KNOWLEDGE AND ASSOCIATED FACTORS ON THE INFLUENCE OF EXCESSIVE INTAKE OF ALCOHOL AMONG BASIC MEDICAL SCIENCE UNDERGRADUATES IN A TERTIARY INSTITUTION IN BENIN, EDO STATE

BY

AKINTIMEHIN AYOMIPOSI HENRIETTA

BMS1601871

DEPARTMENT OF NURSING

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IN PARTIAL FULFILLMENT OF THE REQUIREMENTS OF NURSING AND MIDWIFERY COUNCIL OF NIGERIA FOR THE AWARD OF BACHELOR'DEGREE IN NURSING SCIENCE.

SUPERVISED BY:

DR. (MRS.) R. E. ESEWE

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ABSTRACT

Excessive alcohol intake among university students is a pressing public health concern, with potential implications for both health and academic performance. This study explores the knowledge and associated factors influencing excessive alcohol consumption among undergraduate students in Basic Medical Sciences at a tertiary institution in Benin, Edo State. Key areas of interest include socio-demographic factors, knowledge of alcohol's effects, behavioral influences, and perceived impact on academic outcomes. A descriptive cross-sectional survey design was employed, utilizing a stratified sampling technique to select a representative sample of 290 students. Data were collected through structured questionnaires and analyzed using the Statistical Package for the Social Sciences (SPSS) version 26.0. Analysis included descriptive statistics to summarize demographic characteristics and inferential statistics to identify factors associated with alcohol intake behaviors. The study found that 80.3% of students demonstrated good knowledge of the health effects of excessive alcohol intake, while 19.7% displayed poor knowledge. Major factors associated with excessive intake included peer pressure (mean score 3.1), ease of accessibility on campus (mean score 3.1), and stress (mean score 3.2). A majority (67.2%) reported family alcohol use, suggesting a potential influence on personal consumption behaviors. Perceptions of alcohol's impact on academic performance were mixed, with 51.4% viewing the impact as low and 48.6% as high. Nonetheless, specific items related to academic performance scored consistently high, indicating a recognized negative impact on focus, class attendance, and study outcomes. While students show substantial knowledge of alcohol's risks, factors like peer pressure and stress continue to drive excessive intake. Academic performance is perceived to be impacted by these behaviors, suggesting a need for interventions. Targeted educational programs and mental health resources are recommended to address the knowledge-behavior gap. Strategies should focus on providing stress management support, fostering healthier social norms, and promoting awareness of alcohol's academic consequences.

Keywords: Knowledge, Associated factors, Influence Alcohol, intake, Undergraduate students

CERTIFICATION

This is to certify that this project titled **KNOWLEDGE AND ASSOCIATED FACTORS ON THE INFLUENCE OF EXCESSIVE INTAKE OF ALCOHOL AMONG BASIC MEDICAL SCIENCE UNDERGRADUATES IN A TERTIARY INSTITUTION IN BENIN, EDO STATE** was carried out by **AKINTIMEHIN AYOMIPOSI HENRIETTA** was carried out by with Mat. No. **BMS1601871** in the Department of Nursing Sciences under the supervision of PROF.(MRS) J.A. AFEMIHKE.

DR. (MRS.) R. E. ESEWE _____

Supervisor Sign & date

DR. (MRS.) R. E. ESEWE _____

Head of Department Sign & date

_____ _____

External Examiner Sign & date

DECLARATION

This is to declare that this research project titled **KNOWLEDGE AND ASSOCIATED FACTORS ON THE INFLUENCE OF EXCESSIVE INTAKE OF ALCOHOL AMONG BASIC MEDICAL SCIENCE UNDERGRADUATES IN A TERTIARY INSTITUTION IN BENIN, EDO STATE** was carried out by **AKINTIMEHIN AYOMIPOSI HENRIETTA** is solely the result of my work except where acknowledged as being derived from other person(s) or resources.

DEPARTMENT/SCHOOL: NURSING SCIENCE, SCHOOL OF BASIC MEDICAL SCIENCES, UNIVERSITY OF BENIN, BENIN CITY.

Signature: …….

Date: …….

DEDICATION

This research study is dedicated to God, for his love and intentionality towards me,and the Nursing profession that I love and pray to be great at.

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My profound gratitude goes to God almighty for his strength, wisdom and guidance all through my period of study and for making my work a success.

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CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Alcohol consumption among college students is a pervasive and complex issue with potentially far-reaching consequences (Gilbert, 2020). The university environment, marked by newfound independence and exposure to various social influences, often becomes a critical period for the initiation and escalation of alcohol use (Paat et al., 2023). This phenomenon is of particular concern among students pursuing medical education, given the demanding nature of their coursework and the future responsibilities associated with the medical profession (Haviland et al., 2021). The World Health Organization (WHO) defines alcohol as "a psychoactive substance with dependence-producing properties that has been widely used in cultures for centuries" (WHO, 2022).

Globally, alcohol consumption is prevalent, with approximately 26.5% among individuals aged 15 to 19 years (Kuteesa et al., 2020). In Japan, around 56.8% of males and 47.8% of females are reported as alcohol consumers (Kawaidawr et al., 2021). In Poland, the prevalence of alcohol consumption is approximately 20.1%, with 10% for males and females, respectively. In Bulgaria, about 46.2% of males and 28.1% of females are reported to consume alcohol (Htet et al., 2020).

Nigeria stands out among countries in sub-Saharan Africa with one of the highest prevalence of alcohol consumption (Morojele et al. 2021). The main causes of alcoholism among undergraduates can be attributed to differences in social class, frustration, lack of employment, and poverty. These factors may also lead to drug intake as a means of reducing tensions and anxieties (Kahsa et al., 2019). The issue with undergraduate drinking lies in the negative effects of excessive alcohol intake, which can result in death, depression, injury, dropouts, and other health-related issues (Redwan, 2021). Alcohol consumption can affect the

careers of undergraduates (Bravo et al. 2018). The transition to tertiary education brings about lifestyle changes seen as freedom from parental control and family monitoring. It is said that exposed to new values which are different from ones learnt from their parents. These values give them motivation to involve in some motivate unhealthy behaviors like drinking alcohol, smoking, and drug use (Dumbili & Williams, 2018).

Furthermore, the effects of alcohol consumption among undergraduates may include criminal misconduct, poor academic performance, strained relationships, particularly with family, and vocational failure (Okafor et al., 2017). Alcohol consumption among undergraduate students can increase the risk of sexual misconduct (Groenewald et al., 2018). It has been identified as a serious factor causing mental health issues among undergraduates, including increased depressive symptoms, suicide, anxiety, aggressive behaviors, and other mental health conditions (Mekonen et al., 2018).

The influence of excessive alcohol intake among medical students can have multifaceted implications (Steiner-Hofbauer et al., 2020). Beyond the well-documented health effects of alcohol abuse, academic repercussions may impact future healthcare professionals' ability to provide optimal patient care (Byrne et al., 2021). Understanding the underlying factors contributing to excessive alcohol consumption is crucial for developing targeted interventions and educational programs that aim to promote a healthier and more conducive learning environment (Minian et al., 2020).

Despite the prevalence of harmful alcohol use in Nigeria, particularly in Benin, Edo State (Adeloye et al., 2019), there is a dearth of research on the knowledge and associated factors related to excessive alcohol intake among basic medical science undergraduates in University of Benin. This gap necessitates a comprehensive study to assess the knowledge of basic medical science undergraduates regarding the influence of excessive alcohol intake and to identify the associated factors contributing to this behavior within this specific population.

Addressing this gap aims to provide valuable insights to guide the development and implementation of targeted strategies to reduce excessive alcohol intake among undergraduates in Benin City and Nigeria at large.

1.2 Statement of the problem

The escalating global prevalence of alcohol consumption among undergraduate students, as highlighted by the (WHO, 2019), has evolved into a critical societal issue. This trend, notably observed among undergraduate students, has raised concerns due to its detrimental impact on the social fabric of the country (Charles, et al., 2021). The implications extend beyond social concerns to encompass the mental health and overall well-being of university students, presenting a significant public health challenge (Hernández-Torrano, et al., 2020). Recent international surveys reveal alarming statistics, indicating that 35% of university students meet diagnostic criteria for at least one common mental health condition such as anxiety, depression, and substance abuse disorders (Sheldon et al., 2021). Despite reporting higher depression levels than their age-matched peers in the general population (Blanco et al., 2020; Lim et al., 2018), university students also face an increase in suicide rates, pointing to a growing mental health crisis (Gunnell et al., 2020). Nigeria, with its status as the most populous country in Africa, grapples with the challenge of high alcohol misuse rates, compounded by limited resources for an effective population-wide response (Emeh et al. 2023).

The specific focus on basic medical sciences undergraduates becomes imperative as this group experiences a concerning addiction to excessive alcohol intake, adversely affecting their lives and professional trajectories (Bravo, et al., 2018). Alcohol emerges as the third-leading preventable risk factor for global burden of disease, contributing to 5.9% of liver cirrhosis, cancers, and other health-related conditions. Its impact on the mental health of

undergraduate students is pronounced, manifesting in aggressive behaviors, suicidal tendencies, and depression, often exacerbated by alcohol consumption as a coping mechanism (Mekonen et al., 2018).

Based on clinical experiences, there is a notable pattern where young patients aged 15 to 22 years with mental health disorders frequently exhibit a history of drug and alcohol abuse. This observation underscores the need for a comprehensive examination of the knowledge and associated factors influencing excessive alcohol intake among Basic Medical Sciences undergraduates in the University of Benin.

1.3 Objective of the study

Broad objectives of the study

To assess the knowledge and associated factors on the influence of excessive intake of alcohol among basic medical sciences undergraduates in University of Benin.

The specific objectives are;

1. To assess the level of knowledge of effect of excessive intake of alcohol among basic medical sciences undergraduates in University of Benin
2. To identify the associated factors influencing excessive intake of alcohol among basic medical sciences undergraduates in University of Benin.
3. To assess the perceived impact of excessive alcohol intake on the academic performance among basic medical sciences undergraduates in University of Benin

1.4 Research questions

1. What is the level of knowledge of effect of excessive intake of alcohol among basic medical sciences undergraduates in University of Benin?
2. What are the associated factors influencing excessive intake of alcohol among basic medical sciences undergraduates in University of Benin?

3. What are the perceived impacts of excessive alcohol intake on the academic performance among basic medical sciences undergraduates in University of Benin?

1.5 Research Hypothesis

To aid the completion of the study, the following research hypothesis was formulated;

H1: There is no significant relationship between socio demographic factors such as gender, level of study, department and the excessive intake of alcohol among basic medical sciences undergraduates in University of Benin.

1.6 Significance of the study

This study holds significance implications for various stakeholders, including the medical profession, healthcare providers, students, and society at large.

For the profession, the findings of this study can enhance professional training by shaping curricula and training programs in medical schools, ensuring that future healthcare professionals are well-educated about the risks and consequences of excessive alcohol consumption. This improved education can lead to better coping mechanisms and stress management techniques among medical professionals, thereby enhancing their overall competence. Additionally, increased awareness of the effects of alcohol can foster a culture of responsibility and ethical behavior within the medical profession.

Healthcare providers can also benefit from the study as it can inform clinical practice by helping them identify at-risk individuals early and provide targeted interventions. This improved knowledge can lead to more comprehensive care and counseling for patients, ultimately improving health outcomes. Moreover, the study's findings can guide the development of hospital policies and guidelines on alcohol use, promoting a safer and healthier environment for both staff and patients.

For students, this study can increase awareness of the risks and consequences of excessive alcohol consumption, leading to more informed decision-making. By understanding these

risks, students may be motivated to adopt healthier behaviors and reduce their alcohol intake, which can positively impact their academic performance and overall well-being. Additionally, identifying the factors influencing alcohol consumption can help develop support systems and resources for students struggling with alcohol-related issues.

The broader society also stands to benefit from this study. Addressing excessive alcohol consumption among future healthcare providers can contribute to reducing the public health burden associated with alcohol-related diseases and injuries. Educated and responsible medical professionals can advocate for healthier lifestyles within their communities, fostering a culture of wellness. Furthermore, the findings of this study can inform public health strategies and policies aimed at reducing alcohol consumption and its associated harms in the broader population.

1.7 Scope of the study

The scope of this study includes male and female undergraduate students enrolled in Nursing Science and Medical Laboratory Science at the University of Benin, aged 18 years and above, ranging from 200 level to 500 level. The study will investigate factors contributing to alcohol use and assess the knowledge levels regarding excessive alcohol consumption among these students.

1.8 Operational definition of terms

Alcohol Consumption: The intake of alcoholic beverages by basic medical science students, measured in terms of frequency and quantity consumed within a specified period.

Excessive Alcohol Intake: The consumption of alcohol in quantities that exceed the recommended limits set by health authorities, leading to potential negative health and academic consequences. This is typically defined as more than four drinks per day for men and more than three drinks per day for women.

Knowledge: The awareness and understanding of the effects, risks, and consequences of excessive alcohol consumption among basic medical science students, assessed through survey questions and interviews.

Associated Factors: The various elements that contribute to or influence the excessive intake of alcohol among students, such as peer pressure, stress, social norms, family background, and accessibility of alcohol.

Basic Medical Science Students: Individuals enrolled in undergraduate programs in medical science disciplines at a tertiary institution in Benin, Edo State.

Tertiary Institution: An institution of higher education offering undergraduate and postgraduate programs, specifically the unnamed university in Benin, Edo State, where the study is conducted.

Benin, Edo State: The geographical location in Nigeria where the study is conducted, focusing on its unique cultural, social, and educational context.

Health Effects: The physical and mental health consequences of excessive alcohol consumption, including liver disease, addiction, mental health disorders, and other related conditions.

Academic Performance: The scholastic achievements of students, measured by their grades, test scores, and overall academic standing, which can be impacted by alcohol consumption.

Undergraduate Students: Individuals pursuing a bachelor's degree in various disciplines at a tertiary institution.

Associated Factors: The various elements that contribute to or influence the excessive intake of alcohol among undergraduate students,

GABRG2 and GABRA2: These refer to specific genes that code for subunits of the GABA-A receptor (gamma-aminobutyric acid type A receptor). The GABA-A receptor is an

inhibitory neurotransmitter receptor in the brain, and variations in these genes have been associated with an increased risk of alcohol use disorder.

COMT Val 158Met: This refers to a specific polymorphism (genetic variation) in the COMT gene (catechol-O-methyltransferase). The COMT enzyme is involved in the breakdown of dopamine, a neurotransmitter associated with pleasure and reward. The Val 158Met variant affects the enzyme's activity and has been linked to various psychiatric and behavioral traits, including susceptibility to alcohol use disorder.

DRD2 Taq1A: This refers to a polymorphism in the DRD2 gene that encodes the dopamine D2 receptor. This receptor is involved in the brain's reward pathways, and the Taq1A variant is associated with differences in dopamine receptor density, which can influence an individual's risk for developing alcohol use disorder. KIAA0040: This is a gene associated with neural development. Variations in this gene have been implicated in various neurodevelopmental processes and may contribute to the genetic risk for alcohol use disorder.

CHAPTER TWO

LITERATURE REVIEW

Overview

This chapter focused on the related literature review under the following headings; conceptual review, theoretical review and empirical review from published and unpublished articles, textbook and journals.

2.1 Conceptual review

2.1.1 Concept of Alcohol

WHO, (2019) has defined alcohol use as a nonmedicinal consumption of psychoactive substances like beer, whiskey, wine and other alcoholic beverages that have dependence producing properties which have been widely used in many cultures for centuries. Less than half of the world's adults have consumed alcohol in the last 12 months, the global burden of disease caused by its harmful use is enormous. It exceeds those caused by many other risk factors and disease high on the global health agenda. Over 200 health conditions are linked to harmful alcohol use from liver diseases, road injuries and violence, cancers, cardiovascular diseases, suicides, tuberculosis and human immunodeficiency virus (HIV) (Rehm, & Shield, 2019). Although the highest levels of alcohol consumption are in Europe, Africa bears the heaviest burden of the disease and injury attributed to alcohol (WHO, 2018). Alcohol use disorder is a condition characterized by unhealthy and problematic patterns of alcohol consumption. It is a well-recognized disorder that comprise a broad spectrum of symptoms and behaviors associated with alcohol misuse. Alcohol use disorder affects a large significant portion of the population. The consequences of alcohol misuse extend beyond individual health, impacting various aspects of society including social dynamics, economic factors and public health (Jerlhag, 2019).

2.1.2 Epidemiology of Alcohol use disorder

Alcohol use affects approximately 240 million people worldwide, with the highest prevalence in Europe and America. In the United States, an estimated 20.8 million people aged 12 and older have a substance use disorder, with 15.7 million specifically struggling with alcohol use disorders. This makes alcohol the most commonly abused substance in the country (Nehring, et al., 2023). Globally, alcohol consumption is prevalent among 26.5% of individuals aged 15 to 19 years. In Japan, 56.8% of males and 47.8% of females consume alcohol. In Poland, the prevalence is about 20.1% for males and 10% for females. In Bulgaria, approximately 46.2% of males and 28.1% of females consume alcohol (Htet et al., 2020). According to the Global Burden of Disease (2016), Nigeria is one of the countries with the highest prevalence of alcohol consumption in sub-Saharan Africa. Data from the National Survey on Drug Use and Health in the United States revealed that approximately 138.3 million individuals aged 12 and older reported active alcohol use. Of these, 48.2% admitted

2.1.3 Etiology of alcohol use disorder

The pathogenesis of alcohol use disorder (AUD) remains incompletely understood, with multiple factors contributing to its development. Environmental influences such as home environment, peer pressure, and social interactions, along with genetic predispositions, cognitive functioning, and existing personality traits, are recognized as significant factors (McHugh and Weiss, 2019). Among undergraduate students, alcoholism often stems from socioeconomic disparities, frustration, unemployment, and poverty. Many young individuals turn to alcohol and drugs to cope with stress and anxiety. Of particular concern in undergraduate populations is the detrimental impact of excessive alcohol consumption, which can result in fatalities, depression, physical injuries, academic underachievement, and various health complications (Bravo et al., 2018).

The transition to tertiary education represents a pivotal lifestyle change for undergraduates, marking newfound independence from parental oversight. This shift exposes students to novel values and social norms divergent from those instilled at home, potentially prompting engagement in risky behaviors such as alcohol consumption, smoking, and substance abuse (Dumbili and Williams, 2018).

Research indicates that specific genetic factors influence an individual's susceptibility to alcohol use disorder. Variants of genes encoding alcohol dehydrogenase and aldehyde dehydrogenase enzymes are believed to confer protective effects against alcohol use disorder. Conversely, certain genetic markers, such as GABRG2 and GABRA2 involved in GABA receptor function, COMT Val 158Met affecting dopamine metabolism, DRD2 Taq1A influencing dopamine receptor density, and KIAA0040 linked to neural development, have been identified as potential genetic risk factors associated with an increased vulnerability to developing alcohol use disorder (Lovallo et al., 2019). These genetic insights underscore the complex interplay between biological predispositions and environmental influences in the development of alcohol use disorder among diverse populations, including undergraduates.

2.1.4 Metabolism of Alcohol

The metabolism of alcohol primarily occurs in the liver, primarily through the action of cytosolic alcohol dehydrogenase (ADH), which reduces nicotinamide adenine dinucleotide (NAD+) and produces acetaldehyde as a byproduct (Lu & Cederbaum, 2018). Subsequently, acetaldehyde is metabolized by aldehyde dehydrogenase (ALDH) to form acetate, which enters various metabolic pathways. ADH is also present in the gastrointestinal tract, contributing to the initial metabolism of alcohol upon ingestion, known as first-pass metabolism. The cytochrome P450 system, particularly CYP2E1, also plays a role in alcohol metabolism, though to a lesser extent than ADH (Lu and Cederbaum, 2018). In chronic

alcohol users, this pathway is upregulated, leading to increased alcohol metabolism rates. Several factors influence alcohol metabolism; generally, females metabolize alcohol faster than males due to lower levels of ADH, resulting in a slower first-pass metabolism and higher initial blood alcohol concentration after consumption (Lu & Cederbaum, 2018).

During pregnancy, fetal alcohol metabolism is slowed due to incomplete expression of CYP2E1 and ADH enzymes in the fetal liver, prolonging fetal exposure to alcohol and increasing the risk of fetal alcohol spectrum disorders (Lu & Cederbaum, 2018). Furthermore, Aging also lead to a decline in alcohol elimination rates, while fasting decreases alcohol dehydrogenase levels, slowing metabolism. Food consumption enhances liver blood flow and provides substrates like fructose, facilitating NAD+ regeneration for alcohol oxidation (Le Dare, et al. 2019). Diurnal variations affect alcohol elimination rates, with peak rates observed late in the evening. Heavy drinking can initially accelerate alcohol elimination, attributed to increased CYP2E1 expression, but this effect diminishes in individuals with liver disease (Lu & Cederbaum, 2018). Medications such as alcohol dehydrogenase inhibitors (Lu & Cederbaum, 2018) and H2 receptor blockers can also inhibit first-pass metabolism in the stomach, potentially raising blood alcohol levels.

2.1.5 Stages of alcohol intoxication

The rate of alcohol absorption is influenced by various factors, including the amount, concentration, and type of alcohol consumed, as well as the presence of food, gastric emptying rate, gastrointestinal motility, and blood flow (WHO, 2018). Blood alcohol concentration (BAC) is a critical measure, indicating the percentage of alcohol in the bloodstream at a specific time. For instance, a BAC of 0.10% means there is one-part alcohol for every thousand parts of blood. It is the BAC, not the absolute amount of alcohol consumed, that primarily determines the effects of alcohol on individuals (WHO, 2022). The effects of alcohol intoxication progress through predictable stages based on BAC levels:

a. a. 0.020-0.099%: At this stage, individuals typically experience pleasurable effects, slight loss of muscle coordination, changes in mood, personality, and behavior. Inhibitions are reduced, and individuals may falsely perceive their abilities to operate a vehicle (WHO, 2022).
b. b. 0.1-0.199%: Euphoric effects persist, but neurological impairment increases, slowing reaction times and impairing coordination, balance, and speech. Judgment becomes significantly impaired (WHO, 2018).
c. c. 0.2-0.299**%**: Intoxication becomes evident, impairing all mental, sensory, and physical capabilities. Nausea may occur, alongside severe lack of coordination, balance, and speech (WHO, 2022).
d. d. 0.3-0.399%: Severe conditions such as hypothermia, severe dysarthria, amnesia, and the onset of anesthesia (WHO, 2018).
e. e. 0.4-0.499%: Alcoholic coma begins, with decreased consciousness, lowered breathing, blood pressure, body temperature, urinary incontinence, and nearly absent reflexes (WHO, 2018).

f. f. 0.6-0.699%: This stage is often fatal due to airway obstruction, aspiration of vomit, or respiratory failure (WHO, 2018).

Translation of blood alcohol concentration into number of drinks. A blood alcohol concentration of 0.02% equals approximately 2 alcoholic drinks and 0.05% equals three alcoholic drinks. Four alcoholic drinks equal 0.08% blood alcohol concentration and five alcoholic beverages will give 0.10% blood alcohol concentration. Seven drinks will give 0.15% blood alcohol concentration (; Miller et al., 2019).

2.1.6 Effects of alcohol consumption

Evidence has shown that the higher number of alcohols a person consumes the greater the risk of developing an alcohol-associated cancer. Even those binge drinkers have an increased risk of some cancers (White et al., 2017). Moderate to heavy alcohol consumption is associated with higher risks of certain head and neck cancers. Moderate drinkers have 1.8-fold higher risks of oral cavity and pharynx cancers and 1.4-fold higher risks of larynx cancers than non-drinkers and heavy drinkers have 5-fold higher risks of oral cavity and pharynx cancers and 2.6-fold higher risks of larynx cancers. Alcohol consumption at any level is associated with an increased risk of a type of esophageal cancer called esophageal squamous cell carcinoma. The risks compared with no alcohol consumption range from 1.3-fold higher for light drinking to nearly 5-fold higher for heavy drinking (LoConte et al., 2018). Heavy alcohol consumption is associated with approximately 2-fold increased risks of two types of liver cancer (Petrick et al., 2018). Epidemiology studies have found an increased risk of breast cancer with increasing alcohol intake. Data from 118 studies showed that light drinkers have a slightly increased risk of breast cancer compared with non-drinkers. The risk increase is greater in moderate drinkers and heavy drinkers (LoConte et al., 2018).

Numerous studies have examined whether there is an association between alcohol consumption and the risk of other cancers (Mantovani, et al. 2022; McNabb et al. 2020). For

cancers of the ovary, prostate, stomach, uterus and bladder no association with alcohol use has been found or evidence for an association is inconsistent. Evidence is accumulating that alcohol consumption is associated with increased risks of melanoma and prostate cancers (Macke & Petrosyan 2022). In multiple studies any potential benefits of alcohol consumption for reducing the risks of some cancers are likely outweighed by the harms of alcohol consumption. According to the Global Burden of Disease Study (2016), the consumption of alcohol is the major risk factor for about sixty different disease conditions which consist of non-communicable diseases. The consumption of alcohol was also reported to be the seventh major risk factor for premature death and disability among aged 15 to 49 years. A recent study that included data sources as well as death and disability records from 195 countries and territories from 1990 to 2016, concluded that the optimal number of drinks to consume per day to minimize the overall risk to health is zero). The World Health Organization has reported about 7.6% and 4% death related to alcohol consumption among males and females. About two hundred diseases and health related conditions are associated with alcohol consumption such as liver cirrhosis, cancers and other injuries (Mekonen *et al,* 2018).

2.1.7 Diagnosis of alcohol use disorder

According to the diagnostic and statistical manual of mental disorders (DSM-5) (2016), alcohol use disorder is classified based on the presence of two or more of the following criteria within 12 months;

- Alcohol is often taken in more significant amounts or consumed longer than intended.
- A persistent desire or unsuccessful efforts exist to reduce or control alcohol use
- Craving or a strong desire or urge to consume alcohol
- Continued use of alcohol despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of alcohol

- A significant amount of time is spent on activities necessary to obtain or use alcohol or recover from the effects of alcohol
- Regular alcohol use leads to an inability to meet essential responsibilities at work, school or home.
- Recurrent alcohol used in situations in which it is physically hazardous.
- Significant reduction of important social, occupational or recreational activities due to alcohol use.
- Tolerance is characterized by the need for significantly increased amounts of alcohol to attain intoxication or the desired effect.

Based on the number of criteria met, a patient can be classified as having a mild alcohol use disorder if they meet 2 or 3 criteria, moderate alcohol use disorder if they meet 4 or 5 criteria and severe alcohol use disorder if they meet more than 6 criteria (Witkiewitz et al.,2019).

2.2 Theoretical Framework

The study adopted the Health Belief Model (HBM)

Health Belief Model (HBM)

The Health Belief Model (HBM) serves as the theoretical foundation for this study. Developed by social psychologists in the 1950s, the HBM is widely utilized in health behavior research, offering a framework to analyze the decision-making processes related to various health-related behaviors. Key Components of the Health Belief Model:

1. Perceived Susceptibility:

- Individuals are more likely to engage in health-related behaviors if they perceive themselves as susceptible to a particular health issue. In the context of this study, it explores the degree to which basic medical sciences undergraduates perceive themselves as susceptible to the negative consequences of excessive alcohol intake.

2. Perceived Severity:

- The model emphasizes the importance of perceived severity, suggesting that individuals are more likely to take action if they believe the health issue has severe consequences. Understanding the potential health risks associated with excessive alcohol intake can influence students' decisions about their alcohol consumption patterns.

3. Perceived Benefits:

- According to HBM, individuals are more likely to adopt a recommended health behavior if they believe it will bring them specific benefits. In the context of this study, students may be motivated to reduce excessive alcohol intake if they perceive benefits such as improved academic performance, better mental health, and overall well-being.

4. Perceived Barriers:

- HBM acknowledges that individuals may face perceived barriers or obstacles that hinder the adoption of health-promoting behaviors. Identifying and addressing barriers to reducing alcohol intake, such as social pressure or lack of awareness, are essential components of the model.

5. Cues to Action:

- The model proposes that external cues or triggers can prompt individuals to take action regarding their health. In the case of excessive alcohol intake, cues to action may include educational programs, awareness campaigns, or personal experiences that prompt students to reconsider their drinking habits.

6. Self-Efficacy:

- Self-efficacy refers to an individual's confidence in their ability to perform a specific behavior. In the context of the study, students with higher self-efficacy in managing stress and academic challenges without relying on excessive alcohol intake may be more likely to adopt healthier behaviors.

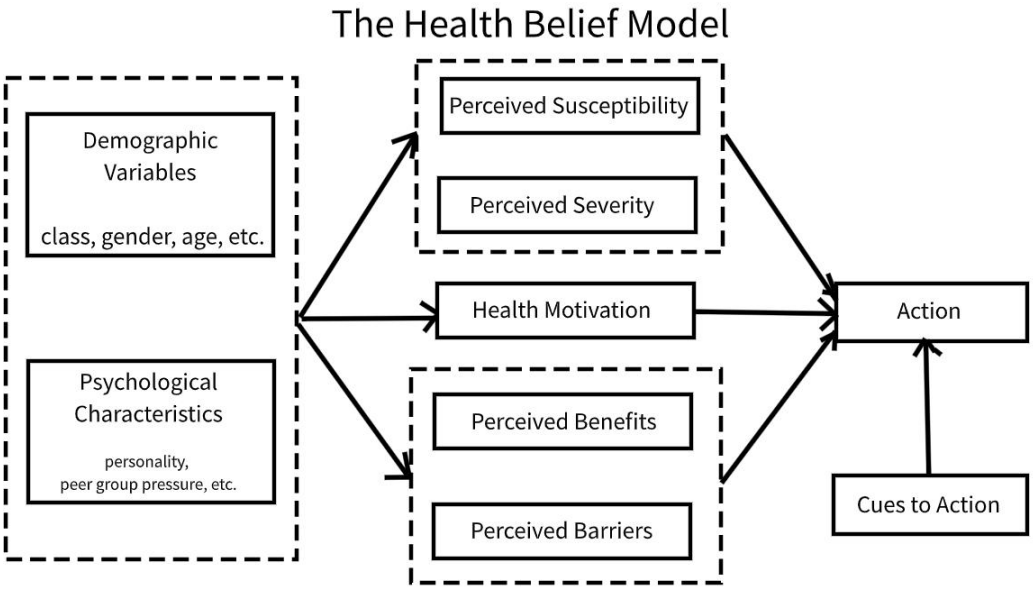

Fig. 2.1: Schematic representation of the Health Belief Mode (Walker, 2004)

Application to the study

Applying the Health Belief Model to this study allows for a structured exploration of basic medical sciences undergraduates' perceptions regarding the influence of excessive alcohol intake on their health and academic performance. The Health Belief Model (HBM) provides a comprehensive framework for analyzing the factors influencing excessive alcohol intake among basic medical science students. This model helps in understanding why students might engage in or avoid excessive drinking by focusing on their perceptions and beliefs.

Perceived Susceptibility involves evaluating how students view their personal risk of experiencing adverse effects from excessive alcohol consumption. If students believe they are likely to suffer from health issues, academic decline, or social problems due to their drinking habits, they may be more motivated to alter their behavior. By assessing these perceptions, the study can identify the extent to which students feel at risk and how this perception influences their drinking behavior.

Perceived Severity addresses how seriously students regard the consequences of excessive alcohol consumption. This component examines students' beliefs about the seriousness of potential outcomes, such as health complications, academic setbacks, and social consequences. If students recognize these outcomes as severe and impactful, they are more likely to take preventive actions. Understanding this aspect helps in gauging the gravity with which students approach their drinking habits and the potential impact on their well-being.

Perceived Benefits refers to the students' beliefs about the advantages of reducing or stopping excessive alcohol intake. If students perceive significant benefits, such as better health, improved academic performance, and enhanced social relationships, they are more likely to engage in behavior change. Exploring these perceived benefits provides insight into what positive outcomes students associate with reducing their alcohol consumption and how these perceptions might drive behavioral changes.

Perceived Barriers involve identifying the obstacles that prevent students from reducing their alcohol intake. These barriers might include peer pressure, stress, lack of knowledge about the consequences of alcohol, or limited access to support services. By understanding these challenges, the study can develop strategies to address and overcome these obstacles, thereby facilitating healthier drinking behaviors.

Cues to Action are triggers that prompt students to reconsider their alcohol consumption. These cues could be health promotion campaigns, personal experiences with alcohol-related issues, or academic feedback indicating a need for change. Identifying these cues helps in designing interventions that effectively motivate students to adopt healthier behaviors and address their drinking habits.

Self-Efficacy pertains to students' confidence in their ability to manage and reduce their alcohol consumption. If students believe they have the capability to control their drinking habits, they are more likely to make and sustain changes. Assessing self-efficacy provides

insight into how confident students are in their ability to implement and maintain healthier drinking behaviors and what support they might need to build this confidence.

2.3 Empirical literature review

2.3.1 knowledge of effect of excessive intake of alcohol

The study by Messina et al (2021) on knowledge and practice towards alcohol consumption in a sample of University students. The study aimed to examine alcohol habits in a population of university. The instrument used were Alcohol Use Disorders Identification Test-Consumption (AUDIT-C) and the Drinking Motive Questionnaire-Revised (DMQ-R). The result showed 53.3% of students were high risk drinkers and 13.1% of students were binge drinker. 43.8% of participants reported to have attended an educational course on alcohol. Motivations to drink +alcohol were 38.9% social, 15.63% coping and 5.55% of social pressure. The result implies that the University students were not fully aware of the effects of alcohol misuse.

Another study was done in Nigeria by Eze et al (2017) on alcohol consumption and awareness of its effects on health among secondary school students. The study aimed at determining the extent of alcohol consumption and the awareness of its negative effects on human health among secondary school students. The result showed that 55.2% male secondary school students moderately consumed beer and cocktail while female reported rare consumption of alcohol (44.8%). The findings also indicated rare consumption of distilled spirits among both male and female students in the investigated area. Male and female students differed significantly in their awareness of the negative effects of alcohol consumption on health.

Alves, et al. (2021) studied on alcohol-related knowledge and attitudes as predictors of drinking behaviors among Portuguese University students. The study aim was to assess the

prevalence of drinking behaviors of university students and their association with knowledge about alcohol consumption and general attitudes towards alcohol use. The study was a cross-sectional study with 840 sample size. The result showed that 85% of the respondents have had alcoholic beverages in the last 12 months. The knowledge about alcohol was better in students who were consuming alcoholic beverages when compared to lifelong abstainers. Older students had better knowledge about alcohol than students in the first year.

Also study by Ndapandula (2021) on assessment of the knowledge, attitude and practices of young adults on alcohol consumption and its effects on their health -Windhoek Namibia. The purpose of this study was to determine the knowledge, attitudes and practices of young adults on alcohol use and its effects on their health. The study was a cross-sectional design and participants were 383 between age 18 to 30 years. Sampling technique was cluster random sampling method. The result showed that most of the respondents had a good knowledge with more than 67.6% describing the awareness and dangers of alcohol. Respondent showed inadequate knowledge regarding the term standard drink and the recommended number of standard drinks. Respondents have good attitude and safe practices towards alcohol consumption and its effects on their health.

2.3.2 The associated factors influencing excessive intake of alcohol

The study by Louis et al (2020) on the prevalence and associated factors of alcohol use patterns among University students in Uganda. The aim of this study was on to examine the prevalence and cardinal demographic and psychosocial factors associated with specific alcohol use patterns among Ugandan university students. The instrument used include; the alcohol use disorders identification test (AUDIT), self-reporting questionnaire (SRQ-20) and the higher education stress inventory (HESI) respectively. The result showed the prevalence of any alcohol use, low-risk drinking, heavy episodic drinking and alcohol misuse were 31%, 17.3%, 4.5% and 8.9% respectively. Those with alcohol misuse were more likely to be male

and with significant depression symptoms. Non-alcohol users were more likely to report high levels of academic stress. In conclusion the prevalence of maladaptive alcohol use patterns id high among Ugandan university students integrating peer led psychological interventions into student health services is desperately needed.

Another study by Shibiru et al (2023) on prevalence and factors associated with alcohol consumption among secondary school students in Nekemte, Ethiopia: a cross-sectional study. The aim of this study is to evaluate the prevalence and associated factors for alcohol consumption among secondary school students in Nekemte town. The sample size in this study was 291. The result showed 27.84% of participants consume alcohol. Age, urban location, smoking, chewing, having friends who drink and having a family member who drinks alcohol. All these categories are significantly associated with alcohol use. The effects of alcohol consumption and its risks of mental illness, chronic illness and social problems in adulthood are not completely understood by school students.

Amare and Getinet (2019) study on alcohol use and associated factors among high school, college and University students in Ethiopia, systematic review and meta-analysis. The aim of this study is to show the prevalence of alcohol use and associated factors among students in Ethiopia. The study is a systematic review and meta-analysis of published studies on the prevalence of alcohol use and associated factors among students in Ethiopia. The result showed the prevalence of alcohol use among University, college and high school students was 26.19%. The factors such as peer pressure, gender male and living alone were associated factors for alcohol use. In conclusion, alcohol use among students was higher than the general population. It is better to give special attention to school students.

Also study by Gebeyehu and Biresaw (2021) on alcohol use and its associated factors among adolescents aged 15-19 years at government high schools of Aksum Town, Tigray, Ethiopia:

a cross-sectional study. This study aimed to assess the prevalence and associated factors of alcohol use among adolescents aged 15-19 years at the government high schools of Asum Town. The result showed prevalence of alcohol use was 39.7%. Being male, father's educational status, father occupation, experience parental neglect, strong social support and family size greater than five were the factors identified to be significantly associated with alcohol use among adolescents aged 15-19 years. The prevalence of alcohol use is found to be high when compared to other populations. A strong association has been found between alcohol use and lower paternal educational status and farming as an occupation of parents.

2.3.3 The perceived impact of excessive alcohol intake on the academic performance

The study by Okafor et al (2022) on the prevalence and the pattern of use of alcohol among undergraduate students in Jos Plateau State, Nigeria. This study is a cross-sectional study aimed at assessing the prevalence and pattern of use of alcohol among undergraduate students in Jos Plateau State, Nigeria. The participants were 290 undergraduates selected using multistage sampling method. The result showed prevalence of alcohol intake to be 33.7%, there is a significant association between use of alcohol and sex, there is also a significant association between alcohol use and level of study. There is a significant association between alcohol use and respondents' cumulative grade point. In conclusion, the university and government should collaborate with students to establish peer support groups and program that discourage the use of alcohol during school hours and while studying.

In a study conducted by Olorunleke et al. (2023) at the College of Education in Oro, Kwara State, Nigeria, the researchers aimed to investigate the perceived effects of alcohol intake and cigarette smoking on academic performance among college students. The study utilized a descriptive survey design and involved a sample of 400 students selected through accidental sampling. The findings revealed that alcohol intake and cigarette smoking were significantly

perceived as detrimental to academic performance, as indicated by the high correlation values ($r = 0.641$ and $r = 0.720$, respectively). The study concluded that these substances negatively impact students' academic outcomes, leading to recommendations for students to abstain from alcohol and seek help if already engaged in substance use to improve their academic performance.

El Ansari et al. (2020) conducted a survey among undergraduates in Finland to assess the association between alcohol consumption and perceived academic performance. The study involved an online questionnaire that assessed various sociodemographic factors, alcohol consumption behaviors, and students' perceptions of their academic performance. The results indicated that gender, religiosity, living situation, marital status, and age were associated with different alcohol consumption behaviors. However, factors such as study discipline, income sufficiency, and perceived academic performance were not significantly associated with alcohol consumption. The study emphasized the need for universities to address problem drinking among students and implement prevention strategies to mitigate the risks associated with alcohol use.

Hjarnaa et al. (2023) conducted a longitudinal cohort study involving 65,233 high school students in Denmark to investigate the relationship between alcohol intake, academic performance, and dropout rates. The study found that both frequent binge drinking and high weekly alcohol intake were associated with higher dropout rates and lower grade point averages. Interestingly, even students who never drank alcohol had a higher incidence rate ratio of dropout compared to those with low alcohol intake. The study concluded that alcohol consumption negatively impacts academic performance in a dose-dependent manner and called for policies and interventions aimed at reducing alcohol intake among high school students to safeguard their academic and future prospects.

Finally, Luo et al. (2023) explored the association between health-risk behaviors (HRBs), including substance abuse, and perceived academic performance (PAP) among middle and high school students in Shanghai, China. The cross-sectional study, which involved 35,740 participants, found that multiple HRBs, such as poor dietary habits, insufficient physical activity, and smoking, were negatively associated with PAP. Students who engaged in these behaviors were more likely to report lower academic performance. The study highlighted the need for comprehensive public health interventions to address HRBs among adolescents to enhance their academic outcomes.

2.4 Summary of the literature review

The literature was reviewed from both developing and developed countries. From the work reviewed, alcohol use disorder is a condition characterized by unhealthy and problematic patterns of alcohol consumption. It is a well-recognized disorder that comprise a broad spectrum of symptoms and behaviors associated with alcohol misuse. Alcohol use affects about 240 million people mostly in Europe and America globally. An estimated 20.8 million Americans age 12 and older had a substance use disorder and 15.7 million were alcohol use disorders whereas 2.7 million had an illicit drug use disorder. Evidence has shown that Nigeria was one of the countries with the highest prevalence of alcohol consumption in sub-Saharan Africa. The pathogenesis of alcohol use disorder is unknown. There are a lot of factors believed to have contributed comprise the environmental influences like home environment, peer pressure or interactions, genetic elements, cognitive functioning and certain existing personality disorders Also reviewed was the metabolism of alcohol use. For the theoretical review, positive-effect regulation theory and negative-effect regulation theory were used and different empirical studies reviewed.

CHAPTER THREE

RESEARCH METHODOLOGY

This section describes the methods and procedures that was used in this study. It discussed the followings; research design, research setting, population target, sample size and sampling techniques, instrument for data collection, validity and reliability of the instrument, method of data collection, method of data analysis and ethical consideration.

3.1 Research Design

A quantitative cross-sectional research design method was used for this study to assess the knowledge and associated factors on the influence of excessive intake of alcohol among basic medical sciences undergraduate in University of Benin.

3.2 Research setting

This study was carried out among basic medical sciences undergraduate in the University of Benin. The University of Benin (UNIBEN) is a prominent public research university located in Benin City, the capital of Edo State, Nigeria. Established in 1970, it has grown to become one of Nigeria's leading institutions of higher education. Edo State, situated in the southern region of Nigeria, is known for its rich cultural heritage and historical significance. The state is predominantly inhabited by the Edo people, who engage in various occupations, including agriculture, trading, and craftsmanship. The economy of Edo State is largely driven by agriculture, with crops such as cassava, yam, and maize being cultivated. Additionally, the state has a growing industrial sector, particularly in areas like oil and gas, textiles, and food processing. Edo State is home to several tertiary institutions, including the University of Benin, Ambrose Alli University, Igbinedion University, Edo State Polytechnic, and the College of Education, Igueben.

The University of Benin operates across two campuses: the Ugbowo Campus, which is the main campus where most faculties and administrative offices are located, and the Ekehuen Campus, primarily housing the College of Medical Sciences and related facilities. UNIBEN comprises 16 faculties, which include the Faculty of Arts, Faculty of Agriculture, Faculty of Basic Medical Sciences, Faculty of Dentistry, Faculty of Education, Faculty of Engineering, Faculty of Environmental Sciences, Faculty of Law, Faculty of Life Sciences, Faculty of Management Sciences, Faculty of Pharmacy, Faculty of Physical Sciences, Faculty of Medical Sciences, Faculty of Medicine, and Faculty of Veterinary Medicine.

The Faculty of Basic Medical Sciences is a critical component of the University of Benin, focusing on foundational medical education and research. It encompasses several departments, including the Department of Anatomy, Department of Biochemistry, Department of Physiology, Department of Medical Laboratory Science, and Department of Pharmacology and Therapeutics. The faculty aims to provide students with a comprehensive understanding of the basic sciences that underpin medical practice, preparing them for careers in healthcare, research, and academia. Additionally, the School of Basic Medical Sciences collaborates with the University of Benin Teaching Hospital (UBTH) to enhance practical training and research opportunities for students.

3.3 Target population

The target population consist of male and female undergraduates enrolled in the Basic Medical Sciences program, specifically those in 200 to 500 levels. To facilitate the selection, department were identified in the faculty, and their names were placed in a ballot. The balloting process allowed for random selection, which minimized any potential biases that could arise from subjective decision-making.

Table 3.1 Number of students in each department

Department	Level	Number of students
Medical Laboratory Science	200 level	65
	300 level	130
	400 Level	113
	500 level	101
		409
Nursing	200	151
	300	185
	400	164
	500	147
		647
	Grand total	**1056**

3.4 Sample Size Determination

The sample size was calculated as indicated below:

Using Taro Yamane's Formula

$$n = \frac{N}{1+N(e)^2}$$

Where

N= Population under study

E= Constant 0.05%) margin error

$$n = \frac{1056}{1+1056(0.05)}$$

$$n = \frac{1056}{1+1056\ (0.0025)}$$

$$n = \frac{1056}{1+2.64}$$

$$n = \frac{1056}{3.64}$$

n=290

Therefore, the sample size is 290.

3.5 Sampling Technique

The convenience sampling technique was used in this study. Convenience sampling is a non-probability sampling technique where researchers select participants based on their easy availability and accessibility. They use participants who are easily accessible and the population is divided into homogeneous subgroups based on shared characteristics such as gender, age, income, education level

Table 3.2 Distribution of sample size across all levels

Academic level	Determination of sample size in each level	Sample size per level
MLS		18
200 level	65/1056x290	
300 level	130/1056x290	36
400 Level	113/1056x290	31
500 level	101/1056x290	28
Nursing		
200	151/1056x290	41
300	185/1056x290	51
400	164/1056x290	45
500	147/1056x290	40
	1056/1056x290	**290**

3.6 Instrument for data collection

The instrument for data collection in this study was self-structured questionnaire. This was developed based on the objectives of the study. The questionnaire was made up of four sections with. Questions which were carefully drafted, sequenced and constructed in a bid to get in-depth information that is useful and relevant to the study was used.

Section A: consist of the demographic data of the participants (Age, Marital Status, Current Educational Level, Ethnicity).

Section B: consist of the level of knowledge of effect of excessive intake of alcohol with 4 items

Section C: consist the associated factors influencing excessive intake of alcohol with

Section C: the perceived impact of excessive alcohol intake on the academic performance with.

3.7 Validity of the study

The instrument's validity pertained to its capability to accurately measure the intended construct or concept (Surucu & Maslakci, 2020). Researchers assessed various validity types such as content, construct, criterion, and face validity to evaluate the instrument's accuracy. For this research, face and content validity was utilized to validate the research tool. The questionnaire undergo validation by both the project supervisor and a field expert, and necessary adjustments was implemented by the researcher before starting the main study.

3.8 Reliability of the Study

The questionnaire's reliability was assessed through the split-half model of the test of internal consistency. A pretest was administered to 10% which is 29 respondents of the sample size 290, involving students from another faculty—specifically, the Department of History in the Faculty of Arts—within the same age range. The data collected from the pretest undergo

analysis, and the Cronbach's alpha coefficient was computed. If a coefficient of 0.71 is obtained the instrument will be considered reliable.

3.9 Method of data collection

A well-structured questionnaire was administered to the students until the required sample size of 290 students is achieved. The students was approached in their classrooms at the department on different days, following permission from the heads of the departments involved in the study. The purpose of the study was explained to them, and the instrument for data collection was administered. Data collection was conducted by the researchers. The data collection was taken place during free periods, and on-the-spot retrieval of the administered copies of the questionnaire was ensured that all copies are collected on the same day. Data collection lasted for about two weeks.

3.10 Method of data analysis

The data collected was analyzed using the Statistical Package for the Social Sciences (SPSS) version 26.0. Descriptive statistics such as mean, frequency, and percentages was computed to summarize the data. Hypothesis testing was conducted using the Chi-square test of association, with the level of significance set at $p < 0.05$. The results of the analyses was then presented using tables, graphs, frequencies, and percentages to provide a clear overview of the findings

3.11 Ethical consideration

Ethical approval was obtained from the ethics and research committee of the College of Medical Sciences, University of Benin. Permission was obtained from the Head of Departments in the Department of Nursing Science, University of Benin, to proceed with the research. Before data collection begins, participants received detailed explanations about the research's purpose, content, and implications. They were assured of confidentiality, ensuring

the protection of their personal and private information. Throughout the research, ethical guidelines were strictly adhered to, including the following considerations:

1. Confidentiality: Respondents' information was treated confidentially, with no request for names or addresses in the questionnaire. Participants understood that their responses are confidential and solely used for research purposes. No personal identifiers was used in any document or questionnaire to maintain anonymity.

2. Voluntary Participation: Participants were informed of their right to voluntary participation without facing penalties or discrimination. They can choose to withdraw or decline to provide information at any point if they feel uncomfortable or unsure.

3. Avoidance of Plagiarism: Proper citation of all authors used in the study was ensured, both within the content and in the reference page.

CHAPTER FOUR

RESULTS

This chapter deals with the presentation of data collected from respondents on the knowledge and associated factors on the influence of excessive intake of alcohol among basic medical science undergraduates in a tertiary institution in Benin, Edo State. A total of 290 questionnaires were distributed to male and female undergraduates enrolled in the Basic Medical Sciences program, out of which all was properly filled and valid for data analysis, giving a response rate of 100% specifically those in 200 to 500 levels.

Table 4.1: Socio-demographic characteristics of respondents

Variable	Frequency (n = 290)	Percent (%)
Age		
18-24	158	54.5
25-34	113	39
35-44	17	5.86
45 and above	2	0.69
Gender		
Male	138	47.6
Female	152	52.4
Academic Level		
100 Level	0	0
200 Level	86	29.7
300 Level	78	26.9
400 Level	82	28.3
500 Level	59	20.3
Place of Residence		
On-Campus	176	60.7
Off-Campus	114	39.3
Other	0	0
Monthly Allowance		
Less than ₦50,000	137	47.2
50,000 - ₦80,000	113	39
More than ₦80,000	40	13.8
Family members who take alcohol		
Yes	195	67.2
No	95	32.8

Table 4.1 provides an overview of the socio-demographic characteristics of 290 respondents. The majority of respondents were aged 18-24 (54.5%) and 25-34 (39%). Gender distribution

was nearly balanced, with 52.4% being female and 47.6% male. Most students were in their 200 level (29.7%), followed by 400 level (28.3%), 300 level (26.9%), and 500 level (20.3%). In terms of residence, 60.7% of the students lived on-campus, while 39.3% resided off-campus. Regarding monthly allowances, 47.2% received less than ₦50, 000 39% between ₦50,000 - ₦80,000 and 13.8% more than ₦80,000 Additionally, 67.2% reported having family members who consume alcohol, while 32.8% did not.

Answering Research Questions

Table 4.2: Knowledge of excessive alcohol intake among Basic Medical Sciences undergraduate students at the University of Benin

S/N	Items	Frequency	Correct	Wrong	Mean	Remark
1.	**What is the MAIN effect of excessive alcohol intake on the human body?**					
	Increased risk of liver disease	241 (83)	241 (83)	49 (17)	1.8	Good
	Improved cognitive function	11 (4)				
	Reduced risk of heart disease	23 (8)				
	Enhanced muscle growth	15 (5)				
2.	**Which of the following is NOT a known health consequence of excessive alcohol consumption?**					
	Improved immune system	252 (87)	252 (87)	38 (13)	1.9	Good
	Increased risk of stroke	19 (7%)				
	Increased risk of certain cancers	12 (4%)				
	Reduced bone density	7 (2%)				
3.	**Excessive alcohol intake can lead to which of the following conditions?**					
	Increased risk of pancreatitis	205 (71)	205 (71)	85 (29)	1.7	Good
	Improved sleep quality	18 (6)				
	Decreased risk of diabetes	27 (9)				
	Reduced anxiety levels	40 (14)				
4.	**Which of these is NOT a common short-term effect of binge drinking?**					
	Enhanced academic performance	258 (89)	258 (89)	32 (11)	1.9	Good
	Impaired judgment	12 (4)				
	Increased risk of alcohol poisoning	7 (2)				
	Increased risk of injuries	13 (4)				
5.	**Prolonged excessive alcohol consumption can result in which of the following long-term effects?**					
	Increased risk of nerve damage	209 (72)	209 (72)	81 (28)	1.7	Good
	Improved liver function	1 (0.3)				
	Decreased risk of dementia	37 (13)				
	Reduced risk of high blood pressure	34 (12)				
			Grand Mean		**1.8**	

Mean Cut-off = 1.5

Table 4.2 highlights the knowledge of excessive alcohol intake among 290 Basic Medical Sciences undergraduate students at the University of Benin. The majority of respondents correctly identified the increased risk of liver disease (241), the lack of improvement in immune function as a consequence of excessive alcohol (252), and the increased risk of

pancreatitis (205) as effects of alcohol consumption, resulting in a mean score of 1.8, reflecting good knowledge. Additionally, 258 respondents accurately recognized that enhanced academic performance is not a short-term effect of binge drinking, and 209 were aware of the increased risk of nerve damage from prolonged excessive alcohol consumption. Overall, the students demonstrated a strong understanding of the health risks associated with alcohol, with a grand mean of 1.8, surpassing the cut-off of 1.5, indicating good knowledge of the topic.

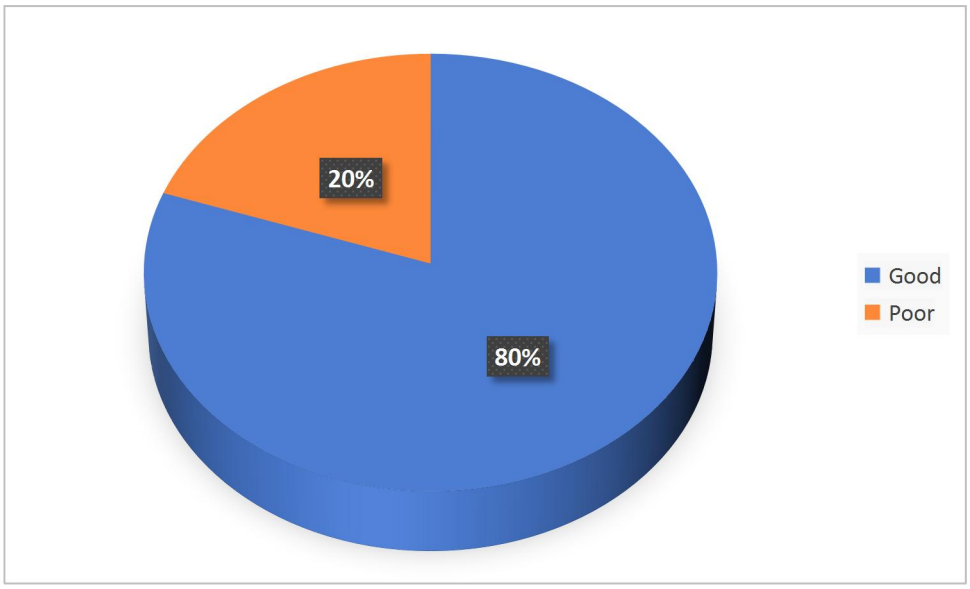

Figure 4.1: Pie Chart showing the knowledge of Knowledge of excessive alcohol intake

The pie chart shows that 233 (80.3%) Basic Medical Sciences undergraduate students have good knowledge of the effects of excessive alcohol intake, while 57 (19.7%) have poor knowledge.

Research Question 2: What are the associated factors influencing excessive intake of alcohol among basic medical sciences undergraduates in University of Benin?

Table 4.3: Associated factors leading to excessive intake of alcohol

S/N	Items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Remark
1.	Peer pressure is a significant factor that influences excessive alcohol intake among basic medical sciences undergraduates.	49 (17)	58 (20)	52 (18)	83 (29)	49 (17)	3.1	High
2.	Easy accessibility to alcohol on and around the university campus contributes to excessive alcohol consumption among students.	35 (12)	66 (23)	61 (21)	85 (29)	35 (12)	3.1	High
3.	Stress and anxiety experienced by basic medical sciences students can lead to increased alcohol intake as a coping mechanism.	38 (13)	60 (21)	50 (17)	94 (32)	38 (13)	3.2	High
4.	Lack of awareness and education on the dangers of excessive alcohol intake influences its consumption among basic medical sciences undergraduates.	153 (53)	107 (37)	8 (3)	18 (6)	153 (53)	1.7	Low
5.	Poor time management and work-life balance among basic medical sciences students contribute to excessive alcohol consumption.	40 (14)	62 (21)	54 (19)	81 (28)	40 (14)	3.2	High

Table 4.3 Cont'd

S/N	Items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Remark
6.	Cultural or social norms surrounding alcohol use on campus make it more likely for basic medical sciences students to engage in excessive alcohol consumption.	42 (15)	65 (22)	51 (18)	76 (26)	42 (15)	3.1	High
7.	The perceived positive effects of alcohol, such as relaxation or socializing, encourage excessive alcohol intake among basic medical sciences undergraduates.	37 (13)	63 (22)	48 (17)	91 (31)	37 (13)	3.2	High
					Grand Mean		**3.0**	

Mean Cut-off = 3.0

Table 4.3 presents the factors associated with excessive alcohol intake among Basic Medical Sciences undergraduate students. Peer pressure, easy accessibility to alcohol on campus, and stress and anxiety were identified as significant factors, each with a mean score of 3.1 or 3.2, indicating a high level of agreement among respondents. Poor time management, lack of awareness about alcohol's dangers, and cultural or social norms also contributed to alcohol consumption, with mean scores reflecting high influence (3.1 to 3.2). The perceived positive effects of alcohol, such as relaxation and socializing, were another key factor, scoring 3.2. Overall, with a grand mean of 3.1, the findings suggest that multiple factors contribute to the excessive intake of alcohol among these students, surpassing the mean cut-off of 3.0.

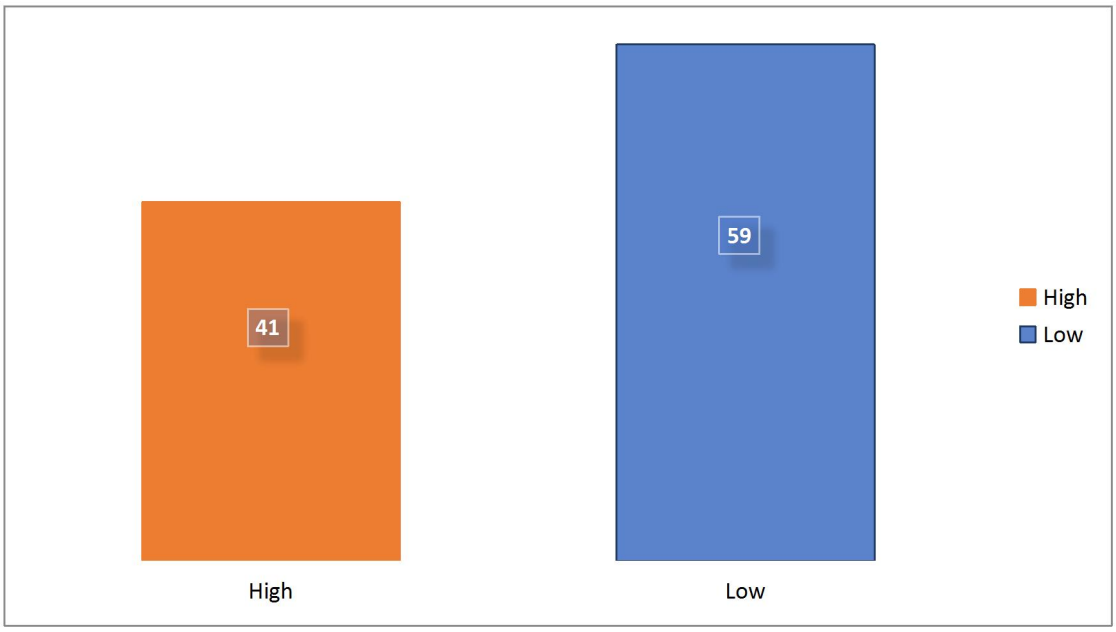

Figure 4.2: Bar chart showing associated factors leading to excessive intake of alcohol

The bar chart indicates that 171 (59%) respondents believe the associated factors leading to excessive alcohol intake are low, while 119 (41%) consider these factors to be high.

Research Question 3: What are the perceived impacts of excessive alcohol intake on the academic performance among basic medical sciences undergraduates in University of Benin?

Table 4.4: The perceived impact of excessive alcohol intake on academic performance

S/N	Items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Remark
1.	Excessive alcohol consumption negatively affects students' ability to focus during lectures or study sessions.	42 (14)	57 (20)	49 (17)	82 (28)	60 (21)	3.2	High
2.	Excessive alcohol intake causes students to miss classes, assignments, or academic deadlines.	40 (14)	59 (20)	53 (18)	84 (29)	54 (19)	3.2	High
3.	Alcohol consumption has a negative impact on the overall academic performance of students.	35 (12)	65 (22)	47 (16)	88 (30)	55 (19)	3.2	High
4.	Excessive alcohol intake contributes to poor grades or academic difficulties among students.	38 (13)	58 (20)	51 (18)	87 (30)	56 (19)	3.2	High
5.	After consuming alcohol in excess, students experience a decline in cognitive abilities, such as memory or concentration.	41 (14)	62 (21)	46 (16)	79 (27)	62 (21)	3.2	High
6.	Alcohol consumption affects students' ability to prepare for exams or complete academic projects effectively.	39 (13)	64 (22)	50 (17)	82 (28)	55 (19)	3.2	High
					Grand Mean		**3.2**	

Mean Cut-off = 3.0

Table 4.4 illustrates the perceived impact of excessive alcohol intake on the academic performance of Basic Medical Sciences undergraduate students. Across all items, respondents agreed that excessive alcohol consumption negatively affects various aspects of academic performance, with a consistent mean score of 3.2, indicating a high level of agreement. Key areas impacted include focus during lectures, missed classes or deadlines, and overall

academic performance. Additionally, respondents noted a decline in cognitive abilities, such as memory and concentration, and reduced effectiveness in exam preparation and project completion. The grand mean of 3.2 surpasses the cut-off of 3.0, emphasizing the significant detrimental effects of excessive alcohol intake on students' academic success.

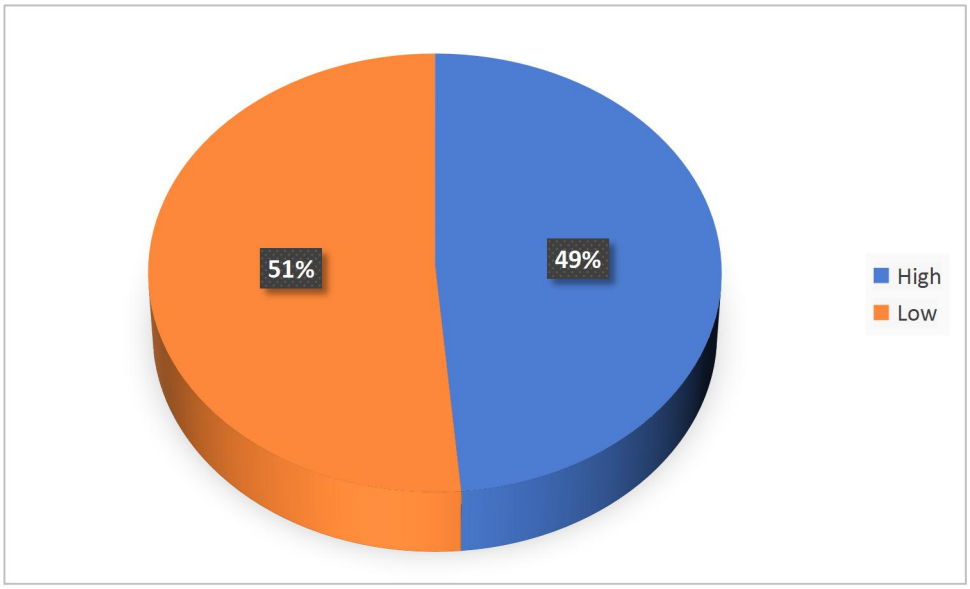

Figure 4.3: Pie Chart showing perceived impact of excessive alcohol intake on academic performance

The pie chart reveals that 149 (51.4%) respondents perceive the impact of excessive alcohol intake on academic performance as low, while 141 (48.6%) consider the impact to be high.

Research Hypothesis

There is no significant relationship between socio demographic factors such as gender, level of study, department and the excessive intake of alcohol among basic medical sciences undergraduates in University of Benin.

Table 4.5: showing relationship between socio demographic factors such as gender, level of study, department and the excessive intake of alcohol among basic medical sciences undergraduates in University of Benin

Variable	excessive intake of alcohol		Test Statistics (χ^2)	df	P value	Decision
	High	Low				
Age						
18-24	57 (53.3)	32 (46.7)	6.082	3	0.02	Rejected
25-34	31 (46.9)	35 (53.1)				
35-44	5 (38.5)	8 (61.5)				
45 and above	5 (38.5)	8 (61.5)				
Gender						
Male	79 (82.0)	37 (18.0)	6.495	1	0.01	Rejected
Female	82 (64.2)	62 (35.8)				
Academic Level						
200 Level	57 (53.3)	32 (46.7)	1.258	3	0.3	Rejected
300 Level	31 (46.9)	35 (53.1)				
400 Level	5 (38.5)	8 (61.5)				
500 Level	23 (76.7)	7 (23.3)				
Place of Residence						
On-Campus	23 (76.7)	7 (23.3)	1.087	3	0.02	Rejected
Off-Campus	56 (88.2)	9 (47.4)				
Other	22 (91.7)	2 (8.3)				
Monthly Allowance						
Less than 50,000 NGN	56 (88.2)	9 (47.4)	2.453	2	000	Rejected
50,000 - 80,000 NGN	25 (45.0)	30 (55.0)				
More than 80,000 NGN	20 (40.0)	30 (60.0)				
Family members who take alcohol						
Yes	25 (55.0)	20 (45.0)	7.065	3	0.01	Rejected
No	20 (40.0)	30 (60.0)				

The Chi-square analysis reveals significant associations between excessive alcohol intake and several socio-demographic factors among basic medical sciences undergraduates at the

University of Benin. Age shows a significant relationship ($\chi^2 = 6.082$, df = 3, p = 0.02), with younger students (18–24) reporting higher intake. Gender is also significant ($\chi^2 = 6.495$, df = 1, p = 0.01), with males (82.0%) consuming more excessively than females (64.2%). Place of residence ($\chi^2 = 1.087$, df = 3, p = 0.02) and monthly allowance ($\chi^2 = 2.453$, df = 2, $p < 0.001$) are significantly associated, with off-campus residents and those with lower allowances reporting higher consumption. Family history of alcohol use is similarly significant ($\chi^2 = 7.065$, df = 3, p = 0.01). However, academic level shows no significant association ($\chi^2 = 1.258$, df = 3, p = 0.3). Based on the various P values, the null hypothesis is rejected. Therefore, there is significant relationship between socio demographic factors such as gender, level of study, department and the excessive intake of alcohol among basic medical sciences undergraduates in University of Benin

CHAPTER FIVE

DISCUSSION OF FINDINGS

This chapter discusses the major findings of the research in relation to the literature reviewed, the implication for nursing, summary, conclusion, Recommendations and Suggestions for further Studies.

5.1. Discussion of major Findings

This study deals with the knowledge and associated factors on the influence of excessive intake of alcohol among basic medical science undergraduates in a tertiary institution in Benin, Edo State. The socio-demographic characteristics of the respondents in this study provides valuable context for understanding the findings related to knowledge, factors influencing, and perceived impact of excessive alcohol intake. The age distribution of respondents shows a predominance of young adults, with 54.5% falling in the 18-24 age range and 39% in the 25-34 range. This aligns with typical age ranges for undergraduate students and is consistent with many studies on alcohol use among university students, such as Amare and Getinet (2019) in Ethiopia and Okafor et al. (2022) in Nigeria.

The younger age profile of the sample may influence perceptions and behaviors related to alcohol consumption, as younger students may be more susceptible to peer influence and social pressures. Gender distribution is relatively balanced, with 52.4% female and 47.6% male respondents. This near-equal representation allows for potential gender-based comparisons in alcohol-related knowledge and behaviors, which could be explored in future analyses. Some studies, like Louis et al. (2020) in Uganda, have found gender differences in alcohol use patterns among university students. The academic level distribution shows representation across 200 to 500 levels, with no first-year students included. This suggests that respondents have had some exposure to university life and potentially to alcohol-related

education within their medical sciences curriculum. The absence of 100 level students might affect the overall picture, as first-year students often face unique challenges in adapting to university life that can influence alcohol consumption patterns. Place of residence data reveals that 60.7% of respondents live on-campus, while 39.3% live off-campus. This distribution is important when considering factors like accessibility to alcohol and social norms surrounding drinking, as highlighted in the findings on factors influencing excessive alcohol intake.

The higher proportion of on-campus residents might influence the overall perception of alcohol availability and campus drinking culture. Monthly allowance information provides insight into the economic status of the students, with 47.2% receiving less than ₦50, 000 and only 13.8% receiving more than 80,000 NGN. Economic factors can influence alcohol consumption patterns, as noted in studies like Shibiru et al. (2023) in Ethiopia, where higher monthly pocket money was associated with increased likelihood of alcohol use.

5.1.2 Knowledge of effect of excessive intake of alcohol

They provide valuable insights into the knowledge of excessive alcohol intake among undergraduate students. A substantial majority of students, 80.3%, demonstrated good knowledge of the effects of excessive alcohol consumption, while 19.7% showed poor knowledge. This high level of awareness aligns with some previous research, such as Ndapandula's 2021 study in Namibia, which found that 67.6% of young adults had good knowledge about alcohol's dangers. However, it contrasts with other studies like Messina et al. (2021), which suggested university students were not fully aware of alcohol misuse effects.

The study delved into specific areas of knowledge, revealing strengths and potential gaps. Students showed particularly strong understanding in identifying liver disease as a main effect of excessive alcohol intake and recognizing that improved immune system is not a

consequence of heavy drinking. They also demonstrated good awareness of short-term effects, with most correctly identifying that enhanced academic performance is not associated with binge drinking. Knowledge about long-term effects like increased risk of nerve damage was also strong. However, slightly fewer students correctly associated excessive alcohol intake with increased risk of pancreatitis, suggesting this specific health consequence might be less emphasized in their education.

The overall good knowledge (grand mean of 1.8, above the cut-off of 1.5) among these students is encouraging and somewhat contradicts studies like Shibiru et al. (2023), which found school students did not fully comprehend alcohol consumption risks. This difference might be attributed to the specialized nature of Basic Medical Sciences education. Despite the generally positive results, the presence of a significant minority (19.7%) with poor knowledge highlights the need for continued education and awareness programs, even among medical students. These findings underscore the importance of comprehensive alcohol education in medical curricula and suggest potential for these students to serve as peer educators. Future research could explore how this knowledge translates into personal alcohol consumption behaviors and attitudes towards alcohol use among these students, providing a more complete picture of the relationship between knowledge and practice in this population.

5.1.3 Factors influencing excessive intake of alcohol

The factors associated with excessive alcohol intake among undergraduate students. The bar chart indicates that 59% of respondents perceive these factors as having a low influence, while 41% consider them to have a high influence. This split in perception suggests a complex interplay of factors affecting alcohol consumption among these students. Despite the overall perception leaning towards low influence, the detailed analysis of specific factors reveals that most are rated as having a high influence, with mean scores above the 3.0 cut-off. This apparent contradiction highlights the complexity of alcohol-related behaviors and perceptions among university students. Peer pressure emerges as a significant factor (mean 3.1), aligning with findings from studies like Amare and Getinet (2019) in Ethiopia, which identified peer pressure as a major contributor to alcohol use among students.

The influence of peer groups on drinking behaviors is a consistent theme in alcohol research among young adults. Easy accessibility of alcohol on and around campus also scores highly (mean 3.1), echoing concerns raised in various studies about the availability of alcohol in university environments. This factor underscores the importance of considering environmental influences on student drinking behaviors. Stress and anxiety as drivers of alcohol consumption received one of the highest mean scores (3.2). This finding resonates with Louis et al.'s (2020) study in Uganda, which found links between alcohol misuse and depression symptoms among university students. However, it's worth noting that the relationship between stress and alcohol use can be complex, with some studies finding non-linear associations. Lack of awareness and education on the dangers of excessive alcohol intake scored low (mean 1.7), contrasting with the high scores of other factors. This low score suggests that students perceive themselves as well-informed about alcohol's risks, which aligns with the findings from the first objective showing good knowledge levels. However, this perceived knowledge doesn't necessarily translate to reduced influence of other factors

on alcohol consumption. Poor time management and work-life balance (mean 3.2) and cultural or social norms surrounding alcohol use on campus (mean 3.1) both scored highly.

These findings highlight the importance of considering both individual and environmental factors in understanding alcohol consumption patterns among students. The perceived positive effects of alcohol, such as relaxation or socializing, also received a high score (mean 3.2). This aligns with studies like Messina et al. (2021), which found social reasons to be primary motivations for alcohol consumption among university students. The overall grand mean of 3.0 exactly matches the cut-off, indicating that while individual factors are perceived as highly influential, the overall perception of their influence is balanced. This result underscores the complex nature of alcohol consumption behaviors among students and the need for multifaceted approaches to addressing excessive alcohol intake. These findings suggest that interventions aimed at reducing excessive alcohol consumption among Basic Medical Sciences students should address multiple factors simultaneously. While education about alcohol's risks appears to be effective, efforts to manage stress, promote healthy social norms, improve time management skills, and provide alternative socializing opportunities might be equally important. Future research could explore how these factors interact and which combinations of interventions might be most effective in this specific student population.

5.1.4 Impact of excessive alcohol intake on the academic performance

The study on the perceived impact of excessive alcohol intake on academic performance among undergraduate students presents a nuanced picture. The results show a nearly even split in perception, with 51.4% of respondents viewing the impact as low and 48.6% considering it high. This division in perception aligns with the complex relationship between alcohol consumption and academic performance observed in previous studies. Despite the split in overall perception, all specific items assessing the impact of excessive alcohol intake

on academic performance scored a mean of 3.2, above the cut-off of 3.0, indicating a high perceived impact. This consistency across different aspects of academic performance suggests that while students may not universally perceive a high overall impact, they do recognize specific ways in which excessive alcohol consumption can negatively affect their studies.

The perceived negative effects on focus during lectures or study sessions, missing classes or deadlines, and overall academic performance align with findings from studies like Okafor et al. (2022) in Nigeria, which found a significant association between alcohol use and respondents' cumulative grade point average. Similarly, the perceived impact on grades and cognitive abilities, such as memory and concentration, echoes the findings of Hjarnaa et al. (2023) in Denmark, where both frequent binge drinking and high weekly alcohol intake were associated with lower grade point averages. The recognition that excessive alcohol intake affects students' ability to prepare for exams or complete academic projects effectively is consistent with the study by Olorunleke et al. (2023) in Nigeria, which found that alcohol intake was perceived as detrimental to academic performance.

This perception among Basic Medical Sciences students suggests an awareness of the potential consequences of excessive drinking on their academic success. However, the nearly even split in overall perception of impact (51.4% low vs. 48.6% high) presents an interesting contrast to the consistently high mean scores for specific impacts. This discrepancy might reflect a complex interplay of factors, including personal experiences, observed behaviors of peers, or varying definitions of "excessive" alcohol intake. It may also indicate that while students recognize potential negative impacts, they might not perceive these impacts as severe or widespread in their immediate academic environment. These findings align with the broader literature suggesting a negative relationship between alcohol consumption and

academic performance, as seen in studies like El Ansari et al. (2020) in Finland and Luo et al. (2023) in China.

However, the split perception among Basic Medical Sciences students suggests a need for further research to understand the factors influencing these perceptions and how they relate to actual alcohol consumption behaviors and academic outcomes. The results underscore the importance of continued education and awareness programs about the potential academic consequences of excessive alcohol consumption, even among students in health-related fields. They also highlight the need for targeted interventions that address not only the direct effects of alcohol on academic performance but also the perceptions and attitudes that may influence drinking behaviors among university students.

5.3 Summary

The study investigates the knowledge, factors influencing, and perceived impact of excessive alcohol intake among undergraduate students. The results reveal that 80.3% of the students demonstrated good knowledge of the effects of excessive alcohol intake, particularly recognizing its link to liver disease and the absence of benefits such as improved immune function. However, a notable 19.7% still showed poor knowledge, indicating the need for ongoing education.

Factors contributing to excessive alcohol consumption include peer pressure, stress, easy access to alcohol, and cultural norms. The overall perception of these influences was split, with 41% considering them high and 59% viewing them as low, highlighting the complexity of alcohol-related behaviors among students. Regarding the perceived impact of excessive alcohol consumption on academic performance, 48.6% of students believed it had a high negative effect, particularly in areas such as focus during lectures, missed classes, and reduced cognitive abilities. Despite this, 51.4% perceived the impact as low, suggesting

varied perceptions of alcohol's effects on academic success. The study underscores the importance of comprehensive alcohol education and intervention strategies that address both knowledge gaps and behavioral factors influencing alcohol consumption among students. The findings call for targeted efforts to reduce excessive drinking and mitigate its potential impact on academic performance.

5.2 Implication to nurses

The findings of the study on excessive alcohol intake among undergraduate students hold significant implications for nurses, particularly those involved in health education, preventive care, and student support services. Nurses play a crucial role in promoting awareness and preventive strategies to mitigate alcohol-related health risks. Given the good knowledge demonstrated by a majority of students regarding the dangers of excessive alcohol intake, nurses can build on this foundation by reinforcing education on less emphasized health consequences, such as pancreatitis.

Moreover, nurses can leverage their expertise in mental health and stress management to address factors like stress, peer pressure, and poor time management, which were identified as contributors to excessive alcohol consumption. By implementing targeted interventions, such as stress-relief programs, time management workshops, and counseling services, nurses can help students develop healthier coping mechanisms and reduce reliance on alcohol as a means of managing academic pressures.

The high perceived impact of excessive alcohol intake on academic performance further emphasizes the need for nurse-led initiatives that integrate alcohol education with academic support services. Nurses can collaborate with academic institutions to provide resources that address the academic and cognitive challenges students face due to alcohol misuse, such as

memory lapses and poor concentration. These efforts can enhance students' academic success while fostering a culture of health and well-being on campus.

5.4 Conclusion

This study highlights significant insights into the knowledge, contributing factors, and perceived impact of excessive alcohol intake among undergraduate students in Basic Medical Sciences at the University of Benin. The majority of students exhibited a good understanding of the detrimental effects of excessive alcohol consumption, though a substantial minority still lacked adequate knowledge, emphasizing the need for continued educational efforts.

Key factors influencing excessive alcohol intake, such as peer pressure, stress, easy access to alcohol, and cultural norms, point to a multifaceted issue requiring holistic intervention strategies. Although perceptions of alcohol's negative impact on academic performance were divided, the recognition of its effects on focus, cognitive abilities, and academic success indicates that excessive drinking poses a real threat to students' educational outcomes.

These findings call for targeted prevention and education programs that not only increase awareness but also address the underlying factors driving alcohol consumption. Such efforts will be critical in promoting healthier behaviors and minimizing the academic risks associated with excessive alcohol intake among students.

5.6 Recommendations

Based on the findings of this study, the following recommendations are proposed:

1. Educational institutions, particularly those in health-related fields, should implement comprehensive alcohol education programs. These programs should focus on the risks associated with excessive alcohol consumption, particularly its short-term and long-term effects on health and academic performance. Targeting both students with poor

knowledge and reinforcing understanding among those with good knowledge will be essential.

2. Given the role of stress and anxiety in contributing to excessive alcohol intake, universities should provide better mental health resources. Workshops on stress management, counseling services, and promoting a healthy study-life balance can help students find healthier coping mechanisms instead of resorting to alcohol.
3. Easy accessibility to alcohol on and around campuses should be addressed through stricter enforcement of alcohol policies. Universities can collaborate with local authorities to regulate alcohol sales in areas surrounding the campus, while also discouraging on-campus drinking through awareness campaigns.
4. Peer pressure was identified as a significant factor influencing alcohol consumption. Peer-led programs where students educate each other about the dangers of excessive alcohol intake could prove effective. Such initiatives would allow students to relate more easily and provide a supportive community promoting healthier behaviors.
5. There is a need to shift cultural norms surrounding alcohol use in university settings. Universities should create and promote alcohol-free social events and provide alternatives to the drinking culture. Encouraging participation in clubs, recreational activities, and community engagement can reduce the influence of alcohol on student socialization.
6. Given the perceived negative impact of alcohol on academic performance, tailored interventions that link alcohol education to academic success should be developed. Workshops or seminars that directly address how excessive alcohol consumption affects grades, focus, and cognitive functions could motivate students to reconsider their drinking habits.

5.5 Limitations of study

The study relies on self-reported data, which may introduce response bias. Students may over- or under-report their knowledge, perceptions, and behaviors related to alcohol intake due to social desirability or personal biases, potentially impacting the accuracy of the findings.

5.7 Suggestions for further Studies

The following suggestions for further studies are proposed:

1. Future research should explore the long-term impact of alcohol consumption on academic performance. By conducting longitudinal studies, researchers can track the academic progress of students over time, providing a clearer picture of how drinking habits evolve and influence academic outcomes.
2. While this study focuses on quantitative data, future studies could adopt a qualitative approach to better understand student perceptions of alcohol use and its effects. In-depth interviews or focus groups could provide insights into why students engage in excessive alcohol intake and how they perceive its impact on their academic and social lives.

References

Adeloye, D., Olawole-Isaac, A., Auta, A., Dewan, M. T., Omoyele, C., Ezeigwe, N., ... & Adewole, I. F. (2019). Epidemiology of harmful use of alcohol in Nigeria: a systematic review and meta-analysis. *The American journal of drug and alcohol abuse*, *45*(5), 438-450.

Alves, R. F., Precioso, J., & Becoña, E. (2021). Alcohol-related knowledge and attitudes as predictors of drinking behaviours among Portuguese university students. *Alcoholism and Drug Addiction/Alkoholizm i Narkomania*, *34*(1), 33-50.

Amare, T., & Getinet, W. (2020). Alcohol use and associated factors among high school, college and university students in Ethiopia, systematic review, and meta-analysis, 2018. *Journal of Mental Health*, *29*(4), 455-463.

Blanco, V., Salmerón, M., Otero, P., & Vázquez, F. L. (2021). Symptoms of depression, anxiety, and stress and prevalence of major depression and its predictors in female university students. *International journal of environmental research and public health*, *18*(11), 5845.

Bravo, A. J., Pearson, M. R., & Henson, J. M. (2017). Drinking to cope with depressive symptoms and ruminative thinking: A multiple mediation model among college students. *Substance use & misuse*, *52*(1), 52-62.

Byrne, A., Barber, R., & Lim, C. H. (2021). Impact of the COVID‐19 pandemic–a mental health service perspective. *Progress in Neurology and Psychiatry*, *25*(2), 27-33b.

Charles, N. E., Strong, S. J., Burns, L. C., Bullerjahn, M. R., & Serafine, K. M. (2021). Increased mood disorder symptoms, perceived stress, and alcohol use among college students during the COVID-19 pandemic. *Psychiatry research*, *296*, 113706.

Dumbili E.W., Williams C (2018). Anywhere, everywhere: alcohol industry promotion strategies Nigeria and their influence on young people. Afr J Drug Alcohol Stud. 15 (2): 135-152.

El Ansari, W., Salam, A., & Suominen, S. (2020). Prevalence and socio-demographic, academic, health and lifestyle predictors of illicit drug/s use among university undergraduate students in Finland. *International journal of environmental research and public health*, *17*(14), 5094.

Eze NM, Njoku HA, Eseadi C, Akubue BN, Ezeanwu AB, Ugwu UC et al (2017). Alcohol consumption and awareness of its effects on health among secondary school students' in Nigeria. 96(48).

Gebeyehu E.T., Biresaw M.S. (2021). Alcohol use and its associated factors among adolescents aged 15-19 years at governmental high schools of Aksum town, Tigray, Ethiopia: A cross- sectional study.

Gilbert, L. (2020). Alcohol: Truth and consequences on campus: Time to change college binge drinking culture once and for all. *JC & UL*, *45*, 141.

Groenewald C, Essack Z, Khumalo S (2018). Speaking through pictures: canvassing adolescent risk behaviors in a semi-rural community in Kwazulu-Natal Province, South Africa. S Afr J Child Health; 12 (2 Suppl 1): S57-S62.

Gunnell, D., Appleby, L., Arensman, E., Hawton, K., John, A., Kapur, N., ... & Yip, P. S. (2020). Suicide risk and prevention during the COVID-19 pandemic. *The Lancet Psychiatry*, *7*(6), 468-471.

Haviland, S., & Robbins, S. (2021). Career and technical education as a conduit for skilled technical careers: A targeted research review and framework for future research. *ETS Research Report Series*, *2021*(1), 1-42.

Hernández-Torrano, D., Ibrayeva, L., Sparks, J., Lim, N., Clementi, A., Almukhambetova, A., ... & Muratkyzy, A. (2020). Mental health and well-being of university students: A bibliometric mapping of the literature. *Frontiers in psychology*, *11*, 1226.

Htet H, Saw YM, Saw TN, Htun NM, Lay Mon K, Cho SM, et al. (2020). Prevalence of alcohol Consumption and its risk factors among University students: A cross-sectional study across Six Universities in Myanmar. PLOS One 2020; 15; e0229329.

Jerlhag E (2019). Gut-brain axis and addictive disorders: A review with focus on alcohol and drugs of abuse. Pharmacol Ther; 196:1-14.

Kawaida, K., Yoshimoto, H., Saito, G., & Takayashiki, A. (2021). Optimal cutoff values of the alcohol use disorders identification test and its short version for detecting excessive alcohol use in Japanese college students. *The Tohoku Journal of Experimental Medicine*, *253*(1), 3-10.

Kuteesa, M. O., Weiss, H. A., Cook, S., Seeley, J., Ssentongo, J. N., Kizindo, R., & Webb, E. L. (2020). Epidemiology of alcohol misuse and illicit drug use among young people aged 15–24 years in fishing communities in Uganda. *International journal of environmental research and public health*, *17*(7), 2401.

Le Dare B, Lagente V, Gicquel T (2019). Etanol and its metabolites: update on toxicity, benefits and focus on immunomodulatory effects. Drug Metab Rev. 51(4): 545-561.

LoConte NK, Brewster AM, Kaur JS, Merrill JK, Alberg AJ (2018). Alcohol and cancer: A statement of the American society of clinical oncology. Journal of clinical oncology; 36(1):83-93.

Louis HK et al (2020). Prevalence and associated factors of alcohol use patterns among university students in Uganda. Pan Africa Medical Journal; 37: 339.

Lovallo WR, Cohoon AJ, Sorocco KH, Vincent AS et al (2019). Early-Life Adversity and Blunted Stress Reactivity as Predictors of alcohol and drug use in persons with COMT. 43(7):1519-1527.

Lu Y, Cederbaum AL (2018). Cytochrome P450S and Alcoholic Liver Disease. Curr pharm Des: 24(14).

Macke, A. J., & Petrosyan, A. (2022). Alcohol and prostate cancer: Time to draw conclusions. *Biomolecules*, *12*(3), 375.

McHugh R.K., Weiss R.D. (2019). Alcohol use disorder and depressive disorders. Alcohol Res.40(1)

Mekonen T, Fekadu W, Chane T, Bitew S (2018). Problematic alcohol consumption among University Students. Front Psychiatry; 8:16-21.

Messina MP, Battagliese G, D'Angelo A, Ciccarelli R, Pisciotta F, Tramonte L, Fiore M. (2021). Knowledge and practice towards alcohol consumption in a sample of University students

Miller SC, Fiellin DA, Rosenthal RN, Saitz R (2019). The ASAM principles of addiction medicine, sixth edition. Philadephia: Wolters Kluwer.

Minian, N., Corrin, T., Lingam, M., deRuiter, W. K., Rodak, T., Taylor, V. H., ... & Selby, P. (2020). Identifying contexts and mechanisms in multiple behavior change interventions affecting smoking cessation success: a rapid realist review. *BMC Public Health*, *20*(1), 1-26.

Morojele, N. K., Shenoi, S. V., Shuper, P. A., Braithwaite, R. S., & Rehm, J. (2021). Alcohol use and the risk of communicable diseases. *Nutrients*, *13*(10), 3317.

Ndapandula N.A. (2021). Assessment of the knowledge, attitudes and practices of young adults on alcohol consumption and its effects on their health – Windhoek, Namibia.

Nehring S.M., Freeman A.M., Chen RJ (2023). Alcohol use disorder. National library of medicine

Okafor KC, Bimba JS, Adekeye OA, Obateru AP, Idoko LO (2022). The prevalence and pattern of use of alcohol among Undergraduate Students in Jos Plateau State, Nigeria.Open journal of preventive medicine. Vol 12; 8.

Okafor, K.C., Azuike, E.C and Okojie, P.W. (2018). The causes and prevalence of Road Traffic Accidents amongst Commercial Long Distance Drivers in Benin City,Edo State, Nigeria. Nigeria Journal of Medicine. 26, 220-230.

Owolabi EO, Goon DT, Adeniyi OV, Seekoe E (2018). Adult binge drinking: rate, frequency and intensity in Buffalo City Metropolian Municipality, South Africa. South African family practice. 60 (2): 46-52.

Paat, Y. F., Hope, T. L., & Dominguez, S. (2023). Substance use behavior among Hispanic emerging adults in Los Angeles, California. *Journal of Ethnicity in Substance Abuse*, *22*(2), 453-476.

Petrick JL, Campbell PT, Koshiol J et al (2018). Tobacco, alcohol use and risk of hepatocellular carcinoma and intrahepatic cholangiocarcinoma: The Liver Cancr Pooling Project. British Journal of Cancer; 118(7): 1005-1012.

Redwan, S. (2021). *Effect Of Alcohol Beverage Advertisment On The Drinking Behaviour Of The Youth: A Case Study Of Addis Ababa* (Doctoral dissertation, ST. MARY'S UNIVERSITY).

Sheldon, E., Simmonds-Buckley, M., Bone, C., Mascarenhas, T., Chan, N., Wincott, M., ... & Barkham, M. (2021). Prevalence and risk factors for mental health problems in university undergraduate students: A systematic review with meta-analysis. *Journal of Affective Disorders*, *287*, 282-292.

Shibiru T, Arulandu A, Belete A, Etana J, Amanu W (2023). Prevalence and factors assoiated with alcohol consumption among secondary school students in Nekemte, Ethiopia: A cross sectional study. Vol 14; 35-47.

Steiner-Hofbauer, V., & Holzinger, A. (2020). How to cope with the challenges of medical education? Stress, depression, and coping in undergraduate medical students. *Academic psychiatry*, *44*, 380-387.

Walker, L. J. (2004). *Components of the health belief model and HIV testing decisions* (Doctoral dissertation, University of North Carolina at Wilmington).

White AJ, DeRoo LA, Weinberg CR, Sandler DP (2017). Lifetime alcohol intake, binge drinking behaviors and breast cancer risk. American Journal of Epidemiology; 186(5):541-549.

WHO (2018). Global status report on alcohol and health, World Health Organization, Geneva, Switzerland.

WHO (2022) Alcohol: Available https: //www.who.int/news-room/fact- sheets/detail/alcohol [Accessed 30 May 2023].

Williams, F., & Brands, B. (2019). Knowledge of consequences, academic performance and drug consumption among undergraduate students in one university in Jamaica. *Texto & Contexto-Enfermagem*, *28*(spe), e213.

Witkiewitz K, Litten RZ, Leggio L (2019). Advances in the science and treatment of alcohol use disorder. 5(9)

World Health Organization (2024) Alcohol. https://www.who.int//news-room/fact-sheets/detail/alcohol/?gad_source=1&gclid=Cj0KCQjws560BhCuARIsAHMqE0GA

o4IZ5f_w5r4VWS6EQ_KCvNolKgWy6fBoWTr1wZgnQb6Dh2E1mY0aAnImEALw_wcB

World Health Organization. (2019). *Global status report on alcohol and health 2018*. World Health Organization.

APPENDIX I

QUESTIONNAIRE
DEPARTMENT OF NURSING SCIENCES
SCHOOL OF BASIC MEDICAL SCIENCES
UNIVERSITY OF BENIN,
BENIN CITY, EDO

Dear Respondent,

I am a 500level student of the department of Nursing in the above-named institution. I am carrying out a research study on the topic; "knowledge and associated factors on the influence of excessive intake of alcohol among basic medical science in a tertiary institution In Benin, Edo State". Please kindly assist me by indicating your opinion where necessary

Yours faithfully,

Instruction: please do not write your name, provide and tick the appropriate answer.

Introduction:

Thank you for participating in this survey. The purpose of this questionnaire is to assess your knowledge and associated factors on the influence of excessive intake of alcohol. Your honest response will contribute to research on this topic. This survey is anonymous and your response will be kept confidential.

Section A: Demographic Information

1. **Age** (a) 18-24 (b) 25-34 (c) 35-44 (d) 45 and above
2. **Gender**: [ ] Male [ ] Female [ ] Other
3. **Academic level**: [ ] 100level [ ] 200level [ ] 300level [ ] 400level [ ] 500 level
4. **Place of Residence**: [ ] On-Campus [ ] Off-Campus [ ] Other
5. **Monthly allowance**: [ ] Less than 50,000 NGN [ ] 50,000 - 80,000 NGN [ ] More than 80,000 NG
6. Do any of your family members take alcoholic drink? [ ] Yes [ ] No
7. Department: _____

Section B: The knowledge of excessive intake of alcohol

1. What is the MAIN effect of excessive alcohol intake on the human body? Improved cognitive function ( ) Increased risk of liver disease ( ) Reduced risk of heart disease ( ) Enhanced muscle growth ( )
2. Which of the following is NOT a known health consequence of excessive alcohol consumption? Increased risk of stroke ( ) Improved immune system ( ) Increased risk of certain cancers ( ) Reduced bone density ( )
3. Excessive alcohol intake can lead to which of the following conditions? Improved sleep quality ( ) Decreased risk of diabetes ( ) Reduced anxiety levels ( ) Increased risk of pancreatitis ( )
4. Which of these is NOT a common short-term effect of binge drinking? Impaired judgment ( ) Increased risk of alcohol poisoning ( ) Enhanced academic performance ( ) Increased risk of injuries
5. Prolonged excessive alcohol consumption can result in which of the following long-term effects? Improved liver function ( ) Decreased risk of dementia ( ). Reduced risk of high blood pressure ( ) Increased risk of nerve damage ( )

Section C: The associated factors leading to excessive intake of alcohol

	Items	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
1.	Peer pressure is a significant factor that influences excessive alcohol intake among basic medical sciences undergraduates.					
2.	Easy accessibility to alcohol on and around the university campus contributes to excessive alcohol consumption among students.					
3.	Stress and anxiety experienced by basic medical sciences students can lead to increased alcohol intake as a coping mechanism.					
4.	Lack of awareness and education on the dangers of excessive alcohol intake influences its consumption among basic medical sciences undergraduates.					

5.	Poor time management and work-life balance among basic medical sciences students contribute to excessive alcohol consumption.					
6.	Cultural or social norms surrounding alcohol use on campus make it more likely for basic medical sciences students to engage in excessive alcohol consumption.					
7.	The perceived positive effects of alcohol, such as relaxation or socializing, encourage excessive alcohol intake among basic medical sciences undergraduates.					

Section D: The Perceived Impact of Excessive Alcohol Intake on The Academic Performance

	Items	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
1.	Excessive alcohol consumption negatively affects students' ability to focus during lectures or study sessions.					
2.	Excessive alcohol intake causes students to miss classes, assignments, or academic deadlines.					
3.	Alcohol consumption has a negative impact on the overall academic performance of students.					
4.	Excessive alcohol intake contributes to poor grades or academic difficulties among students.					
5.	After consuming alcohol in excess, students experience a decline in cognitive abilities, such as memory or concentration.					
6.	Alcohol consumption affects students' ability to prepare for exams or complete academic projects effectively.					

Thanks for taking out time to answer these questions.

APPENDIX II

RELIABILITY OF INSTRUMENT

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.71	0.70	29

S/N		Item-Total Statistics Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1.	What is the MAIN effect of excessive alcohol intake on the human body?	53.4931	15.077	-.047	.701
2.	Which of the following is NOT a known health consequence of excessive alcohol consumption?	54.1111	15.302	.204	.210
3.	Excessive alcohol intake can lead to which of the following conditions?	53.4167	15.126	-.061	.185
4.	Which of these is NOT a common short-term effect of binge drinking?	87.3188	27.590	-.123	.099
5.	Prolonged excessive alcohol consumption can result in which of the following long-term effects?	87.4813	26.138	.053	.092
6.	Peer pressure is a significant factor that influences excessive alcohol intake among basic medical sciences undergraduates.	53.4931	15.077	-.047	.565
7.	Easy accessibility to alcohol on and around the university campus contributes to excessive alcohol consumption among students.	53.2986	14.141	.055	.196
8.	Stress and anxiety experienced by basic medical sciences students can lead to increased alcohol intake as a coping mechanism.	53.2986	14.141	.055	.196
9.	Lack of awareness and education on the dangers of excessive alcohol intake influences its consumption among basic medical sciences undergraduates.	87.3188	27.590	-.123	.099
10.	Poor time management and work-life balance among basic medical sciences students contribute to excessive alcohol consumption.	87.4813	26.138	.053	.092
11.	Cultural or social norms surrounding alcohol use on campus make it more likely for basic medical sciences students to engage in excessive alcohol consumption.	53.4931	15.077	-.047	.165
12.					
13.	The perceived positive effects of alcohol, such as relaxation or socializing, encourage excessive alcohol intake among basic medical sciences undergraduates.	87.2313	27.034	-.044	.078
14.	Excessive alcohol consumption negatively affects students' ability to focus during lectures or study sessions.	87.3188	27.590	-.123	.099
15.	Excessive alcohol intake causes students to miss classes, assignments, or academic deadlines.	87.3188	27.590	-.123	.099
16.	Alcohol consumption has a negative impact on the overall academic performance of students.	87.4813	26.138	.053	.092
17.	Excessive alcohol intake contributes to poor grades or academic difficulties among students.	53.4931	15.077	-.047	.165

18.	After consuming alcohol in excess, students experience a decline in cognitive abilities, such as memory or concentration.	87.4500	25.582	.125	.071
19.	Alcohol consumption affects students' ability to prepare for exams or complete academic projects effectively.	87.3188	27.590	-.123	.099

Comment: The reliability analysis using Cronbach's Alpha, yielding a result of 0.71, for the overall scale. Additionally, the Cronbach's Alpha of 0.52 when the items are standardized. These values suggest a good level of internal consistency among the items in this scale.