



Effects of Excessive Alcohol Consumption Among the Kenyan Youth, An Educational Poster to Address the Effects

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ABSTRACT

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The many cases of harms suffered by or caused by intoxicated youths in Kenya, including bar fights, injuries, drunk driving accidents and death makes it necessary to address the effects of excessive alcohol consumption. Most Kenyan youths who consume alcohol tend to do so due to various influences including proximity to alcohol outlets, early access of alcohol and the age in which they consume their first alcoholic drink, socioeconomic background, religion, genetics and behaviour and government policies and restrictions.

The purpose of this functional thesis was to produce an educational poster for the Kenyan youths to address the negative effects of excessive consumption of alcohol. The objective of this thesis was to increase awareness regarding the risks and consequences related to excessive consumption of alcohol. The data search process involved the review of literature from peer-reviewed articles, government and legal information (NACADA, WHO), patient education information and practice guidelines.

This thesis provided definitions of alcohol, excessive alcohol consumption, the youth and alcohol effects and discussed the influences and effects of excessive alcohol consumption among the Kenyan youths. The information search results revealed that the effects of excessive alcohol consumption included injury, unsafe sex, physical and sexual assault, health problems, suicide attempts and death, and memory loss or blackouts.

This thesis highlighted the need to conduct further research on the various effects of alcohol consumption on different groups of Kenyan youths, including pregnant women, youths younger than 21 years of age, youths with certain medical conditions, youths that take medications which react with alcohol, youths unable to control the amount they drink, and those who are recovering from alcohol use disorder.

Keywords: Alcohol, excessive alcohol consumption, Kenyan youth.

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ABBREVIATIONS AND TERMS

NACADA – National Authority for the campaign Against Alcohol and Drug Abuse

AUD – Alcohol use disorder

DA – Dopamine

BAC – Blood alcohol concentration

DAT – Dopamine transporter

ALD – Alcoholic Liver Disease

1. INTRODUCTION

Many parts of Kenya, particularly areas where there is alcohol use and hazardous drinking, report many cases of harms suffered by or caused by intoxicated youths, including bar fights, injuries, drunk driving accidents and death (Jenkins et al. 2015, 1; NACADA 2022, 1). Despite the significant harm associated with excessive consumption of alcohol among the youths, Kenya has not been able to effectively address this problem, making excessive alcohol consumption a serious issue of public health concern (Patel et al. 2020, 2).

The government of Kenya recognises drug and substance abuse as a threat to the welfare of its citizens and its increased use will likely have a negative impact on the social, economic and political milestones made over the years hence the need to curb its use (NACADA 2022, 1). Excessive alcohol consumption continues to harm the health and welfare of youths, presenting a clear threat to social and economic development (Mungandi et al. 2022, 704). Furthermore, excessive alcohol consumption has been associated with many diseases including liver cirrhosis and cancer. The practice also increases the risk of other related alcohol disorders such as psychiatric disorders as well as accidents and injuries. (Soyka 2015, 507-512.) In addition, these consequences jeopardize the efforts by the Kenyan government to advance the youth agenda through various initiatives and programmes including: Kenya Youth Development Policy that seeks to equip and empower youths to realize their full potential; public participatory budgeting that seeks to encourage civic engagement; and addressing unemployment (Allen et al. 2016, 3).

The harmful effects of excessive alcohol consumption necessitate the sensitization on alcohol consumption along with its adverse effects in the Kenyan schools and the community at large. This functional thesis will discuss the major influences of alcohol consumption and the effects of excessive alcohol consumption among the Kenyan youths. The information gathered from searches done in electronic scientific databases

will be presented through a poster. This method of presentation is ideal because of its visual appeal, which has the potential to attract the target audience.

2.THEORETICAL STARTING POINTS

This chapter defines the key terms that are used in this thesis to help clarify the meaning and scope of the concepts used. The key terms defined are: excessive alcohol consumption, youth, and alcohol effects.

2.1 Excessive alcohol consumption

Alcohol, chemically referred to as ethanol, is a natural substance that causes intoxication, and has a sedative, thus suppresses the brain function (Ilhan & Yapar 2020, 1197). Alcohol is also considered a myotoxin that alters tissue metabolism, skeletal muscle function, and substrate generation and utilization throughout the body (Tice et al. 2022, 215).

Alcohol consumption is the use of alcohol, including social drinking, risky drinking, problematic drinking, and alcohol addiction (Ilhan & Yapar 2020, 1197). According to Centre for Diseases Control and Prevention (2019), excessive alcohol consumption is defined as binge drinking where four or more drinks are consumed in one occasion of two to three hours by female or more than five drinks for male.

Kenyan youths consume two main types of alcohol—recorded and unrecorded alcohol. Recorded alcohol is generally tracked, regulated, controlled, and legally purchased while unrecorded alcohol is not regulated, and is illegally produced, homemade, illegally imported, not consumed at the point of registration, and not intended for consumption. (Mkuu et al. 2018, 6.)

The prevalence of severe substance use disorders (addiction) among the youth aged between 15 and 24 and 25 and 35 years in Kenya as asserted by the NACADA report were as follows; 2% of the population of youths aged 15 – 24 years were addicted to alcohol and 7% of population of youths aged 25 – 35 years were addicted to alcohol.

(NACADA 2022, 55). Results showed that alcohol was the most widely used substance at 11.8%.

2.2 Youth

A youth is an individual between the age of 18 years and 34 years (The Constitution of Kenya 2010, 163). In our study, we used the Kenyan constitution to define our target group. In Kenya, the youth are regarded as the wealth, strength, and drivers of the country's innovation, with 35% of the total population constituting the youth, who constitute 55% of the labour force in Kenya. One of the major challenges that hinder the youth from becoming productive and contributing effectively to the Kenyan economy and national development is drug use and substance abuse including alcohol consumption. (Kenya youth development policy 2019).

2.3 Alcohol effects

Alcohol effects are the outcomes of alcohol consumption. Such results may be experienced at an individual level, family level, group level, community level, or national level. (Sayette 2017, 4.) The effects of excessive alcohol consumption on the Kenyan youths are the outcome of the factors that usually motivate the Kenyan youths to indulge in alcohol consumption. Many Kenyan youths have developed alcohol use disorders later in their lives which have made them suffer negative health, economic and psychological impacts. Furthermore, the families and communities of young people with alcohol use disorders are usually forced to bear the costs associated with the neglect of responsibilities, job loss and healthcare expenses. Some families also suffer emotional stress including depression, anxiety and shame related to the alcohol addiction of their loved ones. (Njeru 2015, 15). Youths tend to indulge in binge drinking, whereby they consume four or more alcoholic drinks within a span of two hours (Spear 2018, 197). Some individuals may begin harmful consumption of alcohol in childhood, with the

problematic habit continuing to intensify from their adolescence into young adulthood (Ryan et al. 2019, 1).

3 PURPOSE, OBJECTIVE AND STUDY QUESTIONS

The purpose of our thesis is to produce an educational poster for the Kenyan youths to address the negative effects of excessive consumption of alcohol.

The objective of this thesis is to increase awareness regarding the risks and consequences related to excessive consumption of alcohol.

The study questions for this thesis are:

- i. What influences the Kenyan youths to start consuming alcohol?
- ii. What are the effects of excessive alcohol consumption on the Kenyan youths?

4. METHODOLOGICAL STARTING POINTS

Our thesis is a functional thesis that aims to produce a poster addressing the negative effects of excessive alcohol consumption among the youths in Kenya. To achieve the aims of this thesis, we conducted a descriptive literature review and data search of peer-reviewed articles, government and legal information (NACADA, WHO), patient education information, and practice guidelines.

4.1 Data search process and PICO analysis

The identification of materials relating to excessive alcohol consumption among the youths in Kenya involved searches done in electronic scientific databases; Cinahl (EBSCO), PubMed, Medline, and Cochrane. We began the data search process by generating search phrases based on the Medical Subject Headings (MeSH). MeSH is a hierarchically-organized and controlled vocabulary used to index, catalogue, and search health-related and biomedical information (Baumann 2016, 171). This thesaurus includes subject headings that appear in the National Library of Medicine (NLM) databases, the NLM catalog, MEDLINE, and PubMed databases. MeSH helped us create a comprehensive information search structure comprising three key search phrases: excessive alcohol consumption, Kenyan youths, and alcohol effects.

We also used PICO framework in our evidence-based search practice to develop our literature search strategies. PICO represents: Population (P); Intervention (I); Comparison (C); Outcome (O). Thus, the grouping of our research topic based on PICO analysis was: P – Kenyan youths; I – Excessive alcohol consumption; C – Kenyan youths who do not indulge in excessive consumption of alcohol; O – Effects of excessive alcohol consumption.

4.2 Inclusion and exclusion criteria

Having created a comprehensive information search structure, we evaluated the search results based on the inclusion and exclusion criteria. Establishing inclusion and exclusion

criteria that is ideal for study participants is essential for designing high-quality research protocols (Keung et al. 2020, 48).

Inclusion criteria entails the target population's key features that will be used to answer research question, which typically includes geographic, demographic, and clinical characteristics (Patino & Ferreira 2018, 84). On the other hand, exclusion criteria entails characteristics of the potential study participants that meet the inclusion but possess additional characteristics that have the potential to affect the success of the research or increase the probability of an unfavorable outcome (Keung et al. 2020, 49).

Our data was limited to a 10-year period to ensure that we were capturing relevant information that would be useful in our study. We also ensured that we used research articles that were relevant and peer reviewed. Additionally, the information that we gathered included studies that were done in Kenya or relevant to the Kenyan context.

4.3 Implementation

The implementation of this thesis involved the preparation and the actual design of the poster product. The chapter on implementation discusses the importance of a poster in communicating clinical information, how to create a poster, and the actual practice of designing the poster to visually convey the effects of excessive alcohol consumption among the Kenyan youths.

5. INFLUENCES AND EFFECTS OF EXCESSIVE ALCOHOL CONSUMPTION

5.1 Influences of Alcohol Consumption Among the Kenyan youths

The major influences of alcohol consumption among the Kenyan youths include: proximity to alcohol outlets; age exposure; socioeconomic background; religious influence; individual or behavioural contributors; and political, legal, or policy contributors.

5.1.1 Proximity to Alcohol Outlets

Proximity to alcohol outlets influences the consumption of alcohol by determining the frequency of access to alcoholic beverages. An increase in the availability of alcohol outlets potentially increases the accessibility to alcohol (Amiri et al. 2020, 7). A higher alcohol outlets density near schools or residential areas that is mainly occupied by students, such as hostels, is positively associated with excessive alcohol consumption among the youths (Khamis et al. 2022, 9). In Kenya, many alcohol outlets operate in residential areas and near learning institutions, especially institutions of higher learning, which tend to encourage excessive consumption of alcohol (Njeru 2015, 14). A higher alcohol outlets density makes it easier for the Kenyan youths to access alcoholic beverages, thus contributes to an increase in the frequency of alcohol consumption.

5.1.2 Age Exposure

Early access of alcohol and the age in which an individual takes the first alcoholic drink play crucial roles in developing drinking patterns and proper awareness among the Kenyan youth. Despite most countries having minimum purchase age laws to prevent early drinking, some parents initiate youths to alcohol consumption by permitting drinking in adolescence. (Maggs and Staff, 2018, 246.) Parents who are heavy drinkers tend to have more permissive behaviors and attitudes concerning child and adolescent alcohol use. Furthermore, difficult-to-parent children may progressively trigger parent permissiveness regarding alcohol use. (Staff & Maggs 2020, 3). Protective factors and early childhood risk may also serve as the basis for early drinking among the Kenyan

youths (Asiedu et al. 2021, 451). Adolescents permitted to consume alcohol have more than twice the probability of indulging in heavy episodic drinking by the age of fourteen and engaging in frequent heavy drinking in the later years. Such young people also have almost double the risk of significantly increasing the number of alcoholic drinks five times or more, within a year or less. (Staff & Maggs 2020, 7.)

Family also influences the habit and rate of alcohol consumption of a youth by impacting the individual's personality and lifestyle. Family instability, such as being divorced or widowed is associated with more problematic alcohol use. (Boua et al. 2021, 4.) Youths from complex and non-intact family structures such as single-parent families, cohabiting parent families, step-father families, and caregiver and grandparent families, are at a higher risk of being weekly drinkers due to low monitoring by the parents, grandparents, or caregivers, as well as the tendency of mothers to exhibit permissive-neglectful parenting style and fathers to exhibit authoritarian-repressive parenting style (Hummel et al. 2013, 5).

5.1.3 Socioeconomic background

The socioeconomic background of a youth, including educational level, nature of employment, the type of profession, and monthly income, may expose the individual to excessive alcohol consumption. Youths with a higher socioeconomic status, especially working students, are more likely to consume alcohol frequently. (Khami et al. 2022, 12.) Research demonstrates a relationship between high income and frequency of alcohol consumption, suggesting that youths residing in high-income areas tend to consume more alcohol than those residing in low-income areas (Heckley, Jarl, and Gerdtham 2017, 501). Moreover, living in a high-income area, regardless of an alcohol outlet density being off premises, is associated with frequent drinking as well as higher alcohol dependence (Mair et al. 2020, 1). Lower-income youths who reside in high-income neighborhoods tend to drink more often compared to youths with similar incomes in the low-income neighborhoods (Khami et al. 2022, 12). The excessive consumption of alcohol among low-income youths living in high-income neighborhoods is attributed to many

circumstances including: dependent youths; live-in domestic laborers; renters or boarders of “in-law” units; and “low-income advantage”, such as youths who come from affluent families but are still earning low salaries. (Mair et al. 2020, 9).

5.1.4 Religious influence

Religion influences the perceptions and attitudes of youths towards alcohol, impacting their approach to alcohol use (Khami et al. 2022, 12). Religiosity is negatively linked with excessive consumption of alcohol. Research reveals that less religious youths tend to exhibit alcohol-related problems compared to their highly religious counterparts, who are less likely to engage in binge drinking. (Stauner et al. 2019, 243.) Kenyan youths with higher religiosity tend to consume less or no alcohol, with their reduction or avoidance of alcohol usage primarily attributed to their participation in religious activities, such as reading the sacred texts. Youths who pray frequently also tend to exhibit reduced or no consumption of alcoholic beverages. (Bai 2021, 151.)

5.1.5. Individual or behavioral contributors

Individual factors such as genetic factors and the differences in how an individual reacts to alcohol influence the acquisition, initial rise, and the increase in the consumption of alcohol (Bowen et al. 2022, 15). The variation in the functioning of physiological and neural systems that are linked with alcohol impacts play are crucial in extending the risks for the development of alcohol use disorder (AUD). Dopamine (DA) plays a pivotal role in reinforcing ethanol effects and contribute to the variation of the dopaminergic genes that contribute to AUD. (Céspedes et al. 2020, 4.) The presence of polymorphisms in genes that are responsible for producing the dopamine transporter (DAT), such as *SLC6A3*, are associated with the tendency to develop alcohol dependence (Bowen et al. 2022, 19).

Excessive alcohol consumption has been linked to depression, with depressive symptoms being associated with the beginning of and the higher frequency of consuming alcohol (Chow et al. 2021, 87). Depression is considered a complex mental disorder that

extends beyond personal well-being which affects emotions and physical health (Monroe and Harkness 2022, 3). Some of the causes of depression include stressful life events and vulnerability to genetic and faulty mood regulation. Many Kenyan youths often try to manage their depression by drinking alcohol excessively. Depressive symptoms may encourage hazardous drinking behavior, especially if an individual is reluctant to seek professional help to manage their mental health-related issues. (Chow et al. 2021, 93.) Furthermore, individuals with higher depressive symptoms levels are more likely to embrace avoidance as a way of coping with stress instead of using positive thinking, problem-solving, and social support (Haskell, Britton and Servatius 2020, 8). Avoidance, as a passive coping mechanism, may lead to pessimistic thinking, which may increase the risk of depression, consequently prompting an individual to consume alcohol as a way of managing their depressive symptoms.

5.1.6 Political, legal, or policy contributors

Less restrictions by the government on alcohol consumption can influence excessive alcohol consumption among the youths (Petticrew et al. 2017, 3). Governments in developing countries rarely prioritize alcohol policy. This is because a majority of health ministries focus more on healthcare provision, especially for the sick and injured instead of addressing the underlying causes and minimizing the risk factors hence have no access to the most crucial policy levers, such as availability, price, and marketing restrictions. (Stockwell et al. 2021, 5.)

In Kenya, public health considerations are barely represented in the regulation of alcohol at the local, regional, and national levels (Eddah 2019, 24). The finance ministries under the local governments in Kenya are mostly responsible for pricing and taxing but is not mandated to minimize the negative health and safety effects of alcohol and are usually less aware of the economic costs arising from excessive alcohol consumption. These ministries see one of their major responsibilities as maintaining the markets for all commodities in a free and fair manner with the aim of raising government revenues. (Elemano & Obuba 2023, 3295.)

The civic authorities and local licensing in most developing countries, who are often delegated the role of overseeing direct regulation of alcohol sale and liquor distribution, tend to see their roles as overseeing a fair market and restricting public nuisance arising from the consumption of alcohol instead of protecting public health (Stockwell et al. 2021, 5). Some corrupt police officers from the Kenya National Police Services, mandated to regulate the operation of alcohol outlets, often facilitate the operation of such outlets beyond the specified legal hours, thus impeding the realization of the objectives of the Alcohol Drinks Control Act, which include countering all alcohol-related problems and providing treatment and rehabilitation of addicts (Eddah, 2019, 24).

5.2 Effects of Excessive Alcohol Consumption on the Kenyan youths

5.2.1 Injury

Excessive consumption of alcohol is a risk factor for both intentional and unintentional injuries (Siqueira et al. 2015, 718). Intentional injuries are harms caused by purposeful actions that are directed towards oneself or others, and include self-harm, interpersonal violence, and suicide. On the other hand, unintentional injuries are injuries that occur without the intention of harming oneself or others. (Chikritzhs & Livingston 2021, 3.) Binge drinking is linked with increased likelihood of fatal injuries (Siqueira et al. 2015, 718). Excessive alcohol use potentially impairs brain function, leading to: poor judgment; reduced perception and reaction to hazards; slow decision-making and response time; loss of motor skills and balance; and behavioral effects such as reduced inhibitions, increased risk-taking, increased aggression, and reduced processing of communications (Alpert et al. 2022, 7).

Kenyan youths who engage in drunk driving are at risk of suffering fatal traffic injuries due to their impaired abilities and skills required to engage in safe driving. Drunk driving has been associated with involvement in road crash, with the probabilities of unfavorable safety outcomes increasing with the increase in the blood alcohol concentration. (BAC)

(Shaikh et al. 2022, 1.) In Kenya, 8.1% of road traffic crashes were associated with alcohol-influenced driving, suggesting that drunk driving potentially worsens incidents of road traffic crashes (Gathecha et al. 2018, 107). The pharmacological action of alcohol on the central nervous system contributes to traffic accidents by increasing reaction time, decreasing the ability to determine distances and space, increasing feeling of self-confidence, and eventually decreasing the ability to operate a vehicle safely (Chen et al. 2016, 2).

Besides fatal traffic injuries, excessive alcohol consumption is also associated with fatal nontraffic injuries caused by drowning, aspiration, fall injuries, child maltreatment, air-space transport, motor vehicle nontraffic crashes, fire injuries, hypothermia, firearm injuries, homicide, occupational and machine injuries, water transport, motor vehicle nontraffic crashes, poisoning, and suicide (Alpert et al. 2022, 8). Alcohol use at hazardous or harmful levels, by youths who are parents or caregivers, increases the possibility of child physical injury, caused by maltreatment (Chikritzhs & Livingston 2021, 5).

5.2.2 Unsafe sex

Kenyan youths who consume alcohol in excess have a high willingness to engage in sexual risk behaviors. Excessive consumption of alcohol directly reduces the intention to use a condom, thus increasing the probability of engaging in unprotected sex. This is because alcohol impairment concerning alcohol expectancies and personal risk perception influence risky sexual decision-making. (Walsh et al. 2017, 1.) The effects of alcohol intoxication on human beings are usually worsened by perceived alcohol outcomes, increased sexual desire, and the delay to condom availability (Berry & Johnson 2018, 2). Unprotected sex is considered a sexual risk behavior since it exposes an individual to a situation capable of causing harm to the health of oneself or another person, through the probability of infection by the sexually transmitted diseases (STDs) such as HIV (Díaz, Orlando-Narváez and Ballester-Arnal 2019, 1420).

5.2.3 Physical and sexual assault

Physical assault is an unlawful physical attack or aggression against an individual, with the intention of causing harm or injury to the individual (Auger et al. 2022, 4). There is a strong association between excessive consumption of alcohol and the risk of physical assault victimization (Caamano-Isorna et al. 2021, 6). Men are likely to cause worse assaults after consuming alcohol while women tend to suffer more from abuse with heavy drinking living partners. Moreover, women who are heavy drinkers are likely to suffer from abuse themselves and experience higher physical aggression from their partners. (Sontate et al. 2021, 2). The intensity of physical assault is usually greater when the perpetrator is intoxicated than when they are not (Ross and Davis 2023, 42).

Consuming alcohol can increase aggressive behavior in people, causing them to engage in acts of violence or crimes that potentially cause extreme harm, including death (Caamano-Isorna et al. 2021, 7). The disinhibiting effects of alcohol, together with the loss of emotional control that makes an individual more prone to physical assaults, makes alcohol one of the major ingredients of violent occurrences such as murder. When alcohol is consumed in moderate doses and absorbed into the bloodstream, it tends to impair an individual's perceptual, cognitive, motor, and verbal capabilities as well as causing loss of control that ultimately results in unacceptable social behaviors such as violence. (Sontate et al. 2021, 3.)

Sexual assault is the practice of subjecting an individual to nonconsensual sexual acts against their will (Grest et al. 2022, 1). This form of violence can include rape or attempted rape, sexual coercion, and unwanted touching (Farahi & McEachern 2021, 168). Excessive consumption of alcohol places the Kenyan youths at a higher risk of forcible sexual assault. Furthermore, alcohol use by an individual, at the time of sexual assault, can delay treatment, which can negatively affect the ability of the individual to recall the events leading up to the assault incident, gathering of crucial forensic evidence, and the provision of appropriate and timely prophylactic treatment of pregnancy and STIs (Sheridan & Evans 2019, 5).

5.2.4 Health problems

Harmful alcohol use is a causal factor in over 200 disease conditions worldwide, which represents 5.1% of global burden of disease (World Health Organization, 2022). Excessive consumption of alcohol has been associated with the risk of many health issues and disorders including Alcohol Liver Disease (ALD), alcohol dependence, and other non-communicable diseases (Dukić et al. 2023, 1). ALD includes acute alcoholic hepatitis, fatty liver, hepatocellular cancer (HCC), and alcoholic steatohepatitis (ASH) that results in cirrhosis and fibrosis (Neuman et al. 2020, 1). Consuming alcohol, even in smaller quantities between 12g and 24g per day, increases the risk of suffering liver cirrhosis compared to people who do not consume alcohol (Dukić et al. 2023, 1).

Alcohol-induced protein acetylation tends to cause major physiological impacts that contribute to hepatotoxicity (Neuman et al. 2020, 10). Alcohol metabolism by Cytochrome-2E1 (CYP2E1), which plays a crucial role in the metabolism of xenobiotics (chemical compounds that are foreign to the body, such as drugs), leads to the production of highly-reactive metabolites, such as acetaldehyde and extensive Reactive Oxygen Species (ROS) (Kumar et al. 2022, 1). These highly-reactive metabolites may eventually form covalent changes on proteins, lipids, and DNA, thus altering their functions, which can contribute to the development of liver disease (Neuman et al. 2020, 11).

About 20% of alcoholics suffer ALD, with women becoming the greater victims, experiencing more acute forms of the disease (Erol and Karpyak 2015, 2). Women tend to acquire a higher alcohol blood level when they consume the same quantity of alcohol due to their smaller constitution and a lower water percentage in the body that leads to a smaller alcohol distribution volume (Dukić et al. 2023, 2).

5.2.5 Suicide attempts and death

Kenyan youths who abuse alcohol are at a higher risk of developing suicidal thoughts, attempting suicide, or committing suicide. Excessive consumption of alcohol is associated

with higher suicide risk and various forms of intentional self-harm including suicidal thoughts, suicide attempts, and deaths by suicide (Perez et al. 2022, 1). Acute alcohol use is a proximal risk factor that is temporally close to suicide attempt, often exerting its influence in minutes, hours, or in the day before an attempt (Bagge et al. 2015, 474). Acute intoxication usually impairs judgment and lowers inhibitions against suicidal actions, increasing the risk of suicidal behavior (Perez et al. 2022, 1).

Depression and excessive consumption of alcohol often correspond in nature, with depression capable of causing alcohol dependence (Chow et al. 2021, 87). Individuals battling depression usually struggle with harmful alcohol use whereas alcohol abuse patients usually struggle with depression. This combination of depression and alcohol dependence often increases suicidal thoughts and suicide attempts in an individual. (Perez et al. 2022, 1). Furthermore, binge drinking increases the likelihood of using other substances, such as benzodiazepines, which increases the risk of a drug overdose death (Alpert et al. 2022, 2).

Unrecorded alcohol in Kenya is consumed more frequently and in higher quantities than the recorded alcohol (Mkuu et al. 2018, 2). The consumption of unrecorded alcohol in Kenya accounts for a significant number of fatalities (Kipchumba, Kiruthu and Minja 2022, 45). Such harmful consequences are mainly attributed to the consumption of alcoholic drinks that are adulterated with harmful substances believed to increase their potency, such as methanol. (Mkuu et al. 2018, 2.) Alcohol intoxication due to binge drinking can lead to loss of consciousness, respiratory failure, aspiration pneumonia, or coma, which may ultimately result in death (Chikritzhs & Livingston 2021, 2).

5.2.6 Memory Loss/Alcohol Blackouts

Kenyan youths who are heavy drinkers often suffer blackouts as a negative consequence of alcohol use. Many Kenyan youths often seek alcohol blackout experience to celebrate their accomplishments, birthdays, or sport events, and to cope with stressors, or negative emotional states. Alcohol-induced blackouts are moments of anterograde amnesia,

whereby an individual suffers partial or complete memory loss for the events which happened while they were drinking. (Miller et al. 2018.) Such moments make an individual susceptible to many alcohol-related consequences, such as overdose and physical injury (Siqueira et al. 2015, 718). The rapid rise in blood alcohol concentration, caused by heavy drinking, potentially impairs information transfer from short-term to long-term memory, leading to partial or complete memory loss (Miller et al. 2020, 2).

6. IMPLEMENTATION

The functional thesis method entails working on a concrete task that arises from working life. The concrete task is subsequently answered by the developing operations that exist in the target organization. This typically results in the development of an output, such as a product, alongside a thesis report that evaluates the development of the operations. (TAMK Student's Handbook.)

6.1 Importance of a poster in communicating clinical information

The use of a poster is ideal for visually conveying information about excessive consumption of alcohol to the Kenyan youths because it is considerably visible, thus can easily capture the attention of the target audience. A poster that communicates information through the use of images and signs is effective in raising awareness about an issue of public health concern.(Neves, Matos, and Carvalho 2024, 13.)A poster can be displayed in various venues frequented by the Kenyan youths, such as shopping malls, outdoor spaces, and metro stations, which can increase the possibilities of reaching the target audience.

In addition, a poster is an economical means of communication since it is relatively inexpensive to create, print, and install, and can also stay in place for a longer duration. Thus, it is possible to reach a large number of youths in Kenya at a lower cost compared to other forms of communication such as television or radio. A poster is also a one-time investment hence may not require ongoing payments to maintain its visibility to the target audience.(Hasanica et al. 2020, 138.) Using this means of communication to reach out the Kenyan youths may only require a single payment for designing, printing, and installing the poster in a strategic location.

6.2 How to create a poster

Creating a poster involves a number of steps. The first step is identifying the goal or purpose of the poster. This step helps guide the choices of the poster designer, including the types of fonts and the font sizes. (Gemayel 2018, 1180.) The second step is considering the target audience. It is important to consider the type of audience that the poster should reach. This helps the designer to focus primarily on the details that may likely attract the attention of the audience. Deciding on the distribution platform is the third step. Understanding the requirements of the platform where the designer desires to share the poster helps create a poster that is appropriate to the platform. A poster intended for digital use, such as sharing on social media platforms may require a different scaling dimensions compared to that designed for print. The fourth step is choosing a color scheme. A color scheme helps achieve visual appeal for the target audience, which promotes audience engagement. It is important to choose a color scheme that complements the theme of the poster and resonates with the target audience. (Papanas et al. 2019, 7.)

6.3 Actual practice for the poster

The poster that serves as the product of this functional thesis was created systematically by first condensing the study information to ensure that every key idea of the topic was included in the poster. Condensing the study information also ensured that only easy-to-digest information and relevant data was included in the poster. The condensed information was then presented in the poster alongside vector illustrations with the help of Adobe Illustrator, a vector graphics design and editing software.

The design of the product was guided by its purpose, which was to address the negative effects of excessive consumption of alcohol. The target audience was the Kenyan youths, and this informed the decision to include particular details that would likely attract their attention, such as the use of eye-catching colors and graphical elements. The dominant color for the poster was brown, which contributed to conveying the theme of alcohol consumption. The outcome of the systematic design of the poster is shown in figure 1 below.

7. DISCUSSION

7.1 Research ethics

Our thesis was in line with the Finnish Advisory Board on Research Integrity (TENK), which maintains that conducting a thesis according to good scientific practice is the prerequisite for ethical reliability, acceptability, and credibility (Finnish National Board on Research Integrity TENK 2023). Honesty and truthfulness are crucial in research since they help maintain the sanctity of scientific literature (Deshmukh et al. 2017, 2). We ensured that our research adhered to research value and honesty and demonstrated general diligence and accuracy in evaluation of research, and in the saving and presentation of results.

Acknowledging and respecting the work and achievements of other researchers is important for supporting the integrity of a researcher's work. We ensured proper referencing and citation in our study to avoid plagiarism and used the thesis structure according to Tampere University of Applied Sciences. Fabrication (making up of data that never existed), falsification (manipulation of research data) and plagiarism (appropriation of other people's ideas without acknowledging or seeking their permission) are forms of research misconduct that compromise research integrity and lower the standards of research ethics (Mishra and Dabas 2021, 781). We avoided fabrication by presenting information obtained from existing and verifiable sources. We avoided falsification by presenting the research data as they appeared in their original sources.

7.2 Limitations of the study

Our study was impacted by the limitation of focusing primarily on heavy drinking on the Kenyan youths in general, which appeared to disregard the effects of alcohol consumption in quantities considered low or moderate, without considering the exceptions, such as pregnant women, youths younger than 18 years of age, youths with certain medical conditions, youths that take medications which react with alcohol, youths

unable to control the amount they drink, and those who are recovering from alcohol use disorder. The CDC completely discourages these categories of people from consuming any quantity of alcohol and further suggests that moderate or low consumption of alcohol does not lower the risk of death in comparison to avoiding drinking completely (CDC 2024). This limitation presents a challenge to the campaign against excessive consumption of alcohol for the Kenyan youths who may be considering reducing their alcohol consumption instead of not drinking at all.

7.3 Development proposal

Despite poster product having the potential to engage the audience visually, the piece presents the challenge of providing detailed and conclusive information. Presenting condensed information in the form of a poster may hinder effective communication, particularly in areas that need more clarification to understand. Thus, there is need to consider ways of improving audience understanding, especially for audiences who have lower literacy levels.

8. CONCLUSION

Excessive alcohol consumption among the Kenyan youths is a practice that is influenced by a variety of factors including the youths' proximity to alcohol outlets, early access of alcohol and the age in which a youth takes the first alcoholic drink, socioeconomic background, religion, genetics and behavior, and government policies and restrictions. Some youths develop the practice of heavy drinking due to their history of exposure to alcohol by their parents or guardians in their adolescence. Kenyan youths who are located close to alcohol outlets tend to access alcoholic drinks frequently, which influences them to engage in heavy drinking. Kenyan youths who indulge in excessive consumption of alcohol are at risk of experiencing or suffering various adverse effects including injuries, unsafe sex, physical and sexual assault, health problems, suicide attempts and death, and memory loss or alcohol blackouts. Alcohol potentially impairs brain function and causes poor judgment and reduced perception and reaction to hazards. Thus, Kenyan youths who engage in heavy drinking are more exposed to hazardous outcomes due to their highly compromised decision-making ability and response time. The loss of motor skills and balance as well as the reduced inhibitions and increased risk-taking increases the probability of an intoxicated youth suffering fatal traffic and non-traffic injuries. Additionally, harmful alcohol use puts Kenyan youths at risk of developing diseases including acute alcoholic hepatitis, fatty liver, hepatocellular cancer (HCC), and alcoholic steatohepatitis (ASH). Addressing the effects of excessive alcohol consumption through the use of an educational poster can help reach out to a vast population of the Kenyan youths and in turn create awareness that can promote responsible alcohol use and healthy living among the Kenyan youths.

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Excessive Alcohol Consumption Among the Kenyan Youths

Excessive alcohol consumption is the consumption of a large amount of alcohol in a short duration (binge drinking), consumption of a high amount of alcohol regularly, over a longer period, or the inability to stop or control the use of alcohol despite its negative health, occupational, or social consequences.



Kenyan youths consume 2 main types of alcohol

01 Recorded alcohol

Alcohol that is regulated, tracked, controlled, and legally purchased.



02 Unrecorded alcohol

Alcohol that is illegally produced, not regulated, homemade, and illegally transported.



Effects of excessive alcohol consumption among the Kenyan Youths

01 Injury

Binge drinking increases the possibility of fatal injuries.



02 Unsafe sex

Acute alcohol intoxication influence risky sexual decision-making such as having multiple sex partners and engaging in unprotected sex.

03 Physical and sexual assault

Excessive consumption of alcohol increases the risk of physical and sexual assault victimization since it increases the aggressive behavior of the perpetrators.



04 Health problems

Excessive consumption of alcohol puts an individual at risk of suffering many health issues and disorders including acute alcoholic hepatitis and fatty liver.

05 Suicide attempts and death

Acute intoxication usually impairs judgment and lowers inhibitions against suicidal actions, increasing the risk of suicidal behavior.

06 Drunk driving

Excessive consumption of alcohol encourages drunk driving by impairing the abilities and skills required to engage in safe driving.

07 Memory loss or blackout

Heavy drinking may cause a rapid rise in blood alcohol concentration that may impair information transfer from short-term to long-term memory, causing a blackout.

