

**The relationship between alcohol abuse and attachment styles among
undergraduate students studying psychology at the University of Limpopo,
South Africa.**

by

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DISSERTATION

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DEDICATION

To the memory of my beloved mother, Sewela Margaret Debang, I am eternally grateful for the values you instilled in me, the lessons you taught me, and the love you showered upon me. Your memory will forever fuel my determination to excel and make a meaningful impact in the world, just as you encouraged me to do. As I complete this milestone, I carry your legacy in my heart, and I dedicate this work to you, my dear mother.

DECLARATION

I, Mr. Selaelo Debang, hereby declare that the enclosed dissertation titled “**The relationship between alcohol abuse and attachment styles among undergraduate students studying psychology at the University of Limpopo, South Africa**”, is my own work and that all the sources that I have used have been indicated and acknowledged using complete references and that this work has not been submitted before for any other degree at any other institution.

Full names: Selaelo Debang

Date: 04/09/2023

Signature:

A handwritten signature in black ink, appearing to be 'Selaelo Debang', written in a cursive style.

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ABSTRACT

Background: Literature suggests that alcohol abuse is widespread among university students globally, including in South Africa. While extensive research indicates the impact of socio-economic factors on alcohol abuse, there is lack of research to show the impact of interpersonal attachments on alcohol abuse. Previous research has indicated that attachment styles can predict problematic alcohol use; however, few studies have examined this relationship among university students. Therefore, the principal objective of this study was to explore the relationship between alcohol abuse and attachment styles among undergraduate psychology students at the University of Limpopo, thus filling this gap.

Methods: A quantitative cross-sectional study was undertaken to explore the potential relationship between alcohol abuse and attachment styles among students. A convenience sample of 272 students completed self-report measures of alcohol (the Alcohol Use Disorders Identification Test) and attachment (the Experience in Close Relationships-Revised). Descriptive statistics, Spearman correlation rank test, and Mann-Whitney U test analyses were conducted.

Results: A statistical analysis of the findings of the study showed that anxious attachment was significantly and positively correlated to higher alcohol use levels ($p = 0.006$), whereas avoidant attachment was significantly and negatively correlated to higher alcohol use levels. Furthermore, the findings of the study revealed that male students reported higher rates of alcohol use, and thus expressed both anxious attachment and avoidant attachment than female students.

Conclusion: This study recommended that future research should use longitudinal designs to offer extensive insights into the relationship between alcohol abuse and attachment styles.

Keywords: Alcohol; Attachment; Students; Alcohol abuse; Anxious attachment; Avoidant attachment.

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LIST OF ACRONYMS

ACRONYM	MEANING
AIDS	Acquired Immune Deficiency Syndrome
AUD	Alcohol Use Disorder
AUDIT	AUDIT Alcohol Use Disorders Identification Test
DALY	Disability-adjusted Life Year
ECR-R	Experiences in Close Relationships-Revised
HIV	Human Immune Deficiency Virus
IWM	Internal Working Model
NDMP	National Drug Master Plan
NIAAA	National Institute on Alcohol Abuse and Alcoholism
NSDUH	National Survey on Drug Use and Health
STI	Sexually Transmitted Infection
UK	United Kingdom
UNODC	United Nations Office on Drugs and Crime
US	United States
WHO	World Health Organisation

CHAPTER 1: INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 Introduction and Background

Alcohol (in the form of beer, wine, or spirits) has been widely consumed for recreational purposes in many cultures for centuries (Roberts, 2017). Across many societies today, alcohol is routinely consumed by many members of society (World Health Organisation [WHO], 2018a). As stated by Roberts (2017), alcohol is consumed for many reasons, including the ability to reduce symptoms of anxiety, providing a mild sense of euphoria and relaxation. Alcohol is also consumed as a means of reducing the stress associated with relationships, school, money, and work. However, alcohol is often abused (Roberts, 2017). It is well-known that alcohol abuse can cause contractions of diseases, road accidents, severe health effects, and alcohol dependence in some instances (WHO, 2018b). Moreover, it has been shown that alcohol abuse contributes to high levels of poverty, unemployment, crime, and university dropout rates in societies (National Institute on Alcohol Abuse and Alcoholism [NIAAA], 2019).

Alcohol abuse causes harm among societies globally. As reported in the 2018 global status report on alcohol and health, the harmful use of alcohol leads to the death of 3 million people yearly, or 5.3% of all deaths globally (WHO, 2018b). In comparison to other causes of mortality, the WHO (2018b) highlighted that alcohol use is more significant than road accidents (3%), violence (1%), high blood pressure (2%), sugar diabetes (3%), tuberculosis (2%), and HIV/AIDS (2%). In terms of disability-adjusted life years (DALYs), alcohol is responsible for 5.1% of the global disease and injury burden (WHO, 2018b). According to Mbandlwa and Dorasamy (2020), approximately 5% of the global burden of disease is attributed to alcohol and drug use in South Africa alone. The authors reported that South Africa has the highest rate of deaths associated with alcohol, with 58% of all road deaths being caused by alcohol. Moreover, South Africa ranks in the top African countries with the highest levels of hazardous alcohol use per capita (Mbandlwa & Dorasamy, 2020). The statistics highlighted in this paragraph point out the urgency to address this issue, mainly among the younger population, as they are more susceptible to it and its adverse mental and social effects.

The issue of alcohol abuse among young adults is a major public health concern globally. In a study of 25 319 French citizens aged 18 to 75 years, 2.3% of those aged 18 to 24 years consumed alcohol every day, while 20% of them consumed it regularly (Nguyen-Thanh & Guignard, 2019). Among university students in the Polish, Slovak, Romanian, and Ukrainian parts of the Carpathian Euroregion, 70% of the students admitted to consuming alcohol occasionally (Zadarko-Domaradzka et al., 2018). The rates of alcohol consumption have been found to differ based on gender. For instance, Gierski and Morvan (2020) reported that male students (45%) drink alcohol more often and every day than female students (35%). Begdache et al. (2020) highlighted that both male and female drinkers excessively consume alcohol for the purpose of relaxing and forgetting their problems. However, the authors discovered that alcohol has greater anxiolytic effects on females than on males.

Mekonen et al. (2017) highlighted that in terms of alcohol use, South Africa is known to take an unacceptable position among colleges and universities in developed countries. There is a high rate of alcohol use in South Africa, estimated at 10.3 to 12.4 litres per person each year. Alcohol use is high in South Africa, with a worrying statistic of 50%-57% among university students (Mekonen et al., 2017). A South African study revealed that 88% of students use alcohol mostly for social and recreational reasons, and two-fifths of students reported heavy use (Nyandu & Ross, 2020). In another study, South African students consumed alcohol at risky levels resulting in adverse outcomes, for example, unhealthy peer relationships, high rape rates, unprotected sexual activity, suicide, physical injuries, high dropout rates, and poor academic performance (Nel et al., 2017). The above findings indicate that university students are a population which is highly focused on alcohol use and research needs to be done on the risk factors that might contribute to this problem.

Research has identified various factors that contribute to alcohol abuse, and one such factor is attachment style (Walker & Kreitler, 2018). Attachment style refers to the way in which people perceive and respond to interpersonal relationships, such as romantic relationships (Mikulincer & Shaver, 2019). Individuals who experience relationship problems, inconsistencies within themselves, or poor functioning internal working models (IWMs) may indulge in drugs and alcohol as a means of coping with these problems (Barbarias et al., 2019; Nakhoul et al., 2020). Moreover, it is possible that individuals with attachment problems are susceptible to emotional distress and

therefore consume alcohol as a means of coping with interpersonal stress (Barbarias et al., 2019). Indeed, there have been reports of increased alcohol use because of interpersonal stress among adults, adolescents, and university students (Chakroun-Baggioni et al., 2021).

There has been a growing interest in understanding the association between attachment styles, especially insecure attachment styles, and behavioural health issues, such as substance abuse (Simpson & Rholes, 2017). Both high levels of anxious and avoidant attachment in relationships may contribute to the future use of alcohol and other substances in the sense that, for instance, adults who are insecurely attached experience more distress in their interpersonal relationships than those with less insecure attachment (Feeney & Fitzgerald, 2019). Nevertheless, frequent use of substances may increase one's risk of insecure attachment, including the desire to separate from interpersonal relationships because of one's drug use or alcohol use (Tucker et al., 2022). The results of a meta-analysis of 34 studies (N = 56,721) indicated that both alcohol problems and adult relationship problems are preceded by insecure attachment (Fairbairn et al., 2018). Despite the need for further research, a substantial body of literature evidences the relationship between insecure attachment and alcohol use among university students (Hocking et al., 2018) and in fact, behavioural addictions in general (Nakhoul et al., 2020). It has been established in previous research that insecure attachment styles are significantly correlated to a higher risk of addiction or dependence on substances such as alcohol than a secure attachment style (Nakhoul et al., 2020). The relationship between insecure attachment styles and alcohol abuse and relationships was further explored by Goldstein et al. (2019) who concluded that, among young adults, attachment problems may precede alcohol use problems.

Exploring the relationship between attachment styles and alcohol abuse among young adults is imperative. Understanding the relationship between these variables can provide insight on how attachment styles, especially insecure attachment styles, affect alcohol use among this younger generation. This may be helpful in the development of interventions to manage alcohol use problems, probably resulting in the improved health outcomes of young adults. This may also have implications for theories of addiction and psychological functioning. The purpose of this study was to explore the

relationship between alcohol abuse and attachment styles among undergraduate students studying psychology at the University of Limpopo.

1.2 Research Problem

The above introduction and background indicate that alcohol abuse among university students is a significant public health issue globally, and in South Africa (Htet et al., 2020; Moagi et al., 2020; Schulenberg et al., 2017). University students are susceptible to using and abusing substances, including alcohol (Kenney et al., 2018). Alcohol abuse in South Africa does not negatively impact students only, but also the whole social and economic development of the country. Alcohol abuse negatively impacts the country's economy and the health of communities, families, and individuals of all ages (Mbandlwa & Dorasamy, 2020). According to Nasui et al. (2021), alcohol abuse has negative consequences on the health of students and may predict later substance-related problems and disorders.

Several health risks can be associated with alcohol abuse, such as a diminished sense of psychological well-being, schizophrenia development, and an impairment of psychological functioning (Mekonen et al., 2017). Continued abuse of alcohol may result in alcohol dependence, which may make it difficult for people to control and quit consuming alcohol despite the consequences associated with it (WHO, 2018a). A great deal of money is spent each year to prevent alcohol abuse, treat alcohol addiction, and rehabilitate alcohol addicts (United Nations Office on Drugs and Crime [UNODC], 2018). All these facts point to the crucial need to address this problem, especially among young adults, including university students and explore the contributing factors toward it. Insecure attachment is widespread among university students, especially those in romantic relationships and has been found to contribute to major long-term effects, including high levels of substance use disorders such as alcohol, tobacco, or drug abuse (Estévez et al., 2017; Hocking et al., 2018). However, there are few studies which demonstrate a significant correlation between alcohol abuse and attachment styles, especially among the South African student population. Therefore, in responding to this gap and making a novel contribution to the existing body of literature, this study explored the relationship between alcohol abuse and attachment styles among undergraduate students studying psychology at the University of Limpopo, South Africa.

1.3 Research Aim

The main aim of this study was to explore the relationship between alcohol abuse and attachment styles among undergraduate students studying psychology at the University of Limpopo, South Africa.

1.4 Research Objectives

- To explore the existence of a relationship between alcohol abuse and attachment styles among undergraduate students studying psychology at the University of Limpopo.
- To identify if there are any gender differences among undergraduate students studying psychology at the University of Limpopo concerning alcohol abuse and attachment styles.

1.5 Hypotheses

- H₀: There will be no relationship between alcohol abuse and attachment styles among undergraduate students studying psychology at the University of Limpopo.
- H₁: There will be a relationship between alcohol abuse and attachment styles among undergraduate students studying psychology at the University of Limpopo.
- H₂: There will be significant gender differences among undergraduate students studying psychology at the University of Limpopo concerning alcohol abuse and attachment styles.

1.6 Scope of the study

Students (both males and females) at the University of Limpopo who are registered as undergraduate psychology majors and aged 18 years or older were included in this study.

1.7 Significance of the study

There is a variety of purposes this study can serve. First, the study filled a gap of the scarcity of research on alcohol abuse and attachment styles among the South African student population, thus contributing to the existing body of knowledge on this area of interest. This study also sheds light on the extent and current prevalence of student alcohol use and abuse at the University of Limpopo and how this is affected by attachment styles. In addition to that, this study's findings could be used as a baseline

to assist higher learning institutions to better understand and deal with the prevalence of alcohol use amongst students.

Furthermore, the study's findings can act as a guide for future studies on alcohol abuse and attachment styles in South Africa and around the world. This study could also be a motivation for future researchers to explore different attachment styles using other variables. Other researchers may also be encouraged to study concepts used in this study to further refine and develop theories related to this study. Moreover, the study will assist healthcare professionals to gain insight into the relationship between alcohol use and attachment styles. Upon the implementation of prevention programmes, different attachment styles may be viewed as protective or risk factors that affect young adults' attitudes toward substance abuse. Clinically, these constructs may be crucial for the development of therapeutic alliances among adolescents and adults faced with substance abuse disorders.

1.8 Operational definitions of key concepts

The following key concepts, alcohol, alcohol abuse, attachment, anxious and avoidant attachment, gender, and student are defined below:

1.8.1 Alcohol

In terms of the South Africa's National Drug Master Plan (NDMP, 2013-2017), alcohol is a colourless flammable liquid found in liquors such as beer, whiskey, or wine that can make a person drunk and that hinders certain functions of the central nervous system when consumed. For this study, alcohol was operationally defined as alcoholic drinks that are abused by undergraduate psychology students at a South African university.

1.8.2 Alcohol abuse

Alcohol abuse refers to consuming too much alcohol on occasion or to excessive and harmful alcohol use habits that adversely affect health, work, and judgement (Alozai & Sharma, 2022; Khosa et al., 2017). This definition was used in this study. However, the term "alcohol use" was used to refer to alcohol consumption or drinking.

1.8.3 Attachment

Attachment is defined as the process of learning how to love, feel, and manage emotions, develop a sense of Self, and form relationships with others (Bowlby, 1969). For this study, "adult attachment" was adopted, and it referred to the expectations,

attitudes, and behaviours of an adult in their relationships with a romantic partner, especially during close contact periods or periodic separations (Mikulincer & Shaver, 2017). This means that the participants of this study were adults in romantic relationships.

1.8.4 Anxious and avoidant attachment

Anxious attachment refers to concern over rejection from the partner and grief when the partner is not available. Avoidant attachment refers to the reluctance to get closer to others due to fears of intimacy and dependency (Lewczuk et al., 2018). These definitions were used in this study and this study focused only on these two attachment styles.

1.8.5 Student

A student is defined as someone who studies at an institution of higher learning such as college or university (Lategan et al., 2017). In this study, “students” referred to undergraduate students studying psychology at the University of Limpopo.

1.9 Overview of the study’s chapters

This study was organised into five chapters.

Chapter 1: Introduction and Background to the study. This chapter provided an overview of the study, including introduction and background, research problem, aim and objectives, significance of the study, operational definitions of key concepts, and the overview of the chapters of the study.

Chapter 2: Literature review and Theoretical Framework. This chapter began by providing a discussion on the global prevalence of alcohol abuse among university students. This was followed by a brief discussion on the effects of alcohol abuse among university students. Moreover, this chapter presented a discussion on the relationship between alcohol abuse and attachment styles among students, as well as gender differences in these associations. This literature review was guided by the study’s objectives. Lastly, this chapter concluded by providing a discussion on the theoretical framework that underpinned the study.

Chapter 3: Research Methodology. This chapter elucidated the research methods used in this study. This included a detailed description of the study’s research

approach and design, sampling method, data collection tools, and data analysis tools. Lastly, this chapter discussed the ethical considerations followed in the study.

Chapter 4: Data Analysis and Interpretation. This chapter began by providing a presentation and interpretation of the findings of this study and ended by providing a discussion of the main findings of this study.

Chapter 5: Conclusion and Recommendations. As the final chapter of this study, it outlined a summary of the main findings, limitations of the study, the overall conclusion of the study, and the recommendations of the study.

1.10 Research Methodology

This study utilised a quantitative research approach adopting a cross-sectional survey design. This approach was appropriate for this study to investigate the relationship between alcohol abuse and attachment styles among students. The sampling method used in the study was convenience sampling and the sample size was 272 participants. Moreover, data were collected using standardised questionnaires such as the Alcohol Use Disorders Identification Test (AUDIT) and the Experiences in Close Relationships-Revised (ECR-R). For this study, the reliability of the scales was measured using Cronbach's alpha. Data collected were analysed using the Statistical Package for Social Sciences (SPSS) to perform descriptive analysis, Spearman rank correlation test, and Mann-Whitney U test.

1.11 Chapters summary

This chapter presented the introduction and background, and the research problem of the study. The research aim, research objectives, and hypotheses that guided the study were also discussed to contextualise the topic of the study. The chapter also presented the significance of the study, and operational definitions of key concepts. Lastly, it outlined an overview of the study's chapters, and the research methodology followed in this study. The information provided in this chapter, particularly in the introduction and background of the study, as well as in the research problem sections, pointed out the need to study further alcohol abuse looking at its associations with attachment styles. The next chapter provides an extensive literature review pertaining the study.

CHAPTER 2: LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Introduction

Every research project should include a comprehensive literature review (Polit & Beck, 2017). Consistent with Polit and Beck (2017), an in-depth literature review should consist of a current, systematic, and comprehensive approach. A literature review provides the reader with the basis for the study, identifies gaps in an existing body of literature, motivates future research, or shares research results related to the current study with the reader (Creswell, 2014). To ensure that the topic for this study was properly addressed, this chapter provided a literature review on alcohol abuse and attachment styles among university students. Firstly, an extensive global literature review on the prevalence of alcohol abuse among university students was conducted. Following this was a brief discussion on the negative effects of alcohol abuse among university students such as poor academic performance, unprotected sex, sexual assault, alcohol dependence, disability, and vomiting or abdominal pain. Moreover, literature on the relationship between alcohol abuse and attachment styles among university students was provided. This was followed by the gender differences in alcohol abuse among university students. Lastly, literature on gender differences among students concerning alcohol abuse and attachment styles was provided in this chapter.

2.2 Global prevalence of alcohol abuse among university students

A considerable amount of literature has been published globally on alcohol abuse among young adults going to universities (Kamulegeya et al., 2020; Yi et al., 2017). These studies suggest that during this transitional period, students are exposed to increased opportunities to experiment with substances such as alcohol; therefore, over the years, substance use has become a global public health issue among university and college students. According to Lategan et al. (2017), university students exhibit riskier alcohol use behaviours than their non-student counterparts. Moreover, Chekole (2020) purports that alcohol is one of the most prevalent forms of substance use that is mainly high among university students globally. It is one of the most popular risky behaviours amongst university students despite the harmful social and health issues related to it (Chekole, 2020; Htet et al., 2020; Schulenberg et al., 2017). The aim of this section was to provide a literature review on the prevalence of alcohol abuse

among university students globally, particularly those in South Africa, Africa, Europe, United Kingdom, Asia, and America.

2.2.1 South African students and alcohol abuse

The problem of alcohol abuse has been extensively studied among South African university students. South African researchers highlight that risky and harmful alcohol use is increasing among adolescents and young adults, including university students, and is considered a major health issue in this population (Mandeya & Ter Goon, 2019; Moagi et al., 2020). About half of university students in South Africa consume alcohol at a point where they are at risk for alcohol use disorders (AUDs). Individuals who suffer from AUDs such as harmful use of alcohol and alcohol dependence are unable to control their alcohol drinking regardless of the negative effects associated with it (WHO, 2018b). It was found that AUDs account for 13% of the prevalence of psychiatric disorders among those aged 18-34 (Maphisa & Young, 2018).

A recent quantitative study conducted by Mthabela and van der Heever (2021) among undergraduate students (N = 377) at a Health Sciences university in South Africa reveals that 62% of the students reported hazardous alcohol use, 25% of them reported harmful alcohol use, and 14% of them reported alcohol dependence. Similarly, at another university in South Africa, Mandeya and Ter Goon (2019) conducted a survey among undergraduate university students (N = 213) and found moderately high (58.2%) rates of alcohol use. These findings are supported by other researchers such as Lategan et al. (2017) who found 55% of AUDs in the South African student population, making them vulnerable to risky alcohol use. Moreover, in a cross-sectional study conducted at a South African university by Nkambule et al. (2018), 41% of students reported regular use of alcohol, while more than half of students considered alcohol as an acceptable social beverage. These results imply that university students in South Africa also consume alcohol at higher or risky levels.

A qualitative study conducted by Nel et al. (2017) among 700 undergraduate female psychology students in South Africa highlights that these students have reasons for consuming alcohol. These reasons include amongst others: fun and enjoyment, socio-cultural influences, peer pressure, distress, worries about weight and appearance, and it is a self-esteem enhancer. Furthermore, the results of the study highlighted that alcohol use contributes to negative effects and behaviours among female students.

These include deadly and non-lethal injuries, alcohol intoxication, fainting; poor academic performance, rape and assault, unplanned pregnancy, and sexually transmitted infections (STIs); female students should avoid consuming alcohol (Nel et al., 2017). However, prior survey research at a South African university (University of Limpopo) found that alcohol abuse is not common among students, indicating that most of the students (77.2%) reported lower levels of alcohol use (Nekgotha et al., 2020). This implies that even though alcohol use is high among university students in South Africa, other students consume it at lower levels.

2.2.2 African students and alcohol abuse

On the word of Ajayi et al. (2019), alcohol use and abuse in African countries are not different from those in other countries. According to the authors, alcohol abuse is especially prevalent among university students and tends to escalate throughout a student's academic career. Osei-Bons et al. (2017) investigated the prevalence of alcohol use among youth in Ghana as well as factors that influence this behaviour. The authors stated that the use of alcohol among students varies depending on the geographical location of the country. It is noted, however, that alcohol use is always high among university students (Osei-Bons et al., 2017).

A recent cross-sectional study conducted by Ajayi et al. (2019) in Nigeria found that 43.6% of Muslim university student (N = 784) have consumed alcohol at some point in their lives and around one out of three students had consumed alcohol within the previous month. In this research, however, the percentage of Nigerian students who ever consumed alcohol differs from that reported in previous studies, in which 57 to 72% reported having used alcohol ever while 27% to 33% reported having used alcohol currently (Eze et al., 2017). This is likely because most of the research was conducted in the Christian-dominated southern part of Nigeria (Ajayi et al., 2019). The research of Ajayi and colleagues (2019) was done in the Muslim-dominated northern central part of Nigeria. Based on the results of the study, Muslim students consume less alcohol than Christian students. This is because the prohibition of alcohol use in Islam is more enforced in the northern region of Nigeria than in the southern region. Alcohol use is forbidden for Muslims according to their religious beliefs (Ajayi et al., 2019). These results imply that religion is a crucial factor in determining alcohol abuse among students.

A recent cross-sectional study in Ethiopia conducted by Shegute and Wasihun (2021) among undergraduate students (N = 794) found that 74% of the students reported having used alcohol at higher levels. These findings are higher than those of another study conducted in Ethiopia (Gondar) amongst undergraduate university students which found the prevalence of AUDs to be 62% among students who used alcohol (Lemma et al., 2021). In contrast, these percentages are higher than those found in another study conducted in Ethiopia, where about one out of 10 students experienced hazardous alcohol use and 5% of students experienced alcohol dependence (Mekonen et al., 2017). Similarly, in Uganda, Kamulegeya et al. (2020) found that 5% of students consumed alcohol excessively while 9% of them engaged in problematic alcohol use.

In their cross-sectional study, Aboagye et al. (2021) found that among students in Ghana, 40% of them consumed alcohol in their lifetimes while 19% of them consumed it daily. These results are like those of Gebremariam et al. (2018) who report a lifetime and regular prevalence of alcohol use of 36% and 17%, respectively, among Ethiopian students. These results are, however, higher than those of a survey conducted by Asante and Kugbey (2019) who found that among Ghanaian students, 11% of them consumed alcohol in their lifetime, 13% of them consumed it regularly, and 7% of them reported problematic alcohol use. Moreover, Ndegwa et al. (2017) found that among Kenyan undergraduate students who consumed alcohol, 39% of them were doing third level, 31% of them were doing second level, 19% of them were doing fourth level, and 11% of them were doing first level. This suggests that third and second level students were more likely to consume alcohol than fourth and first level students, with first level students showing the lowest rates. This also implies that the level of study could serve as a potential factor determining alcohol use and abuse among university students.

2.2.3 European students and alcohol abuse

Research highlights that risky and problematic alcohol use is on the increase among university students in Europe (Lamberti et al., 2017). For instance, in Polish, Slovak, Romanian, and Ukraine, Zadarko-Domaradzka et al. (2018) found that 70% of university students admitted to consuming alcohol occasionally with about every seventh student surveyed reporting consuming alcohol at dangerous levels. A similar study conducted by Cooke et al. (2019) investigated alcohol use patterns and harm related to alcohol among Danish, English, German, Italian, Portuguese, and Swiss

university students. The authors found that students in Europe consumed alcohol at lower levels and reported less harm related to alcohol. However, AUDs were found to be high among students in the North region of Europe than those in the Central and South regions of Europe reflecting wider cultural standards. In total, their results indicate that 74% of students engage in alcohol abuse every week (Cooke et al., 2019).

Moreover, a cross-sectional survey study among first year French students (N = 279) conducted by Chakroun-Baggioni et al. (2021) found that students abuse alcohol at higher levels (71%). These findings are consistent with the findings of a study conducted among students from four major university cities situated within the Carpathian Euroregion by Zadarko-Domaradzka et al. (2018), which shows that 70% of the students consumed alcohol occasionally. Similarly, in their cross-sectional study, Lamberti et al. (2017) found that 76% of under- and post-graduate students in Italy consumed alcohol at higher rates.

2.2.4 United Kingdom students and alcohol abuse

In the United Kingdom (UK), alcohol abuse is a major concern among university students (Chapman, 2018). Based on the research conducted by Chapman (2018), it is estimated that alcohol causes multiple deaths each year, and noncontagious illnesses, for instance, heart diseases, cancer, obesity, high cholesterol, and cirrhosis. Moreover, the problem of heavy alcohol use is particularly concerning since in 2015, 18% of those between 16 and 24 years and those aged 65 and older reported engaging in weekly heavy alcohol use. Despite a decline since 2005, hospital admissions for alcohol use problems have increased by 15%. Heavy alcohol use has been mostly reported in Scotland. It has also been reported to be common among university students throughout the country (Chapman, 2018). Similarly, an examination of undergraduate students' alcohol use over a three-wave longitudinal period conducted in the UK by Tarrant et al. (2019) revealed excessive use of alcohol. It was discovered that second level students showed greater alcohol use compared to first level students in the beginning. Moreover, these second level students reported greater AUDs after six months. On the other hand, third level students showed relatively reduced levels of alcohol use after three months unlike first and second level students. However, this difference was not apparent in the beginning or after six months. Lastly, most fourth

level students indicated safer alcohol use, specifically during the six-month period preceding their concluding university exams (Tarrant et al., 2019).

2.2.5 Asian students and alcohol abuse

There has been evidence that university students in Asia consume alcohol at high rates (Yi et al., 2017). A recent cross-sectional survey study carried out by Shekhawat et al. (2018) explored the frequency of heavy alcohol use and related complications among Indian paramedical and medical students. The findings of this study reveal that 80% of the students consume alcohol while 56% of them consume alcohol at risky and harmful levels suggesting a need for further assessment among these students at a high risk. A similar survey study conducted in East Asia by Jang et al. (2018) found that 67% of Korean undergraduate students consumed alcohol excessively and 18% of them indicated alcohol dependence. Furthermore, a survey study conducted in South Asia by Jeeva et al. (2022) reveals that 47% of students consumed alcohol while 53% of them did not consume alcohol in their lifetime. However, fewer students (3%) consume alcohol frequently while 36% of the students consume alcohol monthly. In contrast, Chu et al. (2017) carried out a comparative study comparing alcohol use among German and Chinese university students. The study found that Chinese students consume relatively less alcohol compared with their counterparts in Germany.

Moreover, a recent cross-sectional study has been conducted by Yi et al. (2017) that examined the health and behavioural consequences of heavy alcohol use among university students in nine countries in Asia. The findings of this study reveal that 13% of the students consumed alcohol occasionally while 6.4% of the students consumed it regularly. Overall, among university students in Indonesia and Malaysia, heavy alcohol use prevalence is less than 2.5%, whereas among those in Thailand and Laos is 39% and 55%, respectively (Yi et al., 2017). These percentages are less than those from a study conducted in 25 countries spanning America, Africa, and Asia. This study reveals that 17% of students consumed alcohol at moderate levels while 11% of them consumed it at higher levels (Peltzer & Pengpid, 2017). Moreover, Pourmohammadi and Jalilvand (2019) conducted a cross-sectional study in Iran and found that university students consumed more alcohol in the Northeast City than university students in other regions of the country regardless of how illegal alcohol use is in Iran. Various factors may contribute to these differences, including the size of the sample,

the method of research, predominantly non-indigenous student population, and the societal and cultural circumstances within the city. It may also be argued that the legal and religious differences can justify the differences in alcohol use between Iran and other countries, including those with higher alcohol use levels (Pourmohammadi & Jalilvand, 2019).

2.2.6 American students and alcohol abuse

Literature highlights that university students in America consume alcohol at higher and risky rates. For instance, Cadigan et al. (2019) conducted a latent class analysis on alcohol and marijuana use among second and fourth level students in the Northwest part of the United States (US). The findings of this study indicate that 65% of fourth level students engaged in heavy alcohol use than students in second level (27%). These rates are high relative to other studies in America, for instance, in their survey study conducted in North America (Canada), Chang et al. (2021) found that 4% of students consumed alcohol at risky and harmful rates (with no distinction between males and females). Moreover, Greene and Maggs (2020) conducted a survey in the US to investigate the typical trends of alcohol use and reasons for alcohol use among Asian American university students (N = 199). The study found that many of these students consumed alcohol while many of them consumed heavy amounts of alcohol. For example, over 50% of these students were heavy drinkers by the time they reached their fourth level of university. During their heaviest day of alcohol use, the typical drinker consumed more than six alcoholic beverages while others consumed significantly higher amounts (Greene & Maggs, 2020).

Patrick and Terry-McElrath (2017) conducted an extensive longitudinal study in which they examined the prevalence of extreme alcohol use among young adults in the US. The authors found that students in the US consume alcohol at risky rates with 24% reporting that they have consumed over five drinks, 10% reporting that they have consumed over 10 drinks, and 4% reporting consuming over 15 drinks consecutively in the last two weeks. There was a significant increase in alcohol use among full-time fourth level students and 29% of them reported consuming over five drinks, 12% reported consuming over 10 drinks, and 5% reported consuming over 15 drinks. On the other hand, full-time second level students had lower levels of alcohol use and 18% of them reported consuming over five drinks, 8% reported consuming over 10 drinks, and 3% reported consuming over 15 drinks with part-time students and those

not attending university falling in between (Patrick & Terry-McElrath, 2017). Moreover, Krieger et al. (2018) report that 30% to 40% of young adults attending university in the US indicated heavy or binge alcohol use in the past month. The section that follows provides a brief discussion of the negative effects of alcohol abuse among university students.

2.3 The negative effects of alcohol abuse among university students

Alcohol abuse is a serious issue among university students and has numerous negative effects on their academic and personal lives (Nasui et al., 2021). It is important to highlight these negative effects among this population. The following discussion explores some of the most significant effects of alcohol abuse among university students, including poor academic performance, unprotected sex, sexual assault, alcohol dependence, disability, and vomiting or abdominal pain.

2.3.1 Poor academic performance

In addition to factors like signs of depression, increased anxiety, students' negative attitudes toward education (Begdache et al., 2019), inadequate studying techniques (Neroni et al., 2019), and inadequate sleep quality and too much use of internet (Adelantado-Renau et al., 2019), use of alcohol or other addictive substances (Mekonen et al., 2017; Patte et al., 2017; Vargas-Ramos et al., 2021), can have negative effects on the academic performance of university students. The short-term negative effect of alcohol use or abuse on students' academic performance may include dropping out of school whereas the long-term negative effect includes alcohol dependence (Verhoog et al., 2020; Yoo et al., 2020). Similarly, previous research shows that alcohol use has been linked to a decline in university students' academic performance, resulting in school absenteeism, dropout, increasing failure levels, and poor academic grades (Mekonen et al., 2017). It has been found that university students consume alcohol most of the time, which may explain some of these effects. It has also been found that university students often consume alcohol during the week, which results in reduced study time. Additionally, students' academic performance is negatively affected by several instant effects of alcohol use, such as hangovers and mental distress. Lastly, when the use of alcohol becomes an addiction, chronic cognitive problems develop, and make it difficult for students to complete any academic endeavour (Mekonen et al., 2017; Patte et al., 2017).

2.3.2 Unprotected sex

It has also been found that alcohol use among university students is associated with risky sexual behaviours, especially unprotected sexual activities (Chung et al., 2018). An unprotected sexual activity involves engaging in a sexual activity (vaginal, oral, or anal sex) without using contraceptive methods (birth control pills or condoms), which may increase the risk of unplanned pregnancies (Doherty et al., 2018) and STIs such as HIV/AIDS (Ebuenyi et al., 2018; Kebede et al., 2018). In their study, Aboagye et al. (2021) report that 35% of the Ghanaian students aged 26 were under the influence of alcohol before engaging in sexual activity. The authors further report that these students typically consume alcohol prior to engaging in sexual activity, which results in an unprotected sexual activity.

Moreover, a cross-sectional study conducted in Ethiopia by Kebede et al. (2018) to assess risky sexual behaviours among students at Aksum University reveals that approximately 60% of students engaged in a sexual activity after consuming alcohol. The study further reveals that 84% of students reported not using condoms consistently when they are intoxicated by alcohol while 64% of them reported having more than one sexual partner. Although 62% of the students indicated that their first sexual activity was initiated by their desire, alcohol and peer pressure continue to play (Kebede et al., 2018).

2.3.3 Sexual assault

Alcohol or other substances are frequently involved in sexual assaults in university. Alcohol and sexual assault continue to be studied in university students (National Survey on Drug Use and Health [NSDUH], 2019). Previous studies have found that students who consume alcohol are more likely to engage in other risky sexual behaviours like sexual assault (Nasui et al., 2021). However, the alcohol-related sexual assaults differ based on the gender of students. For instance, in Korea, Rose et al. (2020) found that among university students, females indicated rare negative effects of alcohol such as sexual harassment and sexual assault while males indicated high rates of negative effects of alcohol, including sexually assaulting someone, unplanned sexual activity, and purchasing sex. This is supported by Ullman et al. (2019) who report that females are mostly the victims of physical abuse and sexual harassment whereas males are the perpetrators of these harms, especially when they consume alcohol. Moreover, even though it is difficult to determine the rates of sexual

assaults related to alcohol because sexual assault is not typically reported, researchers found that one out of five university females are sexually assaulted during their university years (Muehlenhard et al., 2017). Further research is warranted to provide better estimates for sexual assaults related to alcohol among university students.

2.3.4 Alcohol dependence

Alcohol dependence, according to WHO (2018a), refers to the inability of an individual to control their use of alcohol. The more individuals consume alcohol, the higher the chances of them developing alcohol dependence. It is well-known that alcohol dependence impairs a person's ability to function (cognitively, emotionally, and physically). A person who is dependent on alcohol develops a tolerance to it over time and will require more alcohol drinks to experience the same level of pleasure or to 'pass out' than they did before becoming dependent (WHO, 2018a). According to the NSDUH (2019), 8% of adults between the ages 18 and 22 experienced alcohol dependence in the past year. Moreover, 9% of full-time university students within this age group also reported alcohol dependence.

2.3.5 Vomiting or abdominal pain

University students indicated changes in their state of well-being after consuming alcohol. It has been found that students vomit or experience abdominal pains after alcohol use (SalaŃă et al., 2018). Researchers in Ghana report that 54% of students reported vomiting excessively because of alcohol use (Aboagye et al., 2021). Similarly, researchers in Romania report that 43% of students reported excessive vomiting, abdominal pain, headache problems, and dizziness after consuming alcohol (SalaŃă et al., 2018). Furthermore, Nasui et al. (2021) highlight that students who engage in heavy or risky alcohol use experience alcohol use effects such as nausea and vomiting than those who consume alcohol at lower levels. The next section discusses the relationship between alcohol abuse and attachment styles among university students.

2.4 The relationship between alcohol abuse and attachment styles among university students

In childhood, attachment styles develop and persist throughout life (Mikulincer & Shaver, 2019). Insecure attachment styles have been identified in literature as the most reliable factors linked with alcohol abuse among young adults (Hocking et al.,

2018). A growing body of empirical studies highlights a significant positive relationship between substance abuse (alcohol, illicit drugs, or prescribed medication) among adolescents and young adults (Fairbairn et al., 2018; Ward & Limb, 2019). Because people who have insecure attachment styles are prone to emotional distress (Chakroun-Baggioni et al., 2021), it is possible that they consume alcohol as a coping mechanism (Estévez et al., 2017), and that they may feel inclined to consume alcohol when confronted with stressful interpersonal situations (Alvarez-Monjaras et al., 2019). Indeed, a substantial increase in alcohol use following stressful interpersonal situations has been found in samples of adult community members (Fairbairn et al., 2018; Ward & Limb, 2019), and university students (Chakroun-Baggioni et al., 2021; Murase et al., 2021).

As reported by Murase et al. (2021), students who lack a secure attachment develop insecure attachment styles such as poor IWMs of themselves and others, and negative expectations about relationships (be it romantic relationships or therapeutic relationships). Moreover, the increased degree of insecurity will make it more difficult for students to regulate their emotions and stress. With or without attachment figures or IWMs, this regulation will not function (Hocking et al., 2018; Murase et al., 2021). Similarly, students with greater insecure attachment may have difficulty establishing and maintaining interpersonal relationships with others. As a result, psychoactive substances such as alcohol could be perceived as an option for regulating emotions, coping with stress (Estévez et al., 2017; Kiepek et al., 2019; Schindler, 2019), replacing relationships (Hocking et al., 2018; Liese et al., 2020), or self-medicating attachment needs (Kiepek et al., 2019; Mikulincer & Shaver, 2017; Schindler, 2019).

In North America, Pedersen (2017) found that undergraduate students consumed alcohol more frequently because of relationship stress, interpersonal conflicts, and conflict in a living condition. It is possible for an individual to consume alcohol either with an intimate partner, or away from them, based on their attachment style (Hocking et al., 2018). Moreover, even though insecure attachment is not a medical disorder, it is associated with psychological disorders. It has not only been identified as a major risk factor for substance use disorders, but for general psychological disorders as well (Chakroun-Baggioni et al., 2021).

Previous studies have found a significant positive correlation between insecure attachment styles and increased use of alcohol among university students (Alvarez-Monjaras et al., 2019). Based on the data collected from 472 students in Spain, Estévez et al. (2017) found that insecure attachment styles impact the use of substances such as alcohol, by students. These findings are like those of other studies conducted in Spain by Momeñe et al. (2021) who report that insecure attachment patterns are related to substance abuse, interpersonal problems, and emotional distress in students. Moreover, in the US, Liese et al. (2020) found that insecure attachment styles are associated with a range of addictive behaviours such as alcohol abuse among university students. Chakroun-Baggioni et al. (2021) also demonstrate that first year students with higher levels of AUD exhibit significantly more insecure attachment styles than non-alcoholic students.

In contrast, Walker and Kreitler (2018) conducted a quantitative study on attachment styles and perceptions of alcohol use among university students in the US. The findings of this study reveal no relationship between increased use of alcohol and insecure attachment styles among students. A critical finding from this study is that students with insecure attachment styles are less likely to consume alcohol for coping or social reasons. However, the study found that alcohol was consumed by students for enhancement, social, or coping motivations without having any relation to insecure attachment styles (Walker & Kreitler, 2018). This implies that a secure attachment as opposed to insecure attachment styles, is associated with lower alcohol dependence among students (Nakhoul et al., 2020). Due to these inconsistent findings, further research is needed to confirm whether attachment styles are related to alcohol abuse or increased alcohol use among students. The ensuing section discusses anxious and avoidant attachment styles in relation to alcohol abuse among university students.

2.4.1 Anxious attachment style and alcohol abuse among university students

Individuals with high levels of anxious attachment style are more inclined to hyperactive attachment strategies (Mikulincer, & Shaver, 2017). They are also sensitive to signs of affection or threats of rejection (Gillath et al., 2016; Mikulincer, & Shaver, 2017). In the face of such threats, individuals experience cognitive and emotional reactions that reflect increased distress and intensify attempts to get close to attachment figures (Gillath et al., 2016).

Literature suggests significant positive correlations between anxious attachment style and alcohol abuse among young adults (including university students). For instance, in their quantitative study in the US, Hocking et al. (2018) found that undergraduate students with an anxious attachment style are more likely to abuse alcohol and develop AUDs. Similarly, in the US, Walker and Kreidler (2018) found that students with greater anxious attachment tend to consume alcohol frequently with the aim of controlling negative emotions, which may also contribute to the development of alcohol dependence or abuse. Furthermore, in Australia, Meredith et al. (2020) found that anxious attachment among young adults (university students included) was significantly correlated with substance abuse, and frequent tobacco and prescribed medicine use. This is in line with the results of a survey conducted in Ireland by Cassidy et al. (2021), which found that students with insecure and anxious attachment are prone to a higher risk of increased alcohol use or alcohol dependence.

Researchers further report that students with anxious attachment styles may be prone to consume alcohol to cope with stress and anxiety (Hocking et al., 2018). Furthermore, in Canada, Goldstein et al. (2019) found that emerging adults with a greater anxious attachment style consumed alcohol at higher levels due to interpersonal problems, feeling overwhelmed or stuck, and lacking the ability to manage stress and negative emotions. Moreover, a correlation study conducted in Kenya by Owuor and Karaga (2019) reveals a significant correlation between anxious attachment and substance abuse (alcohol, sedatives, and tobacco) among undergraduate students. This is consistent with the findings of a cross-sectional study conducted by Wang et al. (2022) in the US, which reveals that students with a greater anxious attachment consumed more alcohol resulting in greater alcohol-related problems. In contrast to these findings, in Canada, Hayre et al. (2019) found no association of alcohol use among students with anxious attachment than students with avoidant attachment.

2.4.2 Avoidant attachment style and alcohol abuse among university students

Individuals with avoidant attachment style, on the other hand, are often reluctant to accept closeness, excessively self-sufficient, and unable to depend on others for comfort and security (Gillath et al., 2016). They often rely on deactivating attachment strategies (Mikulincer, & Shaver, 2017). Due to this, individuals tend to disregard or suppress emotional, romantic, and relationship cues. During times of threat, they

engage in behaviours that indicate suppression of distress or disassociation from it, as well as suppression or minimisation of seeking closeness from an attachment figure (Gillath et al., 2016).

A growing body of research suggests strong correlations between avoidant attachment style and alcohol abuse among university students. For instance, in the US, a descriptive analysis study conducted by Okpych and Courtney (2018) reveals that students with greater avoidant attachment reported alcohol-related problems such as frequent use of alcohol or alcohol dependence. This is supported by a cross-sectional survey study conducted by Nottage et al. (2022) in Netherlands, which found a direct link between avoidant attachment and increased alcohol use among undergraduate Dutch students. According to Hayre et al. (2019), avoidant attachment may lead to substance abuse (alcohol, and drugs) among young adults because they often refuse to seek or accept guidance and support from their parents, and they rarely share their activities with their parents. Alternatively, they may seek support or find comfort in peers who also consume substances.

Moreover, it has been found that it is likely that students with an avoidant attachment style consume alcohol to ease their discomfort in establishing intimate relationships by either consuming alcohol to facilitate social interactions or distancing themselves from social engagements (Hocking et al., 2018; Tussey et al., 2021). Similarly, other researchers found that students who are higher in avoidant attachment display signs of psychological problems, substance use problems, and behavioural problems (Okpych & Courtney, 2018). Moreover, Basting et al. (2023) found that alcohol use problems were correlated with increased avoidant attachment among undergraduate students. This is supported by a cross-sectional study conducted by Nakhoul et al. (2020) in Lebanon, which found that students who reported higher levels of avoidant attachment style were significantly correlated with increased alcohol use problems. In contrast to these findings, Goldstein et al. (2019) found an indirect and negative correlation between avoidant attachment and greater alcohol use problems among students. This is supported by Meredith et al. (2020) who found that avoidant attachment was not directly correlated with the problematic use of alcohol and other substances such as drugs and tobacco among students in Australia. Liese et al. (2020) also found weak correlations between higher levels of alcohol use and avoidant attachment among university students in the US.

2.5 Gender differences in alcohol abuse among university students

Gender (in the form of male or female) has been found to be a variable that determines the extent to which university students abuse alcohol and other substances such as tobacco and illicit drugs (Ajayi et al., 2019; Gierski & Morvan, 2020; Nyandu & Ross, 2020). Research on the subject indicates that female students abuse alcohol at a lower rate than their male counterparts (Nyandu & Ross, 2020). Concerning this matter, Nyandu and Ross (2020) suggest that males are both socially and genetically more prone to abusing or consuming alcohol than females. Such claims are supported by researchers such as Osei-Bonsu et al. (2017) who found that most male students (74%) reported greatest levels of current alcohol use than female students (26%) who reported their levels of current use of alcohol. Similar findings have been reported in a cross-sectional study conducted by Nyandu and Ross (2020) among undergraduate students, which reveals higher rates of alcohol use among males (69%) than females (19%).

A South African cross-sectional study conducted by Nkwana et al. (2021) among students reveals that males (62%) reported higher prevalence rates of current use of alcohol than females (48%). In another South African cross-sectional study, Lategan et al. (2017) found that male students consumed alcohol at higher rates and more frequently than female students. The authors also found that 32% of male students reported higher rates of heavy or binge alcohol use patterns than female students (9%). Overall, it was found that male students reported higher rates of hazardous, harmful, and dependent alcohol use patterns compared to female students (Lategan et al., 2017). Similarly, Nekgotha et al. (2020) reveal that almost 50% of students consume alcohol twice or thrice in a day with 10% of males and 9% of females consuming alcohol at levels that are considered risky or potentially harmful, respectively.

Furthermore, in a South African student population, Mandeya and Ter Goon (2019) found that the prevalence of alcohol use and risky or harmful alcohol use were 58% (male students) and 43% (female students), respectively. These findings are supported by another South African study, which found that excessive alcohol use puts students at risk of AUD, with 67% and 76% of females and males consuming alcohol, respectively (Maphisa & Young, 2018). Moreover, a comparative study on alcohol abuse among South African and Belgian students by Inaç and colleagues

(2021) demonstrates that 95% of the Belgian males consumed alcohol in the past year, relative to 66% of the South African males. The authors observed more hazardous alcohol use among Belgian males (62%) than South African males (28%). Moreover, the authors observed that 92% of the Belgian females consumed alcohol compared to 68% of the South African females. They also observed more hazardous alcohol use among Belgian female students (48%) than South African female students [17%] (İnaç et al., 2021).

A qualitative study conducted by Mbutia et al. (2020) among undergraduate students in the Coastal Region of Kenya report that the male gender was a predisposing factor to alcohol and drug abuse. They highlight that more male students engaged in substance abuse compared to a few females mainly because they are risk takers. Among Indian students, Shekhawat et al. (2018) found that males reported higher alcohol use problems than females. In Kenya, Ndegwa et al. (2017) found higher levels of harmful alcohol use among males (60%) than females (54%). These findings are in line with the findings of a study conducted among first year university students in the Carpathian region of Europe by Zadarko-Domaradzka et al. (2018), which shows that males (48%) consume more risky alcohol than females (42%). Similarly, in Nigeria, Ajayi et al. (2019) found that male students (44%) consumed alcohol at higher rates than female students (31%). There is a general belief that males are adventurous in nature and their use of alcohol appears to be more socially endorsed relative to that of females (Lasebikan et al., 2018). Therefore, this could contribute to the potentially higher rates of alcohol use found among males (Ajayi et al., 2019).

Moreover, Lebreton et al. (2017) conducted a mixed methodology study among students from five different universities in the northern region of France. The quantitative findings of their study show significant gender differences in alcohol use with males reporting consuming alcohol at higher rates and in large quantities than females. On the other hand, their qualitative findings highlight that gender differences in alcohol use behaviour among students are influenced by gender conformity pressures, gendering of alcohol type, masculine embodiment through alcohol use, safety-related concerns of females, and male privilege. Moreover, in their systematic review and meta-analysis, Newman et al. (2017) found that among undergraduate students in China, 67% of males and 32% of females reported heavy alcohol use, respectively. However, these rates are high relative to other studies; for instance, in

Myanmar, Htet et al. (2020) indicate that among students who heavily consumed alcohol, 36% were males and 10.8% were females. Kamulegeya et al. (2020) found substantial prevalence rates of heavy or problematic alcohol use among students in Uganda at 9% for males and 5% for females. It is obvious from these findings that male students abuse alcohol more than female students. The reason may be due to gender difference because society encourage males' alcohol use but not females' alcohol use (Osei-Bons et al., 2017).

While a lot of researchers highlight more alcohol abuse among male students than female students, other researchers found that alcohol use is highest among female students who feel that consuming alcohol relieves stress, anxiety, and other interpersonal problems (Nel et al., 2017). According to Nel et al. (2017), female students are significantly more likely than male students to display patterns of risky alcohol drinking when they are heavy drinkers. Although the study shows that female students' drinking patterns are like those of male students, Begdache et al. (2020) confirm that there is still a variance in frequency of alcohol use between the two genders, with a higher percentage of male students consuming alcohol than female students. Isralowitz et al. (2017) conducted a cross sectional study on alcohol use among undergraduate female students (N = 473) from a major university in Israel. They found that these students abuse alcohol at high rates.

However, there are many studies that contradict most of the above-mentioned findings, which concluded that males abuse alcohol more than females or vice versa. For instance, a Canadian study conducted by Chang et al. (2021) found no gender differences in alcohol abuse among students. Similarly, recent research, carried out in South Africa by Blows (2020) did not find any statistically significant correlation between the gender of the students and their abuse of alcohol and other substances. However, males reported alcohol dependence, and an equal rate of harmful alcohol use, regardless of the gender difference (Blows, 2020). Moreover, in the US, a study which surveyed students using data from the Youth Risk Behaviour Survey (YRBS) conducted in 2013 found no gender differences in alcohol use, drug use, and tobacco smoking.

2.6 Gender differences in terms of alcohol abuse and attachment styles among university students

Research points out that there are gender differences in terms of alcohol abuse and attachment styles among university students. For example, a cross-sectional survey study among first year French students (N = 279) by Chakroun-Baggioni et al. (2021) found that insecurely attached males were most likely to consume alcohol than insecurely attached females. Surprisingly, they found that securely attached females consume alcohol more frequently than insecurely attached females. There is a belief that the secure attachment enables them to consume alcohol frequently because they have numerous opportunities to consume it. This secure attachment allows them to effectively connect with their peers, increasing their likelihood to experiment with alcohol. Due to their secure attachment, they can distance themselves from the gender stereotypes suggesting that “women drink less alcohol than men”, or “it is inappropriate for a woman to drink alcohol a lot”; thus, they drink more alcohol without fear of being judged (Chakroun-Baggioni et al., 2021).

Moreover, Meredith et al. (2020) found that avoidant attachment among students was associated with the prediction of risky alcohol use and motives to cope among males, but not among females. Similarly, Ciocca et al. (2019) report that male students are mainly associated with avoidant attachment, whereas female students are associated with anxious attachment. These findings are consistent with the findings of other previous studies, which reveal that female students reported greater anxious attachment, but lower avoidant attachment relative to male students (Diez et al., 2019; Scharfe, 2017; Tussey et al., 2021; Weber et al., 2022). It is important to note, however, that there are cases where female students report a greater level of avoidant attachment, and males report a greater level of anxious attachment (Scharfe, 2017). A correlational study conducted by Khodarahimi et al. (2022) in Iran found that anxious and avoidant attachment styles were both associated with higher rates of alcohol and substance abuse among male young adults; however, only males participated in the study. The following section discusses the theoretical framework that underpinned this study.

2.7 Theoretical Framework

A theoretical framework helps to guide the research process, inform the research design and methodology, and provide a framework for interpreting the results (Grant

& Osanloo, 2014). Accordingly, the Attachment Theory was considered as an appropriate framework for this study. The Attachment Theory was adopted in this study to help the researcher interpret the results on the relationship between alcohol abuse and attachment styles among undergraduate students studying psychology at the University of Limpopo, South Africa and make broader generalisations.

2.7.1 Attachment Theory

Attachment Theory is a psychological framework that explains how childhood experiences with caregivers influence an individual's attachment style, which then influences how they behave and make decisions in their adult relationships throughout their life (Bowlby, 1969; Main, 2000). Attachment, according to Bowlby (1969), refers to the formation of social and emotional connections with others, which are influenced by the nature of childhood interactions with caregivers. A child's early interaction with their caregivers imparts a working model for relationships, which determines the child's development of secure or insecure attachment styles (Flaherty & Sadler, 2011). A secure attachment style is associated with constant support and care from caregivers, whereas insecure attachment styles are associated with neglect and abuse (Dinero et al., 2022; Flaherty & Sadler, 2011; Kural & Kovacs, 2022). However, it is important to note that the attachment process differs for each developmental stage, that is, childhood, adolescence, and adulthood. During childhood, children form attachment bonds with their primary caregiver (Bowlby, 1969). Through adolescence, attachment bonds are formed with peers during early adulthood, they are formed with romantic partners (Main, 2000). Lastly, in adulthood, attachment bonds continue to be mainly with a close, romantic partner (Foroughe & Muller, 2014).

Adult Attachment Theory suggests that the attachment relationship formed between adults and their romantic partners is the same as the one formed with their caregivers in childhood. This is because both relationships are governed by same attachment behavioural system (Hazan & Shaver, 1987). Secure attachment relationships in adults are characterised by love, trust, and intimacy. Adults with a secure attachment feel secure in their relationships and this sense of security helps them to manage their emotional experiences during interactions with attachment systems (Johnson, 2013). On the other hand, an insecure attachment relationship is classified into two distinct continuous underlying factors, namely, anxious, and avoidant attachment (Fraleigh et al., 2015). Adults with an anxious attachment tend to be afraid of rejection or

abandonment from their romantic partners, which often makes them become clingy to get attention from their partners and relieve such fears whereas those with an avoidant attachment tend to show independence and lack of emotional intimacy resulting from mistrust and fear of romantic partners (Simpson & Rholes, 2017). However, it is important to note that being low in anxiety does not necessarily imply being high in avoidance and vice versa (Fraley et al., 2015).

In romantic relationships, attachment plays a crucial role in regulating emotions, behaviours, and thoughts that threaten a romantic relationship (Hazan & Diamond, 2000; Kruger et al., 2013). The emotional and behavioural dynamics of adult romantic relationships are guided by similar biological systems that influence the physical and psychological closeness to a partner (Fraley & Shaver, 2000), and fostering safety and survival (Bowlby, 1969). In this sense, adults feel more secure and safe when their partners are responsive, accessible, or close by. Adults who feel distressed, unwell, or threatened will seek protection, safety, and comfort from their partners. As a result, their safety may be threatened when their partner is unavailable (Hazan & Shaver, 1987). These individual differences called attachment styles, have gained a lot of attention in research on attachment and other constructs such as substance abuse (Gillath et al., 2016; Hocking et al., 2018).

2.7.2 Attachment Theory and Alcohol Abuse

The development of alcohol use problems may be tied to attachment styles, which can be viewed as a coping mechanism for abusers of alcohol (Estévez et al., 2017). In addition to providing a framework for understanding the biological, psychological, and social factors influencing substance use, Attachment Theory also studies alcohol abuse (Le et al., 2018). According to Mikulincer and Shaver (2016), Attachment Theory can be used to understand the relationship between attachment styles and alcohol abuse in individuals. Insecure attachment styles are related to interpersonal problems, emotional distress, and alcohol abuse (Borhani, 2013). As stated by Flores (2006), substance use disorders are attachment disorders in which the relationship with the substance substitutes for the relationship with others, thus allowing the individual to become independent. Connecting with others is an essential need of human beings, and especially young adults (Chakroun-Baggioni et al., 2021). Although Attachment Theory has been previously used to study interactions between interpersonal relationships and the development of mental illnesses (Cassidy &

Shaver, 2016; Gillath et al., 2016) and to explain various mental disorders such as depression and anorexia (Brennan et al., 1998; Madigan et al., 2016), in this study, it was used to examine the role of attachment styles on alcohol abuse among students, that is, to determine the relationship between these variables.

Studies have demonstrated that attachment styles can make an individual more prone to a variety of psychological and behavioural disorders such as alcohol and substance abuse (Alvarez-Monjaras et al., 2019; Estévez et al., 2017). Insecure attachment may be correlated to substance use since it is associated with other factors which are associated with substance use such as depression and anxiety, which are often present in conjunction with psychological distress (Kessler et al., 2002). Individuals with insecure attachment, especially those with anxious or avoidant styles, may consume alcohol as a means of coping with stress or negative emotions (Goldstein et al., 2019). For example, individuals with anxious attachment may consume alcohol to reduce their fear and lack of confidence in interpersonal situations (Kassel et al., 2007). Those with avoidant attachment may engage in alcohol use as a means of reducing their feelings of emotional attachment, thereby making them less inhibited and more relaxed during interpersonal situations (Hocking et al., 2018; Meredith et al., 2020). Since attachment styles have a profound influence on interpersonal bonds and substance abuse, it is conceivable that they may also influence social attitudes regarding substance abuse as a coping mechanism (Alvarez-Monjaras et al., 2019).

Researchers have confirmed strong correlations between insecure attachments and substance abuse among young adults (Alvarez-Monjaras et al., 2019; Murase et al., 2021). Through the Attachment Theory lens, alcohol abuse among young adults is viewed as “self-medication,” an attempt to compensate for lacking attachment strategies (Kiepek et al., 2019; Schindler, 2019). It is established in the literature that insecure attachment poses a risk for alcohol abuse (Estévez et al., 2017; Fairbairn et al., 2018). However, it remains unclear how its various styles affect alcohol use. Several studies demonstrate a significant positive correlation for anxious attachment only (Kassel et al., 2007), some for avoidant attachment only (Okpych & Courtney, 2018), and some for both (Anderson et al., 2019).

However, it is important to note that attachment styles can change over time with new relationships and experiences- they are not constant (Foroughe & Muller, 2014).

Moreover, not everyone with attachment issues will use alcohol as a coping mechanism. It is also important to note that other factors such as, family history, peer pressure, and access to alcohol can also contribute to the problem of alcohol abuse among individuals, especially young adults (Dorji et al., 2020), and insecure attachment is not the only factor contributing to this problem. Overall, literature suggests that attachment may play a crucial role in understanding and fighting alcohol abuse among individuals, but it does not determine or predict individual behaviour (Hocking et al., 2018).

2.8 Chapter summary

This chapter presented the literature review for this study. Specifically, it presented literature on the prevalence of alcohol abuse among students globally. This was followed by a brief discussion on the negative effects of alcohol abuse among university students. The chapter also provided literature on the relationship between alcohol abuse and attachment styles among students. Further to that, literature on gender differences in alcohol abuse as well as gender differences in terms of alcohol abuse and attachment styles among students was offered in this chapter. Lastly, a review of Attachment Theory as a theory that underpinned this study was offered to explain the development of alcohol abuse. The next chapter presents and justifies the research methods employed to identify, select, process, and analyse the information enclosed in this study.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents and clarifies the research methodology that was adopted in this study. More specifically, it discusses the research approach and design, sampling method, data collection tools, types of data analysis, and ethical considerations that were followed to conduct this study.

3.2 Research Approach

This study was quantitative in nature. According to Leavy (2017), quantitative research is a systematic and empirical investigation of a phenomenon through the processing and analysis of numerical data using statistical analysis to test hypotheses and establish correlations between variables. Accordingly, the researcher used this research approach in this study to examine the relationship between alcohol abuse and attachment styles among university students. By collecting numerical data on both variables and using statistical techniques to analyse the data, the researcher was able to identify whether there is a correlation between the two variables.

3.3 Research Design

Because this study was conducted at a single point in time, it employed a cross-sectional survey design. Cross-sectional studies allow researchers to assess participants' outcomes and experiences simultaneously. It is a process of taking a sample from a larger population or group at a specific time (Carlson & Mrrison, 2009). Cross-sectional studies do not follow-up with participants over an extended period like other observational research methods. Usually, they are not costly, and they can be easily conducted. Cross-sectional studies serve as a basis for developing an advanced prospective study (Wang & Cheng, 2020). As stated by Wang and Cheng (2020), most cross-sectional studies are conducted using questionnaires. Furthermore, the authors pointed out that questionnaires can be a relatively inexpensive method of reaching the target sample of a large population; however, response rates may be low. Consequently, in this study, the researcher used questionnaires (to be discussed later) to collect data from the study participants.

e3.4 Variables of the study

Variables are defined by Welman et al. (2005) as systematic ways to explain change in a single thing by relating it to a change in another. These variables can be classified

as independent and dependent variables. Simply put, the independent variable, also known as the predictor variable, is the cause of a change in the dependent variable while the dependent variable, also known as the outcome variable, refers to the effect of or the changes that take place because of independent variables (Welman et al., 2005). Therefore, variables of this study were attachment styles (independent variables), and alcohol abuse (dependent variable).

3.5 Sampling

3.5.1 Target Population and Sample

As defined by Babbie (2016), a population is a group of people, events, or objects sharing relevant similar features that researchers wish to examine, investigate, or make conclusions upon. The population could be people, animals, plants, or any other relevant unit of analysis (Babbie, 2016). The target population for this study comprised all registered undergraduate students (from first-level to fourth-level) studying psychology at the University of Limpopo during the academic year 2023. These students were required to be 18 years or older, as the study involved investigating alcohol abuse, and in South Africa, the legal age for purchasing alcohol is 18 years and above. The intended number of participants from this target population was 933. The target population was selected from the faculty of Humanities in the school of Social Sciences at the University of Limpopo (Turfloop Campus). Obtaining access to the entire undergraduate population of the Faculty of Humanities or the School of Social Sciences or of the entire University, was difficult for the researcher due to limited resources and time. Therefore, first-level to fourth-level psychology students were delineated as the population under investigation since they represented a manageable number. The rationale to conduct this research among this population is that there are few studies that show the relationship between alcohol abuse and attachment styles among young adults in South Africa.

3.5.2 Study Site

This study took place at the University of Limpopo (Turfloop Campus) in the Capricorn District of Limpopo Province, about 30 km east of Polokwane.

3.5.3 Sampling Method

Babbie (2016) refers to a sample as a subgroup of the population that we select to represent the whole group in a research study. A sample is chosen to make inferences

or draw conclusions about the entire population (Babbie, 2016). To select the sample from the target population, the convenience sampling method was utilized. Convenience sampling involves selecting participants who are conveniently located or easily reachable, such as those who are near the researcher's location or those who can be contacted through social media or other online platforms to participate in a study (Hesse-Biber & Leavy, 2005, 2011). Convenience sampling is often used in social science research, especially in exploratory research, when the researcher is looking to gather data quickly and efficiently (Hesse-Biber & Leavy, 2011). The convenience sample of this study consisted of undergraduate psychology students at the University of Limpopo (registered for the 2023 academic year) who were readily available to the researcher and who met the inclusion criteria for the study. Hesse-Biber and Leavy (2011) stated that one of the main advantages of convenience sampling is its ease and speed of implementation, as it requires less time and resources compared to other sampling methods.

According to Delice (2010), the size of the study determines the sample size. The sample size was determined using the Bukhari sample size Calculator (Bukhari, 2020). From the initial target population of 933, a sample size of 273 was selected, comprising 187 female students (69%) and 85 male students (31%).

3.6 Data collection

An online self-report survey was employed to collect data from the participants of this study. Gravetter and Forzano (2012) highlighted that data can be collected quickly and conveniently using survey questionnaires. The data collection instrument utilized for this study was a survey questionnaire, comprising the following sections:

- Section A: Demographic Questionnaire
- Section B: The Alcohol Use Disorders Identification Test
- Section C: The Experiences in Close Relationships-Revised

3.6.1 Demographic questionnaire

Participants of the study (that is, students) completed a demographic questionnaire with their demographic information, for instance, gender, age, level of study, relationship status, and ethnicity. They self-reported their gender (by birth) as either male or female. Age was based on the participants' self-report in years between 18 years and forty years. Moreover, participants self-reported their level of study as either

first level, second level, third level or fourth level. Participants self-reported as either African, White, Indian, or Coloured, and an additional category of “other” was offered for those outside the mentioned categories.

3.6.2 The Alcohol Use Disorders Identification Test

The Alcohol Use Disorders Identification Test (AUDIT) is a screening tool with 10-item designed by the WHO to measure alcohol use patterns and related problems (Babor et al., 2001). Reinert and Allen (2007) used this tool in their study, and they reported a Cronbach’s alpha (α) of 0.83, demonstrating good internal reliability. This test is widely used across genders and cultures and is a standardised, valid, and reliable scale to identify people with AUDs and people at risk of developing alcohol use problems (Babor et al., 2001; Dybek et al., 2006). It is also a valid and reliable scale to identify students with problematic alcohol use (Chaudhary et al., 2015; Inaç et al., 2021). For this reason, it was used in this study to assess students’ alcohol use patterns. This tool has also been previously used in some South African studies on alcohol abuse using university students as participants (du Preez et al., 2016; Lategan et al., 2017).

3.6.3 The Experiences in Close Relationships-Revised

The Experiences in Close Relationships-Revised (ECR-R) is a 36-item tool designed by Fraley et al. (2000) to measure adult attachment styles (Diamond & Hicks, 2005; Peixoto et al., 2017). According to Fraley et al. (2000), two subscales of attachment are measured with the ECR-R: Anxiety (the first 18 items) and Avoidance (the last 18 items). Anxious attachment is characterised by fear of rejection, abandonment, and unavailability in close relationships whereas avoidant attachment is characterised by difficulty forming and maintaining close relationships, that is, avoiding intimacy and dependency and distancing oneself (Mikulincer & Shaver, 2017). The Anxiety and Avoidance scales have high internal consistency, with Cronbach’s alphas of 0.91 and 0.94, respectively. These scales are both reliable (Mikulincer & Shaver, 2017; Zavattini & Busonera, 2017). It was found that the parallel scales of the old and new scales were correlated (Mikulincer & Shaver, 2017). These scales were used to measure students’ attachment patterns. The ECR-R is a valid and reliable scale to identify people with attachment issues across cultures and is translated and used extensively in several languages (Diamond & Hicks, 2005; Peixoto et al., 2017). This instrument

has been used in several South African studies on attachment (Nee Negroo & Viljoen, 2020; Rawatlal et al., 2015), which is why it was used in this study to assess students' attachment patterns.

These survey questionnaires are publicly available for researchers to utilise them for their research purposes. For this study, the researcher sent the questionnaire to a statistician who reviewed the items in the questionnaires and assessed their ability to measure what they intend to measure.

3.6.4 Data collection procedure

The first step in commencing with this research was by obtaining ethical clearance from the Turfloop Research Ethics Committee (TREC), with reference number: REC-0310111-031. After that, the University Gatekeeper (the Registrar's Office) was contacted to request for permission to gain access to registered undergraduate psychology students' email addresses since not all students were on Campus. This means that data were collected online from the identified student population. The Registrar's Office provided the researcher with a single email address which is for "All Students" registered in the university. The researcher then sent a Google form including the survey questionnaire, information sheet, and a consent form to this email address. Since the email was sent to "All Students", the researcher indicated in the message of the email that ONLY registered undergraduate psychology students can participate in the study. The data collection period lasted for three weeks, during which time the survey questionnaires were distributed in English.

3.7 Data analysis

The data obtained from research participants was captured and coded on the Microsoft Excel and on the Statistical Package for Social Sciences (IBM SPSS Version 29) and both descriptive and inferential statistics were calculated. This ensured the quality and accuracy of the collected data, as the missing data were screened for. Initially, it was proposed that regression analysis would be used to determine the relationship between alcohol abuse and attachment styles among students. However, due to the nature of the data collected for this study (that is, data were not normally distributed), Spearman rank correlation test was found to be the appropriate test to determine the relationship between alcohol abuse and attachment styles. This test does not rely on assumptions about the underlying distribution of the data. Spearman

rank correlation test used the significance (p) value to help determine the significance of the relationship between the study variables (Al-Hameed, 2022). Moreover, the Mann-Whitney U test was used to compare differences between independent groups (in this case, male and female students) concerning alcohol abuse and attachment styles. These differences were further explored using descriptive statistics to compare the medians of male and female students regarding alcohol abuse and attachment styles. This is because the Mann-Whitney U test is based on medians and does not assume a specific distribution for the data.

3.8 Reliability of scales

Reliability is the ability of an instrument to accurately measure what it intends to measure while producing the same results. It is about the fairness and precision of the data used in the study to draw a conclusion (Babbie, 2016). In this study, reliability was ensured by clarifying the techniques used such as data collection and analysis tools. The use of standardised questionnaires in this study further ensured the reliability of the collected data. These questionnaires have been demonstrated to be reliable and valid and have been widely used among diverse populations globally. For this study, Cronbach's alpha was used to measure the internal consistency of the scales employed. In 1951, Lee Cronbach established alpha (α) which measures the internal consistency of a scale or test and is represented by a number ranging from 0 to 1. Internal consistency is a measure of reliability, describing the degree to which all the items in a scale assess similar constructs and therefore, it is connected to the interdependencies of the items of the scale (Cronbach, 1951).

3.8.1 Cronbach alpha (reliability testing) for the scales

Table 3.1 below shows reliability testing of the scales used in this study. Based on this table, the AUDIT scale, and the ECR-R scales (anxious attachment scale and avoidant attachment scale) showed a Cronbach's alpha (α) that is greater than 0.8. which is acceptable (see Table 3.2).

TABLE 3.1: RELIABILITY TESTING FOR THE STUDY'S SCALES

SCALE	CRONBACH'S ALPHA (α)	AVERAGE INTERIM-CORRELATIONS	N OF ITEMS
AUDIT scale	0.875	0.42	10
Anxious attachment scale	0.888	0.303	18
Avoidant attachment scale	0.892	0.314	18

TABLE 3.2: CRONBACH'S ALPHA INTERPRETATION TABLE

CRONBACH'S ALPHA (α)	INTERNAL CONSISTENCY
$\alpha \geq 0.9$	Excellent
$0.9 > \alpha \geq 0.8$	Good
$0.8 > \alpha \geq 0.7$	Acceptable
$0.7 > \alpha \geq 0.6$	Questionable
$0.6 > \alpha \geq 0.5$	Poor
$0.5 > \alpha$	Unacceptable

(Tavakol & Dennick, 2011)

3.9 Ethical Considerations

It is vitally important for all researchers to maintain ethical standards throughout the course of their research. In research, ethics refers to the rules for carrying out research. It regulates and instructs researchers to make sure that they adhere to a set of ethical principles when carrying out their research (Hasan et al., 2021). As part of ethical consideration, before the study was undertaken, permission was given by the School of Social Sciences Research and Ethics Committee (SSSREC), Turfloop Research Ethics Committee (TREC) and the University of Limpopo Registrar. The following ethical guidelines were applied throughout this study to ensure compliance with the ethical guidelines of psychological research (Adair, 2001):

3.9.1 Informed consent

Participants of this study were sent an information sheet (*Appendix D*) outlining the aim and objectives of the study, their rights, and responsibilities as participants, and what would be required from them pending their agreement to participate. The google form sent to the participants included this information sheet and a consent form (*Appendix E*), where participants were asked to select between "yes" or "no" to provide consent for their participation in the study. Upon selecting "yes", students were then able to access and start with the questionnaire by clicking on the "next button". By selecting "no", students had the option of exiting the questionnaire by clicking the "next button". Furthermore, the information sheet outlined the participants' right to voluntarily participate and to withdraw at any time should they feel so. The information sheet also provided clarifications regarding the processing and reporting of the findings.

3.9.2 Confidentiality, anonymity, and privacy

The data provided by the participants of this study remained confidential and were only used for research purposes as highlighted in the information sheet. To maintain anonymity of the participants, the researcher did not, anywhere, in the questionnaires

require their identity and personal information such as names, email addresses, etc., to ensure privacy of data collected from participants, the questionnaires and the responses were kept on a computer protected by a password and the only people who had access to them were the researcher, supervisor, and statistician.

3.9.3 Participant risk of harm

The study's participants were informed that in the event of the need for counselling services or emergency interventions during their participation in the study, they had to contact either the researcher or the supervisor (names and email addresses are provided on the information sheet) for referrals or debriefing intervention. There were no reports of participants feeling uncomfortable or troubled after completing the survey (*Appendix F*) of this study.

Overall, ethical considerations in research are important as they ensure that research is conducted in a way research participants are protected, and that the collected data are valid and reliable. Noteworthy, researchers should follow ethical guidelines and standards in their research so that their work is undertaken responsibly and in a respectful manner.

3.10 Chapter summary

This chapter presented the research methodology that was used to conduct this study. The research approach and design employed in the study were described and justified as to why they are suitable for this study followed by the sampling procedure used. Further to that, the data collection and analysis methods were explained and justified for their use in the study. The chapter that follows provides a presentation of the findings and discussion.

CHAPTER 4: DATA ANALYSIS AND INTERPRETATION OF RESULTS

4.1 Introduction

This chapter presents the findings of this study. Firstly, the demographic information of participants is presented and interpreted followed by the results of the questionnaires used in the study. From the 272 survey questionnaires administered to research participants, all respondents completed the questionnaire, resulting in a 100% response rate. The results of the hypotheses of the study are also presented and interpreted in the chapter. Lastly, the discussion of the main findings of the study is provided in this chapter.

4.2 Section A: Demographic information of participants

This section presents the three items that were used to describe the characteristics of the sample of this study. These items included gender, age, and level of study. Therefore, Table 4.1 below provides information on these three variables and their characteristics, frequencies, and percentages while Figures 4.1 to 4.3 visualise the distribution of these variables using pie and bar charts.

TABLE 4.1: DEMOGRAPHIC INFORMATION OF PARTICIPANTS (N = 272)

VARIABLE	CHARACTERISTICS	FREQUENCY	PERCENTAGE (%)
Gender	Female	187	69
	Male	85	31
	Total	272	100
Age	18-20	161	59
	21-25	104	38
	26-30	4	2
	31-40	3	1
	Total	272	100
Level of study	1 st level	150	55
	2 nd level	36	13
	3 rd level	52	19
	4 th level	34	13
	Total	272	100

- Gender of participants

Figure 4.1 below shows that the majority of participants of this study were females than males. The reason for this gender disparity is that more females in the undergraduate level registered to major in psychology than males, this is according to the Principal Admin Office of the School of Social Sciences (2023) at the University of Limpopo.

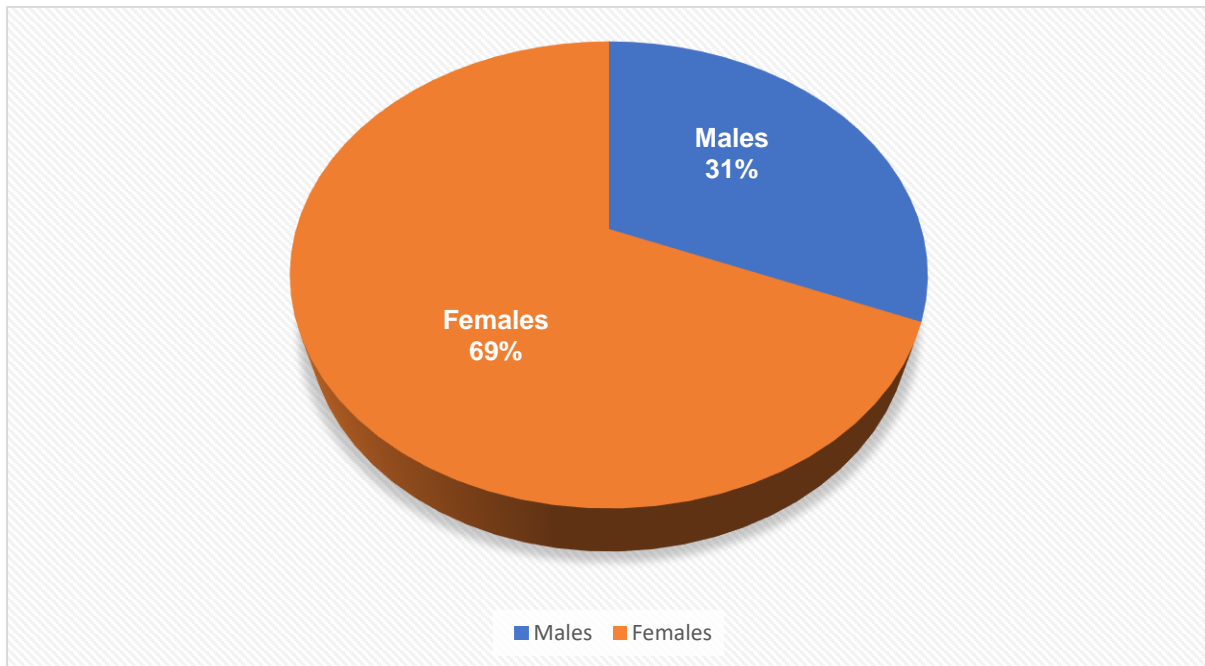


Figure 4.1: Gender distribution of participants

- Age of participants

The ages of those who participated in this study ranged between 18 and 40 years. Figure 4.2 below shows that the majority of participants of this study were between 18 and 20 years of age, followed by those between 21 and 25 years of age. These age groups usually represent a developmental stage of young adulthood, which means that the majority of those who participated in this study are young adults.

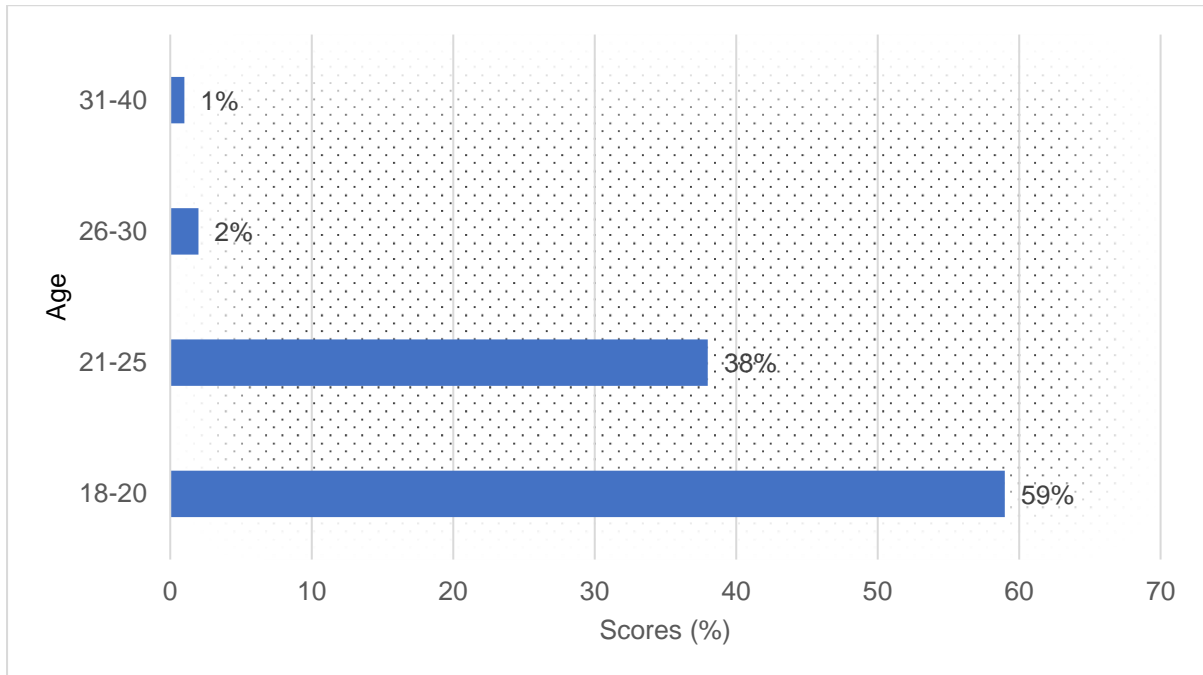


Figure 4.2: Age distribution of participants

- Level of study of participants

The participants of this study were undergraduate (first to fourth level) students studying psychology at the University of Limpopo. Based on Figure 4.3 below, the majority of the study's participants were first level students. The reason for this is that there was a higher number of students registered in the first level than in other levels, according to the Principal Admin Office of the School of Social Sciences (2023).

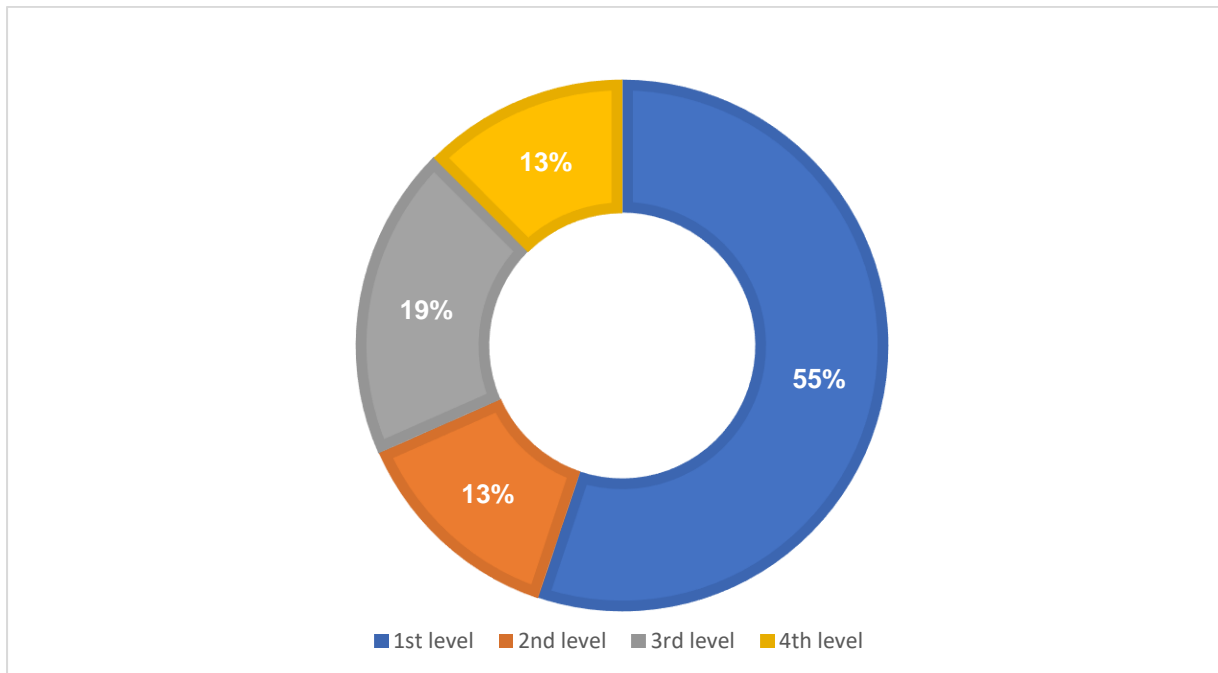


Figure 4.3: Level of study distribution of participants

4.3 Section B: The Alcohol Use Disorders Identification Test findings

Section B presents the findings of the Alcohol Use Disorders Identification Test (AUDIT) which was used to ascertain the level of alcohol use of the participants of this study. The AUDIT (with 10 items) measured the level at which participants consume alcohol (Babor et al., 2001), which can be categorised as 'low risk drinking', 'hazardous drinking', 'harmful drinking', and 'alcohol dependence'. Individual scores on the AUDIT range from 0 to 40, where a score of 0-7 indicates low risk drinking as per the World Health Organisation (WHO) guidelines. Scores ranging from 8-15 suggest hazardous drinking. Scores ranging from 16-19 suggest harmful drinking. Finally, scores ranging from 20-40 suggest alcohol dependence or severe alcohol-related problems. Accordingly, participants of this study were scored, and findings were analysed. The following analysis categorises the level of alcohol use by participants according to their gender.

- Level of alcohol use and Gender

Table 4.2 shows the level of alcohol use by students in relation to their gender. The analysis in Table 4.2 reveals that most students (79%) reported 'low risk drinking' while 'hazardous drinking', 'harmful drinking', and 'alcohol dependence' were reported by 12% (or 32 students), 5% (or 14 students), and 4% (or 10 students), respectively. As for gender disparities, there are more females (87.7%) than males (61%) who reported 'low risk' drinking. In terms of proportions of 'hazardous', 'harmful' and 'alcohol dependence', males (39%) reported more problematic alcohol drinking than females (12%). These findings are consistent with those of other researchers who found that male students consume alcohol at higher and risky levels than female students (Mandeya & Ter Goon, 2019).

TABLE 4.2: CROSS-TABULATION OF ALCOHOL USE LEVELS AND GENDER

			ALCOHOL USE LEVEL				Total
			Low risk drinking	Hazardous drinking	Harmful drinking	Alcohol dependence	
Gender	Female		164	16	4	3	187
			87.7%	8.6%	2%	1.6%	100%
	Male		52	16	10	7	85
			61%	19%	12%	8%	100%
Total			216	32	14	10	272
			79%	12%	5%	4%	100%

4.4 Section C: The Experiences in Close Relationships-Revised scale findings

This section provides findings of the Experiences in Close Relationships-Revised Scale (ECR-R; Fraley & Shaver, 2000) which was used to measure the attachment patterns of the study's participants across two 18-item subscales: Anxious attachment (for example, "I often worry that my partner will not want to stay with me") and avoidant attachment (for example, "I get uncomfortable when a romantic partner wants to be very close"). In this study, these items were presented randomly. The rating of the items was on a 7-point scale where 1 represents strongly disagree and 7 represents strongly agree. A participant's responses to items 1-18 were averaged to determine

their level of anxious attachment. Items 9 (I rarely worry about my partner leaving me) and 11 (I do not often worry about being abandoned) were reverse coded prior to the calculation of this average. The reverse coding method simply refers to the reversal of the numerical scoring scale (Fraley & Shaver, 2000). A participant's responses to items 19-36 were averaged to determine their avoidant attachment score. Items 20, 22, 26, 27, 28, 29, 30, 31, 33, 34, 35, and 36 were reverse coded before calculating this average. The analysis that follows categorises the participants' attachment styles according to their gender.

- Attachment styles and Gender

Table 4.3 below provides group statistics for gender and attachment styles. This table demonstrates that males reported higher levels of anxious attachment ($M = 3.4647$; $SD = 1.12723$) and avoidant attachment ($M = 3.8065$; $SD = 1.08259$) than females.

TABLE 4.3: GROUP STATISTICS FOR GENDER AND ATTACHMENT STYLES

ATTACHMENT STYLE	GENDER	N	MEAN (M)	STD. DEVIATION (SD)
Anxious attachment	Female	187	3.1001	1.31419
	Male	85	3.4647	1.12723
Avoidant attachment	Female	187	3.6664	1.37266
	Male	85	3.8065	1.08259

4.5 Study Objectives

4.5.1 Objective 1: Alcohol abuse and attachment styles among students

The Spearman rank correlation (ρ) test was used in this study to measure the strength and direction of the relationship between alcohol abuse and attachment styles among students. To determine whether the observed relationship between these two variables is statistically significant, the significance (p) value was used. The significance level used in this study was 0.05 (5%). Table 4.4 below shows that there is a statistically significant positive relationship between alcohol use and anxious attachment, $r(272) = 0.165$, $p = 0.006$, and a statistically significant negative relationship between alcohol use and avoidant attachment, $r(272) = -0.134$, $p = 0.027$. For sensitivity analysis (Field, 2013), see Pearson correlation results (Appendix G).

TABLE 4.4: SPEARMAN RANK CORRELATION TEST: ALCOHOL USE AND ATTACHMENT STYLES

			ALCOHOL USE	ANXIOUS ATTACHMENT	AVOIDANT ATTACHMENT
Spearman's rho	Alcohol use	Correlation Coefficient	1.000	0.165**	- 0.134*
		Sig. (2-tailed)	.	0.006	0.027
		N	272	272	272
	Anxious attachment	Correlation Coefficient	0.165**	1.000	- 0.072
		Sig. (2-tailed)	0.006	.	0.235
		N	272	272	272
	Avoidant attachment	Correlation Coefficient	- 0.134*	- 0.072	1.000
		Sig. (2-tailed)	0.027	0.235	.
		N	272	272	272
**. Correlation is significant at the 0.01 level (2-tailed).					
*. Correlation is significant at the 0.05 level (2-tailed).					

4.5.2 Objective 2: Gender differences among students concerning alcohol abuse and attachment styles

Table 4.5 below provides the results of the Mann-Whitney U test which was employed in this study to ascertain if there are statistically significant gender differences among students concerning alcohol use and attachment styles. Based on this table, there are statistically significant gender differences among students concerning alcohol use and anxious attachment. These significant differences are further explored by comparing the medians of male and female students concerning alcohol use and attachment styles (see Table 4.6).

TABLE 4.5: MANN-WHITNEY U TEST: HYPOTHESIS TEST SUMMARY

	NULL HYPOTHESIS	TEST	SIGNIFICANCE	DECISION
1	The distribution of Alcohol use is the same across categories of Gender.	Independent-Samples Mann-Whitney U Test	.000	Reject the null hypothesis.
2	The distribution of Anxious attachment is the same across categories of Gender.	Independent-Samples Mann-Whitney U Test	.010	Reject the null hypothesis.
3	The distribution of Avoidant attachment is the same across categories of Gender.	Independent-Samples Mann-Whitney U Test	.230	Retain the null hypothesis.
Asymptotic significances are displayed. The significance level is .050.				

- Descriptive statistics of male and female difference

Table 4.6 below provides a comparative analysis of gender, alcohol use, and attachment styles. According to this table, male students have higher median scores in terms of alcohol use, anxious and avoidant attachment than female students. For sensitivity analysis (Field, 2013), see the results of the Independent Samples t-test (*Appendix H*).

TABLE 4.6: COMPARATIVE ANALYSIS OF GENDER, ALCOHOL USE, AND ATTACHMENT STYLES

GENDER		ALCOHOL USE	ANXIOUS ATTACHMENT	AVOIDANT ATTACHMENT
Female	N	187	187	187
	Mean	.2701	3.1001	3.6664
	Std. Deviation	.45076	1.31419	1.37266
	Median	.0932	2.8981	3.6667
Male	N	85	85	85
	Mean	.7365	3.4647	3.8065
	Std. Deviation	.82460	1.12723	1.08259
	Median	.4583	3.5556	4.0000
Total	N	272	272	272
	Mean	.4158	3.2141	3.7102
	Std. Deviation	.63018	1.26803	1.28869
	Median	.1628	3.0873	3.7685

4.6 Discussion of the main findings

Before the discussion of the main findings of this study, the hypotheses are stated as follows:

- H₀: There will be no positive linear relationship between alcohol abuse and attachment styles among undergraduate students studying psychology at the University of Limpopo.
- H₁: There will be a positive linear relationship between alcohol abuse and attachment styles among undergraduate students studying psychology at the University of Limpopo.
- H₂: There will be significant gender differences among undergraduate students studying psychology at the University of Limpopo concerning alcohol abuse and attachment styles.

The causes of alcohol and substance abuse are undoubtedly composite, including several contextual, interpersonal, and intrapersonal factors (Mikulincer & Shaver, 2017). This study explored the relationship between alcohol abuse and attachment styles among undergraduate psychology university student population. Specifically, the study investigated the relationship between alcohol abuse and insecure attachment, particularly anxious and avoidant attachment styles. According to Mikulincer and Shaver (2017), alcohol use is correlated with attachment quality, which further proves that emotion regulation is one of the main functions of adult attachment. In essence, individuals who cannot effectively control or quell negative affect in close relationships may resort to alcohol as maladaptive coping method of relieving tension and affect, causing an increase in AUDs (Mikulincer & Shaver, 2017).

4.6.1 Alcohol abuse and attachment styles among students

The overall findings of this study suggest significant relationships between alcohol abuse and attachment styles among students. These findings were confirmed by the Spearman rank correlation test, which showed that the null hypothesis (H₀) of the study was rejected while hypothesis one (H₁) was accepted. Specifically, the findings of this study suggest a statistically significant positive relationship between alcohol use and anxious attachment style, indicating that students with anxious attachment were more likely to consume alcohol at higher rates. These findings align with several previous studies which have identified a positive correlation between higher levels of alcohol

use and anxious attachment among students (Cassidy et al., 2021; Hocking et al., 2018; Owuor & Karaga, 2019; Walker & Kreitler, 2018; Wang et al., 2022). According to Simpson and Rholes (2017), individuals with greater levels of anxious attachment exhibit excessive worries about abandonment, fear of rejection from a romantic partner, engagement in behaviour that elicits attention from their romantic partner, and overall worry with their romantic partner. Moreover, researchers such as Mikulincer and Shaver (2019) demonstrated that individuals with anxious attachment style have difficulties regulating their emotions and may therefore turn to alcohol as an external means of controlling their negative emotions resulting from feelings of anxiety and insecurity. The findings of this study suggest that anxious attachment is associated with alcohol abuse, although further investigation is necessary to ascertain whether this finding is reliable.

Unlike findings for anxious attachment, this study found a statistically significant negative relationship between alcohol use and avoidant attachment style, suggesting that students with avoidant attachment were less likely to engage in problematic alcohol use. These results are consistent with previous research, which found negative or weak correlations between avoidant attachment style and alcohol use among young adults including university students (Goldstein et al., 2019; Liese et al., 2020; Meredith et al., 2020). There may be some degree of reporting bias involved in this negative correlation. For example, individuals with avoidant attachment style may understate problematic behaviour while those with anxious attachment style may exaggerate it (Meredith et al., 2020). These findings suggest that understanding the correlations between avoidant attachment and lower alcohol use could benefit the development and implementation of interventions and treatment approaches to individuals with avoidant attachment tendencies.

4.6.2 Gender differences among students concerning alcohol abuse and attachment styles

In line with the second hypothesis, this study found statistically significant gender differences among students concerning alcohol abuse and attachment styles. These results were confirmed by the Mann-Whitney U Test and comparative analysis statistics. More specifically, male students had higher median scores in alcohol use, anxious attachment, and avoidant attachment than female students, indicating that both anxious and avoidant attachment styles are associated with higher levels of

alcohol use among male students. These results corroborate previous research highlighting that insecure attachment styles (anxious and avoidant) play a crucial role in the development of problematic alcohol use in males (Khodarahimi et al., 2022). However, these findings contradict with previous research, which highlighted that male students are commonly associated with higher levels of alcohol use and display only avoidant attachment tendencies (Ciocca et al., 2019; Meredith et al., 2020). Further research is warranted to help extend these findings and determine whether these findings are reliable as they are inconsistent.

According to the above-mentioned findings, some of the participants of this study who suffer from attachment problems such as anxious attachment are more likely to abuse alcohol. These findings agree with the Attachment Theory, which proposes that individuals (in this instance, students) use alcohol as a form of self-medication due to attachment insecurity, including anxious attachment. Therefore, alcohol is utilised as a means of coping with attachment problems (Schindler, 2019). There is evidence to support this notion that people who experience insecure attachments, particularly anxious and avoidant attachments, are inclined to consume alcohol to cope with their negative emotions and to numb any feelings of insecurity or fear they experience in relationships (Kiepek et al., 2019).

4.7 Chapter summary

This chapter presented the findings of this study using tables and charts. Firstly, the findings of the demographic information of participants were presented and interpreted followed by the AUDIT and the ECR-R questionnaires results. The study's hypotheses results were also presented and interpreted. Lastly, the chapter provided a discussion on the main findings of the study. The ensuing chapter provides a conclusion for the study.

CHAPTER 5: CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter serves as a conclusion for this study. It starts by providing the study limitations followed by the overall conclusion of the study as well as the recommendations are provided in this chapter. Lastly, it provides the recommendations of the study. The overall aim of this study was to explore the relationship between alcohol abuse and attachment styles among undergraduate students studying psychology at the University of Limpopo, South Africa.

5.2 Limitations of the study

- It important to note that a single study cannot address every aspect of a given field of enquiry.
- The sample of this study mainly consisted of Black students since this University predominantly consists of Blacks and this sample was limited to only undergraduate psychology students.
- There was also a limitation of gender disparity in the sample of this study, as the sample comprised primarily of female participants (approximately 69% female, 31% male). This was because more females were registered as psychology majors in the current year than males.
- The other limitation is that the study used quantitative research component for the intended results and did not look at the lived experiences and subjective perspectives of participants' alcohol abuse and attachment styles.
- For future research, various research methods, and larger and more diverse samples might be used, and various findings can be achieved.

5.3 Conclusion

This study explored the relationship between alcohol abuse and attachment styles among students. The findings of the study showed that higher levels of alcohol use among students were significantly and positively associated with anxious attachment (anxiety over possible abandonment) and significantly and negatively associated with avoidant attachment. In addition to this, the results showed that male students reported higher levels of alcohol use, and both anxious and avoidant attachment than their female counterparts. Consistent with these findings, the interventions that aim to reduce alcohol abuse could contemplate the influence of attachment styles have on

this behaviour. As anxious attachment has been highlighted as a potential factor in the current problematic alcohol use of university students, these students should be continuously followed-up to avoid developing any addiction that could potentially harm them. This study's results support widely Attachment Theory recommending that insecure attachment styles (such as anxious and avoidant attachment styles) are associated with the development of substance abuse, particularly alcohol abuse among young adults. Future studies that include non-university adolescents and adults are warranted to confirm the findings of this study. Moreover, although it may be tempting to conclude that attachment styles precede and influence alcohol use behaviour, future research should consider employing longitudinal study designs to examine such a causal relationship.

5.4 Recommendations of the study

Based the findings of this study, as well as existing research, it is indorsed that additional studies be conducted to address the following:

- Future studies should not reproduce this study but utilise a qualitative research component, which can offer a deeper understanding into the underlying subjective experiences, motivations, and contextual factors that shape a person's behaviour related to alcohol and attachment styles.
- This study also recommends that future research consider exploring the correlation between attachment styles and alcohol abuse among diverse populations with a random sampling aspect, which will allow for the generalisability of the findings across various populations.
- Additionally, it is recommended that future researchers should consider conducting longitudinal studies that will further improve and expand our understanding of young peoples' patterns of alcohol use and changes in attachment styles, especially those who transition from childhood to adolescence to young adulthood, during which pervasive personal and contextual change is the base of these developmental transitions.
- Furthermore, it is recommended that future studies be more inclusive such as exploring social constructs such as gender on a non-binary spectrum, especially when studying attachment and substance use.
- Lastly, it is recommended that a broader research approach be used to investigate identified study limitations.

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APPENDICES

Appendix A: Turfloop Research Ethics Committee clearance certificate



University of Limpopo
Department of Research Administration and Development
Private Bag X1106, Sovenga, 0727, South Africa
Tel: (015) 268 4713/3766, Fax: (015) 268 2306, Email: trec@ul.ac.za

TURFLOOP RESEARCH ETHICS COMMITTEE
ETHICS CLEARANCE CERTIFICATE

MEETING: 09 JANUARY 2023

PROJECT NUMBER: TREC/38/2023: PG

PROJECT:

Title: The relationship between alcohol abuse and attachment styles among undergraduate students studying Psychology at the University of Limpopo, South Africa.

Researcher: S Debang

Supervisor: Dr PM Mothapo

Co-Supervisor/s: N/A

School: Social Sciences

Degree: Master of Arts Psychology



PROF D MAPOSA
CHAIRPERSON: TURFLOOP RESEARCH ETHICS COMMITTEE

The Turfloop Research Ethics Committee (TREC) is registered with the National Health Research Ethics Council, Registration Number: **REC-0310111-031**

Note:

- i) This Ethics Clearance Certificate will be valid for one (1) year, as from the abovementioned date. Application for annual renewal (or annual review) need to be received by TREC one month before lapse of this period.
- ii) Should any departure be contemplated from the research procedure as approved, the researcher(s) must re-submit the protocol to the committee, together with the Application for Amendment form.
- iii) PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES.

Appendix B: Gatekeeping permission request letter

GATEKEEPING PERMISSION REQUEST LETTER

TO: University of Limpopo registrar

SUBJECT: Request for gatekeeping permission

This letter serves as a request to gain access to undergraduate (first level to fourth level) psychology students' email addresses for the purposes of conducting a study

TITLED: The relationship between alcohol abuse and attachment styles among undergraduate students studying psychology at the University of Limpopo, South Africa.

Project Leader: Mr. Selaelo Debang

Supervisor: Dr P.M. Mothapo

School: Social Sciences

Degree: Master of Arts (Psychology)

Appendix C: Gatekeeping permission letter



**University of Limpopo
Office of the Registrar**

Private Bag X1106, Sovenga, 0727, South Africa

Tel: (015) 268 2407, Fax: (015) 268 3048, Email: Kwena.Masha@ul.ac.za/Retha.Balie@ul.ac.za

07 February 2023

Mr. S Debang

Email: 201724432@keyaka.ul.ac.za

Dear Mr. Debang,

GATEKEEPER PERMISSION TO CONDUCT RESEARCH

TITLE: THE RELATIONSHIP BETWEEN ALCOHOL ABUSE AND ATTACHMENT STYLES AMONG UNDERGRADUATE STUDENTS STUDYING PSYCHOLOGY AT THE UNIVERSITY OF LIMPOPO, SOUTH AFRICA

Researcher: S Debang
Supervisor/s: Dr. PM Mothapo
Co-supervisor/s: N/A
School: Social Sciences
Degree: Master of Arts in Psychology

Kindly be informed that Gatekeeper permission is granted to you to conduct research at the University of Limpopo entitled: **"The relationship between alcohol abuse and attachment styles among undergraduate students studying Psychology at the University of Limpopo, South Africa"**.

Regards,

**PROF. JK MASHA
UNIVERSITY REGISTRAR**

Cc. Prof. RJ Singh: Deputy Vice-Chancellor; Research, Innovation and Partnerships
Prof. RN Madadzhe: Deputy Vice-Chancellor: Teaching and Learning
Dr. T Mabila, Director: Research Development and Administration
Prof. D Maposa – Chairperson: Research and Ethics Committee
Ms M Hutamo – Assistant: Ethics Secretarist

Appendix D: Participant Information sheet

INFORMATION SHEET

Project title: The relationship between alcohol abuse and attachment styles among undergraduate students studying psychology at the University of Limpopo, South Africa.

Project Leader: Mr. Selaelo Debang

1. What is this study about?

The proposed study aims to examine the relationship between alcohol abuse and attachment styles among undergraduate psychology students at the University of Limpopo, South Africa. As an undergraduate psychology student at the University of Limpopo, you are invited to participate in the study.

2. What will I be asked to do if I agree to participate?

Several measures to assess your alcohol use and attachment styles will be administered to you as a part of the demographic information form and consent form.

3. Will the information I provide to this study be kept confidential?

The researcher will protect the details of your contribution. The researcher will maintain confidentiality within the study by not requiring any identifying information from you as a participant, so that you remain anonymous during the entire study process.

4. How does this research pose risks?

Almost every interaction with humans, including the sharing of personal information, involves some level of risk. In case of discomfort such as psychological or physical discomfort while completing the questionnaire, the researcher will help you quickly. If further assistance or intervention is required, you will be referred to a professional who can help.

5. What are the benefits of this research?

As a result of the study, a comprehensive body of knowledge is expected to be compiled that will serve as an input for policymakers fighting alcohol abuse in the university environment. Additionally, the findings of this study can be used as a guide

for future research and applied to other contexts with similar characteristics in South Africa.

6. Do I have to be in this research, and may I stop participating at any time?

It is completely voluntary for you to participate in this research, and you have the right to stop participating anytime.

7. What if I have questions?

For questions regarding the actual project, you may contact Mr. S. Debang at debangselaelo@gmail.com or Dr P.M. Mothapo at maredi.mothapo@ul.ac.za.

8. The Turfloop Research Ethics Committee (TREC) has approved this research.

Appendix E: Consent Form

CONSENT FORM

PROJECT TITLE: The relationship between alcohol abuse and attachment styles among undergraduate students studying psychology at the University of Limpopo.

PROJECT LEADER: Debang Selaelo

I, _____ (participant's full name), hereby voluntarily consent to participate in the following project: **The relationship between alcohol abuse and attachment styles among undergraduate students studying psychology at the University of Limpopo.** I have been given a comprehensive description of the study in terms that I understand. I understand that the Ethics Committee approved attempts to approach individuals for participation in the study. In participating in the study, I am aware that I can withdraw from the study at any time. I understand that the information I provide will remain confidential. Should counselling services or emergency intervention be required during my participation in this study, I am aware that I need to contact the researcher or his supervisor for referrals or debriefing. It has been made clear that if enquiries about, or complications involving the study arise following my participation in the study, I may contact Mr. S. Debang at debangselaelo@gmail.com or Dr P.M. Mothapo at maredi.mothapo@ul.ac.za.

Signature of Participant _____ Date _____

Signature of Researcher _____ Date _____

Appendix F: Questionnaire protocol

**QUESTIONNAIRE FOR STUDENTS' ALCOHOL USE AND ATTACHMENT
STYLES IN THE UNIVERSITY OF LIMPOPO**

This questionnaire seeks to gather information about the University of Limpopo undergraduate psychology students' alcohol use and attachment styles. Upon completion of this questionnaire, the responses will be made available to legitimate and interested stakeholders to establish partnerships for establishing strategies related to preventing alcohol use. It is very important that you answer the questions honestly. Remember that no answer right or wrong Your answers and identity will remain anonymous and confidential. You should participate freely, and you can withdraw from the study at any time. Please never write your student number or name anywhere on the questionnaire. Thank you so much for participating in this study.

SECTION A: Demographic questions

Instructions: This section is aimed at gathering your demographic information. Please circle the applicable number in the relevant box.

1. Gender (by birth)	Female	1
	Male	2
2. Age NB: Circle your age	18-20	21-25
	26-30	31-40
3. Level of study	1 st level	1
	2 nd level	2
	3 rd level	3
	4 th level	4

SECTION B: The Alcohol Use Disorders Identification Test (AUDIT)

Instructions: This section is aimed at assessing how often you drink alcohol. Please be honest in your answers; they will remain confidential. Tick or circle the applicable number in the relevant box. **Note:** No answer is right or wrong.

1. How often do you have a drink containing alcohol?		2. How many drinks containing alcohol do you have on a typical day when you are drinking?	
Never	0	0 - 2	0
Monthly or less	1	3 or 4	1
2 - 4 times a month	2	5 or 6	2
2 - 3 times a week	3	7-9	3
4 or more times a week	4	10 or more	4
3. How often do you have five or more drinks on one occasion?		4. How often during the last year have you found that you were not able to stop drinking once you had started?	
Never	0	Never	0
Less than monthly	1	Less than monthly	1
Monthly	2	Monthly	2
Weekly	3	Weekly	3
Weekly	4	Daily or almost daily	4
5. How often during the last year have you failed to do what was normally expected from you because of drinking?		6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?	
Never	0	Never	0
Less than monthly	1	Less than monthly	1
Monthly	2	Monthly	2
Weekly	3	Weekly	3
Daily or almost daily	4	Daily or almost daily	4

7. How often during the last year have you had a feeling of guilt or remorse after drinking?		8. How often during the last year have you been unable to remember what happened the night before because you had been drinking?	
Never	0	Never	0
Less than monthly	1	Less than monthly	1
Monthly	2	Monthly	2
Weekly	3	Weekly	3
Daily or almost daily	4	Daily or almost daily	4
9. Have you or someone else been injured because of your drinking?		10. Has a relative or friend or a doctor or another health worker been concerned about your drinking or suggested you cut down?	
No	0	No	0
Yes, but not in the last year	2	Yes, but not in the last year	2
Yes, in the last year	4	Yes, in the last year	4

SECTION C: The Experiences in Close Relationships-Revised (ECR-R) questionnaire

Instructions: This section is designed to gauge your feelings regarding your romantic relationship. Your answers will remain confidential so please be honest. Using the 1 to 7 scale, after each statement circle a number to indicate how much you agree or disagree with the statement, with the number 4 being a neutral response. **Note:** No answer is right or wrong,

QUESTION	1=Strongly Disagree.....7=Strongly Agree						
1. I am afraid that I will lose my partner's love.	1	2	3	4	5	6	7
2. I often worry that my partner will not want to stay with me.	1	2	3	4	5	6	7

3. I often worry that my partner does not love me.	1	2	3	4	5	6	7
4. I worry that romantic partners will not care about me as much as I care about them.	1	2	3	4	5	6	7
5. I often wish that my partner's feelings for me were as strong as my feelings for him or her.	1	2	3	4	5	6	7
6. I worry a lot about my relationships.	1	2	3	4	5	6	7
7. When my partner is out of sight, I worry that he or she might become interested in someone else.	1	2	3	4	5	6	7
8. When I show my feelings for romantic partners, I am afraid they will not feel the same about me.	1	2	3	4	5	6	7
9. I rarely worry about my partner leaving me.	1	2	3	4	5	6	7
10. My romantic partner makes me doubt myself.	1	2	3	4	5	6	7
11. I do not often worry about being abandoned.	1	2	3	4	5	6	7
12. I find that my partner (s) do not want to get as close as I would like.	1	2	3	4	5	6	7
13. Sometimes romantic partners change their feelings about me for no apparent reason.	1	2	3	4	5	6	7
14. My desire to be very close sometimes scares people away	1	2	3	4	5	6	7
15. I am afraid that once a romantic partner gets to know me, he or she will not like who I am.	1	2	3	4	5	6	7

16. It makes me mad that I do not get the affection and support I need from my partner.	1	2	3	4	5	6	7
17. I worry that I will not measure up to other people.	1	2	3	4	5	6	7
18. My partner only seems to notice me when I am angry.	1	2	3	4	5	6	7
19. I prefer not to show a partner how I feel deep down.	1	2	3	4	5	6	7
20. I feel comfortable sharing my private thoughts and feelings with my partner.	1	2	3	4	5	6	7
21. I find it difficult to allow myself to depend on romantic partners.	1	2	3	4	5	6	7
22. I am very comfortable being close to romantic partners.	1	2	3	4	5	6	7
23. I do not feel comfortable opening up to romantic partners.	1	2	3	4	5	6	7
24. I prefer not to be too close to romantic partners.	1	2	3	4	5	6	7
25. I get uncomfortable when a romantic partner wants to be very close.	1	2	3	4	5	6	7
26. I find it relatively easy to get close to my partner.	1	2	3	4	5	6	7
27. It is not difficult for me to get close to my partner.	1	2	3	4	5	6	7
28. I usually discuss my problems and concerns with my partner.	1	2	3	4	5	6	7
29. It helps to turn to my romantic partner in times of need.	1	2	3	4	5	6	7
30. I tell my partner just about everything.	1	2	3	4	5	6	7
31. I talk things over with my partner.	1	2	3	4	5	6	7

32. I am nervous when partners get too close to me.	1	2	3	4	5	6	7
33. I feel comfortable depending on romantic partners	1	2	3	4	5	6	7
34. I find it easy to depend on romantic partners.	1	2	3	4	5	6	7
35. It is easy for me to be affectionate with my partner.	1	2	3	4	5	6	7
36. My partner understands me and my needs.	1	2	3	4	5	6	7

Your time is appreciated in completing this survey. Please accept our sincere appreciation for the time you have given us to participate in our research. We shall use the information gained to inform worthwhile improvements in interventions aimed at addressing alcohol use and abuse in university settings. We will share the results of this research endeavour with you through the university website, or it can be requested by contacting Mr S. Debang at debangselaelo@gmail.com or Dr P.M. Mothapo at maredi.mothapo@ul.ac.za.

We thank you once again for contributing to this project.

Appendix G: Pearson Correlation

	Mean	Std. Deviation	N
Alcohol Use Identification Test score	.4158	.63018	272
Anxious attachment	3.2141	1.26803	272
Avoidant attachment	3.7102	1.28869	272

		Alcohol Use Identification test score	Anxious attachment	Avoidant attachment
Alcohol Use Identification Test score	Pearson Correlation	1	.222**	-.060
	Sig. (2-tailed)		.000	.328
	N	272	272	272
Anxious attachment	Pearson Correlation	.222**	1	-.066
	Sig. (2-tailed)	.000		.280
	N	272	272	272
Avoidant attachment	Pearson Correlation	-.060	-.066	1
	Sig. (2-tailed)	.328	.280	
	N	272	272	272

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

Appendix H: Independent samples T Test

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Alcohol Use Identification Test score	Female	187	.2701	.45076	.03296
	Male	85	.7365	.82460	.08944
Anxious attachment	Female	187	3.1001	1.31419	.09610
	Male	85	3.4647	1.12723	.12226
Avoidant attachment	Female	187	3.6664	1.37266	.10038
	Male	85	3.8065	1.08259	.11742

		Levene's Test for Equality of Variances		t-test for equality of means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Alcohol Use Identification Test score	Equal variances assumed	47.139	.000	-.06014	270	.000	-.46642	.07756	-.61911	-.31372
	Equal variances not assumed			-.04473	107.473	.000	-.46642	.09532	-.65537	-.27746

	not assumed			893						
Anxious attachment	Equal variances assumed	3.533	.061	-2.214	270	.028	-.36459	.16470	-.68884	-.04034
	Equal variances not assumed			-2.344	187.532	.020	-.36459	.15551	-.67137	-.05781
Avoidant attachment	Equal variances assumed	6.921	.090	-.831	270	.407	-.14017	.16868	-.47225	-.19192
	Equal variances not assumed			-.907	202.732	.365	-.14017	.15448	-.44476	-.16443