

**AWARENESS OF ASSOCIATED RISKS OF ALCOHOL INTAKE ON
DEVELOPMENT OF LIVER DISEASE AMONG STUDENTS OF ACHIEVERS
UNIVERSITY, OWO, ONDO STATE**

**BY
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DECLARATION

This is to declare that this research project titled "AWARENESS OF ASSOCIATED RISKS OF ALCOHOL INTAKE ON DEVELOPMENT OF LIVER DISEASE AMONG STUDENTS OF ACHIEVERS UNIVERSITY OWO" was carried out by AJAYI DESMOND OLUWATONI. This is solely the result of my work except where acknowledged as being derived from other person(s) or resources.


Matriculation number: AUO19AN2221

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Date: 25-06-2024

CERTIFICATION

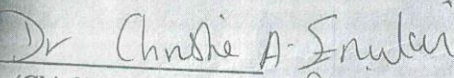
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DEDICATION

I dedicate this project to God almighty

ACKNOWLEDGMENTS

My ultimate appreciation goes to the Almighty God, the ancient of days, the creator of heaven and earth be all glory, honour and praise for keeping me alive and guiding me in the path I am following. For prayers answered, promises kept and blessings showered, I glorify your name.

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My Sincere gratitude goes to my parents Mr. & Mrs. AJAYI who through unfavorable event of life supported me morally, financially, emotionally and spiritually. The Lord will expand your coast and beautify your lives for his glory in Jesus name (Amen)

I also want to appreciate my Siblings, Mr. Ajayi O.A and Miss. Ajayi O.O for their unwavering support and encouragement I pray for the Lord enlarges your coast (Amen)

Lastly, I extend my appreciations to my friends and well-wishers for your love and support. Our expectations and Joy will never be cut short, May Almighty God shelter all of us and keep us under his wings(AMEN).

ABSTRACT

Alcohol consumption can lead to a progressive spectrum of liver diseases, collectively known as alcohol-related liver disease (ALD). The primary goal of this study is to assess the awareness level of the risks of alcohol intake and its connection to the development of liver diseases among students of Achievers University Owo. A descriptive study design was employed to determine the level of awareness of liver disease risks among the students. The study included 389 students selected using a multistage sampling technique. Data were collected through a semi-structured questionnaire and analyzed using SPSS version 23. Descriptive statistics, such as frequency and proportions, were calculated. The findings revealed that 26.7% of students are aware of the dangers associated with alcohol consumption, such as its role in causing liver diseases, including Alcoholic Fatty Liver Disease (AFLD). Factors influencing alcohol intake were identified, with peer pressure (32.1%) and social events (20.8%) playing a notable role. The study also indicated that mandatory education and sensitization, addressing misconceptions, and prohibiting alcohol sales on campus were among the proposed methods to reduce alcohol consumption among students. The study concludes that a substantial number of students at Achievers University are aware of the potential health risks associated with alcohol consumption, including the development of liver diseases. The study therefore recommends that undergraduate students should be encouraged to abstain from alcohol consumption due to its detrimental health effects and health workers and medical personnel should educate and promote healthier beverage choices among students, youth, and adolescents.

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Keywords: Alcohol Intake, Awareness, Liver diseases, Students.

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CHAPTER ONE

INTRODUCTION

1.0 Background to the Study

Alcohol is defined as a psychoactive substance with dependence-producing properties that has been widely used in many cultures for centuries, the harmful use of alcohol causes a high burden of disease and has significant social and economic consequences with alcohol consumption being a causal factor in more than 200 diseases, injuries and other health conditions (World Health Organization [WHO], 2022). Drinking alcohol is associated with a risk of developing health problems such as mental and behavioral disorders, including alcohol dependence, and major non-communicable diseases such as liver cirrhosis (WHO, 2022).

Alcohol use disorder (AUD) is prevalent worldwide, and the burden of heavy alcohol consumption has been increasing over time (Ramkissoon & Shah, 2022). An important complication of prolonged, heavy alcohol use is alcohol-related liver disease (ALD), which can progress from liver steatosis to fibrosis and cirrhosis and frequently involves alcohol-associated hepatitis (Ramkissoon & Shah, 2022). In particular, cirrhosis is the most severe type of ALD and can be associated with fatal and resource-intensive complications and impose a significant social and financial burden on families, hospitals, and communities (Ramkissoon & Shah, 2022; American Liver Foundation, n.d, 2020.; European Association for the Study of the Liver, 2018; National Institute on Alcohol Abuse and Alcoholism [NIAAA], 2021).

The liver is a large and powerful organ that performs hundreds of essential functions in the body with one of its most important functions is to filter toxins from the blood (Clevelandclinic, 2023). Also, its role as a filter makes it vulnerable to the toxins it processes

in which too many toxins can overwhelm the liver's resources and ability to function (Clevelandclinic, 2023). One of these toxins is alcohol intake leading to the development of major noncommunicable diseases such as liver cirrhosis (WHO, 2022). Liver disease accounts for approximately 2 million deaths per year worldwide, 1 million due to complications of cirrhosis and 1million due to viral hepatitis and hepatocellular carcinoma (Asrani et al., 2019). About 2 billion people consume alcohol worldwide and upwards of 75 million are diagnosed with alcohol-use disorders and are at risk of alcohol-associated liver disease. (Asrani et al., 2019).

According to global review, WHO in 2022 reported that 3 million deaths every year result from harmful use of alcohol. This represents 5.3% of all deaths and overall, 5.1% of the global burden of disease and injury is attributable to alcohol, as measured in disability-adjusted life years (DALYs). Beyond health consequences, the harmful use of alcohol brings significant social and economic losses to individuals and society at large bringing about a causal relationship between harmful use of alcohol and a range of mental and behavioural disorders, other noncommunicable conditions like liver disease and injuries (WHO,2022). Also, according to University of Michigan Health, rates of alcohol cirrhosis was identified to be higher in African and Hispanic males than they are in Caucasian males with causes being linked to excessive alcohol intake. Susceptibility can be due to peer pressure, feeling of euphoria, and social events (NIAAA, 2021).

Rates of drinking among college students and other young adults is assumed to still be high as undergraduates are often undergoing role transitions such as moving away from the family home for the first time, residing with other students in school, and experiencing reduced adult supervision that may increase the risk of alcohol use and abuse. On the part of the awareness level of alcohol intake causing liver disease among undergraduates, only few studies had been

conducted still leaving gaps to address. Raising awareness about the risks of alcohol intake on liver health among undergraduates of Achievers University, Owo is crucial for reducing the burden of ALD. This study will help mitigate the impact of alcohol on liver health and improve public health outcomes by addressing the gaps on awareness of risk factors associated with alcohol intake and also ways to reduce alcohol intake so as to prevent it metamorphosing into Liver disease.

1.2 Statement of Problem

World Health Organization (2022), reported that alcohol contributed to more than 200 diseases and injury-related health conditions, in which liver diseases is one of them. Also, according to WHO in 2022, deaths occurring among people aged 20–39 years approximately 13.5% of this total deaths are attributable to alcohol in which is a category of age in which undergraduates falls in. Also, in 2022, there was a case of an undergraduate who was diagnosed of ALD with history of excessive and persistent alcohol intake also with history of family issues which invariably led to his death.

Achievers University Owo, is a tertiary institution in which this age range of student school in and due to youthful exploration, peer pressure, poor academic performance, family issues there might be cases of alcohol consumption. Keeping all these in view, assessing the awareness level is essential to know the level of knowledge of students and to health educate more on areas lagging so as to help in reduction and prevention of alcohol intake and to avoid liver disease development leading to promotion of optimum health. This research study is designed to elicit knowledge on the awareness level of associated risks of alcohol intake on development of liver disease among students of Achievers University Owo.

1.3 Objective of Study

The broad objective of this study is to assess the level of awareness of risks of alcohol intake on development of liver disease among students of Achievers University Owo.

The specific objectives of this study are to:

- i. assess level of awareness on alcohol intake risks associated with liver disease among students in Achievers University, Owo.
- ii. identify risk factors associated with alcohol intake and liver disease among students in Achievers University, Owo.
- iii. discuss ways to reduce alcohol intake among students in Achievers University, Owo.

1.4 Research Questions

- i. What is the level of awareness on risks associated with alcohol intake causing liver disease development among students of Achievers University, Owo?
- ii. What are the risk factors associated with alcohol intake among students of Achievers University, Owo?
- iii. How can alcohol intake be reduced among students of Achievers University, Owo?

1.5 Research Hypothesis

- i. There is no significant relationship between the awareness level on the risks of alcohol intake on development of liver disease and sociodemographic data

1.6 Scope of the Study

This study aims to assess the awareness level on the risks of alcohol intake on development of liver disease among students of Achievers University, Owo. it is delimited to all students of Achievers University, Owo, made up of various colleges within the school.

1.7 Significance of Study

This study will help improve the state of healthy lifestyle among students of Achievers University, Owo. This study will help lead to a heightened awareness of the risks associated with alcohol consumption, potentially reducing the prevalence of ALD in society. The findings of this study can be used to enhance nursing curricula by integrating more comprehensive content on the risks of alcohol intake and its impact on liver health also, nursing students will develop critical thinking skills from it. Understanding the link between alcohol intake and liver disease will enable nurses to adopt a more holistic approach to patient care. The study can help inform the creation of policies that mandate regular screening for liver disease in high-risk populations, including university students leading to curbing, early detection, and better management of liver health issues. The study's findings can provide a foundation for evidence-based practice in nursing, encouraging the integration of research findings into clinical guidelines and patient care protocols

1.8 Operational Definition of Terms

Awareness: Level of understanding demonstrated by students of Achievers University, Owo on the associated risks of alcohol intake on liver disease development.

Associated risks: Causes of alcohol intake among students of Achievers University, Owo with its potential and possibility to cause harm.

Alcohol: Act of ingesting harmful chemical substance present in drinks which can lead to intoxication and resultantly damage the liver.

Liver disease: A problem of the liver which is caused by excess intake of alcohol over time.

Students: Undergraduates studying for a degree in Achievers University, Owo, Ondo state.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This part of the study deals with the review of pertinent literature, which would be conceptual, theoretical and empirical.

2.1 Conceptual Review

2.1.1 Anatomy of the Liver

The liver is situated in the right hypochondrium and epigastric regions under the rib cage and extends from the right fifth intercostal space at the midclavicular line to just below the costal margin with it being the body's largest solid organ (Clevelandclinic, 2023). The liver is found inferior to the diaphragm and occupies the majority of the right upper quadrant (RUQ) of the abdomen. It is mostly intraperitoneal, spanning from the fifth intercostal space in the midclavicular line to the right costal margin (Vernon et al., 2022). The superior posterior aspect of the liver contains a bare area where the diaphragm and inferior vena cava are found. The rest of the liver is covered by visceral peritoneum which meets the diaphragm at the border of the bare area forming the coronary ligament (Vernon et al., 2022). The inferior liver is closely associated with the gallbladder and right kidney (Vernon et al., 2022).

Another ligament of mention is the Falciform ligament which splits the liver into anatomic left and right along the anterior aspect (Vernon et al., 2022). The free-form edge of the falciform ligament contains the round ligament of the liver which is the remnant of the embryonic umbilical vein. Anatomically the liver has four lobes: right, left, caudate, and quadrate. The caudate lobe is demarcated medially by the ligamentum venosum, posteriorly by the inferior vena cava and anteriorly by the porta hepatis (Alessandrino et al., 2019). The ligamentum venosum is the remnant of the embryonic ductus venosus. The quadrate lobe is anterior to the

porta hepatis and lateral to the round ligament of the liver and is closely associated with the gallbladder (Nota, Hagendoorn & Fong, 2019). However, these anatomic lobes do not correlate to the boundaries of the eight functional sub-divisions of the liver which are divided according to the blood supply.

According to Johns Hopkins medicine, the liver consists of 2 main lobes. Both are made up of 8 segments that consist of 1,000 lobules (small lobes). These lobules are connected to small ducts (tubes) that connect with larger ducts to form the common hepatic duct. The common hepatic duct transports the bile made by the liver cells to the gallbladder and duodenum (the first part of the small intestine) via the common bile duct (Johns Hopkins medicine, 2022).

2.1.1 Function of the Liver

According to Johns Hopkins medicine, the liver holds about one pint (13%) of the body's blood supply at any given moment, Other functions of the liver includes;

Metabolism of Carbohydrates, Proteins, and Fats

The liver plays a central role in metabolism by processing nutrients absorbed from the digestive tract. It converts excess glucose into glycogen for storage (glycogenesis) and later converts it back into glucose when the body needs energy (glycogenolysis). The liver also deaminates amino acids, converts ammonia to urea for excretion, and synthesizes cholesterol and triglycerides from fatty acids (University of Michigan Health, n.d.).

Detoxification

The liver detoxifies various metabolites and neutralizes harmful substances such as drugs, alcohol, and environmental toxins. It does this by metabolizing these substances into less toxic forms that can be excreted from the body. The liver's detoxification process is crucial for

preventing the buildup of toxic substances that can cause harm to the body (National Institute on Alcohol Abuse and Alcoholism [NIAAA], 2021).

Production of Bile

The liver produces bile, a digestive fluid that is essential for the emulsification and digestion of fats in the small intestine. Bile is stored in the gallbladder and released into the small intestine when needed. Bile also helps in the elimination of bilirubin, a byproduct of the breakdown of red blood cells (Cleveland Clinic, 2023).

Storage of Vitamins and Minerals

The liver stores various essential vitamins and minerals, including vitamins A, D, E, K, and B12, as well as iron and copper. These stored nutrients are released into the bloodstream as needed to maintain adequate levels and support various bodily functions (University of Michigan Health, n.d.).

Synthesis of Plasma Proteins

The liver synthesizes several important plasma proteins, including albumin and clotting factors. Albumin helps maintain the oncotic pressure of blood, which is necessary for the proper distribution of fluids between blood vessels and body tissues. Clotting factors are essential for blood coagulation and wound healing (University of Michigan Health, n.d.).

The liver produces and regulates proteins that are crucial for blood clotting. Without these proteins, the body would be unable to stop bleeding effectively after an injury. This function highlights the liver's role in maintaining hemostasis and preventing excessive blood loss (European Association for the Study of the Liver [EASL], 2018).

Immune Function

The liver is part of the body's immune system, containing a large number of Kupffer cells, which are specialized macrophages that ingest and destroy pathogens, dead cells, and other debris in the blood. This function is vital for protecting the body against infections and maintaining overall health (Cleveland Clinic, 2023).

2.1.2 Concept of Alcohol Consumption

Alcohol is defined as a psychoactive substance with dependence-producing properties that has been widely used in many cultures for centuries, the harmful use of alcohol causes a high burden of disease and has significant social and economic consequences (WHO, 2022). Alcohol consumption is a causal factor in more than 200 diseases, injuries and other health conditions (WHO, 2022). Drinking alcohol is associated with a risk of developing health problems such as mental and behavioural disorders, including alcohol dependence, and major noncommunicable diseases such as liver cirrhosis (WHO, 2022).

Several factors are assumed to influence alcohol consumption, including demographic characteristics, social influences, and psychological factors. In Nigeria, alcohol use among university students was significantly associated with age, gender, religious background, and family structure (EASL, 2018). Peer influence, curiosity, and psychological issues such as stress and academic adjustment problems are also notable predictors of alcohol use among students in Ghana (Aboagye et al., 2021).

2.1.3 Liver Disease

The term "liver disease" refers to any of several conditions that can affect and damage the liver. It applies to many conditions that stop the liver from working or prevent it from functioning

well. Abdominal pain or swelling, yellowing of the skin or eyes (jaundice), or abnormal results of liver function tests may suggest you have liver disease (Cleveland clinic, 2023). Over time, liver disease can cause cirrhosis (scarring). As more scar tissue replaces healthy liver tissue, the liver can no longer function properly. Left untreated, liver disease can lead to liver failure and liver cancer (Cleveland clinic, 2023). Liver disease can be inherited (genetic). Liver problems can also be caused by a variety of factors that damage the liver, such as viruses, alcohol use and obesity.

2.1.4 Development of Liver Disease due to Alcohol Intake

Alcohol consumption can lead to a progressive spectrum of liver diseases, collectively known as alcohol-related liver disease (ALD). The progression typically occurs in stages, each characterized by increasing severity of liver damage.

Alcoholic Fatty Liver Disease (AFLD)

The first stage is Alcoholic Fatty Liver Disease (also known as hepatic steatosis), which occurs due to the accumulation of fat in liver cells. This stage is common among heavy drinkers and is often asymptomatic. However, some individuals may experience fatigue, discomfort in the upper right abdomen, and general malaise. AFLD is generally reversible if alcohol consumption ceases (MedlinePlus, 2023).

Alcoholic Hepatitis

If alcohol consumption continues, the disease can progress to Alcoholic Hepatitis, an inflammatory condition of the liver. Symptoms of alcoholic hepatitis can range from mild to severe and may include jaundice (yellowing of the skin and eyes), abdominal pain, fever, nausea, vomiting, and loss of appetite. In severe cases, alcoholic hepatitis can lead to liver failure and is associated with a high risk of death (CDC, 2024).

Fibrosis

Continued heavy drinking can lead to Fibrosis, where the liver begins to develop scar tissue due to ongoing inflammation. This scarring disrupts the normal structure of the liver and impairs its ability to function effectively. Unlike fatty liver disease, fibrosis is not fully reversible, although further progression can be halted or slowed if alcohol consumption is stopped (MedlinePlus, 2023).

Cirrhosis

The final stage of ALD is Cirrhosis, which involves extensive fibrosis and the formation of regenerative nodules, leading to severe liver dysfunction. Cirrhosis can cause complications such as portal hypertension (increased blood pressure in the portal vein), varices (enlarged veins that can bleed), ascites (accumulation of fluid in the abdomen), hepatic encephalopathy (confusion due to liver failure), and liver cancer. Symptoms of cirrhosis include jaundice, severe itching, easy bruising and bleeding, swelling in the legs and abdomen, and mental confusion (OHID, 2024).

2.1.5 Prevention and Management of ALD

Preventing ALD primarily involves reducing alcohol consumption. Individuals diagnosed with any stage of ALD are advised to completely abstain from alcohol to prevent further liver damage and potentially reverse early stages of the disease. For those struggling with alcohol dependence, therapies such as behavioral counseling, support groups, and medications may be necessary (CDC, 2024).

In addition to abstaining from alcohol, other lifestyle modifications such as maintaining a healthy diet, regular exercise, and avoiding other liver toxins can help manage the disease. In advanced cases, medical treatments may include medications to reduce liver inflammation, management of complications, and potentially liver transplantation for end-stage liver disease (MedlinePlus, 2023). There's currently no specific medical treatment for ALD. The main

treatment is to stop drinking, preferably for the rest of your life. This reduces the risk of further damage to the liver and gives it the best chance of recovering.

2.2 Theoretical Review

2.2.1 Health belief model

The Health belief model (HBM) is a psychological model for understanding health behavior. It was developed in 1950s by Hochbaum, Rosenstock and Others. The health belief model proposes that a person's health related behavior is on the person's perception of four critical areas: the severity of a potential illness, the person's susceptibility to that illness, the benefit of taking a preventive action and the barrier to taking the action.

The model postulates that the health seeking behavior is influenced by a person's perception of a threat posed by a health problem and the value associated with actions aimed at reducing the threat related action (i.e. stopping alcohol intake) if that person: Feels that negative health condition (like development of liver disease) can be avoided. The HBM is suitable for assessing the associated risks of alcohol intake on development of liver disease as it possesses a proven track record in predicting health behaviors, particularly in preventive health measures.

The health belief model identifies six key concepts as applied to human behavior as follows

Perceived susceptibility: this refers to belief about how susceptible an individual is to illness. That is whether an individual thinks they are likely or have the chance of getting a condition or health problems.

Perceived severity: this refers to an individual's belief about the severity or seriousness of the condition and its consequences.

Perceived benefit: this refers to one's belief in the efficacy of the advised action to reduce risk or seriousness of the condition i.e. defining action to take, accessibility to treatment.

Perceived barriers: this refers to one's belief in the tangible and psychological costs of the advised behavior.

Cues to action: strategies to achieve one's readiness are also factors that prompt action such as provide awareness, reminders.

Self-efficacy: refers to confidence in one's ability to take action.

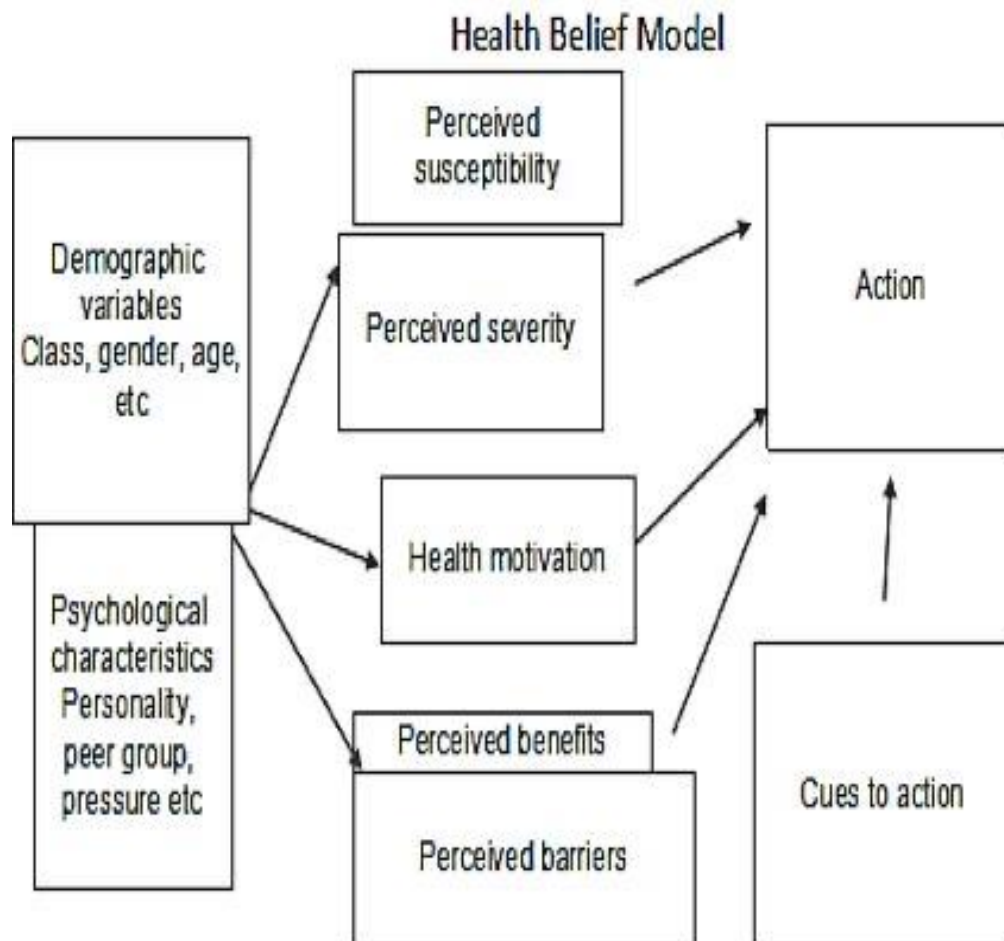


Fig 2.2.1: Health Belief Model

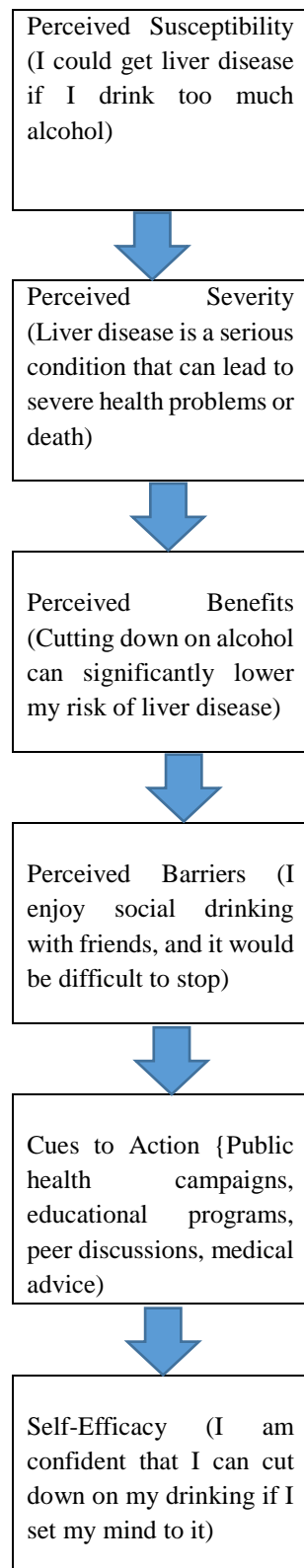


Fig 2.2.2: Application of Model to the Study

2.2.2 Application to the Study

Perceived Susceptibility: This component assesses the students' beliefs about their chances of developing liver disease due to alcohol intake. By evaluating perceived susceptibility, the research will identify whether students recognize the risks they face.

Perceived Severity: This involves understanding how serious the students believe liver disease to be. If they understand the severe consequences, they are more likely to change their behavior.

Perceived Benefits: This assesses the belief in the efficacy of taking preventive actions, such as reducing alcohol intake, to avoid liver disease. Highlighting the benefits of such actions can motivate students to adopt healthier behaviors.

Perceived Barriers: Identifying obstacles that students believe hinder them from reducing alcohol consumption can help in developing strategies to overcome these barriers.

Cues to Action: This component focuses on external triggers that motivate students to change their behavior. Understanding these cues can help in designing effective awareness campaigns.

Self-Efficacy: This measures the confidence of students in their ability to reduce or manage alcohol consumption. Enhancing self-efficacy can lead to better health outcomes (Glanz, Rimer, & Viswanath, 2008).

2.3 Empirical Review

Level of Awareness on Alcohol Intake Risks Associated with Liver Disease among Students

According to a study by Messina et al. (2021) on the research topic Knowledge and Practice towards Alcohol Consumption in a Sample of University Students, the AUDIT-C revealed that 53.3% of students were high-risk drinkers. Regarding binge drinking habits, 13.1% of students admitted to binge drinking behavior at least once a month. It was concluded that University students were not fully aware of the implications of alcohol misuse and will be part of the adult society as critical figures and future leaders. The study recommended that special attention must be paid to young people and their coping strategies that involve substance abuse by using educative, preventive, and motivational approaches.

According to a research conducted by Andrew et al. (2017) on the topic Assessing Knowledge about the Dangers of Alcohol Consumption: A Cross-sectional Descriptive Study, among Makerere University Undergraduate Students. A school in which there is a high prevalence of alcohol consumption. The target population were undergraduate students of Makerere University. Data were collected using self-administered questionnaires and focus group discussions. A number of 435 University students were interviewed, 236 (54.3%) males and 199 (45.7%) females. Median age was 21 years, similar across gender. Majority of the students were consuming alcohol 242 (55.6%), 49 (11.3%) had stopped and 144 (33.1%) had never consumed alcohol. The students were knowledgeable about the dangers of alcohol consumption like liver disease.

Risk factors Associated with Alcohol Intake and Liver Disease among Students

In a cross-sectional survey conducted by Saini and Suthar (2022) with the topic "A Cross-Sectional Study Prevalence of Alcohol Consumption, Factors Associated, and Its Effects Among Undergraduate College Students" which was applied on 180 undergraduates at

Shekhawati PG College, Rajasthan, India, using stratified random sampling. Structured questionnaire and rating scale were used to collect the data. The finding showed 25.55% prevalence of alcohol consumption with majority of being males (63.04%). Maximum number (47.8%) of the students started alcohol consumption at 18–19 years of age, with reasons and risk factors being social gathering or marriage party (69.56%), peer pressure and curiosity about the effects of alcohol (13.04%), and drinking habit of the parents (6.52%).

Aboagye et al. (2021) conducted a research titled Alcohol consumption among tertiary students in the Hohoe municipality, Ghana: analysis of prevalence, effects, and associated factors from a cross-sectional study. The result showed the lifetime prevalence of alcohol consumption was 39.5%. Out of them, 49.1% were still using alcohol, translating to an overall prevalence of 19.4% among the tertiary students. It was also found that students who had peer influence [AOR = 3.7, 95%CI = 2.31, 5.82] and those who had academic adjustment problems [AOR = 3.6, 95% CI = 2.01, 6.46] were more likely to consume alcohol.

Ways to Reduce Alcohol Intake among Students

Aboagye et al. (2021) research finding revealed that lifetime prevalence of alcohol consumption is high among tertiary students in the Hohoe Municipality of Ghana, with several physical, psychosocial and economic consequences. The research work then suggested that Alcohol-related education should be intensified in tertiary institutions and counseling units should be equipped with relevant assessment tools to assess and help students who are at risk and those who are already consuming alcohol.

In a study conducted in two institutions by Calnan & Davoren (2022) with research topic "College students' perspectives on an alcohol prevention programme and student drinking - A focus group study". The study indicated that students perceived alcohol as being endemic to college life and wider society. As a result, many of the students were sceptical or ambivalent regarding the potential efficacy of alcohol prevention programmes. The study also indicated

ways viewed particularly favourably by the student participants in terms of solutions proposed as providing a greater variety of leisure spaces, including alcohol-free environments.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter presents all methodologies employed by the researcher during the course of the study. Discussed in this chapter include: research design, research settings, target population, sample size and sampling technique, instrument of data collection, validity and reliability of research instrument, method of data collection, method of data analysis and ethical considerations.

3.1 Research Design

A descriptive cross-sectional research design was used to determine level of awareness of risks associated with liver disease among students in Achievers University Owo, Ondo state. This design was used because descriptive research design is particularly effective for capturing a snapshot of the current state of awareness within a population, enabling the identification of knowledge gaps, prevalent misconceptions, and potential areas for intervention. Moreover, it facilitates the collection of quantitative data that can be analyzed to provide clear insights and inform the development of targeted educational programs and health promotion strategies tailored to the specific needs of the student population.

3.2 Description of Study Area

The study was conducted in Achievers University Owo (AUO), a university located in Idasen-Ute, Owo, Owo Local Government Area of Ondo State, Nigeria. The University was founded in 2007. It serves as a citadel of learning to many of the states of the Federation. AUO is a private tertiary educational institution located in Owo, Ondo State, Nigeria. It is one of the best Universities in Nigeria providing quality education and learning services to the people of Ondo State and its environs. AUO provides a wide range of programs including undergraduate programs, postgraduate programs and others.

3.3 Study Population

The target population in this study consist of both male and female students of Achievers University Owo, made up of various colleges within the school which are:

- i. College of Basic Health Sciences(COBHS)
- ii. Faculty of Nursing Sciences(FONS)
- iii. Faculty of Medical Laboratory Sciences (FOMLS)
- iv. College of Natural and Applied Sciences(CONAS)
- v. College of Social and Management Sciences (COSMAS)
- vi. College of Law (COL)

Over the course of its establishment and running from year 2007 till date, the student population has risen from about 300 students to Thousands of students presently.

3.4 Sample Size Determination

The sample size was determined using Taro Yamane sampling formula.

$$n=N/(1+N(e)^2)$$

n= sample size

N=Total population of students in Achievers university, Owo, Ondo state.

e=margin error

calculation of sample size; N=3,000; e=0.05

$$n=3,000 / (1+3000[0.05^2])$$

$$n= 3,000 / (1 + 7.5)$$

$$n= 3,000 / (8.5)$$

$$n= 352.94 \text{ approximately } 353$$

10% attrition rate of 353

$$0.1 \times 353 = 35.3 = 36$$

$$353 + 36 = 389$$

Therefore, sample size for this study was 389

3.5 Sampling Technique

A multistage sampling technique was used to select respondents for the study.

Stage 1: All colleges and faculties are being involved and selected.

Stage 2: After the selection of faculties, 7 departments were randomly selected within Achievers university Owo, Ondo State using alphabetical order to select the first and fifth department in each college which are department of Nursing science, Human anatomy, Medical laboratory science, Microbiology, Political science, Accounting and the department of law.

Stage 3: Within these departments of study, convenience sampling method was used to select respondents due to its ease of access to participants without extensive effort or resources.

3.5.1 Inclusion Criteria

- i. Undergraduates of Achievers University, Owo, Ondo state.
- ii. Undergraduates of Achievers University, Owo, Ondo state in the selected departments.

3.5.2 Exclusion Criteria

- i. Postgraduate students of Achievers University, Owo, Ondo state.
- ii. Undergraduates of Achievers University, Owo, Ondo state outside the selected departments.

3.6 Instrument for Data Collection

Instrument for data collection was a self-structured questionnaire with close ended questions to collect data for this study. The questionnaire contains 33 questions arranged into four sections; the first section contains 6 questions on the sociodemographic data of respondents, the second section contains 10 questions assessing the level of awareness on associated risks of alcohol intake, the third section contains 12 questions on causes of alcohol intake, the fourth section contains 5 questions on ways to reduce alcohol intake.

Section A consists of demographic data form which was used to collect the personal details about the respondents, e.g. sex, age, religion, educational status,

Section B assesses the awareness of risks imposed by alcohol intake on the liver among the respondents which will be assessed using a Likert scale with a score of 4 – 1. Where if the respondent pick strongly agree the score is 4, pick agree the score is 3, pick disagree the score is 2, and pick strongly disagree the score is 1.

Section C consists of factors associated with alcohol intake among students which will be assessed using a Likert scale with a score of 4 – 1. Where if the respondent pick strongly agree the score is 4, pick agree the score is 3, pick disagree the score is 2, and pick strongly disagree the score is 1.

Section D consists of ways to reduce alcohol intake among students which will be assessed using a Likert scale with a score of 4 – 1. Where if the respondent pick strongly agree the score is 4, pick agree the score is 3, pick disagree the score is 2, and pick strongly disagree the score is 1.

3.7 Validity of Instrument

Face and content validity was ensured through consultation with the supervisor and previous studies on similar topics for correctness and appropriateness in-tandem with the objectives of the study. Overall, these measures were taken to ensure that the instrument used for data collection in this study is valid and reliable.

3.8 Reliability of Instrument

The test - pretest reliability was employed by conducting a pilot study of 10% sample size. A total of 36 questionnaires copies were administered to 36 undergraduates from the AUO. These

are not part of the sample size as it was done in other to identify ambiguity in the questions before the whole questionnaire are administered.

3.9 Method of Data Collection

For this study, participants were approached and educated on the purpose of conducting the research. Informed consent was obtained from individuals following the approval protocol. The participants were told to sign on the signature box in the self-administered questionnaire as a symbol indicating given consent. Questionnaire distribution was done within the space of two weeks and a total of 389 questionnaires were shared which was made possible with the assistance of two trained nursing students along with the researcher.

3.10 Method of Data Analysis

All questionnaires had been checked for consistency and completeness. Data were entered and analyzed using Statistical Package for Social Sciences (SPSS) version 23 respectively. Variables such as age and education level were collected openly and classified during the analysis process. Descriptive statistics such as frequency and proportions were calculated.

A multivariable logistic regression analysis was employed to identify the factors associated with alcohol intake. Adjusted Odds Ratio (AOR) with 95% confidence interval was used to show the strength and direction of the association, while a P-value < 0.05 was used to declare the significance of association.

3.11 Ethical Consideration

A letter of permission to collect data duly stamped and signed was obtained from the Faculty of Nursing Sciences, Achievers University, Owo, Ondo State (AUO). The letter was presented to the Achievers University Research and Ethics Committee to obtain permission to administer the questionnaires to undergraduates of AUO. Also, the approval to collect data was obtained from Owo Local Government Secretariat Research committee.

However, the questionnaires presented to the respondents was clear and devoid of ambiguity. Emphasis was laid on confidentiality of information that will be provided by the respondents. Participants were made to know that there are no incentives and that they could withdraw at any time during the study.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1 Presentation of Results

This chapter deals with the presentation and description of result according to the study objectives in a systematic order. The data obtained with the use of a well semi-structured questionnaire was analyzed with the use of Statistical Package Service Software (SPSS) and the result obtained was presented in frequency table and chi-square was used to test for relationship between some variables.

Table 4.1: Socio-demographic characteristics of the students

Variable	Frequency (F)	Percentage (%)
Gender		
Male	157	40.4
Female	232	59.6
Total	389	100.0
Age range		
20years or below	102	26.2
21-24years Mean age 20.76 Years \pm 0.45	170	43.7
25-29years	95	24.4
30years or above	22	5.7
Total	389	100.0
Student's level		
100L	112	28.8
200L	163	41.9
300L	66	17.0
400L	24	6.2
500L	24	6.2
Total	389	100.0
Student's Department		
Nursing Science	122	31.4
Medical Laboratory Science	82	21.1
Microbiology	87	22.4
Political Science	21	5.4
Law	24	6.2
Accounting	28	7.2
Human Anatomy	25	6.4
Total	389	100.0
Marital status		
Single	363	93.3
Married	26	6.7
Total	389	100.0
Religion		
Christianity	208	53.5
Muslim	181	46.5
Total	389	100.0

Sociodemographic characteristics of the students was presented in Table 4.1. The table showed that 232 (59.6%) of the students were females and 157(40.4%) of them were males, 170(43.7%) of them were 21-24years of age, 102(26.2%) of them were 20years or below of age and 22(5.7%) of them were 30years or above with mean age of 20.76 Years \pm 0.45. The table showed that 163(41.9%) of the students that participated in the study were 200L students, 112(28.8%) were 100L students, 66 (17.0%) of them were 300L students and 24(6.2%) of them were 400L and 500L students. Also, 122(31.4%) of the students were Nursing science students, 83(21.1%) of them were MLS students, 87(22.4%) of them were Microbiology students and 21(5.4%), 24(6.2%), 28(7.2%) and 25(6.4%) of the students remaining were students of Political science, Law, Accounting and Human Anatomy. The table indicates 363(93.3%) of the students were single and 26(6.7%) were married, 208(53.5%) of the students were Christians and 181(46.5%) of them were Muslim.

Table 4.2: Awareness of alcohol risks associated with liver disease among students

Variables	SA F (%)	A F (%)	D F (%)	SD F (%)
Excessive alcohol consumption is a cause of liver diseases	143(36.8)	227(58.4)	8(2.1)	11(2.8)
Familiar with the term “alcohol-related liver diseases (ALD)	77(19.8)	104(26.7%)	135(34.7)	73(18.8)
Understanding the early symptoms and signs of liver diseases caused by alcohol intake	19(4.9)	37(9.5)	310(79.7)	23(5.9)
Belief that university students are at high risk of developing of liver diseases due to alcohol intake	44(11.3)	39(10.0)	78(20.1)	228(58.6)
Regular alcohol consumption, even in moderation can contribute to the development of liver diseases	81(20.8)	55(14.1)	110(28.3)	143(36.8)
Recommended limits for alcohol consumption to reduce the risk of liver diseases	55(14.1)	91(23.4)	199(51.2)	44(11.3)
Belief that education and awareness campaigns are important to prevent ALD among students	221(56.8)	162(41.2)	3(0.8)	3(0.8)
Access to reliable sources of information about the health risk of alcohol consumption	52(13.4)	77(19.8)	171(44.0)	89(22.9)
Feel confident in my ability to make informed decisions regarding alcohol intake and liver health	109(28.0)	177(45.5)	56(14.4)	47(12.1)
Open to attending workshop or seminars about the risks of alcohol intake on liver health	125(32.1)	148(38.0)	41(10.5)	75(19.3)

SA-Strongly agree, A-Agree, D-Disagree, SD-Strongly disagree

Awareness of risk associated with liver disease among the students was presented in Table 4.2. The table showed that 227(58.4%) of the students agreed that awareness of excessive alcohol consumption is a cause of liver diseases, 104(26.7%) of the students also agreed that they were familiar with the term “alcohol-related liver diseases (ALD) and 135(34.7%) of the students disagreed to the it. Findings showed that 310(79.7%) students disagreed to the statement that understanding the early symptoms and signs of liver diseases caused by alcohol intake and 19(4.9%) of them strongly agreed to it. Also shows that 228(58.6%) of the students strongly disagreed that university students are at risk of developing of liver diseases due to alcohol intake and 44(11.3%) of them strongly agreed to it. Findings shows that 81(20.8%) of the students strongly agreed that regular alcohol consumption, even in moderation can contribute to the development of liver diseases, 55(14.1%) of the students strongly agreed that awareness recommended limits for alcohol consumption to reduce the risk of liver diseases and 221(56.8%) of the students strongly agreed that education and awareness campaigns are important to prevent ALD among students. Also, 52(13.4%), 109(28.0%) and 125(32.1%) of the students strongly agreed that access to reliable sources of information about the health risk of alcohol consumption, feel confident in my ability to make informed decisions regarding alcohol intake and liver health and open to attending workshop or seminars about the risks of alcohol intake on liver diseases, respectively.

Table 4.3: Factors associated with alcohol intake and liver disease among students

Variables	SA F (%)	A F (%)	D F (%)	SD F (%)
Consumption of alcohol due to peer pressure	105(27.0)	148(38.0)	91(23.4)	45(11.6)
Alcohol intake was influenced by friends	52(13.4)	77(19.8)	171(44.0)	89(22.9)
Drinking alcohol at social events	63(16.2)	66(17.0)	260(66.8)	----
Alcohol consumption	36(9.3)	78(20.1)	275(70.7)	----
Using alcohol as a way to cope with stress	268(68.9)	121(31.1)	----	----
Drinking help to relax and unwind	268(68.9)	121(31.1)	----	----
Drinking alcohol out of curiosity	296(76.1)	72(18.5)	21(5.4)	
Drinking alcohol to experience the effect	52(13.4)	77(19.8)	171(44.0)	89(22.9)
Alcohol consumption is part of my cultural background	63(16.2)	66(17.0)	260(66.8)	-----
Drinking is encouraged in my social circle	36(9.3)	124(31.9)	229(58.9)	-----
Influenced by alcohol advertisements	177(45.5)	18(4.6)	179(46.0)	15(3.9)
Media portrays alcohol consumption positively	33(8.5)	44(11.3)	246(63.2)	66(17.0)

SA-Strongly agree, A-Agree, D-Disagree, SD-Strongly disagree

Factors associated with alcohol intake and liver disease among students was presented in Table 4.3. The table showed that 105(27.0%) and 148(38.0%) of the students strongly agree and agree that consumption of alcohol due to peer pressure and 91(23.4%) of them disagreed to it. Findings shows that 52(13.4%), 63(16.2%) and 36(9.3%) of the students strongly agreed that alcohol intake was influenced by friends, drinking alcohol at social events and alcohol consumption 177(44.0%), 260(66.8%) and 257(70.7%) of the students disagreed to the aforementioned statements. The table showed that 268(68.9%), 268(68.9%), 296(76.1%) of the students strongly agreed that using alcohol as a way to cope with stress, drinking help to relax and unwind and drinking alcohol out of curiosity. Also, 52(13.4%), 63(16.2%) and 36(9.3%) of students strongly agreed that drinking alcohol to experience the effect, alcohol consumption is part of my cultural background and drinking is encouraged in my social circle and 171(44.0%), 260(66.8%) and 229(58.9%) of the students disagreed to the aforementioned statements. Also, 177(45.5%) of the students strongly agreed that consumption of alcohol is influenced by advertisements and 33(8.5%) of the students strongly agreed that media portrays of alcohol consumption positively influenced alcohol intake.

Table 4.4: Ways to reduce alcohol intake among students

Variables	SA	A	D	SD
	F (%)	F (%)	F (%)	F (%)
Mandatory education and sensitization	92(23.7)	102(26.2)	151(38.8)	44(11.3)
Address poor perception	227(58.4)	130(33.4)	18(4.6)	14(3.6)
Forbid sales of alcohol in campus	260(66.8)	86(22.1)	21(5.4)	22(5.7)
Forbid use of alcohol at school social event	12(3.1)	26(6.7)	199(51.2)	152(39.1)
Compulsory search at school entrance	78(20.1)	57(14.7)	129(33.2)	125(32.1)

SA-Strongly agree, A-Agree, D-Disagree, SD-Strongly disagree

Table 4.4 shows the ways to reduce alcohol intake among students. The table showed that 194(49.9%) of the students strongly agreed that mandatory education and sensitization is a way to reduce alcohol intake among students. Findings showed that 227(58.4%) and 260(66.8%) of the students strongly agreed that address poor perception and forbidding the sales on alcohol in campus is a way to reduce students' alcohol consumption while 18(4.6%) and 21(5.4%) of the students strongly disagreed to it. The table further showed that 199(51.2%) of the students strongly agreed that forbidding the use of alcohol at school social event is a way to reduce alcohol intake among the students and 78(20.1%) of the students strongly agreed that compulsory search at school entrance is a way to reduce alcohol intake among the students while 129(33.2%) and 125(32.1%) of the students disagreed and strongly disagreed to the aforementioned statements.

4.2 Answering Research Question

Research question one: What is the level of awareness of risks associated with alcohol intake on development of liver disease among students of Achievers University Owo?

Findings of the study showed that 227(58.4%) of the students agreed that awareness of excessive alcohol consumption is a cause of liver diseases, 104(26.7%) of the students also agreed that they were familiar with the term “alcohol-related liver diseases (ALD) and 135(34.7%) of the students disagreed to it. Findings showed that 310(79.7%) students disagreed to the statement that understanding the early symptoms and signs of liver diseases caused by alcohol intake and 19(4.9%) of them strongly agreed to it. Also, 228(58.6%) of the students strongly disagreed that university students are at risk of developing of liver diseases due to alcohol intake and 44(11.3%) of them strongly agreed to it.

Research question two: What are the risk factors associated with alcohol intake among students of Achievers University Owo?

Results of the study showed that 105(27.0%) and 148(38.0%) of the students strongly agree and agree that consumption of alcohol due to peer pressure and 91(23.4%) of them disagreed to it. Also, 52(13.4%), 63(16.2%) and 36(9.3%) of the students strongly agreed that alcohol intake was influenced by friends, drinking alcohol at social events and alcohol consumption while 177(44.0%), 260(66.8%) and 257(70.7%) of the students disagreed to the aforementioned statements. The table showed that 268(68.9%), 268(68.9%), 296(76.1%) of the students strongly agreed that using alcohol as a way to cope with stress, drinking help to relax and unwind and drinking alcohol out of curiosity.

Research question three: How do we reduce alcohol intake among students of Achievers University Owo?

Findings of the study showed that 194(49.9%) of the students strongly agreed that mandatory education and sensitization is a way to reduce alcohol intake among students. Findings also

showed that 227(58.4%) and 260(66.8%) of the students strongly agreed that address poor perception and forbidding the sales on alcohol in campus is a way to reduce students alcohol consumption while 18(4.6%) and 21(5.4%) of the students strongly disagreed to it.

4.3 Testing of Hypothesis

H₀₁: There is no significant relationship between Sociodemographic and awareness of alcohol intake

Table 4.5: Relationship between sociodemographic and awareness of alcohol intake

Variable		Age	SL	SD	AWN	FLD
Age	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	389				
Student's Level (SL)	Pearson Correlation	.213**	1			
	Sig. (2-tailed)	.000				
	N	389	389			
Student's Department (SD)	Pearson Correlation	.694**	.082	1		
	Sig. (2-tailed)	.000	.108			
	N	389	389	389		
Awareness of excessive alcohol consumption as a cause of liver diseases (AWN)	Pearson Correlation	.429**	.423**	.286**	1	
	Sig. (2-tailed)	.000	.000	.000		
	N	389	389	389	389	
Familiar with the term "alcohol-related liver diseases (ALD) (FLD)	Pearson Correlation	.382**	.849**	.181**	.569**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	389	389	389	389	389

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

Table 4.5 shows the relationship between Sociodemographic and awareness of alcohol intake among the students which was tested using correlation analysis. The result showed that there is a significant ($p < 0.05$) relationship between age and awareness of excessive alcohol consumption as a cause of liver diseases with the value ($r = 0.429$; $p\text{-value} = 0.00^{**}$) and familiar with the term “alcohol-related liver diseases (ALD) with the values ($r = 0.382$; $p\text{-value} = 0.00^{**}$)

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATION

5.1 Discussion of the findings

5.1.1 Sociodemographic Characteristics of Respondents

This study was carried out to assess the awareness of risks of alcohol intake on development of liver disease among students of Achievers University Owo. Findings of the study showed 232(59.6%) of the students were female while 157(40.4%) of the students were male which disagrees with the findings of Andrew *et al.* (2017) in a study, Assessing Knowledge about the Dangers of Alcohol Consumption: A Cross-sectional Descriptive Study, among Makerere University Undergraduate Students, Uganda whereby 54.3% of the students in the study were males and 45.7% of them were females, the difference found in this study can be linked to the fact that Nursing, MLS and Microbiology were departments with highest number of participant and they had more of female than male students. Findings showed that 265(69.9%) of the students were between 24years or below of age and 30.1% of them were 25years and above with median age of 20.76 Years \pm 0.45 which is similar to the findings of Andrew et al with median age was 21 years, similar across gender. Also, 163(41.9%) of the students were 200L students, 66(17.0%) of them were 300L students and 112(28.8%) of them were 100L students while 24(6.2%) of the student were 400L and 500L, respectively. This also agrees with Andrew et al. (2017) of more participants from year one(100L) to three (300L) compared to years four and five (400L & 500L). This result of few students from 400L and 500L can be linked to the fact that both levels students are busy and graduating class with busy schedule. The percentage of 500L students found in this study as the lowest was in line with the findings of Andrew *et al.* (2017) whereby 24.1% of the students were 100L, 33.6% of them were 200L, 26.4% of them were 300L, 10.3% of them were 400L and 5.5% of them were 500L students. Findings shows that 122(31.4%) of the respondents were Nursing students, 82(21.1%) were MLS students and

363(93.3%) of them were single and 26(6.7%) were married which can be linked to the respondents' age. Result showed that 208(53.5%) of the students were Christian and 181(46.5) of the students were Muslim, respectively. This research finding therefore deduce that larger respondents are male with a mean age of the study being 20.76 Years \pm 0.45. Also, most respondents were 100L and 200L students which is due to availability of the students are unlike the graduating classes with busy schedule.

5.1.2 Level of Awareness on Risks Associated with Liver Disease among Students

Findings showed that 370(95.1%) of the students agreed that awareness of excessive alcohol consumption is a cause of liver diseases and 19(4.9%) of them disagreed to the statement. The highest percentage of the students with awareness of excessive alcohol consumption as a cause of liver diseases in this study can be linked to their level of exposure and education. Findings showed that 181(46.5%) of the students agreed that they were familiar with the term 'alcohol-related liver diseases (ALD)' while 208(53.5%) of the student were not familiar with ALD which can be related their level of education this disagrees with Andrew et al. (2017) which reported that more students were knowledgeable about the dangers of alcohol consumption like liver disease and death. It also disagrees with the study by Messina et al. (2021) on the research topic Knowledge and Practice towards Alcohol Consumption in a Sample of University Students in which only 50% of the analyzed sample answered the knowledge questions correctly demonstrating that students of the present cohort aren't sufficiently informed.

This result can be linked to the fact that more than half of the students were social and management students who may not have access to such information. This research work finding agreed that most students are aware of excessive alcohol intake as a cause of liver disease and majority of respondents represents that a larger number of students knows about ALD and also likely dangers in which alcohol intake causes to the liver.

5.1.3 Risk factors Associated with Alcohol Intake and Liver Disease among Students

Findings showed that 253(55.0%) of the students strongly agreed that consumption of alcohol is due to peer pressure and 45.0% of the students disagreed to it, 129(33.2%) of the students agreed that alcohol intake was influenced by friends and 270(66.8%) of them disagreed to it. This higher percentage of students that claimed that consumption of alcohol is due peer pressure can be associated to the fact that most people who consume alcohol doesn't wake in a morning and started the consumption but was influenced by friends or peer to taste which may later become a habit which corroborate with the findings of Htet *et al.* (2020) in a study, Prevalence of alcohol consumption and its risk factors among university students: A cross-sectional study across six universities in Myanmar whereby 70.8% of the students that participated in the study claimed that they consume alcohol due to pressure. Findings showed that 129(33.2%) of the students agreed that drinking alcohol at social events influenced their consumption pattern which can be linked to the fact that alcohol is one of the drinks provide for people at any social event making it easily accepted and accessible by people that attend such occasion. Findings showed that 268(68.9%) of the students claimed that they consume alcohol as a way to cope with stress and relax. Findings also showed that 177(45.5%) of the students claimed that their alcohol consumption is influenced by advertisements.

The findings agree with Messina et al. (2021) on the research topic Knowledge and Practice towards Alcohol Consumption in a Sample of University Students which indicated that above all to intervene precociously, attention must be paid to the influence that the environment can exert through direct and indirect pressures which can be inform of peer pressure.

This research work finding identifies peer pressure as a pertinent cause of alcohol consumption within the research setting and also indicates alcohol consumption as a coping strategy with stressor.

5.1.4 Ways to Reduce Alcohol Intake among Students

Findings revealed that 194(49.9%) of the students claimed that mandatory education and sensitization is a method reduce alcohol consumption and 195(50.1%) of the students remaining disagreed to it. More than half 227(58.4%) and 260(66.8%) of the students agreed that addressing poor perception and forbid sales of alcohol in campus is a way to reduce alcohol consumption which may be the most effective methods because if alcoholic drink is prohibited on campus, it will reduce students' free access to it. Also, 12(3.1%) and 78(20.1%) of the students claimed that forbidding the use of alcohol at school social event and compulsory search at school entrance is a way to reduce alcohol consumption among students on campus.

These findings agree with Boltana et al. (2023) on the research topic Alcohol consumption and associated factors among undergraduate regular students in Wolaita Sodo University, Southern Ethiopia, 2021: a cross-sectional study. It was reported that attention should be given to counseling and peer education training and Anti-psychoactive substance club and sensitization therapy that are designed to change students' perceptions on alcohol consumption. Hypothetically, findings of the study showed that there is a significant ($P<0.05$) relationship between sociodemographic and awareness of alcohol consumption and its associated liver diseases.

This research finding identifies More than half of the students agreeing that addressing poor perception and forbid sales of alcohol in campus is a way to reduce alcohol consumption which may be the most effective methods because if alcoholic drink is prohibited on campus, it will reduce students' free access to it.

5.2 Implications of Study to Nursing

Nursing Practice

- i. Since it was discovered from these research finding that peer influence plays a substantial role in students' drinking behaviors, developing peer support programs can

be an effective strategy, with nurses training peer counselors to provide support and information about healthy behaviors and risks.

- ii. Because a significant percentage of students believe in the effectiveness of addressing poor perception and sensitization, nurses can lead community outreach initiatives within universities to raise awareness about the harmful effects of alcohol.

Nursing Education

- i. Given that case studies and simulations can enhance understanding, using case studies and simulations related to alcohol consumption and liver disease in educational settings can help students apply their knowledge practically.
- ii. Because interdisciplinary learning can foster a more holistic approach, promoting interdisciplinary learning opportunities where nursing students collaborate with students from other health disciplines to address alcohol-related health issues can be beneficial.

Nursing Policy

- i. Since the research found that a significant number of students support policies to reduce alcohol consumption, nurses can advocate for university policies that restrict alcohol sales on campus and promote alcohol-free events, creating a healthier campus environment.
- ii. Since screening can help in early identification and intervention, establishing protocols for routine alcohol use screening in student health services can be an effective measure.

Nursing Research

- i. Since peer pressure and social events were found to influence drinking behaviors, further research to identify specific risk factors and predictors of alcohol consumption among university students can inform targeted interventions.

- ii. Given the positive response to potential interventions, conducting research to evaluate the effectiveness of various educational and behavioral interventions in reducing alcohol consumption and preventing liver disease can provide evidence for best practices.

5.3 Summary

The study on awareness of risks of alcohol intake on development of liver disease among students of Achievers University Owo. was conducted on the opinion of 389 students of Achievers University. Convenience sampling method was adopted for the study to select 389 students from various colleges and departments in the University. A well-structured questionnaire was used to collect the data. Data obtained through the questionnaire administered were arranged, coded, analyzed, interpreted and results were presented in frequency tables and percentages. Correlation analysis was used to test the relationship between some variables and $p < 0.05$ was statistically accepted. Highest percentage of the students were 24 years or below of age and were also female students. Many of the students were aware of alcohol consumption and its associated health issues. Higher percentage of the students claimed that peer pressure, friends and social events had an influence in their alcohol consumption and lastly, more than half of the students agreed that addressing poor perception, sensitization, forbidding the sales of alcohol in school campus are ways to reduce its consumption.

5.4 Conclusion

In conclusion, significant number of the students were aware of alcohol consumption, its risk factors, associated diseases like ALD and ways to reduce its consumption. The findings suggest that effective strategies to reduce alcohol consumption among students include addressing misconceptions, enhancing sensitization efforts, and implementing policies to restrict alcohol sales on campus.

5.5 Recommendations

- i. This study is recommended to undergraduate students to abstain from alcohol consumption as its detrimental to health and good living
- ii. This study is also recommended to health workers and medical personnel to educate and encourage students, youths and adolescent consume drinks and beverages that are beneficial to health and good living.

5.6 Limitations

1. Limited scope and generalizability

The findings couldn't offer a unique opportunity to develop a campus-wide alcohol awareness program, which can later be adapted by other universities and public health agencies in Nigeria which aligns with national goals to reduce alcohol-related health risks. This is due to the study being delimited to just Achievers University alone.

2. Funding constraints

Budget constraints may have affected the depth and breadth of the study, limiting its ability to explore additional factors such as the role of family background in alcohol consumption among students. With additional funding, we can extend this research to other universities, implement targeted alcohol education campaigns, and collaborate with health organizations to create sustainable intervention programs for students.

3. Lack of Longitudinal Data

Without longitudinal data, it is difficult to assess whether students' awareness improves or whether changes in drinking behavior occur as a result of education and policy efforts.

Therefore, follow-up surveys or longitudinal tracking will be needed to evaluate changes in awareness and behavior over time which will require funding and timing.

5.7 Suggestion for further studies

- i. Further studies are suggested with the same study topic among adult to examine the knowledge, attitude and consumption pattern of alcohol among undergraduate students.
- ii. Further studies are suggested compare the effects of alcohol intake on liver disease with other risk factors like obesity and genetic predisposition.
- iii. Further studies are suggested to investigate the dose-response relationship between alcohol intake and liver disease risk to determine safe drinking limits.

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APPENDIX I

QUESTIONNAIRE

AWARENESS OF ASSOCIATED RISKS OF ALCOHOL INTAKE ON DEVELOPMENT OF LIVER DISEASE AMONG STUDENTS OF ACHIEVERS UNIVERSITY, OWO, ONDO STATE, NIGERIA

Dear Respondent,

I am a student of department of Nursing Science, Faculty of Nursing Sciences, Achievers University Owo Ondo State. I'm currently carrying out research on the above topic. This questionnaire is designed to examine the level of awareness of associated risks of alcohol intake on development of liver disease among students in Achievers University, Owo, Ondo State, Nigeria. All information collected will be treated strictly with confidentiality. Your maximum cooperation is highly anticipated.

Please indicate your consent to participate in this study

Signature

QUESTIONNAIRE

SECTION A: SOCIO DEMOGRAPHIC DATA

Instruction: Kindly tick the appropriate option in front of each question.

1. Gender (a) Male (b) Female
2. Age (a) 20 or below (b) 21-24 (c) 25-29 (d) 30 or above
3. Level _____
4. Department _____
5. Marital status _____
6. Religion _____

SECTION B: AWARENESS OF ASSOCIATED RISK OF ALCOHOL INTAKE ON DEVELOPMENT OF LIVER DISEASE AMONG STUDENTS OF ACHIEVERS UNIVERSITY, OWO, ONDO STATE.

Instruction: Kindly tick the appropriate option in front of each question.

Please study the questions carefully and answer each question by ticking the appropriate answers and specify where necessary. The following represent the keys. SA= Strongly Agree, A= Agree, D= Disagree, SD= Strongly Disagree.

S/N	Awareness	SA	A	D	SD
7.	I am aware that excessive alcohol consumption can lead to liver disease.				
8.	I am familiar with the term 'alcohol-related liver disease (ALD).'				
9.	I understand the early symptoms and signs of liver disease caused by alcohol intake				
10	I believe that university students are at a higher risk of developing liver disease due to alcohol consumption.				
11	I think that regular alcohol consumption, even in moderation, can contribute to the development of liver disease.				
12	I am aware of the recommended limits for alcohol consumption to reduce the risk of liver disease.				
13	I believe that education and awareness campaigns are important to prevent alcohol-related liver disease among university students.				
14	I have access to reliable sources of information about the health risks of alcohol consumption.				
15	I feel confident in my ability to make informed decisions regarding alcohol intake and liver health.				
16	I am open to attending workshops or seminars about the risks of alcohol intake on liver health.				

SECTION C: FACTORS ASSOCIATED WITH ALCOHOL INTAKE AMONG STUDENTS OF ACHIEVERS UNIVERSITY, OWO, ONDO STATE.

Instruction: Kindly tick the appropriate option in front of each question.

Please study the questions carefully and answer each question by ticking the appropriate answers and specify where necessary. The following represent the keys. SA= Strongly Agree, A= Agree, D= Disagree, SD= Strongly Disagree.

S/N	Factors	SA	A	D	SD
17	I consume alcohol due to peer pressure.				
18	My friends influence my alcohol intake.				
19	I tend to drink alcohol at social events.				
20	Alcohol consumption is common at parties and gatherings I attend.				
21	I use alcohol as a way to cope with stress.				
22	Drinking helps me relax and unwind.				
23	I drink alcohol out of curiosity.				
24	I want to experience the effects of alcohol.				
25	Alcohol consumption is part of my cultural background.				
26	Drinking is encouraged in my social circle.				
27	I am influenced by alcohol advertisements.				
28	Media portrays alcohol consumption positively.				

**SECTION D: WAYS TO REDUCE ALCOHOL INTAKE AND LIVER DISEASE
AMONG STUDENTS OF ACHIEVERS UNIVERSITY, OWO.**

Instruction: Kindly tick the appropriate option in front of each question.

Please study the questions carefully and answer each question by ticking the appropriate answers and specify where necessary. The following represent the keys. SA= Strongly Agree, A= Agree, D= Disagree, SD= Strongly Disagree.

S/N	Prevalence	SA	A	D	SD
29.	Mandatory education and sensitization				
30.	Address poor perception.				
31.	Forbid sales of alcohol in campus				
32.	Forbid use of alcohol at school social event				
33.	Compulsory search at school entrance				

**OWO LOCAL GOVERNMENT SECRETARIAT,
P.M.B. 02.,
OWO**

Our Ref. No. OWLG/7961/T/2023

7th July, 2023

TO: ACHIEVER UNIVERSITY

ACHIEVER UNIVERSITY

ACHIEVER UNIVERSITY, OWO

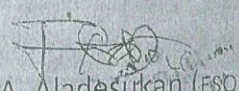
APPROVAL TO COLLECT DATA/INFORMATION

I am directed by the Management of Owo Local Government to refer to the ACHIEVER UNIVERSITY letter dated 4th July, 2023 on the above subject and to give you this approval letter to collect data/information on

AWARENESS OF ASSOCIATED RISKS OF ALCOHOL
INTAKE ON DEVELOPMENT OF LIVER DISEASE AMONG
STUDENTS OF ACHIEVER UNIVERSITY, OWO

With this approval, you are permitted to contact the appropriate resource person(s)/group(s) of people for the collection of the required data/information for your academic research purpose only.

Wishing you success in your endeavours.


F. A. Aladesurkan (ESQ.)
For: Chairman