithuru *et al.*, 2015).

Youth in Kenya face a myriad of challenges ranging from unemployment, under-employment, HIV/AIDS and Sexually Transmitted Infections (STIs), drug and substance abuse, poverty, crime and deviant behaviour, exploitation, lack of opportunities to explore and develop their talents, and low representation at decision making levels. For the youth in Kenya to make useful contribution to the country's development, the problems facing young persons in the country need to be addressed comprehensively (NAYS, 2015). In Machakos County where the study area is

located, drug and Substance abuse especially alcohol is a leading health problem according to a survey done on adolescents and youth (NAYS, 2015).

1.2 Statement of the Problem

The consumption of alcoholic beverages by persons aged 18-35 years is an important public health and social issue since this is the most productive generation in terms of contribution to the demographic dividend. Alcohol use results in a significant health, social and economic burden on the society at large. It is associated with a broad range of negative consequences which include drop out from school, poor performance, sexual risk, diseases, sexually transmitted infections, suicide, injuries, broken relationships, loss of jobs and millions of deaths. The progressive harmful use of alcohol also results in addiction and harm to other people, such as family members, friends, co-workers and strangers (WHO, 2018). Alcohol abuse by young people is linked to a range of negative effects that include alcohol poisoning, blackouts; poor daily activity performance; violence, property damage and breaching the rules and laws that spoil their chance of employment in future (UNDOC, 2018).

In Kangundo North Ward, majority of young people are indulging in alcohol use and abuse with reported incidences of violence, injuries, school drop outs, dismissal from workplaces and broken marriages. They live in an environment where alcohol is widely sold and promoted. Alcohol is easily accessible at all times with too many selling points in the villages. Majority of men can be found drunk early in the morning as residents attend to their daily chores. However, data on the factors associated with alcohol abuse is not readily available, there has been limited research investigating factors associated with alcohol consumption. The limited published data has led to youth being side-lined by alcohol and substance abuse prevention efforts. More focus is needed to generate data through relevant forums. The fate for future generation is at stake if intervention measures are not put in place.

1.3 Justification of the Study

Kenyans below 35 years constitute 75% of the population, forming the largest human resource for national development. Alcohol use and abuse in Kenya threatens the

achievement of vision 2030 and holistic wellbeing of young people. WHO projects that alcohol consumption will increase with over 200 health conditions linked to harmful alcohol use, ranging from liver diseases, road injuries and violence, to cancers, cardiovascular diseases, suicides, tuberculosis and HIV/AIDS causing death and disability relatively early in life. In the age group 18 – 35 years, approximately 25 % of the total deaths are alcohol-attributable (WHO, 2018).

There is limited data on alcohol use among persons aged 18-35 years. Previous studies have tried to relate peer pressure, accessibility, economic background, cultural beliefs and advertisement as possible factors attributed to alcohol use. However, the studies majorly focused on underage and adolescence.

The study therefore aimed to determine the factors attributable to this behaviour and its findings may be used to design interventions to tackle alcohol abuse among young people in Kangundo North ward as well as Machakos County. In addition, the findings may be utilized by program implementers in the area of alcohol and drug abuse and Health promotion department of Kangundo Sub-County to tailor their interventions towards addressing the most critical areas of need.

1.4 Objectives

1.4.1 Broad Objective

To determine factors associated with alcohol use among persons aged 18-35 years in Kangundo North ward.

1.4.2 Specific Objectives

1. To determine the sociodemographic characteristics influencing alcohol use among persons aged 18-35 years in Kangundo North ward Machakos County.
2. To establish the Community level factors associated with alcohol use among persons aged 18-35 years in Kangundo North ward Machakos County.
3. To explore the psychosocial factors associated with alcohol use among persons aged 18-35 years in Kangundo North ward Machakos County.

1.5 Research Questions

1. What are the sociodemographic characteristics influencing alcohol use among persons aged 18-35 years in Kangundo North Ward, Machakos County?
2. What are the Community level factors associated with alcohol use among persons aged 18-35 years in Kangundo North Ward, Machakos County?
3. What are the psychosocial factors associated with alcohol use among persons aged 18-35 years in Kangundo North ward, Machakos County?

1.6 Study Limitations

The study was cross sectional and analytical in nature and limited to Kangundo North Ward and thus generalization to other regions was made with caution. Recall bias for previous experiences may have occurred due to the nature of the methodology applied. This was overcome by ensuring research assistants are careful as they phrase questions and maintain open ended questions. Other challenges while carrying out the research included time constraints whereby the study took longer time than expected, due to financial limitations that influenced the scope of the study and transport. This was managed by ensuring proper time management and strict adherence to the workplan.

1.7 Theoretical Framework

This study conceptualized factors associated with alcohol use among persons aged 18-35 years using the Socio ecological model as a result of interaction of various factors that include individual, biological, social, environmental and psychosocial. The Factors associated with alcohol abuse tend to be more than one. According to UNDOC no factor alone is sufficient to lead to the use of substances and these influences change over time. (UNDOC, 2018)

1.8 Conceptual Framework

This study conceptualized alcohol use as a result of factors which can be personal/individual, socioeconomic, structural and psychosocial factors. This multi-level perspective was reflected in the model presented here as a means of the

conclusions made by Donovan in 2017 that alcohol consumption occurs as a result of combination of factors associated with alcohol use that include; personal/individual, social, structural and psychosocial factors. Donovan concluded that many of the factors that facilitate trial, also facilitate moderate and excess consumption (Donovan, 2017).

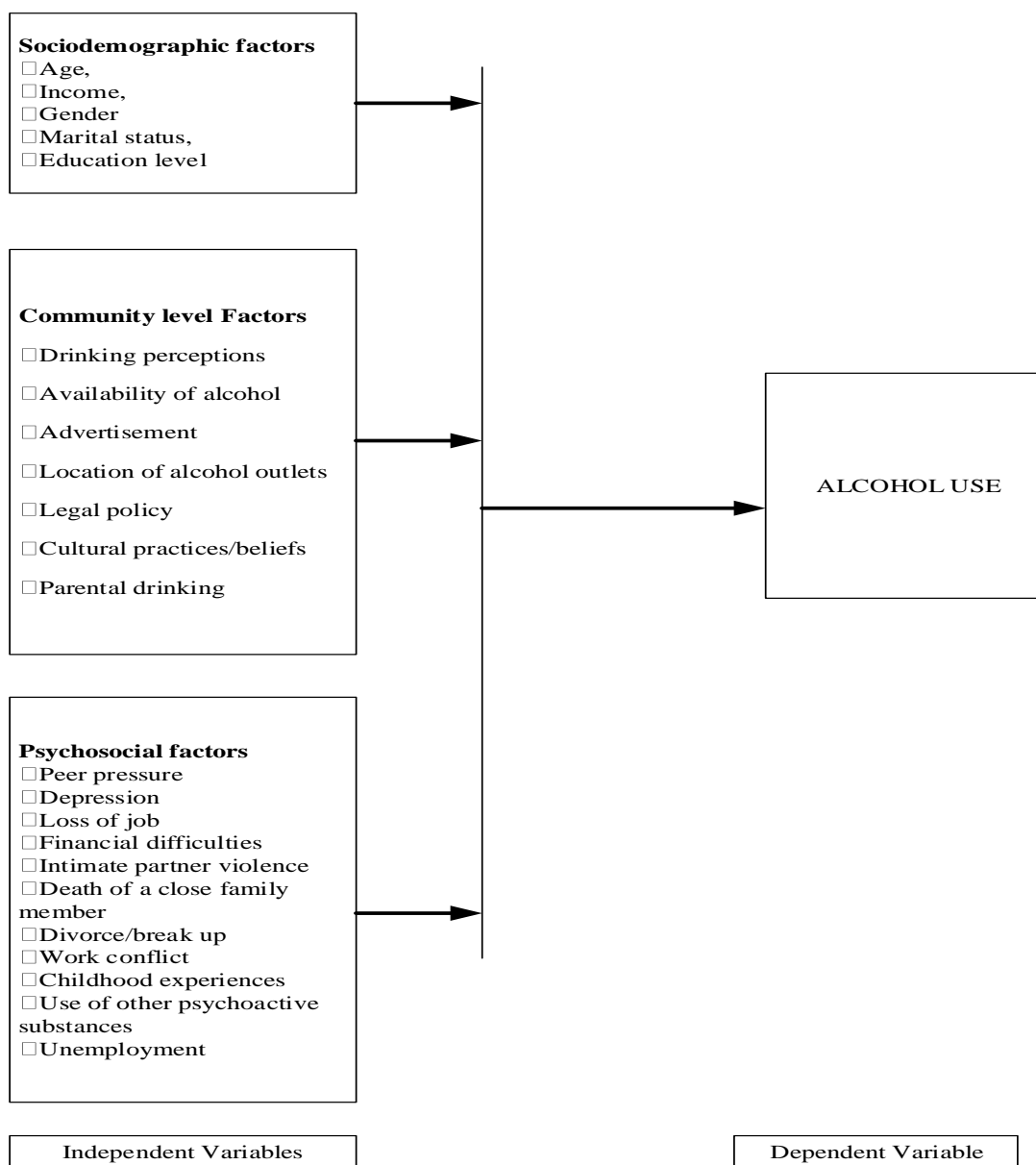


Figure 1.1: Conceptual Framework

Source: Adopted framework on factors associated with alcohol use by Donovan (2017)

CHAPTER TWO

LITERATURE REVIEW

Overview on Alcohol Use

According to WHO, Worldwide, 3 million (5%) deaths every year result from harmful use of alcohol. Overall, 5.1% of the global burden of disease and injury is attributable to alcohol (WHO 2018). Various factors have been identified at the individual, societal and psychosocial level, which affect the levels and patterns of alcohol consumption and the magnitude of alcohol-related problems in populations. In people aged 20–39 years, approximately 13.5% of total deaths are attributable to alcohol. Individual factors include age, gender, family circumstances and socio-economic status. Societal factors include economic development, culture, availability of alcohol, and the comprehensiveness and levels of implementation and enforcement of alcohol policies. For a given level or pattern of drinking, vulnerabilities within a society are likely to have similar differential effects as those between societies. There is no single risk factor that is dominant, the more vulnerabilities a person has, the more likely the person is to develop alcohol-related problems as a result of alcohol consumption (WHO, 2018).

The UNDOC report 2018 noted that, the path from initiation to harmful use of substances among young people is influenced by factors that are often out of their control. Factors at the personal level (including behavioural and mental health, neurological developments and gene variations resulting from social influences), the micro level (parental and family functioning, schools and peer influences) and the macro level (socioeconomic and physical environment) can render the youth vulnerable to substance use. These factors vary between individuals and not all young people are equally vulnerable to substance use. No factor alone is sufficient to lead to the use of substances and, in many instances, these influences change over time (UNDOC, 2018).

2.1 Socio-Demographic Characteristics Associated with Alcohol Use

Alcohol use is part of many cultural, religious and social practices, and provides perceived pleasure to many users. Social factors contribute to a person's views of drinking. According to WHO, worldwide and in all WHO regions, prevalence of Heavy Episodic Drinking is lower among adolescents (15–19 years) than in the total population but it peaks at the age of 20–24 years when it becomes higher than in the total population (WHO, 2018). Males, rural populations and those aged 25-34 years exhibited the highest levels of risky drinking practices, while urban populations exhibit higher levels of general alcohol consumption. 50% of males and 30% of females were found to be current drinkers of alcohol (Demaio *et al.*, 2013).

According to Maharjan and Margar, youth of age group 15-18 years were 0.251 less likely to drink than 19-24 years old. Male were 3.56 more likely to drink than female. Respondents having positive family and friend's history of drinking were 3.71 and 11.64 times likely to drink than those who don't have respectively. Youth who start drinking before age 15 years were six times more likely to develop alcohol dependence or abuse later in life than those who begin drinking at or after age 21 years (Maharjan *et al.*, 2017).

In a study done at Egerton University by Boitt and others, there is a significant association between the year of study of the students, marital status, family's economic status and the living arrangements (with whom) and the prevalence of alcohol abuse. However, high significant association was found among the middle income, divorced, living with spouses, and finally being on second year (Boitt *et al.*, 2016).

A study done by Kendago and others revealed a significant prevalence of Heavy episodic drinking among alcohol drinkers in Kenya. Young males, those with less education, married people, and tobacco users were more likely to report heavy alcohol use, with male sex as the primary driving factor. These findings are novel to the country and region; they provide guidance to target alcohol control interventions for different groups in Kenya (Kendago *et al.*, 2018).

Collins noted that socio-economic status influences a person's alcohol use and related outcomes. The study findings indicated that people with higher status may consume similar or greater amounts of alcohol compared with people with lower status (Collins, 2016).

Most of the alcoholics have peers who use or abuse alcohol. Existing norms were opposed to alcohol consumption among young people, particularly the children. Drinking during adolescence can have long-term effects on a person's life trajectory. (Patrick *et al.*, 2013).

2.2 Community Level Factors Influencing Alcohol Abuse

In a study done by Karriker-Jaffe and others, some of the environmental influences on alcohol use include: acceptance of alcohol use by society; availability (including price, number of outlets, and server practices), advertising and marketing both nationally and locally; and public policies regarding alcohol and enforcement of those policies. Karriker-Jaffe noted a growing interest in understanding how environmental conditions enhance alcohol use in light of evidence that sociocultural factors and the built environment are associated with levels of alcohol consumption and risk for related problems in U.S. racial/ethnic minority populations (Karriker-Jaffe *et al.*, 2018). Social environment is the main determinant of alcohol consumption in this setting (Takahashi, 2017).

A study done by Nyatuoro, revealed that there is close association between distance from wine and spirit shop and drug and substance drug abuse. Areas within 200m from the nearest shop had a slightly higher percentage of abusers (37%) as compared to those with shops beyond 200m (33%). (Nyatuoro, 2013).

Young people who have greater exposure to alcohol marketing appear to be more likely subsequently to initiate alcohol use and engage in binge and hazardous drinking. Mediators included marketing receptivity, brand recognition and alcohol expectancies. Levels of marketing exposure among younger adolescents were similar to those found among older adolescents and young adults (Jernigan *et al.*, 2017).

In many societies, access to alcoholic beverages has been greater for those who are accorded higher or more privileged status. Where alcohol is a market commodity, this will be partly a reflection of how much money the person has for purchasing (Kan *et al.*, 2013).

The alcohol industry has intensified its activities through; funding of social aspect organizations, technical publications, policy workshops and other corporate social responsibility activities. In a study by Westgate and others posting and viewing alcohol-related content on social media is linked to real world drinking behaviors (Westgate *et al.*, 2017), Marketing campaigns, new product designs and the development of industry-civil society partnerships have increased. There is evidence that the alcohol industry also engages in lobbying, information dissemination and legal action to thwart effective public health measures (Barbor *et al.*, 2015).

A study done in northern Tanzania by Osaki and others revealed that social space (social environment and interactions) plays an important role in influencing youth initial consumption of alcohol (Osaki *et al.*, 2018). Studies show that teenagers who are given alcohol by their parents are thrice more likely to be heavy drinkers in their late teens than those from families which do not supply alcohol. As societies become more affluent, there is a strong tendency for the level of alcohol consumption to increase, except in Muslim-majority countries with a religion-based prohibition on drinking (Probst *et al.*, 2015).

The NACADA survey of 2017 noted that the enforcement of Alcoholic Drinks Control Act, 2010 (ADA) and County Alcoholic Drinks Control Act is inadequate (NACADA, 2017). Lutta study revealed that indeed corruption and enforcement personnel have negatively affected the implementation of alcohol and drug abuse policies. The study concluded that for effective implementation of ADA policies, all acts of corruption should be eliminated, the enforcement personnel should be well facilitated and well trained on ADA policies (Lutta, 2016).

A study by fish and others revealed that level of acculturation moderated the association between alcohol beliefs and weekly drinking. Native Americans who identified less with mainstream culture demonstrated a positive association between

their cultural alcohol beliefs and their weekly drinking (Fish *et al.*, 2017). The consumption of alcohol was associated with celebrations and was also a means of defining social levels within treatment of illness (Singkorn, 2017).

According to Nkambule, the overall knowledge of undergraduate students on social and health implications of excessive consumption of alcohol and smoking was adequate although it was lacking on alcohol with regards to certain diseases. The majority associated smoking and alcohol consumption with social activities. Alcohol and smoking practices were similar to other studies (Nkambule *et al.*, 2018).

According to Atwoli, most of the negative effects attributed to substance use by the respondents were associated with alcohol use. 55.2% of the participants using alcohol reported having experienced medical problems as a result of their alcohol use. Further, 60.5% engaged in unprotected sex and 62.5% engaged in sex which they regretted the next day. Over 60% of the participants reported engaging in scuffles, loss and damage to property and quarrels (Atwoli *et al.*, 2011). According to Alcohol Research Current Reviews, too many people, particularly young adults, are binge drinkers despite the adverse consequences associated which are dangerous and sometimes fatal (ARCR, 2018).

The harms to health are only part of the total alcohol-related harm. Harms from drinking occur not only to the drinker, but also to those around him or her – to others in the family or household, to relatives and friends, and to those encountered on the street. The harms may be to health (e.g. injury, a family member's anxiety or depression, transmission of infection to a sexual partner), or may be social (e.g. assault, community nuisance) or economic (e.g. damage to property, money for family necessities spent on drinking (Karriker-Jaffe *et al.*, 2018).

Alcohol intoxication plays a large part in harms to others from drinking. In an Australian national adult sample, those who had been harmed in the last year by the drinking of a relative or other person known to them were asked about that person's drinking patterns. The average response was that the person drank five or more drinks (50 grams or more of ethanol) four times a week, and 13 drinks when drinking heavily (Laslett *et al.*, 2017). Exposure to alcohol-related content on the Internet might

predispose young people to patterns of alcohol use by promoting alcohol as a natural and vital part of life (Gupta et al., 2016)

In a study by Tran and others, despite the belief that drinking and driving will increase the risk of a crash, a significant proportion of respondents (44.9%) reported drinking and driving; 56.7 percent admitted to drinking and driving within the previous 1 month. Drinking and driving was more common among males, with approximately 60.2 percent indicating a history of drinking and driving. This proportion was particularly high among males aged 17 to 26 (71.4%) (Tran et al., 2012).

2.3 Psychosocial Factors Contributing to Alcohol Use

A study done by McMorris and others noted that risk factors that occur during early childhood further increase the risk of youth substance abuse, early aggressive behaviour, lack of parental supervision, academic problems, undiagnosed mental health problems, peer substance use, drug availability, poverty, peer rejection, and child abuse or neglect are risk factors associated with increased odds of youth substance use and abuse. Prolonged risk factors including those that persist on from childhood through adolescence, are also associated with increased likelihood of youth substance abuse (McMorris *et al.*, 2011).

A study done by Tamers and others noted that stressful life events promote healthy and unhealthy alcohol consumption, certain events impact alcohol intake temporarily while others have longer-term implications. Research should disentangle women's and men's distinct perceptions of events over time (Tamers *et al.*, 2014). Juergens noted that Co-occurring alcohol abuse and mental health conditions, like depression, bipolar and schizophrenia, can cause an array of serious side effects. More than 40% of bipolar sufferers abuse or are dependent on alcohol, and approximately 20% of depression sufferer's abuse or are dependent on alcohol. (Juergens, 2018).

According to WHO, alcohol is responsible for approximately 5.9 percent of deaths worldwide and a global loss of 139 million disability-adjusted life-years. The alcohol-related disease burden is precipitated in part by acute intoxication, which

decreases reaction time, perception and motor skills, and inhibitions and is thereby associated with an increased risk for traffic accidents, self-inflicted injuries, suicide, falls, drowning, alcohol poisoning, and interpersonal violence. Longer-term effects of alcohol consumption also contribute to the disease burden by way of various medical conditions (e.g., cancer, cardiovascular disease, and liver cirrhosis) and psychiatric disorders (e.g. depression and alcohol use disorder (WHO, 2014) Alcohol is also associated with many serious social issues, including violence, child neglect and abuse, and absenteeism in the workplace (WHO, 2018).

Youth in Kenya face a myriad of challenges ranging from unemployment, under-employment, HIV/AIDS and Sexually Transmitted Infections (STIs), drug and substance abuse, poverty, crime and deviant behaviour, exploitation, lack of opportunities to explore and develop their talents, and low representation at decision making levels. The National Adolescent Survey noted that for the youth in Kenya to make contribution to the country's development, the problems facing young persons in the country need to be addressed comprehensively (NAYS, 2015).

Early exposure to child maltreatment is associated with elevated risk for behavioural disorders in adulthood while women with maltreatment are likely to develop alcohol use disorders (Orbleteiner, 2015). According to Keyes and others, literatures demonstrate that exposure to stress is an important component in individual differences in risk for alcohol consumption and alcohol use disorders. However, many areas of this research remain to be studied, including greater attention to the role of various stressors and potential risk moderators when individuals are exposed to stressors (Keyes *et al.*, 2011).

Studies have found these factors of how stress relates to alcohol use, men and women who report high levels of stress drink more, stressed men are 1.5 times being a vic than women, men are 2.5 times more likely to have alcohol use disorders (Buddy, 2018). Saha and others noted that Psychiatric patients face significantly higher stressful life events, experience significantly more life changes, and consume significantly more alcohol as compared to healthy participants. (Saha *et al.*, 2017).

Unfavourable psychosocial factors, which can produce further stress, are isolation, monotony, low pay, the pressure to increase output, and lack of career opportunities which may contribute to poor morale and psychological disturbances. This in turn may lead to alcohol use, as employers as well as employees attempt to compensate for tensions (Mattoo *et al.*, 2009). In a study by McKay and others, girls who experienced loneliness were more likely to have had an alcoholic drink in the past month and more likely to ever have consumed a full alcoholic drink, compared to boys who reported experiencing loneliness (McKay *et al.*, 2017). Tamers noted that stressful life events promote healthy and unhealthy alcohol consumption. Certain events impact alcohol intake temporarily while others have longer-term implications. Research should disentangle women's and men's distinct perceptions of events over time (Tamers, 2014).

Recent alcohol use is a significant issue among youth with one in four youth reporting this behaviour. Positive connections to parents, teachers/school protected students from recent alcohol use (King *et al.*, 2012).

Alcohol is often considered a gateway to the use of illegal substances. Youth who drink are significantly more likely to use other illicit drugs, compared to young non-drinkers (Patrick *et al.*, 2011). According to the NACADA 2017 survey, alcohol abuse contributes the highest burden of substance use disorders. According to NACADA, the prevalence of alcohol use disorders among respondents aged 15 -65 years stands at 10.4% in 2017(NACADA, 2017).

Psychoactive substances have diverse effects and taking a second substance can amplify or build on the effect of the first, or it may diminish or counteract it, or the combination of the two substances may be experienced as a different effect. In everyday life, many people routinely alternate mundane stimulants like coffee, tea or tobacco and depressants like alcohol to change their mood and degree of alertness, often without conscious thought about doing so (Kiepek *et al.*, 2018).

According to NACADA 2017, for current use 3.8% (82,517) are on alcohol, 3.6 (78,175) Khat/miraa, 2.6% (56,459), prescription drugs, 2.5% (54,288) tobacco, 1.8% (36,087), 1.8% (39,087) bhang/cannabis, 0.6% (13,029) inhalants, 0.2% (4,343)

heroin and 0.2% (4,343) cocaine. The survey also shows that bhang is the most widely used narcotic drug in Kenya. Findings on bhang among respondents aged 15 – 65 years show that the trend has stabilized at 1.0% from 2007, 2012 and 2017 (NACADA, 2017). Alcohol and cigarettes were the commonly abused substances in all universities with a high proportion of students at JKUAT (20%) and (7%) respectively, marijuana (5%) smokeless tobacco (4%) and stimulants (3%) (Magu *et al.*, 2015).

Gubner and other noted that tobacco use is greater among young adults who binge drink and a high rate of smoking on binge drinking days. Individuals smoked cigarettes on 85.7%±32.9% of days they binge drank. Frequent binge drinkers reported greater temptations to smoke in positive affective/social situations ($p=0.02$); intermediate binge drinkers were less likely to have a tobacco abstinence goal ($p=0.03$) but more likely to have made a serious tobacco quit attempt; all of the binge groups were more likely to be social smokers (all $p<0.01$) (Gubner *et al.*, 2016).

CHAPTER THREE

METHODOLOGY

3.1 Study Site

The study was carried out in Kangundo Northward, Kangundo Sub County in Machakos County. Kangundo North ward has 5 sub-locations namely; Mbilini, Kikambuani, Kitwii, Kawauni, Ndunduni. Kitwii Sub location location was randomly selected. It has 8 villages namely Savatia, Nyekini, Mikoikoni, Ng'ambo, Kayangii A, Kayangii B and Uamani A and Uamani B. The location has a total of 1217 households with a total population of 1,571 persons aged 15-35 years as per the 2019 census. (Source –National Bureau of statistics Machakos County office, 2019). The area receives relief rainfall with short rains between October and December and long rains between March and June each year. Activities mainly in the area include farming and business (See Appendix IX).

3.2 Study Design

A cross-sectional analytical study design was used whereby data was collected both qualitatively and quantitatively in relation to factors associated with alcohol use among persons aged 18-35 years in Kangundo North ward.

3.3 Variables

3.3.1 Independent Variables

The various independent variables that were addressed included; socio-demographic characteristics (age, income, gender, education, marital status), Community level factors (drinking perceptions, advertisement, family history, distance, policy) and psychosocial factors (life stressors, gender based violence, other psychoactive drug use).

3.3.2 Dependent Variables

The dependent variable is alcohol use.

3.4 Study Population

The study population included male and female persons aged 18-35 years living in Kangundo North Ward.

3.4.1 Inclusion Criteria

- i. Persons aged 18-35 years who are permanent residents of Kangundo North Ward
- ii. Persons aged between 18-35 years who consent to participate in the study.

3.4.2 Exclusion Criteria

Persons aged 18-35 years who did not consent and non-residents.

3.5 Sample Size Determination

The sample was determined using the Cochran's formula (1999)

$$n = \frac{z^2 p(1 - P)}{d^2}$$

Z= z score at 95% confidence interval. (i.e., 1.96 for 95% confidence interval)

d is the margin of error (i.e., 0.05 = d degree of accuracy).

P=estimated value for the proportion of a sample that have the condition of interest.

N= (1.96*1.96) *(0.25*0.75)/0.0025= 385 respondents.

Finite population correction for proportion less than 10,000 respondents.

$$n = \frac{n_0}{1 + \frac{(n_0 - 1)}{N}}$$

n=desired sample size, n₀ =calculated sample size, N =estimate of population in study area (i.e.) 1571=310 respondents.

3.5.1 Sampling Technique

Random sampling was applied to select Kitwii Sub Location among the 5 sub locations in Kangundo North ward namely ;(Ndunduni, Kitwii, Kawauni, Mbilini, Kikambuani,). Kitwii Sub location was randomly selected. A list of all the villages and respective households in Kitwii Sub location was obtained from the assistant Chief's office Probability proportionate to size sampling was then applied to determine the number of households to select per village. Random sampling was used to select the village to start with. At the village level, a landmark (e.g. a school) was identified and selected to determine the starting point. The direction was determined by spinning a pen in the air and letting it drop on the ground. A door-to-door household survey was then conducted on 310 respondents from across Kitwii sub location.

3.5.2 Sampling Procedure

A list of all the villages and respective households was obtained. Sampling was stratified and was based on PPS to the total population in enrolment size of the randomly selected. Probability proportionate to size sampling was then applied to determine the number of households to select per village. Random sampling was used to select the village to start with.

Table 3.1: Probability Proportionate to Size Sampling

Name of village	Total number of households	Probability Proportionate to size	Number of Households	Sampling Interval
Uamani a	125	125/1,217	32	4 th
Uamani b	130	130/1,217	33	4 th
Nyekini	107	107/1,217	27	4 th
Savatia	144	144/1,217	37	4 th
Mikoikoni	310	310/1,217	79	4 th
Kayangii a	159	159/1,217	40	4 th
Kayangii b	97	97/1,217	25	4 th
Ng'ambo	146	146/1,217	37	4 th

3.6 Data Management

Quantitative data was collected using questionnaires while qualitative data was collected using a key informant interview guide.

3.6.1 Pretesting

Pretesting was done among 30 respondents randomly selected at Mukuyuni village which is not part of the study area. One of the gaps noted was that questions on regulations of alcohol use were not clear to the respondent. Amendments were done to the questions that were not clear.

3.6.2 Data Collection Tools

Tools used included a semi structured questionnaire, a Focus Group Discussion guide and a key informant interview guide.

Quantitative Data Collections Tools

3.6.2.1 Semi structured Questionnaire

An interviewer-administered questionnaire was distributed publicly to the participants. The selected study participants were explained on the intention of the study and requested for their informed consent and then interviewed. Random

sampling technique was used to select the villages, then the number of households determined. The research assistants were trained on the tool prior to the exercise.

Qualitative Data Collection Tools

3.6.2.2 Focus Group Discussions (FGDs)

Four FGDs were conducted. Each FGD comprised of ten participants consisting of both male and female. The respondents were purposively selected and led by a trained moderator through an open free-flowing discussion. The moderator generated alcohol use ideas from the subjects within 45 minutes per group in a private place.

3.6.2.3 Key Informant Interview

The Key informant Interview(KII) consisted of 4 leaders (Chief, Youth leader, Head teacher and a spiritual leader) who had knowledge on alcohol use were purposively selected based on the fact that they understood alcohol use among persons aged 18-35 years. They were interviewed on their perception on the factors associated with alcohol use among persons aged 18-35 years in Kangundo North Ward. The interviews were led by a trained research assistant who administered questions on alcohol use within 45 minutes. The research assistants were trained prior to data collection.

3.6.3 Data Entry and Storage

Data entry was done using Microsoft access with unique identifiers in duplicate for validation (double entry) and exported in SPSS. The data was then cleaned and cross-checked for entry errors and range checks. Data storage was on flash disks while questionnaires sheets were kept under key and lock.

3.6.4 Data Analysis

SPSS version 24 computer software was used to analyse the data. Descriptive statistics was applied. Logistic regression was used to analyse the association between the factors reported by the respondents and alcohol. P value of <0.005 was

used as the level of significance. Qualitative data was typed into MS Word, coded and analysis done based on themes (thematic analysis) and described.

3.6.5 Data Presentation

The results were presented using percentages, tables, graphs and pie charts. Frequencies and bar graphs were used to present categorical variables. Descriptive statistics including mean, standard deviation, ranges, frequency distribution and proportions was applied. Logistic regression was used to determine associations.

3.7 Ethical Consideration

Approval to conduct the study was given by The Baraton University Ethical Review Committee. Permission was sought from the Chief Kitwii Location. Informed consent was obtained from the respondents. Questionnaires were administered confidentially, and privacy was ensured. Consent forms and questionnaires were kept under key and lock to ensure high level of confidentiality and privacy. Subject's participation was voluntary, and respondents could opt not to participate or withdraw from the study at any point. The information obtained was kept confidential and used for the purposes of the study. The study ensured no harm to respondents and those who needed referral were supported. Anonymity concerning the respondents was observed.

3.8 Assumptions

The alcohol use exposure could not be assumed to be linearly related. Some subjects might have had accidental alcohol use but never sought clarification from the researcher. The generalizability of the study findings was limited as the study focused on 18-35 years.

3.9 Reliability and Validity

The study applied a standardized, pretested questionnaire used for both quantitative and qualitative research methods. The sampling procedure used was appropriate to

the study and ensured representativeness. Analysis was conducted using standardized methods and triangulation done.

CHAPTER FOUR

RESULTS

4.1 Sociodemographic Characteristics of Respondents

4.1.1 Introduction

This chapter presents the results of the study. The chapter is organized as follows; the descriptive statistics of the study participants is presented. The objectives of the study are also presented with the odds ratios and logistic regression done to determine the factors associated with alcohol use among persons aged 18-35 years in Kangundo North Ward.

4.1.2 Response Rate of Questionnaires Returned by Respondents

Table 4.1 presents the response rate. A total of 310 questionnaires were administered, filled and collected from the respondents. As indicated the response rate was 100% of the total sample size which is above the acceptable threshold of 70% in a study.

Table 4.1: Response Rate

	Frequency	Percent
Returned	310	100
Not Returned	0	0
Total	310	100.0

4.1.3 Distribution of Socio-demographic characteristics of the study participants

Table 4.2 shows the distribution of Sociodemographic characteristics of the respondents, 86.40% were males while 14% were females, 86.4% of alcohol consumers were males, while 13.60% who consumed alcohol were females. On marital status, 64% of those who consumed alcohol were single, 30.80% were married, 3.20% were divorced and 2% were cohabiting. On the age distribution, 89.6% were aged between 18-24 years, 8.4% were aged between 25-29 years while 2% were aged between 30-35 years. On education level, 17.6% had attained tertiary

education, 55.2% secondary,22.8% had attained Primary education, 2% had attained a vocational training, while 2% had no education background. 37.6% of the respondents earned an income of below 5,000 while 37.6% earned an income below 10,000 while 13.6% of alcohol users earned an income between 10000-15000,4.8% earned an income of 15000-20,000 while 6.4% of alcohol users earned an income of above 20,000. Those who are earned below ten thousand are the majority among those who consume alcohol. Pertaining the employment status those who are majority users of alcohol are the one who have casual type of employment. Among the non-users,70% were males while 30% were females,70% were single ,26% were married,1.67% were married, none were cohabiting.84.75% of non-alcohol users were aged 18-24 years,13.56% were aged 25-29 years while 1.69% were aged 30-35 years.20% were in tertiary education,56.67 % had attained secondary education while 18.33% primary education,5% had attained vocational training.40% earned an income of below 5,000 while 30% earned between 5000-10000,11.67% earned 10000-15000,6.67% earned 15000-20000,11.67% above 20000.15.25% were formally employed, while 23.73% were selfemployed,50.85% were casual while 10.17% were doing other chores to earn a living.

Table 4.2: Socio-Demographic Characteristics of Study Participants

Characteristic	Alcohol Use	
	Yes n (%)	No n (%)
Gender		
Male	216 (86.40)	42 (70.00)
Female	34 (13.60)	18(30.00)
Marital Status		
Single	160(64.00)	42(70.00)
Married	77(30.80)	16(26.67)
Divorced	8(3.20)	1(1.67)
Widower	0(0.00)	1(1.67)
Cohabit	5(2.00)	0(0.00)
Age		
10-17	69(27.60)	14(23.73)
18-24 years	155(62.00)	36(61.02)
25-29 years	21(8.40)	8(13.56)
30-35 years	5(2.00)	1(1.69)
Education		
Tertiary	44(17.60)	12(20.00)
Secondary	138(55.20)	34(56.67)
Primary	57(22.80)	11(18.33)
None	5(2.00)	0(0.00)
Vocational training	6(2.40)	3(5.00)
Income		
0-5000	94(37.60)	24(40.00)
5000-10000	94(37.60)	18(30.00)
10000-15000	34(13.60)	7(11.67)
15000-20000	12(4.80)	4(6.67)
Above 20000	16(6.40)	7(11.67)
Employment		
Formal employment	28(11.29)	9(15.25)
Self employed	62(25.00)	14(23.73)
Casual	102(41.13)	30(50.85)
Unemployed	3(1.21)	0(0.00)
Others	53(21.37)	6(10.17)

4.1.4 Distribution of Age of Initiating Alcohol Consumption

Figure 4.1 shows the distribution of age at alcohol initiation. Majority,86% of the respondents started consuming alcohol between the age bracket 18-24 years,12% initiated between 25-29 years, while 2% initiated alcohol use at 30-35 years.

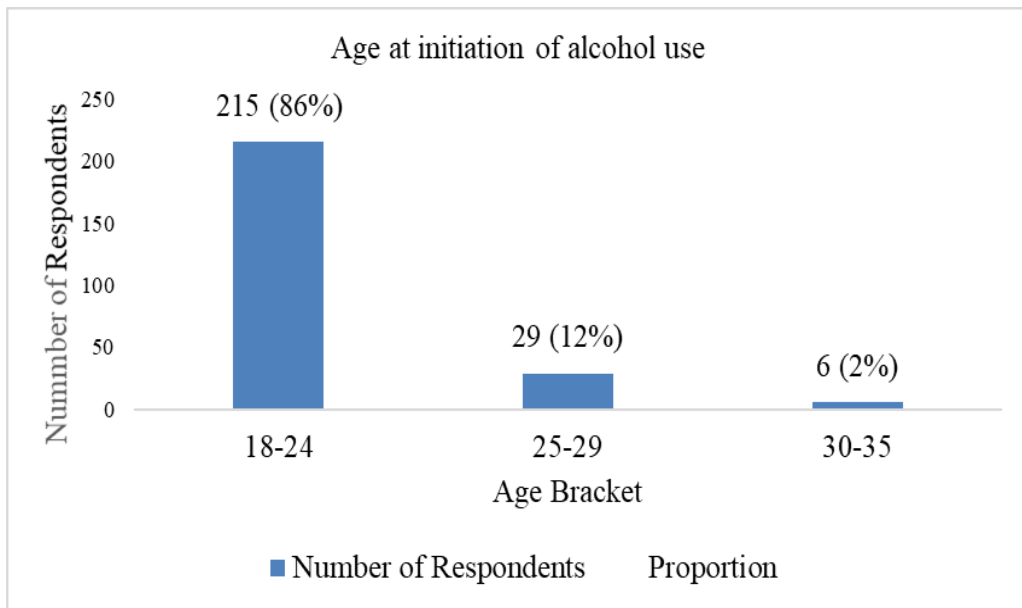


Figure 4.1: Distribution of Age at Initiating Alcohol

4.1.5 Distribution of the Frequency of Alcohol Consumption

The study sought to determine the frequency of alcohol consumption by respondents, majority 48% had consumed alcohol in the last 2 weeks, 26% in the last 1 month, 12% in the last 6 months, 14% in the last 1 year as demonstrated in figure 4.2.

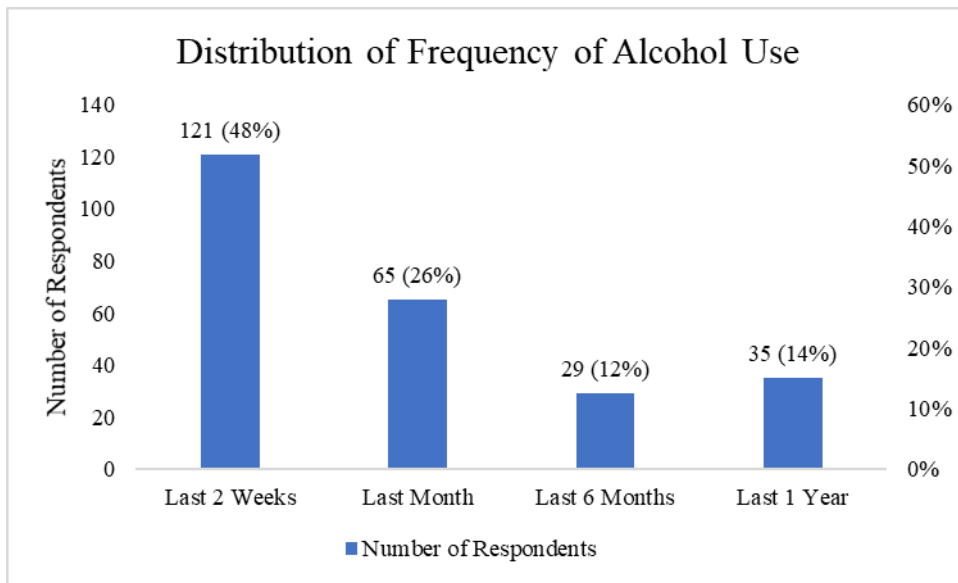


Figure 4.2: Frequency of Alcohol Consumption

4.1.6 Distribution of Alcohol Consumption by Respondents

Figure 4.3 shows the distribution of alcohol consumption by respondents. Majority of the respondents (35%) indicated that they consumed 1-2 bottles, 34% who consumed 2-3 bottles, 22% consumed 3-4 bottles, 9% consumed more than 5 bottles.

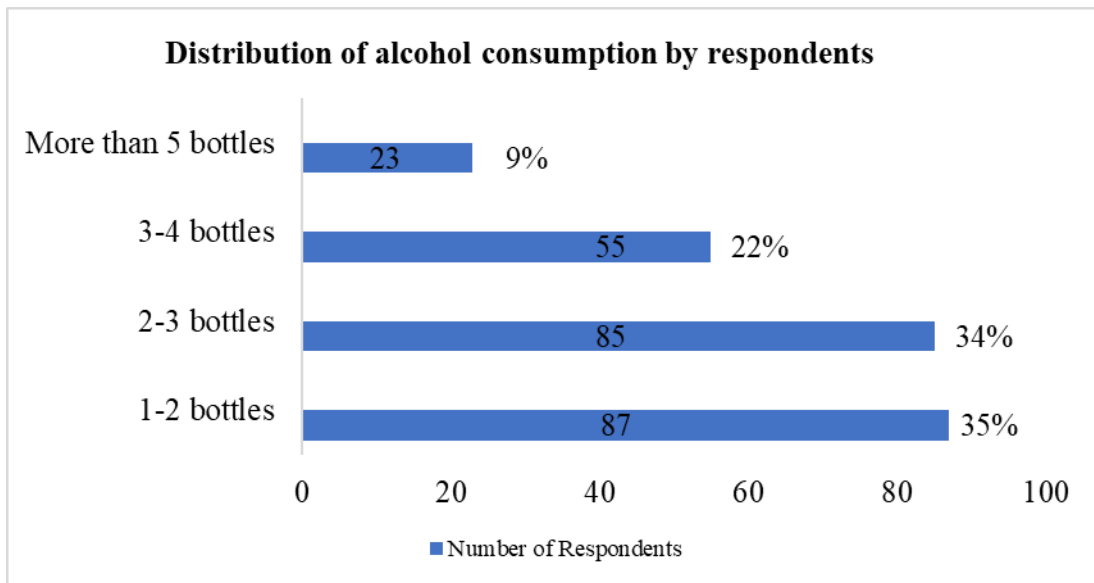


Figure 4.3: Distribution of Alcohol Consumption by Respondents

4.1.7 Distribution of the Type of Alcohol Consumed by Respondents

Figure 4.4 shows the type of alcohol consumed by respondents. 53% of respondents consumed spirits, 30% consumed beer, 10% consumed wine, 5% local brews while 3% consumed other forms of alcoholic drinks.

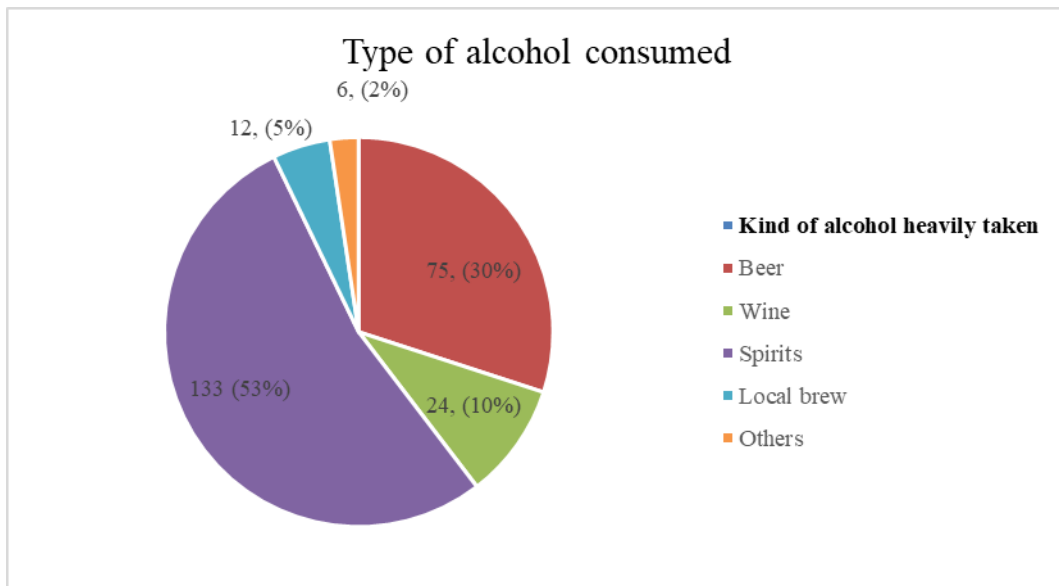


Figure 4.4: Type of Alcohol Consumed by respondents

4.1.8 Distribution of the Reasons for Alcohol Consumption

Figure 4.5 shows the distribution of the reasons for alcohol consumption. The study sought to seek opinion on the reasons as to why the respondents indulged in alcohol. Majority, 30% were due to peer pressure 30% used alcohol to feel good or relax, 17% used alcohol due to curiosity, 12% due to stress, 9 % due to the influence of an adult and 2% because alcohol was cheap.

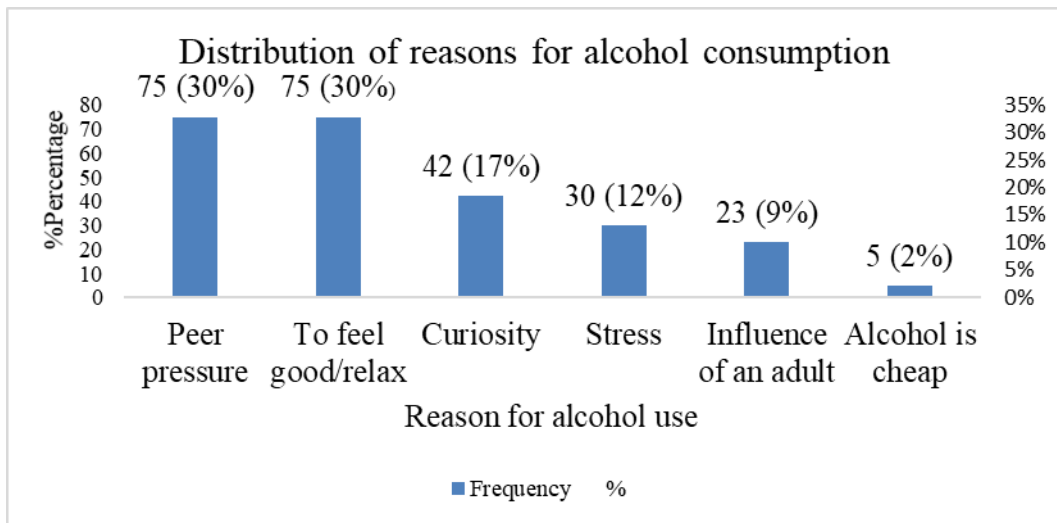


Figure 4.5: Distribution of Reasons for Alcohol Consumption

4.2 Distribution of Community Level Factors Associated with Alcohol Use

4.2.1 Community Level Characteristics of Respondents

Table 4.3 shows the Community level characteristics of the study participants. 64.80% of the respondents who consumed alcohol indicated that they had a family member who consumed alcohol, while 35% of alcohol consumers did not have a family member who consumed alcohol. Pertaining the source of alcohol advertisement, the majority 30.12% of those who take alcohol indicated that they saw the advert from television. Of those who take alcohol, 94.40% indicated that the main alcohol outlets were pubs. 54.8% of outlets were located between 500-1 kilometres

Table 4:3: Community Level Characteristics of Study Participants

Characteristic	Alcohol use	
	Yes n (%)	No n (%)
Family member who takes alcohol		
Yes	162(64.80)	45(75.00)
No	88(35.20)	15(25.00)
Source of alcohol advertisement		
Television	75(30.12)	34(56.67)
Radio	48(19.28)	13(21.67)
Newspaper	8(3.21)	5(8.33)
Roadshow	5(2.01)	0(0.00)
Posters	51(20.88)	3(5.16)
Audio	56(22.49)	4(6.67)
Other sources	6(2.41)	1(1.67)
Main outlet		
Shops	2(0.80)	0(0.00)
Pubs	236(94.40)	60(100.00)
Local brew dens	3(1.20)	0(0.00)
Others	9(3.60)	0(0.00)
Distance of alcohol outlet		
Next door	12(4.80)	0(0.00)
100-200 metres	96(38.40)	11(18.33)
500 – 1kilometre	137(54.80)	48(80.00)
More than 5 kilometres	5(2.00)	1(1.67)

4.2.2 Distribution of Opinion on Alcohol Regulation

Figure 4.6 gives the administration regulations pertaining alcohol use. Majority 88% indicated that the timing of outlets working hours was regulated, 57% indicated that selling alcohol to under 18 years is regulated, 92% agreed that licensing of outlets is regulated, 54% agreed that illicit brews in the area was regulated while 55% indicated that some outlets were located near schools.

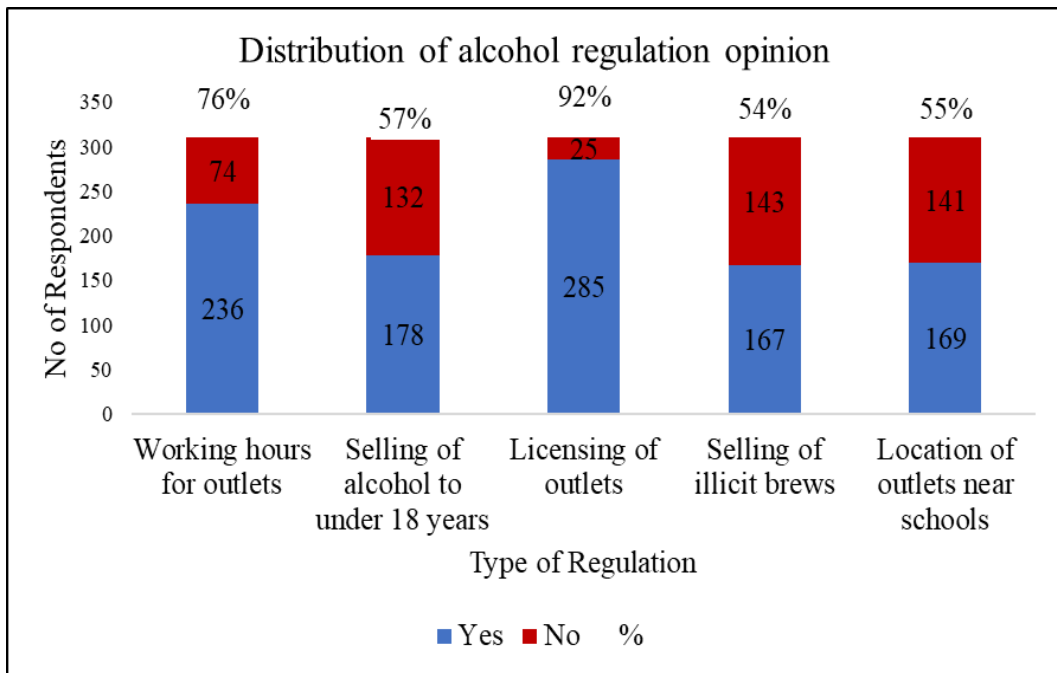


Figure 4.6: Respondents Opinion on Alcohol Regulation

4.2.3 Belief/Perceptions about Alcohol

Figure 4.7 shows the respondents opinion on whether alcohol helps in relieving stress. 50.32% of respondents agreed that alcohol was good while 49.68% did not believe that alcohol has any good effects.

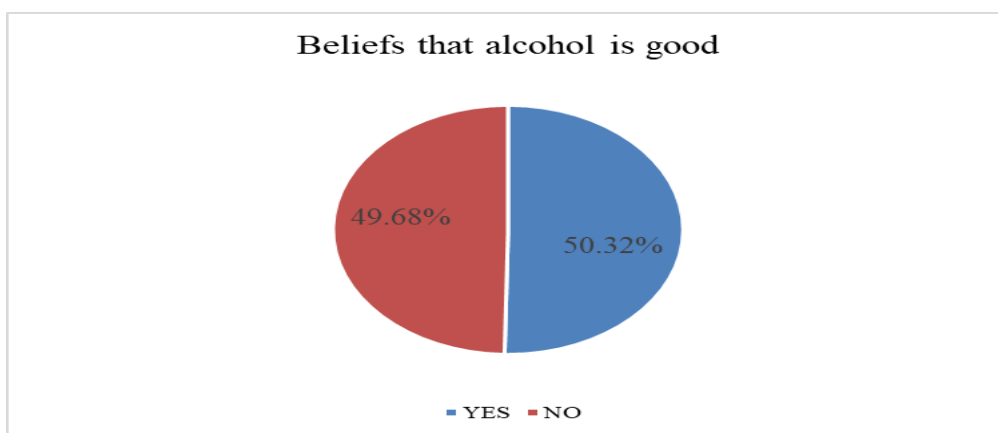


Figure 4.7: Belief /Perception about Alcohol

4.2.4 Distribution of Specific Timings for Alcohol Consumption

The study sought to know the specific timings when the respondents consumed alcohol within the community as shown in figure 4.8. Majority 35% during community occasions, 28% consumed after work, 24% consumed over the weekends, 4% consumed during month end while 9% indicated other non –specific timings.

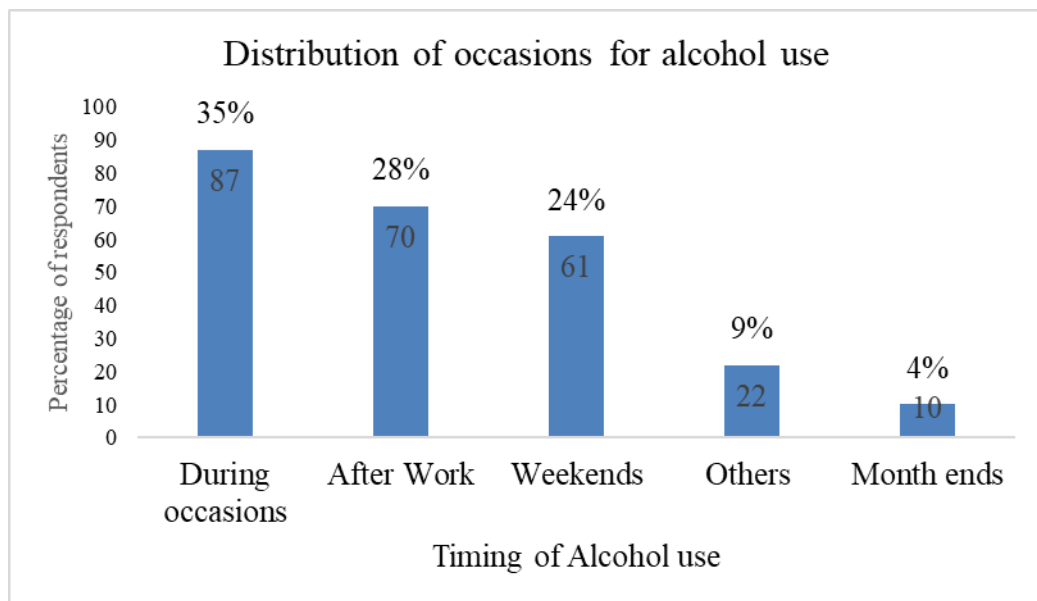


Figure 4.8: Distribution of Timing for Consuming Alcohol

4.3 Distribution of Psychosocial Factors Associated with Alcohol Use

4.3.1 Psychosocial Factors that Contribute to Alcohol Use

To assess the psychosocial challenges faced by the respondents, respondents were asked to indicate the challenges they faced as shown in figure 4.9. Majority of the respondents, 49% indicated that they experienced financial difficulties, 11% were victims of robbery, 9% had experienced divorce, 6 % had a very ill family member and work conflict respectively, 5% had lost their job, 12% had experienced the death of a close family member and 4% had experienced drop out of school.

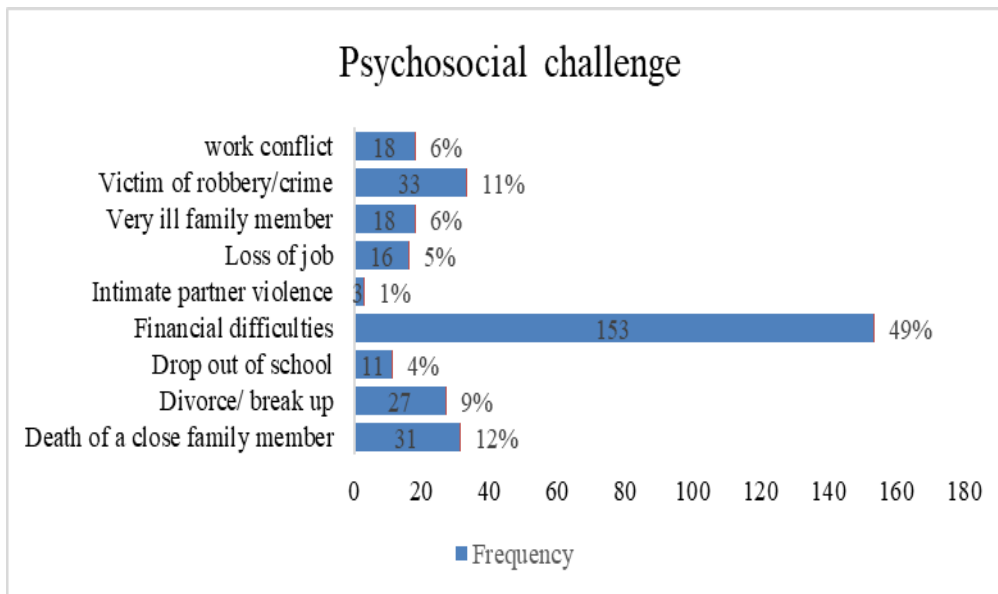


Figure 4.9: Psychosocial Challenges of Respondents

4.3.2 Above Experience Led to Alcohol Consumption

Figure 4.10 shows whether stressful experiences led to alcohol use. 53% indicated that they started taking alcohol after the stressful experiences while 47% did not start taking alcohol as a result of the experiences above.

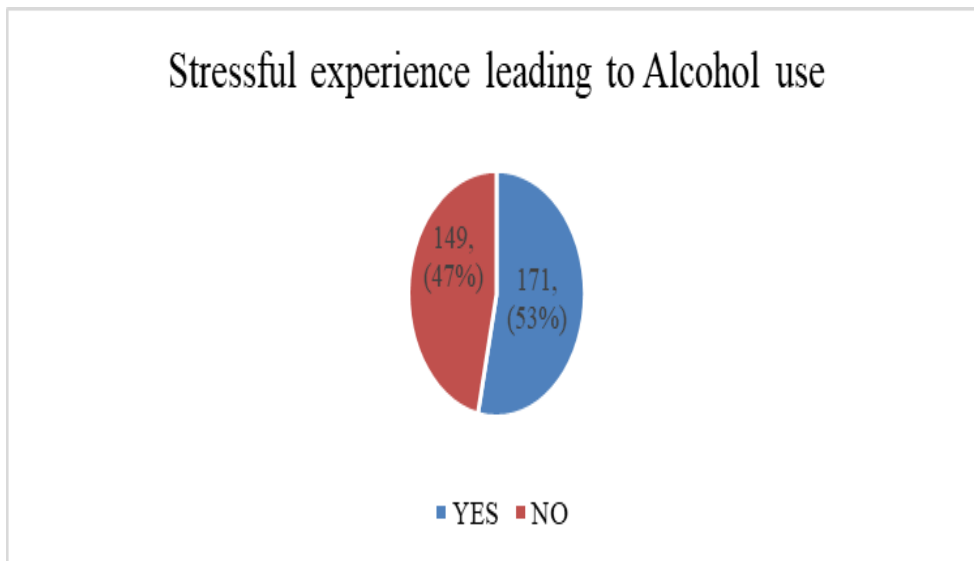


Figure 4.10: Stressful Experience Contributing to Alcohol Use

4.3.3 Gender Based Violence and Harsh Childhood Experiences

The study sought to know the whether the respondents had experienced any form of gender-based violence in the last 1 year as shown in figure 4.11, majority, 48% had experienced physical violence,5% sexual violence,45% emotional violence while 23% had undergone harsh childhood experiences.

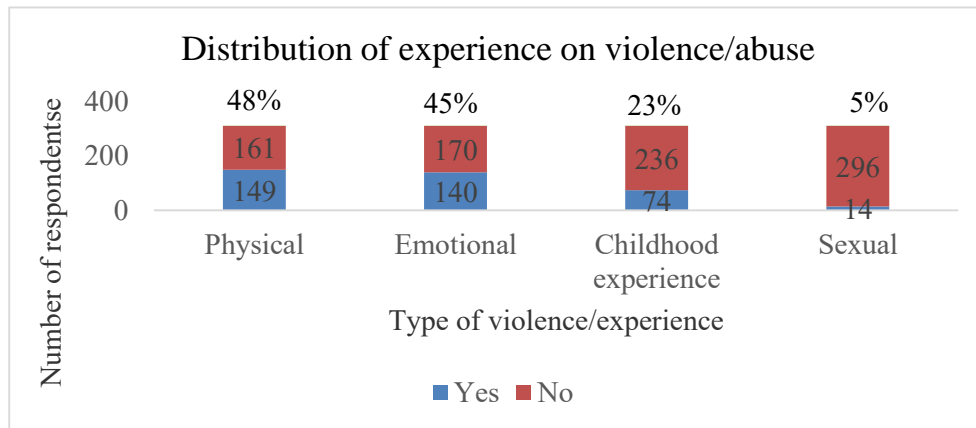


Figure 4.11: Distribution of Respondent’s Experience of Violence and Harsh Childhood Experiences

4.3.4 Distribution of Respondent’s Use of Other Psychoactive Substances

Figure 4.12 shows the types of other psychoactive substance consumed by the respondents. Tobacco (28%) and miraa (17%) were the substances commonly used with alcohol, other substances included (8%) marijuana, (1%) inhalants while (46%) of respondents had never consumed any other psychoactive substance.

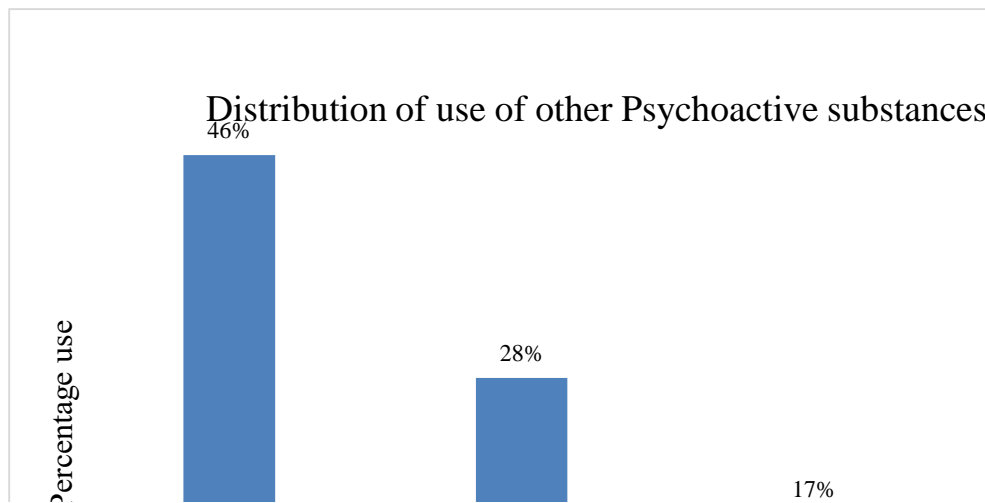


Figure 4.12: Distribution of Use of Other Psychoactive Substances

4.3.5 Knowledge of Seeking Help for Alcohol and Drug Abuse

Figure 4.13 shows the respondents opinion on where to seek help for alcohol. 65% indicated that they do not know while 35% indicated that they know where to get help on alcohol and drug abuse.

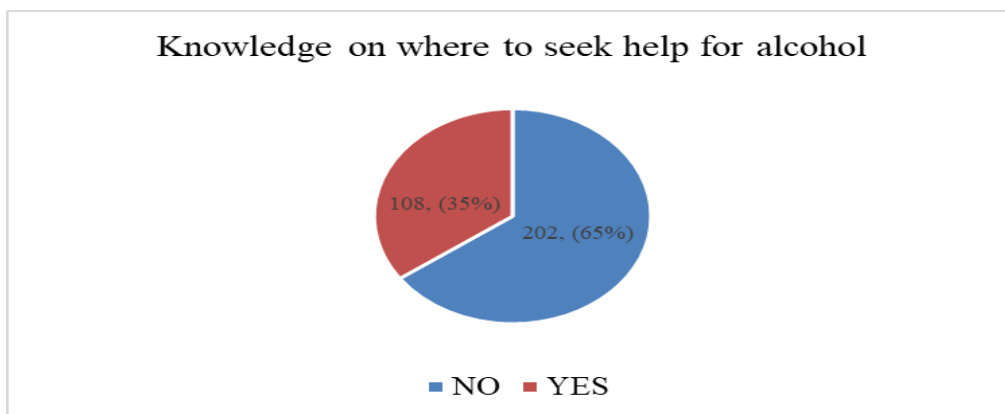


Figure 4.13: Respondent's Knowledge on Where to Seek Help for Alcohol

4.3.6 Distribution of Respondent's Knowledge of Alcohol Support Centres

Figure 4.14 shows the distribution of knowledge on the various alcohol support centres, 65% of the respondents did not know where to seek help for alcohol while

23% indicated health facilities, 10% indicated rehabilitation centres, 3% indicated other centres including counselling.

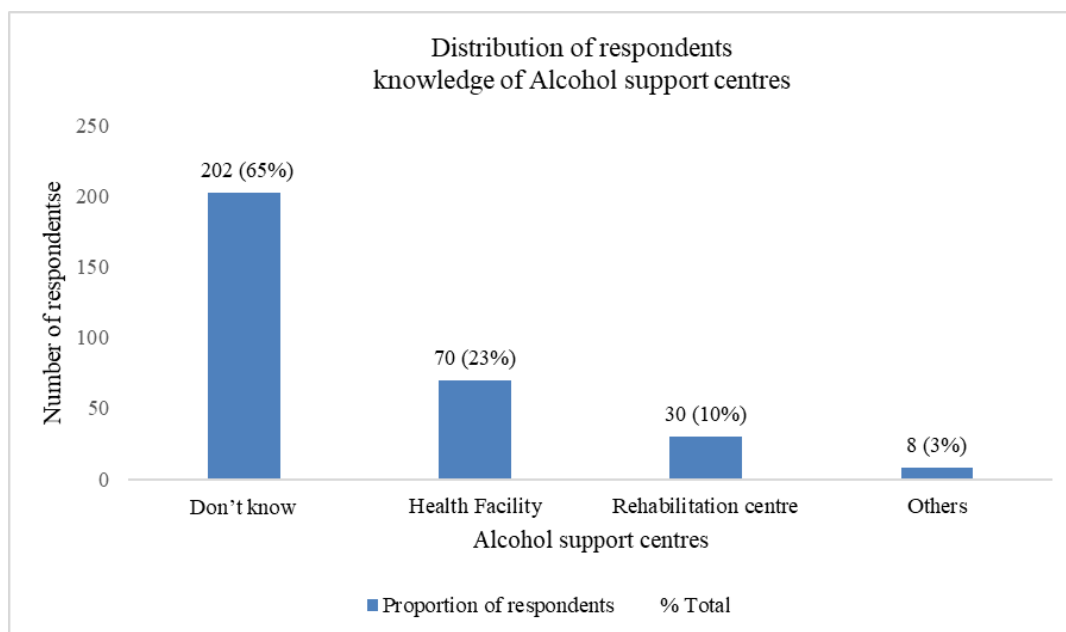


Figure 4.14: Distribution of Knowledge on Alcohol Support Centres

4.4 Inferential Statistics

4.4.1 Univariate Analysis

Univariate logistic regression analysis was conducted to investigate the sociodemographic, the Community level factors, and the psychosocial factors associated with alcohol use. The factors that were found to be significant at the 0.05 level of significance were taken to the multivariate level for further analysis.

4.4.2 Univariate Analysis for the Socio Demographic Factors Associated with Alcohol Use

As indicated in Table 4.4 below, the significant factor at the univariate level is gender, marital status, income level and education level since the p value is less than 0.05.

Table 4.4: Univariate Analysis for Sociodemographic Factors Associated with Alcohol Consumption

	Odds Ratio	Std. Err.	Z	P>z	[95% Conf. Interval]	
Age Category						
18-24	Reference					
25-29	0.6490872	0.223674	-1.25	0.21	0.330355	1.275337
30-35	0.8156863	0.322496	-0.52	0.606	0.375825	1.770358
_cons	5.3125	1.447739	6.13	0	3.114105	9.062845
	Odds Ratio	Std. Err.	Z	P>z	[95% Conf. Interval]	
Sex						
female	Reference					
Male	2.722689	0.916889	2.97	0.003	1.407176	5.268023
_cons	1.888889	0.550595	2.18	0.029	1.066813	3.344448
	Odds Ratio	Std. Err.	z	P>z	[95% Conf. Interval]	
Marital Status						
cohabit	Reference					
divorced	1.35	1.140641	0.36	0.722	0.257713	7.071809
married	2.243478	1.720968	1.05	0.292	0.498846	10.08967
Single	3.384	2.578123	1.6	0.11	0.760216	15.06343
_cons	1.666667	1.217161	0.7	0.484	0.398308	6.973944
	Odds Ratio	Std. Err.	z	P>z	[95% Conf. Interval]	
Education						
No formal education	Reference					
others	1.375	1.056971	0.41	0.679	0.304775	6.203353
primary	3.544444	1.800879	2.49	0.013	1.309379	9.594691
secondary	4.759615	2.233022	3.33	0.001	1.897675	11.93773
tertiary	8.9375	5.994681	3.27	0.001	2.400417	33.2771
_cons	1.090909	0.455371	0.21	0.835	0.481368	2.472294

	Odds Ratio	Std. Err.	Z	P>z	[95% Conf.	Interval]
Income Level						
0-5000	Reference					
10-15000	4.768116	2.961095	2.52	0.012	1.411671	16.10497
5-10000	2.213768	0.920123	1.91	0.056	0.980261	4.999454
above-20000	0.6811594	0.601014	-0.44	0.663	0.120837	3.839702
_cons	2.93617	0.495882	6.38	0	2.108745	4.08826
	Odds Ratio	Std. Err.	Z	P>z	[95% Conf.	Interval]
Employment						
Casual	Reference					
formal						
employment	0.9150327	0.398814	-0.2	0.839	0.389442	2.14996
others	2.598039	1.242373	2	0.046	1.017663	6.632653
Self-						
employment	1.302521	0.470884	0.73	0.465	0.641299	2.645507
_cons	3.4	0.706163	5.89	0	2.263021	5.108217
	Odds Ratio	Std. Err.	Z	P>z	95% Conf.	
Alcohol Abuse						
Age category	0.8966	0.1692	-0.58	0.563	0.619	1.298
Gender	2.7227	0.9169	2.97	0.003	1.407	5.268
Marital Status	1.4638	.2607	2.14	0.032	1.032	2.075
Education	1.6934	.2257	3.95	0.000	1.304	2.199
Income level	1.3206	.1753	2.09	0.036	1.018	1.713
Employment	1.1878	0.1397	1.46	0.143	0.943	1.496

4.4.3 Univariate Analysis for the Community Level Factors Associated with Alcohol Consumption

As indicated in Table 4.5 below, the significant factor at the univariate level is distance of 500- 1 kilometre to the outlet, family history and mode of advertisement since the p value is less than 0.05.

Table 4.5: Univariate Analysis for Community Level Factors Associated with Alcohol Use

	Odds Ratio	Std. Err.	Z	P>z	[95% Conf. Interval]
Distance					
100-200 metres	Reference				
500 metres-1 kilometres	0.32704	0.11767	-3.11	0.002	0.161561 0.662012
more than 5 kilometres	0.572917	0.653559	-0.49	0.625	0.061246 5.359266
cons	8.727273	2.77804	6.81	0	4.676561 16.2866
Advert					
Audio	Reference				
newspaper	0.114286	0.087997	-2.82	0.005	0.025269 0.516884
others specify	0.428571	0.513307	-0.71	0.479	0.040976 4.482507
posters	1.214285	0.956744	0.25	0.805	0.259211 5.688381
Radio	0.263736	0.159471	-2.2	0.028	0.080627 0.862695
television	0.157563	0.087813	-3.32	0.001	0.052853 0.469725
cons	14	7.245688	5.1	0	5.076792 38.60706
Family History					
No	Reference				
Yes	0.613636	0.200186	-1.5	0.134	0.323761 1.163048
cons	5.866666	1.638789	6.33	0	3.393263 10.14297
Alcohol Abuse					
Family history	0.613	0.2002	-1.5	0.134	0.324 1.163
Advertisement	0.7675	0.0582	-3.49	0.000	0.662 0.891
Reason consume alcohol	0.9267	0.0734	-0.96	0.337	0.793 1.082
Reason started alcohol	0.9134	0.0805	-1.03	0.304	0.769 1.086
Distance to outlet	0.8090	0.1651	-1.04	0.299	0.542 1.207

4.4.4 Univariate Analysis for the Psychosocial Factors Associated with Alcohol Intake

As indicated in Table 4.6 below, the significant factor at the univariate level is whether one had experienced sexual abuse, emotional abuse and whether the experience led to the participant to start using alcohol since the p value is less than 0.05.

Table 4.6: Univariate Analysis for Psychosocial Factors Associated with Alcohol Intake

Alcohol use	Odds Ratio	Std. Err.	Z	P>z	95% Conf.	
Stressful life event	0.962	0.062	-0.61	0.544	0.848	1.090
Alcohol to relieve stress	0.615	0.180	-1.66	0.097	0.347	1.091
Educated on alcohol	0.768	0.248	-0.82	0.415	0.408	1.448
Physical abuse	0.762	0.068	-3.04	0.006	0.639	0.908
Sexual abuse	0.792	0.083	-2.21	0.002	0.645	0.974
Parental experience	0.918	0.081	-0.98	0.329	0.773	1.090
Emotional abuse	0.775	0.094	-2.11	0.003	0.612	0.983
Experience led to alcohol	0.750	0.067	-3.22	0.001	0.629	0.894

4.5 Multivariate Analysis

4.5.1 Multivariate Analysis for the Socio Demographic Factors Associated with Alcohol Use

As indicated in Table 4.7 the multivariate analysis showed that being a male was significantly associated with alcohol use. The odds ratio is 2.16 implying that being a male is 2.16 times more likely to take alcohol compared to being a female. Having secondary education is significantly associated with alcohol use. The odds ratio is 3.44 implying that respondents having secondary education were 3.44 times more likely to consume alcohol compared to a person who had no education. Having tertiary education was significantly associated with alcohol use. The odds ratio is 6.22 implying that respondents having tertiary education were 6.22 times more likely to consume alcohol compared to respondents who had no formal education. Married respondents were 0.8 times less likely to use alcohol than those who were single. The study participants who earned between 10000 and 15000 were 3.93 times more likely to consume alcohol compared to those who earned below 5000.

Table 4.7: Multivariate Analysis for Socio Demographic Factors Associated with Alcohol Intake

Alcohol Intake	Odds Ratio	Std. Err.	Z	P>z	[95% Conf.	Interval]
Sex						
Male	2.155599	0.82250	2.01	0.044	1.02041	4.55364
Female	Reference					
Marital Status						
Cohabit	0.2546424	0.2001	-1.74	0.082	0.05456	1.18826
Divorced	0.3911402	0.19877	-1.85	0.065	0.14446	1.05903
Married	0.7542885	0.26380	-0.81	0.42	0.38004	1.49705
Single	Reference					
Education Level						
Others	0.8406656	0.70791	-0.21	0.837	0.16137	4.37936
Primary	2.320381	1.24289	1.57	0.116	0.81211	6.62979
Secondary	3.442503	1.69793	2.51	0.012	1.30929	9.05129
Tertiary	6.219188	4.50370	2.52	0.012	1.50426	25.7123
No education	Reference					
Income level						
10-15000	3.912957	2.50550	2.13	0.033	1.11550	13.725
5-10000	2.289728	1.0088	1.88	0.06	0.9655	5.4301
above-20000	0.519226	0.5432	-0.63	0.531	0.0667	4.0361
0-5000	Reference					
_cons	0.775503	0.4164	-0.47	0.636	0.27071	2.22153

4.5.2 Multivariate Analysis for the Community Level Factors Associated with Alcohol Use

As indicated in Table 4.8, having known about alcohol through the newspaper was significantly associated with alcohol consumption. The odds ratio was 0.11 implying that persons who knew about alcohol through the newspaper were 0.11 times less likely to consume alcohol compared to a person who has known about alcohol through audio. Knowing alcohol through the radio was also significantly associated with alcohol use. A respondent who knew about alcohol consumption through the radio is 0.263 times less likely to consume alcohol than a person who knew about alcohol use from audio sources.

Table 4.8: Multivariate analysis for Community Level Factors Associated with Alcohol Use

Alcohol use	Odds Ratio	Std. Err.	Z	P>z	[95% Conf.	Interval
Audio	Reference					
Newspaper	0.1142857	0.087997	-2.82	0.005	0.025269	0.516884
others specify	0.4285714	0.513307	-0.71	0.479	0.040976	4.482507
Posters	1.214285	0.956744	0.25	0.805	0.259211	5.688381
Radio	0.2637363	0.159471	-2.2	0.028	0.080627	0.862695
Television	0.157563	0.087813	-3.32	0.001	0.052853	0.469725
_cons	14	7.245688	5.1	0	5.076792	38.60706

4.5.4 Multivariate Analysis for Other Substance Abuse Associated with Alcohol Intake

As indicated in Table 4.9, the substance that was significantly associated with alcohol abuse was marijuana. The individuals who abused marijuana were 99%times less likely to abuse alcohol compared to the ones who abuse tobacco.

Table 4.9: Multivariate Analysis for Substance Abuse Associated with Alcohol Use

Substance Abuse	Odds Ratio	Std. Err.	Z	P>z	[95% Conf.	Interval
Tobacco	Reference					
Miraa	0.6674	0.3373	-0.8	0.424	0.2478	1.7969
Marijuana	0.0108	0.0096	-5.07	0.000	0.0019	0.062
Inhalants	2.6908	3.0961	0.86	0.39	0.2822	25.6611
Never consumed	1.0601	1.2413	0.05	0.96	0.1068	10.5204
Constant	0.6977	0.8349	-0.3	0.764	0.0668	7.283

4.5.5 Multivariate analysis for the psychosocial factors associated with alcohol use

As indicated in table 4.10, individuals who had undergone emotional abuse were 3 times more likely to use alcohol while those who experienced sexual abuse were 2 times more likely to use alcohol. There was no significance for those who experienced physical abuse and harsh childhood experiences.

Table 4.10: Multivariate Analysis for Psychosocial Factors Associated with Alcohol

Alcohol Intake	OR	Std. Error	Z	P>z	95% CI	
Physical Abuse						
Yes	Reference					
No	0.081	0.103	-1.97	0.049	0.006	0.987
Sexual Abuse						
Yes	Reference					
No	0.035	0.047	-2.53	0.012	0.002	0.473
Emotional Abuse						
Yes	Reference					
No	0.049	0.065	-2.26	0.024	0.003	0.673
Childhood Experience						
Yes	Reference					
No	0.246	0.172	-2	0.045	0.062	0.971
Constant	0.089	0.106	-2.03	0.043	0.008	0.922

4.6 Qualitative Findings

4.6.1 Key informant Interview

Factors associated with alcohol use were investigated by interviewing four key informants. Findings from the key informant interviews revealed that peer pressure is a key factor in contributing to alcohol use. There was a consensus by the 4 in-depth key informants that alcohol use by the 18-35 years was an emerging public health problem in the area especially for males. The respondents observed;

Alcohol use in this area is alarming, most young people especially males are indulging in it its use and abuse.

The respondents also noted that majority of the persons aged 18-35 years in the area were unemployed and most were doing casual jobs. The respondents observed;

The main socioeconomic activities in this area are farming, boda boda, a few are employed formally.

Most of the formally employed youths engage in alcohol use and on different occasions they usually buy.

One of the respondents reported that; *Most of the youths in this area start consuming alcohol after high school and after their first job.*

Majority of the respondents interviewed concurred that occasions in the community were a key factor in contributing to alcohol. Availability and ease of access to alcohol were also noted as factors. Some of the respondents in the interview observed that:

“Alcohol use is very common during occasions especially dowry ceremonies, weddings, public holidays especially Christmas and during parties, youth almost always get an opportunity to indulge in alcohol”.

“Alcohol is as cheap as 30 shillings and therefore easy to find even for those with low income.” Regulation of alcohol policies especially selling to under 18 years needs to be regulated.

“The number of clubs around is huge with Location within 100 metres”

One of the respondents noted that; *“The government needs to be stricter with the regulation of alcohol rules and especially for underage. Providing youths with employment opportunities is very key”*

The respondents revealed that youth are faced by various challenges that can lead them to using alcohol as a reliever. The respondents noted that psychosocial issues among youth aged 18-35 years include:

“Frustrations of life is another challenge, youths facing other forms of stressors in life especially finances end up resulting to alcohol as a reliever measure”.

“The clergy especially priests and pastors in this area are the main people who we have heard talk about alcohol use, NACADA and County Public Health team need to do more in educating our young people on Alcohol”.

Another respondent observed that:

“Peer pressure is a leading factor for alcohol use in this area, youths almost always end up taking alcohol as a result of influence of bad company. Some due to curiosity, some youths end up taking alcohol to know its effects”.

4.6.2 Focus Group Discussion

The respondents in the four Focus Group Discussions revealed that those who used alcohol were the casual labourers and high-income earners. Peer pressure and curiosity was noted as factor in initiating alcohol use.

The respondents noted;

Most of the people aged 18-35 years in this area earn a low income the few earning a high salary also use alcohol.

You feel nice and relaxed like you can do anything and experimented to feel in place with peers.

Others are curios and end up initiating alcohol due to peer pressure.

Respondents from one of the FGD reported that; *Males are engaging in alcohol use than females*

Respondents from all the FGDs noted that alcohol use was rampant in the community and within families. The respondents from the first and second FGD observed that;

Parents who use alcohol are likely to influence their children into alcohol use. Advertisements played a key role in alcohol use.

The respondents from one FGD observed that; *advertisements on alcohol are very visible through media and posters in our markets.*

Respondents from all the FGDs reported that alcohol was cheap and available within the area. One respondent noted;

It is very easy to get alcohol around since it's cheap with too many alcohol outlets.

All respondents from the FGDs noted that persons aged 18-35 years face many challenges hence too much stress which in turn they result to use alcohol as a reliever. The respondents noted that:

Most of these 18–35-year-olds have many challenges in life and end up using alcohol to make them relax.

The challenges majorly include unemployment, broken relationships, gender-based violence and psychosocial issues.

The Psychosocial factors that contributed to alcohol use from the discussion included stressors in life e.g. unemployment, difficult relationships and gender-based violence.

CHAPTER FIVE

DISCUSSION

5.1 Socio-Demographic Factors Influencing Alcohol Use

The study yielded important findings to determine the factors associated with alcohol use. Majority (86%) of the respondents who used alcohol were male. Female gender accounted for 14%. This is consistent with the findings of DeMaio and others who noted 50% of males and 30% of females were found to be current drinkers of alcohol (DeMaio *et al.*, 2013). In the multivariate analysis Male gender was significantly associated with alcohol use. Men were 2.16 times more likely to use alcohol compared to females. The gender disparity is similar to a study by (Magu *et al.*, 2015).

Majority of the respondents (37%) earned an Income less than 5000 while 64% were single. 6% of respondents were earning a higher income of above 20000 are drinkers. This is inconsistent with the findings of Collins in 2016 which indicated that people with higher status may consume similar or greater amounts of alcohol compared with people with lower status (Collins,2016). Low income may pose individuals to consume alcohol in efforts to cope with life stressors.

Having secondary education is significantly associated with alcohol use. The study revealed that individuals with secondary education were 3.44 times more likely to consume alcohol compared to a person who had no education. Youths having tertiary education were 6.22 times more likely to consume alcohol compared to a person who has no formal education. The findings slightly differ with those of Murakami and others who noted that lower education level was associated with drinking. (Murakami *et al.*,2019). Although most literature supports lower socioeconomic status, there may be variations due to geographical regions.

The study revealed the age at initiating alcohol, 52.8% for 18-24 years,33.2% for 10-17,11.6% for 25-29 years and 2.4% for 30-35 years. The mean age for initiating alcohol use was 18 years. The findings slightly differed with the findings of

Maharjan in 2017 that 17 years was the mean age of alcohol initiation among the youth (Maharjan,2017).

The study findings revealed a high drinking rate with majority 51.93% indicating that the last time to take alcohol was in the last two weeks. The findings are close to those of Magu and others who noted that the drinking rate was 60-90% ((Magu *et al.*, 2015). 34.80% respondents indicated that they consume between one and two bottles. The findings slightly differed with NACADA 2017 survey that revealed that 12.2% of respondents aged 15 – 65 years were currently using alcohol with 15.1% of respondents aged 25 - 35 years are currently using alcohol (NACADA, 2017).

5.2 Community Level Factors Associated with Alcohol Use

Regarding parental drinking, 64.80% of the respondents indicated that there is a family member who consumes alcohol. This is consistent with the findings of Probst which showed that teenagers who are given alcohol by their parents are thrice more likely to be heavy drinkers in their late teens than those from families which do not supply alcohol. (Probst *et al.*,2015). Similar findings were noted in a study done by Wahugu also revealed that majority of the fathers of the alcoholics (66%) used alcohol occasionally, moderately or frequently and only about 26% of the mothers use alcohol (Wahugu, 2013).

Pertaining the source of alcohol advertisement, majority, 30.12% of those who take alcohol indicated that they saw the advert from television. Of those who take alcohol, 94.40% indicated that they take alcohol from pubs. Of those who indicated that they take alcohol, 53.01% indicated that the alcohol type taken is the spirits. Alcohol advertisement plays a key role with majority (36%) being done over televisions, audio 20%, radio and 17% by posters. Pubs accounted for the main outlets (98%). This is consistent with the findings of Jernigan who noted that levels of marketing exposure among younger adolescents were similar to those found among older adolescents and young adults (Jernigan *et al.*, 2017).

Nearness to alcohol outlets was identified with 55% of outlets being located within 500 metres to 1 kilometre to the respondents,38% located within 100-200 metres

near the respondents while 5% were next door. This is consistent with a study by Nyatuoro, areas within 200m from the nearest shop had a slightly higher percentage of abusers (37%) as compared to those with shops beyond 200m (33%) (Nyatuoro, 2012).

Alcohol advertisement plays a key role with majority (30%) being done over televisions, audio 20%, radio, 21% by posters 3% newspapers and 2% other sources. Pubs accounted for the main outlets (94%). This is consistent with the findings of Jernigan who noted that levels of marketing exposure among younger adolescents were similar to those found among older adolescents and young adults (Jernigan *et al.*, 2017). Persons who knew about alcohol through the newspaper were 0.11 times less likely to consume alcohol compared to a person who has known about alcohol through audio ($p < 0.05$). Similar findings by Westgate study that noted online postings about alcohol being linked to alcohol use. (Westgate *et al.*, 2017)

Regarding regulation of alcohol policies, Majority 88% indicated that the timing of outlets working hours was regulated, 57% indicated that there was selling of alcohol to under 18 years, 92% agreed that licensing of outlets is regulated, 54% agreed that illicit brews in the area was regulated while 55% indicated that some outlets were located near schools. This was consistent with The NACADA survey of 2017 which noted that the enforcement of Alcoholic Drinks Control Act, 2010 and County Alcoholic Drinks Control Act is inadequate (NACADA, 2017).

Peer pressure accounted for 30% of respondent's reason for consuming alcohol, this is similar to the findings of Singkorn and others whereby 42.5% of respondents had been persuaded to take alcohol by their peers (Singkorn *et al.*, 2019). 30% respondents also used alcohol to relax and feel good, 17% were curious while 9% were influenced by an adult. Drinking patterns can follow social network paths which in turn influences alcohol use.

Cultural occasions were significantly associated with alcohol use, Majority 35% during community occasions especially traditional weddings, public holidays and parties. 24% consumed over the weekends, 28% consumed after work, 1% had intimate partner violence, 4% consumed during month end while 9% indicated other

non –specific timings. This is consistent with the findings of Singkorn that alcohol use is common during celebrations (Singkorn, 2017).

The study revealed perceptions and beliefs about alcohol. Majority, stress 50.32% of respondents agreed that alcohol was good while 49% did not believe that alcohol has relieving effects. Similar findings noted by Munyua and others noted that 66.8% of the respondents agreed or strongly agreed that perceptions of alcohol further enhanced alcoholism (Munyua *et al.*,2013).

5.3 Psychosocial Factors Associated with Alcohol Use

The study revealed that youths aged 18-35 suffer a wide variety of challenges with the majority of the respondents, 49% indicated that they had experienced financial difficulties, 11% were victims of robbery, 9% had experienced divorce, 6 % had a very ill family member, 10% have experienced the death of a close family member and 4% had experienced drop out of school. These stressful life events can lead to one using alcohol. Majority of respondents had ever experienced stressful event with 50% using alcohol as a solution to relieve the stress. 50.32% indicated that they started taking alcohol after the experiences while 49.68% did not start taking alcohol as a result of the experiences above. This is consistent with National Adolescent and Youth Survey 2015, NAYS 2015) that noted youth face a myriad of challenges. In a study done by Jose and others, respondents reporting life events and chronic stressors were compared with regard to their likelihood of heavy drinking (Jose *et al.*, 2015). The findings further coincide with those of Mercer and others that noted workplace trauma and stress contributing to alcohol use (Mercer *et al.*, 2023).

In regards to the opinion on whether alcohol helps relieve stress, 50.32% indicated that they started taking alcohol after the stressful experiences while 49.68% did not start taking alcohol as a result of the experiences above. This is consistent with a study done by Mindigo and others which noted that beliefs and perceptions of experiences with alcohol may perpetuate future alcohol-related expectancies (Mindigo *et al.*,2019).

Childhood experiences reported by the respondents indicated that 48% had experienced physical violence, 5% sexual violence, 45% emotional violence while 24% had undergone harsh childhood experiences. There was significant association between the experiences of emotional and sexual abuse with alcohol use ($p < 0.05$). The findings are consistent with a study done by Mc Morris that noted prolonged risk factors including those that persist on from childhood through adolescence, are also associated with increased likelihood of youth substance abuse (Mc Morris *et al.*, 2011).

The study findings revealed that (28%) had consumed tobacco, (17%) miraa, (8%) marijuana, (1%) inhalants while (46%) had never consumed any psychoactive substance. The findings are consistent with a study among university students by Magu that revealed alcohol and cigarettes were the commonly abused substances in 3 universities with a high proportion of students at JKUAT (20%) and (7%) respectively, marijuana (5%) smokeless tobacco (4%) and stimulants (3%) (Magu *et al.*, 2015).

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

6.1.1 Socio-Demographic Factors

There was a high prevalence of alcohol use among males compared to females. Male gender was significantly associated with alcohol intake. Men were 2.16 times more likely to take alcohol compared to females (AOR 2.1,95% CI:1.02-4.6). Having secondary and tertiary education was significantly associated with alcohol use. Individuals with secondary education were 3.4 times more likely to consume alcohol compared to a person who had no education (AOR:3.4, 95% CI:1.3-9.05). While those with tertiary education were 6.2 times more likely to consume alcohol compared to a person who had no formal education (AOR 6.2,95% CI 1.51-25.7). High socioeconomic status was significantly associated with alcohol use compared to low-income earners. Persons who earned between 10,000 and 15,000 were 3.93 times more likely to consume alcohol compared to those who earned below 5000(AOR 4.8,95% CI 1.4-6).

6.1.2 Community Level Factors

Advertisement of alcohol contributes to alcohol use. Respondents who saw Alcohol adverts through audio were 9 times more likely to use alcohol than respondents who knew it through the newspaper($p < 0.05$).

6.1.3 Psychosocial Factors

There is a significant association between use of other psychoactive substances and alcohol use. The individuals who abused tobacco were 93 times more likely to use alcohol compared to marijuana users ($p < 0.05$). Individuals who had undergone emotional abuse were 3 times more likely to use alcohol while those who experienced sexual abuse were 2 times more likely to use alcohol ($P < 0.05$).

6.2 Recommendations

6.2.1 Socio-Demographic Factors

Male targeted alcohol awareness programmes/intervention need to be enhanced through the public health department. Economic empowerment to equip young people with skills to earn a better living and self-empowerment to reduce alcohol use.

Knowledge on alcohol should be enhanced through the Public Health Department. This can be done through Public Health Education. Health education on alcohol needs to be incorporated in Secondary school education as part of guidance and counselling on alcohol and other psychoactive substance use.

6.2.2 Community Level Factors

Alcohol advertisement and messaging needs to be regulated and should always include the harmful effects of alcohol on health.

6.2.3 Psychosocial Factors

More referral counselling and rehabilitation centres need to be availed within counties for easier access to counselling and therapy for those who are experiencing stressful life events including gender-based violence and possible alcohol addicts. This will help minimise unnecessary alcohol use.

Gender based violence awareness, screening and referrals for young people needs to be enhanced in Kangundo North ward. This will help identify and mitigate the cases in advance before they develop psychosocial issues that lead to alcohol use.

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APPENDICES

Appendix I: Consent for Questionnaire

Study title: “Factors associated with alcohol use among youths aged 18-35 years in Kangundo North Ward”.

PART A: INTRODUCTION

You are asked to participate in the study because health professionals have noted an increase in alcohol use among youth aged 18-35 years. I want to find out factors associated with alcohol use among youths aged 18-35 years in Kangundo North Ward.

Being in the study is your choice

This consent form gives you information about the study, the risks and benefits, and the process that will be explained to you. Once you understand the study and if you agree to take part, you will be asked to sign your name or make your mark on this form and you will be given a copy. Participation in this study is entirely voluntary. You may decide to withdraw from the study without facing any consequences.

Purpose of the study: The purpose of the study is to establish factors associated with alcohol use among youths aged 18-35 years.

The study will involve: Structured questionnaires with selected subjects and key informants’ interview.

What to expect during the interview

I will ask you simple questions on factors influencing alcohol use and alcohol use related outcomes.

If you choose not to participate or to leave the study

You have the choice to or not to participate in this research study. If you choose not to participate in this study or to leave the study during the interview process, you may do so freely without consequences against you.

Risks and/or discomforts

During this study, we do not anticipate any risks or discomforts to you. You will be requested to avail yourself for an interview at a place that you are most comfortable. You may become worried or anxious about discussing matters of alcohol use. We will make every effort to protect your privacy and confidentiality while you are participating in the study. The interview will take place in private.

Benefits

Please note that your participation in this study is voluntary and you can refuse to participate or to answer to any question that you feel uncomfortable with. If you change your mind, you can withdraw at any time. If anything is not clear or if you need further information, we shall provide it to you. However, the results will be used to assist in formulating policies and interventions that will help reduce alcohol use among youths aged 18-35 in Kangundo North Ward. There is no cost to you for participating in this study.

Your records will be private

The information that you give will be kept confidential. You will be identified only by a code and personal information from the interview will not be released without your written permission. You will not be personally identified in any publication about this study. However absolute confidentiality cannot be guaranteed. Your records may be reviewed by: Study Investigator or Ethics Committee at University of Eastern Africa Baraton Ethical Review Committee.

Harm because of participating in this study

It is unlikely that any form of harm could happen to you as a result of being in this

study. If you ever have questions about this study contact: **Principal Investigator**, Joseph Makau. Cell phone no: 0723977843 Email: cjomakau@gmail.com.

In case of any questions or concerns regarding the study and would like to talk to someone other than the researcher, you are encouraged to contact the following:

The Chairman

University of Eastern Africa, Baraton

Ethical Review Committee

PART B: CONSENT

Please read the information sheet (PART A) or have the information read to you carefully before completing and signing this consent form. If you have questions about the study, please ask the investigator prior to signing your consent form.

Declaration of the volunteer

I Mr, Miss, Mrs..... hereby give consent to participate in the proposed study entitled; “Factors associated with alcohol use among youths aged 18-35 years in Kangundo North Ward”

I have read the information sheet concerning this study, I understand the aim of the study and what will be required of me if I take part in the study. The risks and benefits if any have been explained to me. Any questions I have read thoroughly concerning the study and have been adequately answered. I understand that at any time that I may wish to withdraw from this study I can do so without giving any reason and that the study is free of charge I consent voluntarily to participate in this study.

Subject’s name Signature _____ Date.....

Name of person taking consent..... Signature _____ Date.....

Name of investigator... Signature _____ Date.....

Appendix II: Questionnaire

The purpose of this questionnaire is to find out the reality of alcohol use among persons aged 18-35 years living in Kangundo north ward, Kangundo Sub County in Machakos.

The survey is anonymous, so please answer as truthfully and accurately as possible. The aggregate results will be made available when the responses of all participants have been tabulated.

Thank you!

SOCIODEMOGRAPHIC CHARACTERISTICS

1. What is your age?

18-24

25-29

30-35

2. What is your gender?

Male

Female

3. What is your marital status?

Married

Single

Cohabit

Divorced

Widowed

Widower

4. What is your highest level of education?

No formal education

Primary

Secondary

Tertiary

Others (specify)_____

5. What is your occupation?

Formal employment (Tick where applicable)

Self employed

Casual

Others (specify.....)

6. How much is your income per month?

0-5000

5-10000

10-15000

15-20000

Above 20000

7. Have you ever consumed alcohol?

Yes

No

If no skip to B

8. What age did you start consuming alcohol?

a) 10-17

b) 18-24

c) 25-29

d) 30-35

9. Can you recall the last time you consumed alcohol?

Last one year

Last 6 months

Last month

Last 2 week

10. How many bottles did you consume the last time you took alcohol?

1-2 bottles

2-3 bottles

3-4 bottles

More than 5 bottles

Other measures (please specify)

11. Which kind of alcoholic drink do you heavily take?

Beer

- Wine
- Spirits
- Local brew
- Others (specify)_____

12. How often have you consumed alcohol in the last one year?

- Daily
- 3-6 times a week
- Once a week × days per week, 2–4 times a month, monthly or less, and never)
- Only on weekends
- On special occasions (specify).
- Last 2 week

13. What reasons made you to start consuming alcohol?

- Peer pressure
- Curiosity
- Stress
- Influence of an adult
- Alcohol is cheap
- To feel good/relax
- Others (specify)_____

B. COMMUNITY LEVEL FACTORS INFLUENCING ALCOHOL USE

14. In your family is there anyone who takes alcohol?

- Yes
- No
- If yes specify.....

15. What are the main sources of alcohol advertisement in this area?

Advertisement	Please tick as appropriate
Television	
Radio	
Newspaper	
Roadshow	
Posters	
Audio	
Others (Specify)	

16. What are the main alcohol outlets in this area?

- Shops
- Pubs
- Local brew dens
- Others.....(specify)

17. How far is the nearest alcohol outlet from here?

- Next door
- 100-200metres
- 500metres-1Kilometre
- More than 5 kilometres

18. Please respond to the following on regulation of alcohol policies in this area

Administration is able to regulate:	YES	NO
Timing of outlets working hours		
Selling alcohol to under 18 years		
Licensing of outlets		
Illicit brews in the area		
Location of outlets near schools		

20. Are there specific timings when you consume alcohol?

- During occasions
- Month ends
- Weekends
- After work
- Not applicable
- Others (specify.....)

21. Please respond to the following on your perception concerning alcohol:

Question	Yes/No
Alcohol is good for health	

D.PSYCHOSOCIAL FACTORS THAT CONTRIBUTE TO ALCOHOL USE

22. Please choose a stressful experience that has disturbed you most in the last 6 months

Life stressor	Tick
Financial difficulties	
Victim of robbery/crime	
Intimate partner violence	
Loss of job	
Drop out of school	
Very ill family member	
Death of a close family member	

Divorce/break up	
Work conflict	
Other.... (specify)	

23. Did the above experience lead you to using alcohol?

Yes

No

Not applicable

24. Do you feel that alcohol helps you in the stressful moments?

YES

NO

25. Please respond on any of the following questions on childhood experiences

Experience	YES	NO
Have you ever experienced physical abuse in the last 1 year		
Have you ever experienced a life time experience of sexual abuse as a child?		
Have you ever experienced emotional abuse in the last 1 year		
Have you ever experienced harsh Childhood experiences		

26. Other than alcohol which other psychoactive substance do you use

Tobacco

Marijuana

Inhalants

Never consumed any

Miraa

29. Do you know where to seek help for alcohol and other drug use?

Yes

No

Appendix III: Consent for Key Informant Interview

You have been contacted in order to carry out an interview for a study that aims to establish the factors associated with alcohol use. The study encourages participation and partnership that should lead to an action plan for the development of interventions to curb alcohol use among persons aged 18-35 years. Before commencing we require you sign in this consent form, if you agree to participate.

Therefore, please read carefully: Your participation is voluntary, we have taken all measures to ensure confidentiality, so that your name cannot be identified with what you have said. If after reading this you decide that you do not wish to proceed with the interview, you can indicate this to the interviewer. If you do however decide to go ahead, you should be aware that the interview data will be recorded on a computer for subsequent analysis without your name appearing at any moment. If you are in agreement, please sign this consent form with a fictitious name that will be erased and changed into a number after the interview. The team will undertake all measures to prevent breach of confidentiality. The interview will take about half an hour (30 minutes) of your time. It is important to know your collaboration can help reduce alcohol use, if something is unclear, or if you have any doubts whatsoever, you may contact:

The Chairman University of Eastern Africa Baraton Ethical Review Committee

PART B: CONSENT

Please read the information sheet (PART A) or have the information read to you carefully before completing and signing this consent form. If you have questions about the study, please ask the investigator prior to signing your consent form.

Declaration of the volunteer

I Mr, Miss, Mrs..... hereby give consent to

..... to include me in the proposed study entitled; “Factors associated with alcohol use among persons aged 18-35 years in Kangundo North Ward”

I have read the information sheet concerning this study, I understand the aim of the study and what will be required of me if I take part in the study. The risks and benefits if any have been explained to me. Any questions I have read thoroughly concerning the study and have been adequately answered. I understand that at any time that I may wish to withdraw from this study, I can do so without giving any reason and that the study is free of charge I consent voluntarily to participate in this study.

Subject’s name Signature _____

Date_____

Name of person taking consent..... Signature _____

Date_____

Name of investigator..... Signature _____

Date.....

Appendix IV: Key Informant Interview Guide

Name of key informant	
Date	
Position held	
Name of rapporteur	


- 1.What are the main socioeconomic activities done by persons aged 18-35 years in this area?
- 2.Are there any community level factors that make persons aged 18-35 years in this area use alcohol?
- 3.What are some of the psychosocial issues affecting persons aged 18-35 years in this area?

FOCUS GROUP DISCUSSION GUIDE

Name of Focus Group	
Date/Start/End time	
Focus Group number and number of participants	
Name of moderator	
Name of rapporteur	

- 1.What are the main socioeconomic activities done by persons aged 18-35 years in this area?
- 2.What are the community level factors that make persons aged 18-35 years in this area use alcohol?
- 3.What are some of the psychosocial issues influencing persons aged 18-35 years in this area to use alcohol?

Appendix V: Introductory Letter


**JOMO KENYATTA UNIVERSITY
OF
AGRICULTURE AND TECHNOLOGY
COLLEGE OF HEALTH SCIENCES (COHES)
SCHOOL OF PUBLIC HEALTH
DEPARTMENT OF ENVIRONMENTAL HEALTH AND DISEASE CONTROL
TEL: 067-5870001-4 Extn. 3061**

30TH OCTOBER, 2019


**The National Commission for Science Innovation and Technology
(NACOSTI)
P.O. BOX
NAIROBI**



Dear Sir/Madam,

RE: INTRODUCTORY LETTER FOR MAKAU JOSEPH:HSH311-1738/2017


The above named student is pursuing **MSc. Public Health** in the College of Health Sciences (COHES) at Jomo Kenyatta University of Agriculture and Technology (JKUAT). As part of his training, he is required to collect data for his research project, which have been reviewed and approved by the School of Public Health and received ethical approvals. In this regard, we are kindly requesting your office to assist him to get permit to enable him do his research.

We highly appreciate your assistance in this endeavor and look forward to your continued support.

Yours faithfully,

30 OCT 2019
SIGN
DR. SUSAN MAMBO, Ph.D.
COD. ENVIRONMENTAL HEALTH AND DISEASE CONTROL

 
JKUAT is ISO 9001:2015 and ISO 14001:2015 Certified
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Appendix VI: Approval of Research Proposal


**JOMO KENYATTA UNIVERSITY
OF
AGRICULTURE AND TECHNOLOGY
DIRECTOR, BOARD
OF POSTGRADUATE STUDIES**

P.O. BOX 62000
NAIROBI - 00200
KENYA
Email: director@bps.jkuat.ac.ke

TEL: 254-67-5870000/1-5

REF: JKU/2/11/HSH311-1738/2017 11TH DECEMBER, 2019

MAKAU, JOSEPH NDAMBUKI
C/o SoPH
JKUAT


Dear Mr. Ndambuki,

RE: APPROVAL OF RESEARCH PROPOSAL AND APPOINTMENT OF SUPERVISORS



Kindly note that your MSc. research proposal entitled: "FACTORS ASSOCIATED WITH ALCOHOL USE AMONG YOUTH AGED 18-35 YEARS: A CASE STUDY OF KITWII SUBLOCATION IN KANGUNDO NORTH WARD, MACHAKOS COUNTY, KENYA." has been approved. The following are your approved supervisors:-

1. Dr. Dennis Magu
2. Dr. Susan Mambo

Yours sincerely,


PROF. MATHEW KINYANJUI
DIRECTOR, BOARD OF POSTGRADUATE STUDIES
Copy to: Dean, SoPH

/cm

 
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Appendix VII: Ethical Clearance

OFFICE OF THE DIRECTOR OF GRADUATE STUDIES AND RESEARCH
UNIVERSITY OF EASTERN AFRICA, BARATON
P.O. BOX 2500-30100, Eldoret, Kenya, East Africa

B18162019 September 25, 2019

TO: JOSEPH NDAMBUKI MAKAU
REG NO.HSH 311-1738/2017
JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY
SCHOOL OF PUBLIC HEALTH.

Dear Joseph,

RE: Factors Associated with Alcohol Use Among Youth Aged 18-35 Years: A Case Study of Kitwii Sublocation In Kangundo North Ward, Machakos County, Kenya.


This is to inform you that the Research Ethics Committee (REC) of the University of Eastern Africa Baraton has reviewed and approved your above research proposal. Your application approval number is IERC/18/08/2019. The approval period is 25th September, 2019-24th September, 2020.

This approval is subject to compliance with the following requirements;

- i. Only approved documents including (informed consents, study instruments, MTA) will be used.
- ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by the Research Ethics Committee (REC) of the University of Eastern Africa Baraton.
- iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to the Research Ethics Committee (REC) of the University of Eastern Africa Baraton within 72 hours of notification.
- iv. Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to the Research Ethics Committee (REC) of the University of Eastern Africa Baraton within 72 hours.
- v. Clearance for export of biological specimens must be obtained from relevant institutions.
- vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.
- vii. Submission of an executive summary report within 90 days upon completion of the study to the Research Ethics Committee (REC) of the University of Eastern Africa Baraton.






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

Sincerely yours,

**Prof. Jackie K. Obey, PhD**
Chairperson, Research Ethics Committee

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CHARTERED 1991

Appendix VIII: NACOSTI

 REPUBLIC OF KENYA	 NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
RefNo: 625457	Date of Issue: 08/November/2019
RESEARCH LICENSE	
	
This is to Certify that Mr. Joseph Makau of Jomo Kenyatta University of Agriculture and Technology, has been licensed to conduct research in Kiambu on the topic: Factors associated with Alcohol use among Youths aged 18-35 years: A case study of Kitiwi Sublocation in Kangundo North Ward, Machakos County, Kenya for the period ending : 08/November/2020.	
License No: NACOSTI/P/19/2684	
625457 Applicant Identification Number	 Director General NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
	Verification QR Code 
NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.	

THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013

The Grant of Research Licenses is Guided by the Science, Technology and Innovation (Research Licensing) Regulations, 2014 CONDITIONS

1. The License is valid for the proposed research, location and specified period
2. The License any rights thereunder are non-transferable
3. The Licensee shall inform the relevant County Director of Education, County Commissioner and County Governor before commencement of the research
4. Excavation, filming and collection of specimens are subject to further necessary clearance from relevant Government Agencies
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E-mail: dg@nacosti.go.ke / registry@nacosti.go.ke
Website: www.nacosti.go.ke

Appendix IX: Map of the Study Area

