The Influence of Age, Gender, and Alcohol Consumption on Academic Stress among Higher Education Students in Gauteng

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Declaration

I hereby declare that the dissertation submitted for the Master of Philosophy in Arts to The Independent Institute of Education (The IIE) is my own work and has not previously been submitted to another University or Higher Education Institution for a postgraduate qualification.

Signed: 

Date: 07 November 2025

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Abstract

Existing literature explores the effects of alcohol consumption, age, and gender on stress and academic performance; however, a critical gap remains in comprehensively understanding how these factors intersect to influence academic stress among higher education students. This study examined the interaction between alcohol consumption, age, and gender in relation to academic stress among higher education students. The study aimed to determine the influence of age, gender differences and alcohol consumption on academic stress among higher education students.

The following objectives of the study were to examine academic-related stress rates that higher education students experience, examine whether age difference would predict academic stress as a result of alcohol consumption among higher education students, examine whether gender differences would predict academic stress as a result of alcohol consumption among higher education students, examine whether there would be a difference between high and low alcohol users among academic stress among higher education students. Based on the study objectives, the following hypotheses were tested in this study: Age difference will predict academic stress among higher education students; there will be a difference between male and female students on academic stress among higher education students; high alcohol users will report more academic stress than low alcohol users among higher education students; there will be a significant interaction between age, gender and alcohol use on academic stress among higher education students.

The study paradigm utilised was positivist, and it was a quantitative study that used a cross-sectional research design. The study population consisted of individuals aged 18 to 26,

both male and female, enrolled as students at the Independent Institute (IIE) MSA. The sample method was probability, simple random sampling. The study utilised three different instruments to collect the data. Participants consented to taking part in the survey (which was the first page of the survey) followed by a demographic information form, the Alcohol Use Disorder Test, and the Academic Scale to acquire the desired data. There were 352 participants who consented to take part in this study.

Results showed that the academic stress rates are mostly moderate in the entire Academic Stress Scale (ASS) categories for academic stress measurement (with two exceptions of extreme stress for items 7 and 12 under personal inadequacy and fear of failure, respectively). Results concerning alcohol consumption showed that 266 (75.6%) of the participants reported to consuming alcohol across different levels with 4 (1.5%) in the medium consumption group, 116 (43.6%) in the high consumption group, and 146 (54.9%) in the very high consumption/dependence group. This study shows the level of the excessive consumption of alcohol that is commonly practiced by students at higher education institutions.

It was revealed overall that age did not demonstrate significant association with academic stress despite the post-hoc comparisons using the least significant difference (LSD) test finding a significant difference between the 18-20 and 24-26 age group for inadequate lab or library facilities (one of the stressors associated with academic stress measurement). Gender demonstrated significant association with academic stress, specifically with females reporting higher levels of academic stress in comparison to their male counterparts for personal inadequacy (one of the stressors associated with academic stress measurement). Alcohol did not demonstrate significant association with academic stress in this sample. The small sample size in

the medium consumption group (n = 4) may have limited the power to detect differences, warranting caution in interpreting these results. Overall, the findings suggested that age, gender, and AUDIT category (alcohol consumption), individually or in interaction, did not significantly influence the measurement of sources of academic stress in this sample.

This study's findings ultimately indicate that factors such as chance were present in this study among others. Among other future study recommendations, the conduction of longitudinal studies is advised to determine the direction and long-term relationship between the variables of this study for sounder conclusions to be reached.

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List of Abbreviations

AUDIT: Alcohol Use Disorder Identification Test

ASS: Academic Stress Scale

COVID-19: Coronavirus

GAS: General Adaptation Syndrome

H1: Hypothesis 1

H2: Hypothesis 2

H3: Hypothesis 3

H4: Hypothesis 4

SPSS: Statistical Package for Social Science

WHO: World Health Organisation

Influence of Age, Gender, and Alcohol Consumption on Academic Stress among Higher Education Students in Gauteng.

Chapter 1: Introduction

A higher education institution is a place where individuals go upon completing secondary schooling to increase their chances of employment (Asefer & Abidin, 2021). This process of change represents a transitional period for recent high school graduates as they move from late adolescence to early adulthood in higher education institutions (Freire et al., 2020). Changes in environment and responsibilities, along with the change in academic structures, result in various reactions, particularly academic stress (Freire et al., 2020). Academic stress is noted to being common and differs from one individual to the other. It mostly has negative results on higher education students and in some cases affects their academic performance and their overall mental health (Barbayannis et al., 2022). A variety of coping strategies to reduce or manage stress are known to be utilised by individuals experiencing stress and these can either be healthy or unhealthy. Substance use, particularly alcohol, is one of the most common ways of dealing with stress and is also recognised as one of the unhealthy coping strategies (Stallman et al., 2020). Substance use is noted to being an increasing problem in the field of public health with alcohol being a major substance that is known to be consumed in higher education institutions (Blows & Isaacs, 2022). Additionally, consuming alcohol at harmful levels is a major contributing factor to health hazards, leading to various adverse effects, both short-term and long-term (Blows & Isaacs, 2022). Age and gender are biological factors that influence lifestyle choices and decision-making, which may, in turn, shape how academic stress is perceived and handled (). These variables also influence the level of

alcohol consumed, depending on the reasons for its intake (). This study focuses on age, gender, and alcohol as variables influencing academic stress. The format will be as follows.

The background of the study will cover the subsections: the research problem, the aim, a list of objectives, a list of hypotheses, due to the study being a quantitative study, the scope, and the relevance and significance of the study. This will be followed by the theoretical formulations, which will be divided into the following subsections: the theoretical frameworks of the dependent variable and independent variables, theoretical perspectives, a review of the literature surrounding the variables present within the study, and the operational definition of the terms that are of focus. The methodology will follow on afterwards which will be divided into the following subsections: the study paradigm, approach, and design; the information regarding the participants of interest; the instruments that were utilised in data collection process; the procedure surrounding the data collection process; the points of reliability, validity, and objectivity in this study, and the statistical methods that were utilised. The time frame of the study will follow afterwards. The ethical considerations to be followed will then be presented. The results and their interpretation will be presented, followed by a discussion of the results, the study's conclusion, and recommendations for the study and future potential studies.

1. Background to the Study

1.1. *Research Problem*

A study conducted by Stallman et al. (2020) mentions that a variety of psychological symptoms are experienced by higher education students, where stress is one of the major symptoms experienced regularly. This is due to the high

demands that are experienced at higher education institutions, such as adhering to many deadlines within short spaces of time, along with having an increased workload, among other demands related to academics (Stallman et al., 2020). Another study stated that overconsumption of alcohol may be harmful, and this is a global health problem, including in South Africa (Chen et al., 2022). It is further stated that South Africa is one of the countries with the highest levels of alcohol consumption (Chen et al., 2022).

According to Chen et al. (2022), alcohol consumption levels in South Africa for higher education students are among the highest alcohol consumers when compared to other groups of individuals. A study conducted by Stallman et al. (2020) mentioned that alcohol is an agent of coping with stress. These findings suggest that alcohol consumption leads to many problems, such as increased susceptibility to alcohol dependence and negative consequences for student's academic life. Furthermore, excessive alcohol use may induce stress, negatively impacting students' academic health.

Existing literature explores the effects of alcohol consumption, age, and gender on stress and academic performance; however, a critical gap remains in comprehensively understanding how these factors intersect to influence academic stress among higher education students. Studies often isolate these variables, examining them individually without considering the potential synergistic effects that may arise when they are combined. For example, research that has been done by Alhamed (2023) mentions the impact that alcohol consumption has on academic performance but does not mention the different effects that may be

present across different genders or age groups. Furthermore, a study that has been conducted by Wolkowicz et al. (2022) focused on alcohol and stress levels and how they have an effect on each other without emphasising the effects of gender and age as higher-level variables that could have been included in the data to explore the relationship between these variables further. This evidence presents the missed opportunity to explore potential differences in how these factors interact.

Similarly, responses that are gender specific to academic stress have been documented (Barbayannis et al., 2022), however, the analyses that have been made rarely indicate the potential difference in alcohol consumption patterns between genders or how these patterns further intersect with age to modulate stress and academic performance. This oversight highlights the need for research that not only analyses data by gender but also examines the role of alcohol use within these contexts.

Moreover, literature on age-related differences found in academic stress often focuses on traditional vs non-traditional student populations, overlooking the nuanced ways in which age interacts with alcohol use and gender-specific stressors in academic settings (Babb et al., 2022). These kinds of studies indicate the diversity in student experiences but fall short of examining the complexities of these interactions and their implications for strategies to manage academic stress.

To bridge this gap, this study will examine the interaction between alcohol consumption, age, and gender in relation to academic stress among higher education students. By focusing on the combined effects of these factors, the

research aims to illuminate areas that have been underexplored in academic literature. Furthermore, the study aims to develop effective support strategies for diverse student needs, contributing to the discourse on academic stress.

1.2. *Aim of Study*

The study aims to determine the influence of age, gender differences and alcohol consumption on academic stress among higher education students.

1.3. *Objectives(s) of the Study*

The following objectives of the study are to:

- Examine academic-related stress rates that higher education students experience.
- Examine whether age difference will predict academic stress as a result of alcohol consumption among higher education students.
- Examine whether gender differences will predict academic stress as a result of alcohol consumption among higher education students.
- Examine whether there will be a difference between high and low alcohol users among academic stress among higher education students.

1.4. *Hypotheses*

Based on the study objectives, the following hypotheses will be tested in this study

1. Age difference will predict academic stress among higher education students.
2. There will be a difference between male and female students on academic stress among higher education students.

3. High alcohol users will report more academic stress than low alcohol users among higher education students.

4. There will be a significant interaction between age, gender and alcohol use on academic stress among higher education students.

1.5. *Scope of Study*

The scope of the study is to determine the influence of alcohol consumption, age and gender (IV) on academic stress (DV) among higher education students of IIE MSA (IIE MSA was chosen due to easier accessibility to the target population, and that the target population there was culturally diverse whilst aligned with the sample method and research design). Furthermore, a study conducted by Chen et al. (2022) indicates that higher education students experience significant academic-related stress and are high alcohol consumers compared to other groups within the 15-29 age range, with higher education students typically being 18 years and older. The information provided by Chen et al. (2022) establishes the age range of the participants in this study, and the associated alcohol consumption statistics. This study will utilise a cross-sectional survey design to examine the existing relationship between these variables.

1.6. *Significance of the Study*

The relevance of the research is that academic stress is a problem among higher education students. This is due to a younger generation of higher education students increasingly experiencing academic stress during the transitional period they all go through (Freire et al., 2020). Alcohol is noted to be used as a means to coping with stress in an unhealthy and harmful manner due to falling under

unhealthy coping strategies (Stallman et al., 2020). Further to this, alcohol consumption increases vulnerability and susceptibility to risky behaviour engagement in individuals between the ages of 18 and 25 years (Stallman et al. 2020). Blows and Isaacs (2022) also further state that substance use among higher education students stands at around 80.6%. Academic stress is mentioned as being harmful, and the level of alcohol consumed by students influences the severity of the negative symptoms that they experience (Mandeya & Ter Goon, 2019).

The symptoms of academic stress are heightened disturbances in sleep, heightened levels of anxiety, increased intensity and duration of depressive symptoms, and academic performance decline (Alhamed, 2023). The findings that have been presented by Wolkowicz et al. (2022) with regard to alcohol being an increasing public health concern state that annual deaths from alcohol use are at an estimated 3 million, which also form part of the global disease burden of around 5.1% as given by the WHO. The research of Wittgens et al. (2022) mentions further that intensified alcohol intake increases the risk of premature morbidity and mortality, which could be preventable.

The significance of this study extends beyond academic circles, touching on crucial aspects of student life and mental health. By exploring the nuanced relationships between alcohol consumption, age, gender, and academic stress, this research aims to shed light on the mentioned factors that contribute to the negative academic experience, potentially offering a blueprint for more nuanced and effective intervention strategies. This investigation is timely and relevant,

considering the increasing recognition of mental health issues among higher education students and the urgent need for tailored support mechanisms.

Understanding the synergistic effects of these variables on academic stress can lead to targeted interventions that address the specific needs of different student demographics, thereby enhancing their academic performance and overall well-being. Moreover, the study's outcomes could guide higher education policies and mental health services, promoting environments that support students' academic and personal growth.

Furthermore, by filling a gap in the current literature, this research contributes valuable insights into the complex dynamics of student life, offering a comprehensive perspective that can inform future studies. Its findings have the potential to influence public health initiatives, extending its relevance beyond educational settings. Ultimately, this study is poised to significantly impact how educational institutions, policymakers, and mental health professionals understand and address the factors contributing to academic stress, thereby improving the academic journey for students worldwide.

This chapter covered the introduction of the study where the background, research problem, aim, objectives, hypotheses, scope, and significance of the study were identified and presented. The chapters that the dissertation will be covering, as stipulated in the introduction of the study, will present the literature, methodology, findings, discussion, conclusion, and recommendations of the study given above. The literature review will be covered in the next chapter.

Chapter 2: Literature Review

This chapter will be focusing on expanding on literature that is related to the study being conducted. Firstly, the theoretical formulations comprising of the theoretical frameworks, theoretical perspectives, and the review of the relevant literature will be given. The review of relevant literature will be centred on academic stress rates, alcohol consumption patterns, alcohol consumption and its connection to academic stress, the role of age on academic stress, and gender differences on academic stress. Lastly, operational definitions of the study's terms will be provided.

2. Theoretical Formulations

2.1. *Theoretical Frameworks*

The concept of stress was stated by the 'father of stress' named Hans Selye in 1936. Selye's work is rooted in the notion that stating that stress is 'the non-specific response of the body to any demand' (Selye, 1950). This definition is found within the biomedical context of understanding stress, where the process he proposed is called the general adaptation syndrome (GAS) (Selye, 1950). This is understood to be a review of systemic stress, as it is the effect of chronic stressors (Selye, 1950). Rochette et al. (2023) expand on the pioneering work of Hans Selye, in which GAS is divided into three stages: the alarm reaction, the stage of resistance, and the stage of exhaustion. Firstly, individuals are caught off guard after exposure to a stressor, which is followed by resistance to the change, manifested as attempts to maintain homeostasis (Selye, 1950). Exhaustion results from attempting to counter the stress induced by a stressor (Selye, 1950). Additionally, a choreographed state of events is what stress is stated to be which

occurs when individuals fall ill (Slusher & Acevedo, 2023). There is a significant difference between GAS and the response to acute stress or fight-or-flight when encountering a perceived threat, as noted by Walter Cannon in 1915 (Slusher & Acevedo, 2023). Acute stress involves the acute release of neurotransmitters by the sympathetic and central nervous systems, along with the medulla, adrenal glands, pituitary, and other endocrine glands' hormone secretions (Slusher & Acevedo, 2023). Selye's research helps with understanding what the body goes through when one is undergoing stress from a biological viewpoint, but the next theory explains stress from a cognitive viewpoint which can be understood in a more practical sense.

The theory of stress proposed by Selye connects to the next theory, though with some differences. This theory is known as The Lazarus Theory which is brought across by Lazarus and Folkman (1986) which looks at psychological stress and coping. Kristensen et al. (2023), mentions that the work of Lazarus and Folkman brings about the argument that primary and secondary appraisal is continuously experienced by individuals. This involves individuals finding ways and resources to deal with situations they find themselves in after evaluating them (Kristensen et al., 2023). Primary appraisal has to do with personal implications with regards to a situation that one is found in where there are three forms of situational implications (Folkman et al., 1986). They are stressful, irrelevant, and benign-positive (Folkman et al., 1986). A stressful situational implication involves a challenge or threat where feelings of loss or harm are experienced (Folkman et al., 1986). A challenge may evoke positivity by fostering personal

growth, whereas a threat involves anticipating harm or loss (Kristensen et al., 2023). When analysed from a university context, academic workload is appraised where the higher education institution and the work done is analysed for the implications it has on an individual's well-being. Higher education students often experience feelings of threat or loss when dealing with academic demands which is known as an implication to their well-being (Kristensen et al., 2023). A challenge may induce positive emotions, as it may involve tasks that test their capabilities and, if favourable outcomes have been experienced, lead to feelings of accomplishment, such as meeting various assessment deadlines and passing exams (Folkman et al., 1986). A threat or loss induces negative emotions as they have to do with being unable to handle adjusting to a higher education institution, the academic demands that come with it and ultimately failing in tasks (Kristensen et al., 2023). When a higher education student has a stressful experience while thinking and doing their work, they need to find a way to cope (Kristensen et al., 2023).

This then leads to the second appraisal, which becomes increasingly important as it interacts with the primary appraisal in detail to bring about an individual's emotional reaction (Folkman et al., 1986). The second appraisal is understood as whether an individual can handle a stressful situation or otherwise (Folkman et al., 1986). This is in the context of social, biological and cognitive resources being present to cope and adhere to the demands of a situation (Folkman et al., 1986). In the context of this study, higher education students that perceive their adjustment to higher education institutions and its demands as a

challenge may experience positive emotions related to motivation and excitement to cope with completing tasks that uplift them (Kristensen et al., 2023). On the contrary, negative emotions can come about when perceiving higher education institutions' demands as a threat which may increase the occurrence of negative emotions and the risk of finding negative ways to cope with those emotions ultimately increasing academic and overall stress (Kristensen et al., 2023).

Within the context of this study, alcohol consumption has to do with the intake of alcohol that is associated with a variety of different events. However, it is also known to be an agent used to cope with stress. A stressful environment, such as a higher education institution, is known for students to experience academic stress. A study conducted by Henderson et al. (2021) mention that the success of employability and its benefits after attending higher education institutions means successfully graduating from there, however, it does not come easy. Henderson et al. (2021), state that academic success comes with an array of challenges such as assessment tasks (based on their number, complexity, and timing), the thought of studying in a foreign environment, lessened social support, financial instability, and fear of the future. These presented reasons result in the increase in overall stress that is experienced by students.

Given that it is known that young people in higher education institutions consume high levels of alcohol, along with it being an agent of stress management, the effects of high alcohol consumption pose to be problematic, especially since it is mentioned that it is a global public health problem (Wolkowicz et al., 2022). The understanding of stress can be attributed to the

work done by Hans Selye and his theory of stress along with the Lazarus Theory proposed by Lazarus and Folkman which touches on stress and coping. These two theories are important in the link between understanding stress itself and coping with stress which is where academic stress, being a variant of stress, and alcohol consumption can be understood further.

2.2. *Theoretical Perspectives*

The influence of alcohol consumption is that it is known to be associated with risky behaviour such as sexual behaviour and violent acts (Carels et al. 2022). This is known to be influential in the degradation of health by itself, along with increasing the chance of negative effects occurring. Alcohol consumption is known to be associated with academic stress, which is the variable that is of concern within this study which can be explored with the use of social norms theory (Carels et al. 2022). Academic stress on the other hand, can be explored further with the work done on The Lazarus Theory proposed by Richard S. Lazarus and Susan Folkman (Folkman et al., 1986). This theory touches on stress and coping, which is a way that academic stress and alcohol consumption can be understood further. This is based on academic stress being a stress variant, and alcohol consumption used as a form of coping mechanism to deal with this form of stress (Stallman et al. 2020).

2.3. *Review of Relevant Literature*

The review will focus on expanding the existing literature in several key areas. First, it will examine the prevalence of academic stress among higher education students and the rates at which it is experienced. Second, it will explore

the patterns of alcohol consumption within this demographic. Additionally, the review will investigate how alcohol consumption and academic stress are interconnected variables within higher education. Furthermore, it will consider the role of age in influencing academic stress levels among students. Lastly, the review will address potential gender differences in experiences of academic stress.

2.3.1. Academic Stress Rates. Academic stress is mentioned to be a result of the demands in the educational setting that students experience due to the psychological pressure that they go through because of the academic work that they must do (Zhou et al., 2022). Since academic stress is a variant of stress experienced by higher education students, the research conducted on stress and its effects on individuals has been conducted by a number of authors who have published its relation to the understanding of what it is and the agents that are active to induce it in an individual (Alhamed, 2023; Barbayannis et al., 2022; Zhang et al., 2022).

Zhang et al. (2022) state that young individuals in Asian and Western countries experience sporadic and chronic stress with academic concerns being the most important source of those forms of stress. These concerns leading to academic stress are noted to being experienced by individuals from secondary school to higher education institutions (Zhang et al., 2022). The increased academic pressure, change of environment and curriculum, and responsibility in the transition from secondary school to higher education institutions can induce stress, anxiety, and fatigue (Zhang et al., 2022). This is an indication that academic stress is not a concept that is only experienced by individuals when they become higher education students but is a

continuation of the form of stress that they have already experienced during high school, only with additional stressors that are involved along with its heightened level. This is emphasised by Akhtar and Akhtar (2024) mentioning that students have stated that the heightened workload, change of environment, unfamiliar academic requirements, and new social groups were one of the main reasons why they had heightened levels of academic stress. Given the context of the study, the rate of academic stress prevalence among higher education students is found to being on a notably high level.

Barbayannis et al. (2022), mention that 3 in 4 higher education students have self-reported to experiencing stress whilst stress-related ideation has been reported by 1 in 5 higher education students. The findings presented by Barbayannis et al. (2022) further show that within the context of the recent turn of events with respect to the pandemic known as COVID-19, around 80% of the 843 participants have reported an increase in perceived academic stress. This would be due to the change that was present in adjusting to doing things online along with the stress that lockdown regulations had on individuals. Alhamed (2023) on the other hand mentions that the results obtained record a mild to moderate with only 8.6% of the reports being that of extreme academic stress. Pérez-Jorge et al. (2025) mention the connection present between fear of failure and self-doubt. These two factors heighten academic stress which increases the likelihood of general anxiety and burnout (Pérez-Jorge et al., 2025). This is indicative of the difference in how academic stressors affect students from different geographical locations.

Getting into the details of the qualifications that are studied, which may differentiate the academic stress levels of the different students, the health science and medicine-associated qualifications are known to have the highest levels of academic stress recorded. This is brought across by Henderson et al. (2021), who mentions that there is a significantly higher level of academic stress experienced by those of these qualifications compared to others. Whilst Wahid et al. (2023) mentions that those in dental science and medicine under the faculty of health science experience significantly high levels of academic stress with the prevalence of stress being 63% and 25% as the prevalence of severe stress. Henderson et al. (2021) connects to the previously mentioned study where they mention the sources of stress being interpersonal and social connections, clinical training, and academic activities. Akhtar and Akhtar (2024) specifically mention that students come from different social and educational backgrounds that have implications on their adjustment to tertiary education. Teaching and examination styles have developed and the students' backgrounds have had an influence on how they navigate learning and preparing for exams (Akhtar & Akhtar, 2024). Exams that are not aligned with how the students were taught cause academic stress to increase among them (Akhtar & Akhtar, 2024). Out of all the mentioned sources of stress, health science students have reported that academic demands are the highest source of their academic stress (Henderson et al., 2021). This is within the contexts of South Africa and the United States of America, signifying the impact that academic stress has on higher education students from different environments and cultural backgrounds, where their overall quality of life is affected negatively.

The impact of academic stress is negative and students report to experiencing mental and physical effect from the encountered academic stressors (Bojorque et al., 2025). Bojorque et al. (2025), mentions that prolonged academic stress results in physical issues such as physical exhaustion, sleeping disorders, and weakened immune system resulting in overall well-being and academic performance to be compromised. Gasser et al. (2025), on the other hand, mentions that academic stress can lead to mental issues such as negative thoughts, anxiety, and depression that can result in overall loss of motivation, decrease in academic performance, and heightened risk of dropping out.

2.3.2. Alcohol Consumption Patterns. Alcohol consumption is understood to be the intake of beverages that are either distilled (spirits) or fermented (beer and wine) that contain ethanol or ethyl alcohol (Carels et al., 2022). The study of the levels of alcohol consumption has been found to produce outcomes that indicate its usage to be significantly high in various parts of the world. Wittgens et al. (2022) mention that the World Health Organization's (WHO) latest report has reported approximately 3 million deaths related to alcohol abuse. Furthermore, 13.5% of the total reported deaths that are noted to be related to alcohol usage are individuals who are within the 20-39 years age group (Wittgens et al., 2022). Given that the alcohol related deaths are individuals aged from 20-39 years and that higher education students are aged primarily from 18-25 years, higher education students also form part of the statistics that have been reported by the WHO (Wahid et al., 2023). Furthermore, a study done by de Brito et al. (2024) mentions that 20.8% of individuals aged 18-24 years suffer from issues of alcohol dependency as reported by

the Brazilian Centre for Information on Psychotropic. This last entry further brings the point across on the age group that forms part of the WHO's report.

Some of the known risks that are often associated with harmful alcohol use include the risk of being diagnosed with alcohol use disorders (Wittgens et al., 2022). Carels et al. (2022) go into detail with South Africa, mentioning that the country is noted to be ranked number 5 in the consumption of alcohol in the world. This rank is an indication of the way that alcohol is perceived among individuals has to do with culture, history, religion, and societal norms. It can be understood that alcohol forms part of events and routines that are followed by various individuals for various reasons pertaining to the environment and social contexts that they find themselves in (Carels et al., 2022). This goes with the research conducted by Blows and Isaacs (2022), which mentions that higher education institutions have a reputation for having individuals who are introduced to substance use. Alcohol use forms part of substance use, which means that higher education institutions are increasingly responsible for the consumption of alcohol among individuals who have never drunk prior to being at university (Blows & Isaacs, 2022). Blows and Isaacs (2022) mention further details that substance usage such as alcohol consumption and marijuana usage have been reported to be significantly higher in individuals who attend higher education institutions in comparison to their non-attending counterparts, highlighting the impact that this environment has on how alcohol use is perceived and used. This emphasises that the higher education environment has a role to play in the high levels of alcohol consumed by students. Mbuqa et al. (2024) mentions that higher education students begin drinking after enrolment into their respective institutions. Mbuqa et al. (2024)

further mentions that another study found that 6.75% of the higher education students were within the parameters of harmful or high risk with the potential of alcohol dependency. This adds to the high alcohol consumption statistics that are present in universities that contribute to the overall statistics that are reported by the WHO where their harmful effects are worth looking into for better management strategies and reduction.

The concept of 'drinking buddies is a common one among individuals aged from 18-25 years where binge drinking and excessive alcohol use forms part of the norm in society which is coupled with an increase in risky behaviour related to activities such as having multiple partners and partaking in unprotected sex (Carels et al., 2022). The age group mentioned by Carels et al. (2022) is indicative of the ages that are common in higher education institutions among students as a testament to the high levels of alcohol that they regularly consume as it forms part of the binge drinking and excessive alcohol use 'norm'. Chen et al. (2022), however, mentions that the elevated level of consumed alcohol that is present among higher education students is due to the increase in alcohol promotion through media such as advertisements, emails, and celebrity role models promoting alcohol brands. This shows that an increase in connectivity to media as technology advances results in higher levels of exposure to alcohol promotion which increases its consumption levels, especially since higher education institutions are places where there is lack of authoritative supervision that would prevent high alcohol consumption given that it has individuals that are 18 years and older that allow them to drink in certain areas (Chen et al., 2022).

2.3.3. **Alcohol Consumption and Academic Stress**. Alcohol

consumption levels are noted to being high in various universities globally based on a variety of factors. The stressors that contribute to academic stress mainly revolve around interpersonal/social interactions (Henderson et al., 2021). The influence of the academic stress experienced by students is noted to being associated with the consumption of alcohol as a tension reduction agent (Wolkowicz et al., 2022). Phillips et al. (2020) mentions that academic stress is a serious issue which can lead to severe outcomes such as anxiety, depression, and even suicide. The findings of Phillips et al. means that alcohol can be viewed as a tension reducing agent given that the study done by Mthabela and van der Heever (2021) mention that over 50% of higher education students drink high levels of alcohol.

Alcohol consumption used to relieve tension from academic stress, and there being high levels of stress reported by higher education students' results in the increased consumption of alcohol. Blows and Isaacs (2022) mention that university is an environment where students are stressed by academic pressure, social interactions, and adjustment issues, which aids in linking alcohol consumption to academic stress. Masuku et al. (2024) in their study verify that students acknowledge academic stress, stress from exams, and peer pressure as significant causes of consuming excessive alcohol. Academic stress that is experienced by students can increase, which could potentially result in an increase in alcohol consumption, or vice versa, but further research in the South African context is needed to understand this potential relationship further.

2.3.4. Role of Age on Academic Stress. Academic stress is known to plague students of all ages in higher education institutions worldwide. Given the age gaps between students, it can be thought that there could be a role that age plays in how academic stress is perceived, along with how it is experienced. Researchers Onolemhen and Abel (2020) have conducted research and have found that academic stress tends to decrease as one ages and moves through the academic years, but increases when it is the final year. This can be due to the high academic stress that a first-year student can experience due to the transitional process of having to adjust socially and academically (Onolemhen & Abel, 2020). The level of academic stress decreases once one is adjusted to the new environment, according to Onolemhen and Abel (2020).

The increase in academic stress primarily occurs in the final year, when students are older, not solely because of their age but also because of the heightened academic responsibilities they face, such as demonstrating their ability to graduate (Onolemhen & Abel, 2020). Bibi et al. (2024) emphasise this by noting that their study found over 80% of nursing students aged 18-21 years reported moderate stress, those aged 22-27 years reported high stress, and students in their final year experienced the highest stress levels. Conversely, Dennis (2022) states that age correlates with life experience, which can influence how stressful situations are perceived. Therefore, academic stress among older students can sometimes be lower than among younger students, given differences in their reactions to the same stressors. This may be because older students have experienced similar situations and

found better ways to handle the stress that comes with academic pressure compared to their younger peers (Dennis, 2022).

A contrasting outcome reported by Chemutai and Mulambula (2020) indicates that first- and middle-year students experience moderate stress levels, whereas final-year students experience higher stress levels. These previously mentioned results were reported from a sample of 376 undergraduate students (Chemutai & Mulambula, 2020). This indicates that variables can affect the results obtained within these studies, such as the depth of stress perception with age, the difficulty in the workload as one progresses through the academic years, and so on. Given the varying academic demands of the different courses, there can be a difference in the perception of academic stress they may experience as they progress, leading to different conclusions. This means that there is still a requirement to find out the effect that age has on academic stress for there to be a decisive outcome on the role that it plays in academic stress levels.

2.3.5. Gender Difference on Academic Stress. Gender difference is a concept that plays a vital role in how academic stress can be viewed, which can be shown from the results that various studies from different authors have published on academic stress. Males and females being the gender observed primarily in those studies, give indications on the differences in how males experience academic stress compared to females. Rubach et al. (2022) mentions that females have reported higher levels of academic stress due to stressors related to academic performance and workload in comparison to their male counterparts during the COVID-19 pandemic.

This research is backed up by Graves et al. (2021), who also produced results that the females within the sample record levels of academic stress that are on a larger scale than males. This was determined by Perceived Stress Scale (PSS) scores obtained (Graves et al., 2021). The males (N=154, 36.4%) in the sample (Total N=423) reported slightly higher stress levels in the "mild stress (N=3, 1.9%)" and "moderate stress (N=140, 90.9%)" categories in comparison to their female (N=269, 63.6%) counterparts in the same categories (N=3, 1.1% and N=208, 77.3% respectively) (Graves et al., 2021, p. 5). However, the females reported significantly higher levels of stress in the "severe stress" category (N=58, 21.6%) in comparison to their male counterparts (N= 11, 7.1%) (Graves et al., 2021).

The reason is that it has been reported by Graves et al. (2021) that women have been noted to being more vulnerable to stressful situations and stressors in comparison to men. This can be applicable to when academic stress is experienced where stressors such as being in a foreign environment, having to adjust to change in coursework, and change in social circles are in effect (Onolemhen & Abel, 2020). The study done by Devchoudhury and Devasagayam (2022) explores personality and its effect on academic stress in relation to gender, where it finds that due to the happy go lucky or easy going way of living that males follow in comparison to the sensitive and sincere nature that females possess, there is a conclusion that women experience heightened levels of stress in comparison to males. The reason is that it has been reported that women are more vulnerable to stressful situations and stressors compared to men (Graves et al., 2021). This can apply when experiencing academic stress, where stressors such as being in a foreign environment, having to adjust to

changes in coursework, and changes in social circles are in effect (Onolemhen & Abel, 2020). The study conducted by Devchoudhury and Devasagayam (2022) explores personality and its effect on academic stress in relation to gender, concluding that due to the easy-going or laid-back approach often associated with males, compared to the sensitive and sincere nature of females, women tend to experience higher levels of stress.

The reason for the difference also arises from emotional challenges that are highlighted during stressful situations and negative appraisals, which females tend to experience (Staiger et al., 2020). Males, on the other hand, are noted to be trained to display strength when facing stressful situations due to stigmas surrounding men showing vulnerability (Staiger et al., 2020). This proves that gender differences are present given that the same stressors would be experienced by both males and females, but they would respond to the differently, showing the difference in academic stress scores that they obtain.

2.4. *Operational Definition of Terms*

Alcohol consumption: The consumption of alcohol has to do with the intake of beverages that are either distilled (spirits) or fermented (beer and wine) that contain ethanol or ethyl alcohol (Carels, 2022). This is measured both in the levels that are taken in over a period and the levels that are consumed in a single sitting.

Age: Refers to the amount of time a living thing has been in existence (Wicklund & Kowalczyk, 2023). This applies to all human beings where age is a

system that is used to define and measure growth when certain processes are applicable, such as being in higher education institutions from 18 years, and being allowed to drink alcohol at 18 years in South Africa.

Gender: Understood to be the social norms that have been constructed that are associated with behaviour, roles and identity that identify men from women, and boys from girls, and others that are non-binary and of other genders that are part of a spectrum (Canadian Institutes of Health Research, 2023).

Academic stress: Understood to be a psychological state that is experienced by students that is related to demands that are not met which result in pressure being exerted on one's academic life having adverse effects on the overall well-being of an individual (Zhou et al., 2022).

This chapter focused on expanding on literature related to the study. Firstly, the theoretical formulations comprising of the theoretical frameworks, theoretical perspectives, and the review of the relevant literature were given. The review of relevant literature was centred on academic stress rates, alcohol consumption patterns, alcohol consumption and its connection to academic stress, the role of age on academic stress, and gender differences on academic stress. Lastly, operational definitions of terms related to the study were given. The literature touched on seminal and current sources that pinpointed stress and coping and its connection to academic stress and alcohol consumption. Furthermore, information on age and gender related stressors were given. The next chapter, Research Methodology, will follow to discuss the process by which the variables mentioned above were assessed.

Chapter 3: Research Methodology

This chapter will be focused on explaining the stipulated concepts as follows. The study paradigm, approach, and design will be given. Next, the participants concerned including the sample information will be given. The instruments to be used will be explained thereafter. The reliability, validity, and objectivity will be described and explained. Moreover, the statistical methods used, the study time frame, and ethical considerations will be given and explained.

3. Methodology

3.1. *Study Paradigm, Approach, and Design*

The study paradigm that was utilised was positivist. A positivist perspective as a research methodology represents a scientific framework that prioritises gathering empirical, quantifiable data using standardized techniques to determine cause-and-effect connections. This was with the intention of producing objective understanding of a phenomenon by significantly depending on quantitative approaches such as surveys and experiments, while aiming at yielding results that could be generalized (Park et al., 2020). This was a quantitative study which used the cross-sectional approach to research. This design was appropriate for this study because data was collected and analysed from different participants at a given point in time (Wang & Cheng, 2020).

3.2. *Participants*

The target population comprised undergraduate students enrolled at IIE MSA who were 18–26 years old at the time of data collection. The institutional

student body was approximately 4,000 students; using Krejcie and Morgan's (1970) guidance, a target sample of ~350 was planned to ensure adequate precision and statistical power (see Appendix D: Sample Size Rationale/Calculation). Recruitment followed a non-probability, convenience (volunteer) approach: eligible students self-selected after viewing approved posters placed across campus with a QR code linking to the online survey (see Appendix B: Recruitment Poster). This strategy maximised reach within the defined population while acknowledging limits to representativeness and generalisability inherent to volunteer sampling. Key eligibility criteria and screening prompts are summarised below and shown in full on the survey landing page (see Appendix C: Participant Information Sheet & E-Consent).

3.3. *Instruments*

The study utilised three different instruments to collect the data. Participants were requested to consent to taking part in the survey (which was the first page of the survey). This was followed by demographic information form to gain research participant information such as gender, age, as these were the important variables that formed part of the study. The Alcohol Use Disorder Test and the Academic Scale was then utilised in the survey respectively. Below is a brief discussion of the AUDIT and ASS instruments that was used to acquire the desired data.

3.3.1. Alcohol Use Identification Test (AUDIT) [Appendix C].

The items measuring the level of alcohol consumed were collected using the Alcohol Use

Disorders Identification Test (AUDIT) (Saunders et al., 1993). This test has 10 items related to the measurement of alcohol consumption. The test uses a 5-point Likert-scale as a degree of measurement. The AUDIT (found in Appendix C) has items which focus on consumption of alcohol (item 1-3), dependence on alcohol (item 4-6), and negative consequences of alcohol consumption (item 7-10) which all add up to a total score of 40 points (Horváth et al., 2023). The scores ranges are 0-7 points (low alcohol consumption or abstinent drinking), 8-15 points (medium level consumption/risk of high alcohol consumption), 16-19 points (high alcohol consumption), and 20-40 (very high alcohol consumption/dependence on alcohol) (Horváth et al., 2023). The reliability of the AUDIT has a Cronbach $\alpha = 0.93$ for internal consistency (Horváth et al., 2023). The AUDIT is a test that has been confirmed as reliable and valid internationally, along with being valid in being used in South Africa (Anic & Robertson, 2020). This has been confirmed by the study done by Anic and Robertson (2020) that the items within the questionnaire have been derived from the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) and the tenth edition of the International Classification of Diseases (ICD-10) (Anic & Robertson, 2020). The WHO established this test to screen for alcohol use on a hazardous, harmful, or dependent level among individuals based on the scores that they obtain (Anic & Robertson, 2020). Furthermore, a 90% specificity and 83% sensitivity rating are obtained against DSM diagnostic criteria when tested (Anic & Robertson, 2020).

3.3.2. The Academic Stress Scale (ASS) [Appendix D]. This test containing 40 items, brought forth by Kim (1970), was also integrated within the

online survey (Hassan et al., 2023). The Academic Stress Scale uses a 5-point Likert-scale with scores ranging from 0 (no stress), 1 (slight stress), 2 (moderate stress), 3 (high stress), and 4 (extreme stress) (Phillips et al., 2020). There are 5 categories that are present in the ASS which are personal inadequacy (item 1 to 8), fear of failure (item 9 to 18), interpersonal difficulties with teachers/lecturers (item 19 to 24), teacher-pupil relationship which will be lecturer-student relationship (item 25 to 32), and inadequate lab or library facilities (item 33 to 40) (Phillips et al., 2020). The score range that can be obtained is 0-32 points for each category with an overall maximum score of 160 points with all the categories combined (Wahid et al., 2023). The reliability of the ASS is noted to have a correlation coefficient of 0.82, whilst the validity is noted to have a correlation coefficient of 0.73 (Phillips et al., 2020). This serves to ensure that the levels of academic stress experienced by the research participants is established for the data to be collected that is in line with what is desired in the study. The ASS, developed by Kim (1970) is noted to being utilised by different researchers, where the studies done by Phillips et al. (2020) and Wahid et al. (2023) have mentioned its use in their studies along with it being credited to being validated possessing adequate concurrent and construct validity and high internal consistency. The two studies are peer reviewed which indicates that they are valid studies that have utilised the ASS in contemporary research indicating that the ASS is a good test to use when assessing academic stress.

The two items used in the Alcohol Use Disorders Identification Test (AUDIT) and the Academic Stress Scale (ASS) are well-known tools for measuring alcohol intake and academic stress respectively which means that they show a high degree of

reliability and validity in what they are measuring, which is what is desired to be found in the study. They are both accessible online and do not need permission to be utilised in studies, although crediting the sources of the tests is required.

3.4. *Procedure*

Prior to data collection, ethical clearance was obtained from the IIE Higher Degrees Committee (clearance number 910325; see Appendix A: Ethics Approval Letter). Stamped recruitment posters containing the study overview and QR code were displayed at designated campus sites (Appendix B). Scanning the QR code directed students to a secure survey landing page presenting the study purpose, inclusion criteria, data use, and electronic informed consent; only participants selecting "I consent to participate" could proceed (Appendix C).

Consenting to the study on the survey led to the next page where questions related to the demographic information collection were presented in the form of a demographic form (Appendix B). Following that page was the beginning of the Alcohol Use Identification Test items (which was used as a way to obtain data on levels of alcohol consumption of participants) (Appendix C). Thereafter, the items of the Academic Stress Scale followed (which was utilised to obtain data on levels of academic stress experienced by participants) (Appendix D). The last page after the Academic Stress Scale items was the Counselling Information page that had information on the counselling services that are available at IIE MSA and what they specialise in (Appendix E), which thereafter signified the end of the

survey. The survey was stipulated to take 8-10 minutes to complete, which was stipulated on the first page of the survey letter of information (Appendix A).

The data was analysed once the desired minimum sample size of 350 participants was obtained, if not exceeded. The population was the higher education students that have access to being on campus, and the sample was the number mentioned from the usage of Krejcie and Morgan (1970) calculation. There were 361 participants that took part in the survey. The data that was counted was the surveys that were completed for the proper collection of the data required which were 352 participants. Only surveys that have not been completed, which were 9 participants, were removed from the data set because they did not consent to participating in the study.

3.5. *Reliability, Validity, and Objectivity*

Trustworthiness of a study is understood as the quality of a research study that is measured by data confidence, interpretations, and other methods (Nyirenda et al., 2020). The trustworthiness of a quantitative study consists of reliability, objectivity, and validity (the extent to which a test is able to measure what is intended to be measured and how well it does so) (Sürücü & Maslakçı, 2020). Reliability is known as the consistency that is found within a measure (Sürücü & Maslakçı, 2020). Objectivity is understood to be the degree of neutrality exercised by a researcher to decrease bias during result interpretations (Nyirenda et al., 2020). The types of validity that are of concern are internal and external validity. Internal validity refers to the level at which a causal relationship can be

established in a study between a dependent and independent variable (Nyirenda et al., 2020). External validity refers to the level at which inferences generated from a study's sample apply to a target or broader population (Findley et al., 2021).

The reliability of the study was heightened through the use of the AUDIT and ASS tests to obtain results that have been utilised in other studies recording a high level of reliability. Objectivity was increased due to the usage of online survey platforms to record data that was not affected by any bias as it was straightforward which reduced researcher bias when being interpreted. Internal validity could have been affected where a causal relationship could be identified or otherwise when interpreting the data collected between academic stress and alcohol consumption. External validity could have been affected in the case of understanding the general population of university students that consume alcohol after the data has been gathered and analysed. The trustworthiness of the study was also heightened with the collection of the data taking place in the form of Microsoft Forms, which is known to be advantageous in data collection for a quantitative research design which is possible from any location, which increases accessibility of the survey and serves as being convenient and time saving for data collection.

3.6. *Statistical Methods Used*

Data that was collected was analysed with inferential and descriptive statistics. To characterise the participants and compile the data, descriptive statistics like frequency, percentages, mean and standard deviation, figures, and

tables were utilized (Mishra et al., 2019). There were three tables that were used to organise the data gathered from the infographic (demographic characteristics of the sample), ASS (academic stress report per ASS item and academic stress category), and AUDIT (alcohol consumption report per AUDIT category) section respectively (see Table's 1, 2, and 3 respectively). The researcher attempted to evaluate the hypotheses using inferential statistics like correlation analysis, ANOVA, and the independent t-test. An ANOVA, known fully as analysis of variance, is a test that is utilised in the analysis of the difference of means between more than two groups on a single dependent variable (Pallant, 2020). A MANOVA, known fully as multivariate analysis, is a test that is an extension of ANOVA that is used in the analysis of the difference of means between more than two groups where there are multiple dependent variables (Pallant, 2020). There are multiple dependent variables that measure academic stress according to the ASS (personal inadequacy, fear of failure, interpersonal difficulties with teachers/lecturers, teacher-pupil relationship, and inadequate lab or library facilities) (Kim, 1970). Due to the two gender groups, three age groups, and the three AUDIT categories, a MANOVA was conducted due to its suitability to this study's objectives and hypotheses in testing for overall differences between the groups.

Firstly, a one-way multivariate analysis of variance (MANOVA) was conducted to examine the effect of age (18–20, 21–23, 24–26) on five sources of academic stress (see Table 4). This was followed by a post-hoc comparisons using the least significant difference (LSD) test to identify the significance present

between the three age groups (18-20, 21-23, 24-26) and their influence on the variables measuring academic stress since there was a significant difference between two groups that needed to be clarified (see Table 4) (Pallant, 2020). Secondly, a one-way multivariate analysis of variance (MANOVA) was conducted to examine the effect of gender (male, female) on five sources of academic stress: personal inadequacy, fear of failure, interpersonal difficulties with teachers/lecturers, teacher-pupil relationship, and inadequate lab or library facilities (see Table 6). Thirdly, a one-way multivariate analysis of variance (MANOVA) was conducted to examine the effect of AUDIT category (medium level consumption/risk of high alcohol consumption, high alcohol consumption, very high alcohol consumption/dependence on alcohol) on five categories/sources of academic stress: personal inadequacy, fear of failure, interpersonal difficulties with teachers/lecturers, teacher-pupil relationship, and inadequate lab or library facilities (see Table 6). Post-hoc comparisons using the least significant difference (LSD) test took place thereafter to determine the specific alcohol consumption group that displayed significant difference from the other alcohol consumption groups over their influence over the five categories/sources of academic stress according to the ASS (Pallant, 2020). Lastly, a three-way multivariate analysis of variance (MANOVA) was conducted to examine the effects of age (18–20, 21–23, 24–26), gender (male, female), and AUDIT category (medium level consumption/risk of high alcohol consumption, high alcohol consumption, very high alcohol consumption/dependence on alcohol) on five sources of academic stress: personal inadequacy, fear of failure, interpersonal difficulties with

teachers/lecturers, teacher-pupil relationship, and inadequate lab or library facilities (see Table 7). Post-hoc comparisons using the significant pairwise least significant difference (LSD) test for AUDIT category and age groups was conducted for this section thereafter (see Table 7).

Statistical Package for the Social Science (IBM/SPSS) version auxiliary applications was utilized to conduct the analyses. SPSS is a good application to use as it boasts being user friendly and being powerful in being able to process large data volumes for statistical analyses (Rahman & Muktadir, 2021). Furthermore, multiple variables that are in large sets of data can be analysed by the programme with graphic representations that can be generated as outputs (Rahman & Muktadir, 2021). The 7th edition of the SPSS Survival Handbook: A Step-by-Step Guide to Data Analysis Using IBM SPSS was utilised in conjunction with the online application as it is highly recommended handbook for understanding how to use SPSS for data analysis even for beginners (Pallant, 2020). The handbook is widely recognised by many academics and researchers, which has been stated in the book.

3.7. *Ethical Considerations*

The ethical consideration that was followed was transparency which was exercised by giving information on the identification of the researcher behind the study, what the study was about and what it was aimed at investigating, along with the ethical principles that were to be put into practice to protect the participants during the data collection process (Appendix A). Confidentiality was exercised where the data collected was handled by the researcher where the

information was protected on a password protected laptop only accessible to the researcher. The supervisor and co-supervisor of the researcher received the data obtained from the researcher after the data collection process only to ensure that the data was eligible for analysis. The data in both the previously mentioned processes was protected and only viewed by the researcher, supervisor, and co-supervisor of the researcher. The author decided that the data will be kept for five years after completing the dissertation and cleared from the devices storing it after the 5-year retention period has elapsed. Anonymity was executed by not requesting the personal information of participants that could identify them to protect their identities. Only the participants' age and gender were requested which was aligned with the research objectives along with respecting rights to privacy, safety, and security. Ethical protocols were followed by the researcher by applying to the IIE Higher Degrees Committee with the relevant documentation.

The IIE Higher Degrees Committee was to grant their approval of the study after ethical clearance was applied for where the data collection process could take place. Thereafter, post receiving ethical clearance, the first page of the survey comprising of the overall study information in the form of a survey information letter stipulated that the study is entirely voluntary (Appendix A). Study participants could view the relevant and important information about this study. Taking part in this study was stipulated as voluntary. It was stipulated that participants would be allowed to stop completing the survey of the study at any point should they have felt the need to do so. All study participants data were kept in a password locked computer belonging only to the researcher, which was not

shared with anyone else to overcome the risk of information access on the researcher's PC by an external party. Information being strictly confidential and anonymous when published was stipulated to the participants that took part in the study. The data instruments before the items in the survey both had a description that stipulated that the instruments were to only collect data for the research purposes and to not make formal diagnoses of participants. However, the online information on counselling services provided on campus was on the page after the data gathering items in the online survey if some of the participants were to display some level of concern over their level of stress that they may have experienced or on the alcohol that they consumed (Appendix E).

This chapter focused on explaining the study paradigm, approach, and design best suited for this study. The participants concerned, including the sample information, were given. The instruments used were explained in detail where their scoring system on how to measure alcohol consumption and academic stress were stipulated. The reliability, validity, and objectivity were described and explained. Lastly, the statistical methods used, the study time frame, and ethical considerations that were followed were given and explained. The results and interpretation of the variables of interest will be given in the next chapter.

Chapter 4: Findings and Discussion

This chapter will focus on the findings obtained from the data collection and analysis process. Firstly, the tables showing the demographic characteristics of the sample (see Table 1); the academic stress report per ASS item and academic stress category (see Table 2); the alcohol consumption report per AUDIT category (see Table 3); analysis of variance and post-hoc comparisons for age effects on sources of academic stress (see Table 4); analysis of variance for gender effects on sources of academic stress (see Table 5); analysis of variance and post-hoc comparisons for AUDIT category effects on sources of academic stress (see Table 6); and analysis of variance and post-hoc comparisons for age, gender, and AUDIT category effects on sources of academic stress (see Table 7) will be given. Lastly, a discussion on the findings and support of the hypotheses will be presented.

4. Findings

4.1. *Tables of Findings*

The results obtained are presented as follows:

Table 1

Demographic Characteristics of the Sample

Variable	Category	Frequency	Percent
Gender			
Female		208	59.1
Male		144	40.9
Race			
Black/African		256	70.9
White/Caucasian		36	10.0
Coloured		32	8.9
Asian		28	7.8

Age		
18–20	208	57.6
21–23	129	35.7
24–26	15	4.2
Year of Education		
1	124	36.2
2	148	43.1
3	61	16.9
4	7	1.9
5	3	0.8
Language		
English	318	88.1
Zulu	4	1.1
Setswana	3	0.8
Afrikaans	3	0.8
Sesotho	2	0.6
Other^	22	6.1
Nationality		
South African	308	87.5
Zimbabwean	19	5.3
Congolese	3	0.8
Kenyan	3	0.8
Mosotho	3	0.8
Nigerian	3	0.8
Other^	13	3.6
Religion		
Christianity	279	77.3
African Traditional	18	5.0
None	18	5.0
Hinduism	13	3.6
Islam	10	2.8
Other^	14	3.9

Note. Total sample size N = 352 for all variables except Year of Education (N = 343). ^Other includes categories with frequencies ≤ 2 (e.g., Xhosa, Swati, Judaism). Nationality "South African" combines variations (e.g., RSA, SA). Language "Other" includes 11 categories with one or two respondents each.

Table 1 summarises the demographic characteristics of a sample of 352 participants (343 for year of education). The sample was predominantly female (57.6%, n = 208) and Black/African (70.9%, n = 256). Most participants were aged 18–20 (57.6%, n = 208), followed by 21–23 (35.7%, n = 129). The majority were in their second year of education (41.0%, n =

148) or first year (34.3%, n = 124). English was the primary language (88.1%, n = 318), and South Africans comprised 87.5% (n = 308) of the sample, with Zimbabweans (5.3%, n = 19) and others less represented. Christianity was the dominant religion (77.3%, n = 279).

Table 2

Academic Stress Report per ASS Item and Academic Stress Category

Academic Stress Category	**Item Number**	**Academic Stress Level [Frequency (Percentage)]**				
		No Stress	Slight Stress	Moderate Stress	High Stress	Extreme Stress
Personal Inadequacy	1	31 (8.8)	86 (24.4)	127 (36.1)	77 (21.9)	31 (8.8)
	2	43 (12.2)	108 (30.7)	125 (35.5)	58 (16.5)	18 (5.1)
	3	120 (34.1)	64 (18.2)	69 (19.6)	58 (16.5)	41 (11.7)
	4	157 (44.6)	91 (25.9)	67 (19.0)	17 (4.8)	20 (5.7)
	5	46 (13.1)	67 (19.0)	111 (31.5)	79 (22.4)	49 (13.9)
	6	41 (11.7)	75 (21.3)	96 (27.3)	81 (23.0)	59 (16.8)
	7	31 (8.8)	43 (12.2)	78 (22.2)	96 (27.3)	104 (29.6)
	8	114 (32.4)	82 (23.3)	67 (19.0)	48 (13.6)	41 (11.7)
Fear of Failure	9	121 (34.4)	112 (31.8)	68 (19.3)	25 (7.1)	26 (7.4)
	10	161 (45.7)	77 (21.9)	69 (19.6)	25 (7.1)	20 (5.7)
	11	207 (58.8)	65 (18.5)	42 (11.9)	19 (5.4)	19 (5.4)
	12	40 (11.4)	41 (11.7)	80 (22.7)	80 (22.7)	111 (31.5)
	13	97 (27.6)	88 (25.0)	86 (24.4)	48 (13.6)	33 (9.4)
	14	119 (33.8)	101 (28.7)	70 (19.9)	31 (8.8)	31 (8.8)
	15	192 (54.6)	66 (18.8)	57 (16.2)	25 (7.1)	12 (3.4)
	16	88 (25.0)	84 (23.9)	79 (22.4)	58 (16.5)	43 (12.2)
	17	105 (29.8)	90 (25.6)	83 (23.6)	44 (12.5)	30 (8.5)
	18	147 (41.8)	91 (25.9)	74 (21.0)	26 (7.4)	14 (4.0)

Interpersonal Difficulties with Teachers/Lecturers	19	196 (55.7)	76 (21.6)	46 (13.1)	17 (4.8)	17 (4.8)
	20	106 (30.1)	87 (24.7)	92 (26.1)	41 (11.7)	26 (7.4)
	21	69 (19.6)	89 (25.3)	101 (28.7)	52 (14.8)	41 (11.7)
	22	82 (23.3)	77 (21.9)	63 (17.9)	53 (15.1)	77 (21.9)
	23	92 (26.1)	92 (26.1)	89 (25.3)	47 (13.4)	32 (9.1)
	24	68 (19.3)	76 (21.6)	100 (28.4)	48 (13.6)	60 (17.0)
Teacher-pupil Relationship	25	108 (30.7)	111 (31.5)	73 (20.7)	29 (8.2)	31 (8.8)
	26	116 (33.0)	109 (31.0)	77 (21.9)	30 (8.5)	20(5.7)
	27	169 (48.0)	79 (22.4)	57 (16.2)	26 (7.4)	21 (6.0)
	28	109 (31.0)	75 (21.3)	69 (19.6)	51 (14.5)	48 (13.6)
	29	108 (30.7)	88 (25.0)	82 (23.3)	41 (11.7)	33 (9.4)
	30	125 (35.5)	97 (27.6)	72 (20.5)	30 (8.5)	28 (8.0)
	31	59 (16.8)	82 (23.3)	88 (25.0)	63 (17.9)	60 (17.1)
	32	124 (35.2)	99 (28.1)	72 (20.5)	22 (6.3)	35 (9.9)
Inadequate Lab or Library Facilities	33	111 (31.5)	60 (17.1)	66 (18.8)	52 (14.8)	63 (17.9)
	34	73 (20.7)	87 (24.7)	89 (25.3)	58 (16.5)	45 (12.8)
	35	71 (20.2)	89 (25.3)	93 (26.4)	56 (15.9)	43 (12.2)
	36	82 (23.3)	71 (20.2)	75 (21.3)	65 (18.5)	59 (16.8)
	37	89 (25.3)	80 (22.7)	114 (32.4)	38 (10.8)	31 (8.8)
	38	199 (56.5)	74 (21.0)	48 (13.6)	11 (3.1)	20 (5.7)
	39	116 (33.0)	94 (26.7)	77 (21.9)	34 (9.7)	31 (8.8)
	40	152 (43.2)	83 (23.6)	60 (17.1)	31 (8.8)	26 (7.4)

Table 2 summarises the data collected from the ASS. The table shows the total number of items of the ASS (Item 1-40), the categories of variables of academic stress measurement that the items fall under (Personal inadequacy, fear of failure, interpersonal difficulties with teachers/lecturers, teacher-pupil relationship, and inadequate lab or library facilities), the levels

of stress (No stress, slight stress, moderate stress, high stress, and extreme stress), and the frequency of the level of stress reported from participants for each of the ASS items. The sample contained 352 participants that took part in the survey. The frequency under each item represents the number of participants that responded to experiencing one of levels of stress from each of the scenarios stated in the items (Appendix D).

Table 3

Alcohol Consumption Report per AUDIT Category

		Alcohol Consumption Category	**Frequency**
AUDITcat	2,00	Medium level consumption/risk of high alcohol consumption	4
	3,00	High alcohol consumption	116
	4,00	Very high alcohol consumption/dependence on alcohol	146

Table 3 summarises the data gathered on the alcohol consumption of the participants. 266 participants out of the total 352 reported to consuming alcohol at varying levels. The reported data is distributed across three categories. Only 4 participants fell under medium level consumption/risk of high alcohol consumption whilst there were a significantly higher number of participants that fell under the higher risk groups. Specifically, 116 participants fell under the high alcohol consumption category and 146 participants fell under very high alcohol

consumption/dependence on alcohol. This is indicative of the high alcohol consumed that highlights the harmful drinking patterns practiced in higher education institutions.

Table 4

Analysis of Variance and Post-Hoc Comparisons for Age Effects on Sources of Academic Stress

Dependent Variable	F(2, 349)	p	18–20 vs. 21–23		18–20 vs. 24–26		21–23 vs. 24–26	
			MD (SE)	p	MD (SE)	p	MD (SE)	p
Personal inadequacy	1.57	.21	–1.09 (0.72)	.14	–2.02 (1.73)	.24	–0.94 (1.76)	.60
Fear of failure	0.82	.44	–0.53 (0.58)	.37	–1.45 (1.39)	.30	–0.93 (1.42)	.52
Interpersonal difficulties with teachers/lecturers	0.82	.44	–0.53 (0.58)	.37	–1.45 (1.39)	.30	–0.93 (1.42)	.52
Teacher-pupil relationship	0.36	.70	–0.53 (0.83)	.52	–1.28 (1.97)	.52	–0.75 (2.01)	.71
Inadequate lab or library facilities	2.66	.07	–1.04 (0.84)	.22	–4.24 (2.00)*	.04	–3.20 (2.04)	.12

Note. MD = mean difference; SE = standard error. Post-hoc comparisons are based on least significant difference (LSD) tests. $p < .05$. Sample sizes by age group: 18–20 (n = 208), 21–23 (n = 129), 24–26 (n = 15). Multivariate test (Pillai's Trace = .03, F(8, 694) = 1.26, p = .26) indicated no overall significant effect of age.

A one-way multivariate analysis of variance (MANOVA) was conducted to examine the effect of age (18–20, 21–23, 24–26) on five sources of academic stress: personal inadequacy, fear of failure, interpersonal difficulties with teachers/lecturers, teacher-pupil relationship, and inadequate lab or library facilities. The sample consisted of 352 participants, with 208 in the 18–20 age group, 129 in the 21–23 age group, and 15 in the 24–26 age group.

The multivariate test indicated no significant effect of age on the combined dependent variables, Pillai's Trace = .03, F(8, 694) = 1.26, p = .26. Univariate tests of between-subjects effects (see Table 4) further revealed no significant differences across age groups for personal inadequacy, F(2, 349) = 1.57, p = .21, R^2 = .01; fear of failure, F(2, 349) = 0.82, p = .44, R^2 = .01; interpersonal difficulties with teachers/lecturers, F(2, 349) = 0.82, p = .44, R^2 = .01; teacher-pupil relationship, F(2, 349) = 0.36, p = .70, R^2 = .00; or inadequate lab or library facilities, F(2, 349) = 2.66, p = .07, R^2 = .02.

Post-hoc comparisons using the least significant difference (LSD) test (see Table 4) showed a significant mean difference in inadequate lab or library facilities between the 18–20 and 24–26 age groups (MD = –4.24, SE = 2.00, p = .04), indicating that the 18–20 age group reported lower stress related to inadequate lab or library facilities compared to the 24–26 age group. No other pairwise comparisons reached statistical significance (p > .05). These findings suggest that age does not significantly influence most sources of academic stress in this sample, with the exception of a notable difference in perceived stress from inadequate lab or library facilities between the youngest and oldest age groups.

Table 5

Analysis of Variance for Gender Effects on Sources of Academic Stress

Dependent Variable	F(1, 350)	p	R^2	Adjusted R^2
Personal inadequacy	12.57	.001	.03	.03
Fear of failure	2.67	.10	.01	.01
Interpersonal difficulties with teachers/lecturers	2.67	.10	.01	.01
Teacher-pupil relationship	1.26	.26	.00	.00
Inadequate lab or library facilities	0.73	.39	.00	.00

Note. Sample sizes by gender: Male (n = 144), Female (n = 208). Multivariate test (Pillai's Trace = .05, F(4, 347) = 4.16, p = .003) indicated a significant effect of gender.

A one-way multivariate analysis of variance (MANOVA) was conducted to examine the effect of gender (male, female) on five sources of academic stress: personal inadequacy, fear of failure, interpersonal difficulties with teachers/lecturers, teacher-pupil relationship, and inadequate lab or library facilities. The sample comprised 352 participants, with 144 males and 208 females.

The multivariate test revealed a significant effect of gender on the combined dependent variables, Pillai's Trace = .05, F(4, 347) = 4.16, p = .003. Univariate tests of between-subjects effects (see Table 5) indicated a significant effect of gender on personal inadequacy, F(1, 350) =

12.57, $p < .001$, $R^2 = .03$, with females reporting higher stress than males. No significant gender differences were found for fear of failure, $F(1, 350) = 2.67$, $p = .10$, $R^2 = .01$; interpersonal difficulties with teachers/lecturers, $F(1, 350) = 2.67$, $p = .10$, $R^2 = .01$; teacher-pupil relationship, $F(1, 350) = 1.26$, $p = .26$, $R^2 = .00$; or inadequate lab or library facilities, $F(1, 350) = 0.73$, $p = .39$, $R^2 = .00$.

These findings suggest that gender significantly influences perceived personal inadequacy, with females experiencing greater stress in this domain compared to males, but no significant gender differences were observed for other sources of academic stress.

Table 6

Analysis of Variance and Post-Hoc Comparisons for AUDIT Category Effects on Sources of Academic Stress

Dependent Variable	F(2, 263)	p	R^2	Adjusted R^2	Medium vs. High		Medium vs. Very High		High vs. Very High	
					MD (SE)	p	MD (SE)	p	MD (SE)	p
Personal inadequacy	1.97	.14	.02	.01	-4.75 (3.28)	.15	-5.67 (3.27)	.08	-0.92 (0.80)	.25
Fear of failure	0.84	.43	.01	.00	-2.14 (2.62)	.42	-2.71 (2.61)	.30	-0.57 (0.64)	.38
Interpersonal difficulties with teachers/lecturers	0.84	.43	.01	.00	-2.14 (2.62)	.42	-2.71 (2.61)	.30	-0.57 (0.64)	.38
Teacher-pupil relationship	1.20	.30	.01	.00	-3.83 (3.71)	.30	-4.73 (3.69)	.20	-0.91 (0.91)	.32
Inadequate lab or library facilities	0.81	.45	.01	.00	-3.18 (3.77)	.40	-3.94 (3.75)	.30	-0.76 (0.92)	.41

Note. MD = mean difference; SE = standard error. Post-hoc comparisons are based on least significant difference (LSD) tests. Sample sizes by AUDIT category: Medium level consumption/risk of high alcohol consumption (n = 4), High alcohol consumption (n = 116), Very high alcohol consumption/dependence on alcohol (n = 146). Multivariate test (Pillai's Trace = .02, F(8, 522) = 0.51, p = .85) indicated no overall significant effect of AUDIT category.

No respondent scored in the Low/Abstinent (0–7) AUDIT range. Group comparisons therefore involved Medium (8–15), High (16–19), and Very High (20–40) drinkers; full descriptive statistics for the entire sample are provided in Table 3.

A one-way multivariate analysis of variance (MANOVA) was conducted to examine the effect of AUDIT category (medium level consumption/risk of high alcohol consumption, high alcohol consumption, very high alcohol consumption/dependence on alcohol) on five sources of

academic stress: personal inadequacy, fear of failure, interpersonal difficulties with teachers/lecturers, teacher-pupil relationship, and inadequate lab or library facilities. The sample comprised 266 participants, with 4 in the medium consumption group, 116 in the high consumption group, and 146 in the very high consumption/dependence group.

The multivariate test showed no significant effect of AUDIT category on the combined dependent variables, Pillai's Trace = .02, $F(8, 522) = 0.51$, $p = .85$. Univariate tests of between-subjects effects (see Table 6) revealed no significant differences across AUDIT categories for personal inadequacy, $F(2, 263) = 1.97$, $p = .14$, $R^2 = .02$; fear of failure, $F(2, 263) = 0.84$, $p = .43$, $R^2 = .01$; interpersonal difficulties with teachers/lecturers, $F(2, 263) = 0.84$, $p = .43$, $R^2 = .01$; teacher-pupil relationship, $F(2, 263) = 1.20$, $p = .30$, $R^2 = .01$; or inadequate lab or library facilities, $F(2, 263) = 0.81$, $p = .45$, $R^2 = .01$.

Post-hoc comparisons using the least significant difference (LSD) test (see Table 6) indicated no significant pairwise differences between AUDIT categories for any dependent variable ($p > .05$). The largest observed difference was for personal inadequacy between the medium and very high consumption groups (MD = -5.67, SE = 3.27, $p = .08$), but this did not reach statistical significance.

These findings suggest that AUDIT category, as a measure of alcohol consumption level, does not significantly influence perceived sources of academic stress in this sample. The small sample size in the medium consumption group ($n = 4$) may limit the power to detect differences, warranting caution in interpreting these results.

Table 7

Analysis of Variance and Post-Hoc Comparisons for Age, Gender, and AUDIT Category Effects on Sources of Academic Stress

Dependent Variable	F(13, 252)	p	R^2	Adjusted R^2	Age Effect		Gender Effect		AUDITcat Effect	
					F(2, 252)	p	F(1, 252)	p	F(2, 252)	p
Personal inadequacy	2.13	.01	.10	.05	1.27	.28	3.67	.06	1.37	.26
Fear of failure	0.94	.51	.05	.00	0.33	.72	0.19	.67	0.39	.68
Interpersonal difficulties with teachers/lecturers	0.94	.51	.05	.00	0.33	.72	0.19	.67	0.39	.68
Teacher-pupil relationship	0.79	.67	.04	-.01	0.26	.77	0.27	.60	0.64	.53
Inadequate lab or library facilities	0.83	.63	.04	-.01	2.19	.11	1.57	.21	0.59	.56

Note. Sample sizes: Age (18–20: n = 154, 21–23: n = 100, 24–26: n = 12); Gender (Male: n = 112, Female: n = 154); AUDIT category (Medium: n = 4, High: n = 116, Very High: n = 146). Multivariate tests: Age (Pillai's Trace = .04, F(8, 500) = 1.40, p = .20), Gender (Pillai's Trace = .03, F(4, 249) = 1.85, p = .12), AUDITcat (Pillai's Trace = .03, F(8, 500) = 0.79, p = .62). Interaction effects were non-significant (p > .05). Post-hoc comparisons (LSD) for AUDITcat and Age showed no significant pairwise differences (p > .05).

A three-way multivariate analysis of variance (MANOVA) was conducted to examine the effects of age (18–20, 21–23, 24–26), gender (male, female), and AUDIT category (medium level consumption/risk of high alcohol consumption, high alcohol consumption, very high alcohol consumption/dependence on alcohol) on five sources of academic stress: personal inadequacy, fear of failure, interpersonal difficulties with teachers/lecturers, teacher-pupil relationship, and inadequate lab or library facilities. The sample consisted of 266 participants, with 154 in the 18–20 age group, 100 in the 21–23 age group, 12 in the 24–26 age group, 112 males, 154 females, 4 in the medium consumption group, 116 in the high consumption group, and 146 in the very high consumption/dependence group.

The multivariate tests indicated no significant main effects for age (Pillai's Trace = .04, F(8, 500) = 1.40, p = .20), gender (Pillai's Trace = .03, F(4, 249) = 1.85, p = .12), or AUDIT category (Pillai's Trace = .03, F(8, 500) = 0.79, p = .62). All interaction effects, including age ×

gender, age × AUDIT category, gender × AUDIT category, and the three-way interaction, were also non-significant ($p > .05$).Univariate tests of between-subjects effects (see Table 7) showed a significant overall model effect for personal inadequacy, $F(13, 252) = 2.13$, $p = .01$, $R^2 = .10$, but not for fear of failure, $F(13, 252) = 0.94$, $p = .51$, $R^2 = .05$; interpersonal difficulties with teachers/lecturers, $F(13, 252) = 0.94$, $p = .51$, $R^2 = .05$; teacher-pupil relationship, $F(13, 252) = 0.79$, $p = .67$, $R^2 = .04$; or inadequate lab or library facilities, $F(13, 252) = 0.83$, $p = .63$, $R^2 = .04$. For personal inadequacy, the effect of gender approached significance, $F(1, 252) = 3.67$, $p = .06$, $R^2 = .10$, suggesting a trend toward females reporting higher stress than males. No significant main effects were found for age or AUDIT category across any dependent variables ($p > .05$).

Post-hoc comparisons using the significant pairwise least significant difference (LSD) test for AUDIT category and age revealed no differences ($p > .05$) (see Table 7). The largest observed difference for AUDIT category was for personal inadequacy between the medium and very high consumption groups (MD = -5.67, SE = 3.20, $p = .08$), and for age, it was between the 18–20 and 21–23 groups (MD = -1.08, SE = 0.81, $p = .18$), but neither reached statistical significance.

These findings suggest that age, gender, and AUDIT category, individually or in interaction, do not significantly influence sources of academic stress in this sample. The trend toward higher personal inadequacy stress among females warrants further investigation, and the small sample size in the medium consumption group ($n = 4$) may have limited the power to detect significant effects.

4.2. *Discussion*

The study of interest (Influence of Age, Gender, and Alcohol Consumption on Academic Stress among Higher Education Students in Gauteng) was conducted where the aim of the study was to determine the influence of age, gender differences and alcohol consumption on academic stress among higher education students in the previously mentioned geographical area. Age and gender were the demographic variables covered and gathered in the study.

The research objectives were to firstly, examine academic-related stress rates that higher education students experience (H1); secondly, examine whether age difference would predict academic stress as a result of alcohol consumption among higher education students (H2); thirdly, examine whether gender differences would predict academic stress as a result of alcohol consumption among higher education students (H3); and lastly, examine whether there would be a difference between high and low alcohol users among academic stress among higher education students (H4).

Furthermore, the hypotheses that were presented for exploration were that firstly, age difference would predict academic stress among higher education students; secondly, there would be a difference between male and female students on academic stress among higher education students; thirdly, high alcohol users would report more academic stress than low alcohol users among higher education students; and lastly, there would be a significant interaction between age, gender and alcohol use on academic stress among higher education students. Firstly, the study's main findings will be presented and interpreted in

comparison to the previously reviewed literature. Lastly, the outcomes on the hypotheses will be covered.

4.2.1. Academic Stress Rates. Academic stress was measured using the ASS that was reported to possessing a high level of reliability and validity in the previously presented literature covering it (see ASS under Instruments in Chapter 3: Research Methodology). The 40 items are presented in 5 categories. These categories are personal inadequacy (item 1 to 8), fear of failure (item 9 to 18), interpersonal difficulties with teachers/lecturers (item 19 to 24), teacher-pupil relationship which was lecturer-student relationship (item 25 to 32), and inadequate lab or library facilities (item 33 to 40) (Phillips et al., 2020).

The findings were that levels of stress associated with personal inadequacy were reported (in descending order) to be mostly moderate, slight, then high, respectively, for items 1 and 2 ('Lecturers make too many extra demands on students' and 'Poor interest in some modules') (see Table 2). Furthermore, item 7 ('Worrying about the examination') had the most reports of extreme stress [n = 78 (22.16%)], followed by high stress [n = 96 (27.27%)], then moderate stress [n = 104 (29.55%)] (see Table 2). No slight stress was mostly reported for fear of failure (although extreme, high, and moderate stress, respectively, in descending order, were reported for item 12 under fear of failure known as 'Worry about results after examination') (see Table 2). No stress was mostly reported for interpersonal difficulty with teachers/lecturers (see Table 2). No stress was mostly reported for lecturer-student relationship, and no stress was mostly reported for inadequate lab/library facilities, however, similar levels of stress ranging in

descending order from no stress to extreme stress were reported for item 36 (‘Eleventh hour preparation’) (see Table 2).

The findings on item 1 indicate that students mainly experience moderate stress based on common major scenarios, such as the given scenario under item 1 on the perceived high demand of academic workload issued out by the lecturer and the studying that needs to be done. This corroborates the previous literature done by Henderson et al. (2021), which addresses the high academic demands that are a major source of academic stress. The findings reported by the participants for item 2 highlight the loss of interest in the module that they study, which can be connected to the findings of item 1. The increased academic pressure, change of environment, and curriculum changes can account for the loss of interest in the modules completed, which in turn increases academic stress levels, corroborating the previous study by Zhang et al. (2022). The increased academic pressure and responsibility stemming from the findings can further be understood as inducing stress, anxiety, and fatigue that unsettle students, ultimately leading to a loss of interest in the modules; however, the level of stress reported is mainly moderate. This may indicate that loss of interest in a module is perceived differently, resulting in it not being any higher, which may be due to their coping styles, aside from alcohol, as proposed by this study. Bojorque et al. (2025) and Gasser et al. (2025), mention that prolonged academic stress results in physical and mental issues such as physical exhaustion, sleeping disorders, weakened immune, negative thoughts, anxiety, and depression that can result in overall loss of motivation and decrease academic performance system that results in the decline

of overall well-being and academic performance. This ultimately ties with the percentages given on poor interest in modules that solidifies the notion that interest in modules dwindles as one's health is compromised when whilst completing them (see Table 2).

The findings for item 7 under personal inadequacy ('Worrying about the examination') and item 12 under fear of failure ('Worry about results after examination') are connected. Personal inadequacy is fairly high as reported by the sample compared to fear of failure not being high overall among this study's participants. Worrying about examinations before attending to them and worrying about the results thereafter are major points in academics that increase overall academic stress, as corroborated by the study by Pérez-Jorge et al. (2025). Pérez-Jorge et al. (2025) highlighted the connection between fear of failure and self-doubt, and the effects of these two factors in heightening overall academic stress, which aligns with the two sections that included items reporting extreme stress scenarios: personal inadequacy and fear of failure.

The level of stress associated with worrying about the examinations and their results in the sample of this study can be linked to the sample's age range and the number of participants in those ranges. The sample had 352 participants that took part in the study. Most participants were aged 18–20 (57.6%, n = 208), and the majority were in their second year of education (41.0%, n = 148) or first year (34.3%, n = 124), which were part of the 18-20 years age group. This means that the majority of participants were about to enter high school, whilst others had just begun high school when the COVID-19 pandemic occurred, followed by the

lockdown that restricted movement and altered educational methods. Online learning deviated from the traditional teaching and testing norms, leading them to examine students more rigorously only when final examinations and tests were scheduled. This meant that worrying about writing upcoming exams and the results of those exams became the norm as it was the challenge to overcome to move to the next grade which may have continued in higher education institutions among them, hence the 'extreme stress' result for item 7 under personal inadequacy ('Worrying about the examination') and item 12 under fear of failure ('Worry about results after examination'). This is connected to the study done by (Akhtar & Akhtar, 2024), which mentions that teaching and examination styles have developed, and the students' backgrounds have had an influence on how they navigate learning and preparing for exams. Exams that are not aligned with how the students were taught cause academic stress to increase among them (Akhtar & Akhtar, 2024).

The overall ASS responses of this study are that only item 7 under personal inadequacy and item 12 under fear of failure reported extreme levels of stress, as most of the other items reported at no to moderate stress levels. This does not corroborate the previous literature done by Barbayannis et al. (2022), who mentioned that 3 in 4 higher education students have self-reported experiencing stress, whilst stress-related ideation has been reported by 1 in 5 higher education students, as the overall academic stress reported in this study is not as high as expected. The findings of this study indicate that academic stress levels reported are mostly non-existent to moderate, with only two cases of

extreme stress for two items under two academic stress categories, which corroborates previous literature published by Alhamed (2023), who mentions that the results obtained record a mild to moderate level, with only 8.6% of the reports being that of extreme academic stress. This means that academic stress experienced by higher education students is mostly moderate, with the exception of specific scenarios in this study.

4.2.2. Alcohol Consumption Rates. The sample for this study comprised 352 participants aged 18-26 years who consented to participate. The findings indicated that 266 (75.6%) of the 352 participants reported consuming alcohol across different levels, with 4 (1.5%) in the medium consumption group, 116 (43.6%) in the high consumption group, and 146 (54.9%) in the very high consumption/dependence group. This study shows the extent of excessive alcohol consumption commonly practised by higher education students, corroborating the findings of Blows and Isaacs (2022). This study also corroborates previous literature done by Wittgens et al. (2022), Wahid et al. (2023), and de Brito et al. (2024) based on the age range and the number of participants that are in the high and very high consumption/dependence group. The findings sample of this study on the high and very high consumption groups also corroborate the previous study done by Carels et al. (2022) based on the participants' campus being in Gauteng, South Africa. This means that the alcohol consumption levels in this study are backed up by the findings on the ranking that South Africa was ranked number 5 in the world regarding the consumption of alcohol (Carels et al., 2022). This can be due to reasons stated in Chapter 2 such as the concept of 'drinking buddies'

among individuals aged from 18-25 years that normalise binge drinking and excessive alcohol use; increase in alcohol promotion through media such as advertisements, emails, and celebrity role models promoting alcohol brands; and lack of authoritative supervision at higher education institutions since students are known to be 18 years old and above permitting them to drink in certain areas (Carels et al., 2022; Chen et al., 2022). The alcohol dependency group are at risk of alcohol abuse related deaths according to the AUDIT and statistics done by the WHO if not lessened and maintained within a safer parameter afterwards. This is emphasised by previous literature done by Mbuqa et al. (2024) as they mention further that another study found 6.75% of the higher education students were within the parameters of harmful or high risk with the potential of alcohol dependency, which is much lower than the percentage of students that fell under very high alcohol consumption/dependence on alcohol. This could signify that severe drinking culture differs with change in geography and culture despite the country's high level of alcohol consumed when viewed from a holistic standpoint.

4.2.3. Age on Academic Stress. One of the variables in this study was age and its effect on academic stress. The age range was from 18-26 years and this was divided into 3 age groups (18–20 years, 21–23 years, and 24–26 years). The sample consisted of 352 participants, with 208 participants in the 18–20 age group, 129 participants in the 21–23 age group, and 15 participants in the 24–26 age group as mentioned in the results under Table 4. A one-way multivariate analysis of variance (MANOVA) was conducted to examine the effect of age on five sources of academic stress from the ASS: personal inadequacy, fear of failure,

interpersonal difficulties with teachers/lecturers, teacher-pupil relationship, and inadequate lab or library facilities.

The findings of the multivariate analysis of this study showed that age had no significant effect on the combined dependent variables related to academic stress (see Table 4). The univariate tests of between-subjects effects further revealed no significant differences across the given age groups for any of the specific dependant variables measured (see Table 4). Inadequate lab or library facilities approached significance $F(2, 349) = 2.66$, $p = .07$, $R^2 = .02$, however, $p = .07$ where $p > .05$ suggesting a weak difference instead of a significant difference. Furthermore, age explained little to no variance in the findings presented due to the effect sizes being small (R^2 values ranging from .00 to .02). These findings do not corroborate the previous studies done by Onolemhen and Abel (2020) and Chemutai and Mulambula (2020) as these authors mention that there is a form of relationship between age and perceived academic stress that students experience.

The findings for the post-hoc comparisons using the least significant difference (LSD) test (see Table 4), however, found a significant difference in one of the academic stress categories associated with inadequate lab or library facilities between the 18-20 and 24-26 age groups. The 18-20 age group reported to experiencing significantly less stress in than the 24-26 age group. This could suggest that the heightened academic tasks and responsibilities that require the use of technology for their completion may cause stress when the resources are limited as opposed to the 18-20 age group that comprises of individuals that may be in 1st and second year of education where academic responsibility is not as

high as their older counterparts. This corroborates the previous study done by Onolemhen and Abel (2020) and Chemutai and Mulambula (2020) to an extent since they mention that there are heightened stress levels among final year students and those on the cusp of graduating due to academic workload and course difficulty. This also corroborates the previous study done by Bibi et al. (2024) as they mention that the outcome of their study showed that over 80% of nursing students aged 22-27 years reported experiencing high stress, and those in their final year reported to experiencing the highest stress in the sample.

Other than the post-hoc comparisons using the least significant difference (LSD) test finding a significant difference between the 18-20 and 24-26 age group in the above mentioned category of academic stress, no other pairwise comparisons reached significance among other age groups ($p > .05$). These findings overall suggest that the experience that higher education students face is regarding the variables related to academic stress is relatively consistent across the different age groups in this study. Therefore, age does not appear to influence the academic stress categories and the experiences associated with academic stress. This can be due to factors related to the type of qualifications studied by those that took part in the study and how it relates to the way that they perceive the stress that their qualification may bring [corroborating the previous study done by Wahid et al. (2023) on the health science faculty experiencing more stress than other student faculties), their mental states when they took part in the study, and so on. The mentioned factors can corroborate research by Dennis (2022)/she mentions that there are different factors that influence students' perceptions of

stress as they progress through their qualifications, allowing them to adjust to the levels of stress. This can result in them being able to handle stress in a better manner, leading to its reduction. This would result in them not reporting high levels of stress as they age whilst being students.

4.2.4. Gender on Academic Stress. A one-way multivariate analysis of variance (MANOVA) was conducted to examine the effect of gender (male, female) on five sources of academic stress: personal inadequacy, fear of failure, interpersonal difficulties with teachers/lecturers, teacher-pupil relationship, and inadequate lab or library facilities. The sample comprised 352 participants, with 144 males and 208 females. The multivariate test revealed a significant difference between gender and the dependent variables associated with academic stress. The univariate test of between-subjects effects (see Table 5) indicated a significant effect of gender on personal inadequacy, $F(1, 350) = 12.57$, $p < .001$, $R^2 = .03$, with females reporting higher levels of personal inadequacy than males.

These findings in this study suggest that gender significantly influences personal inadequacy, with females experiencing greater stress in this domain compared to males, which corroborates the study done by Rubach et al. (2022) and Graves et al. (2021), who found that females report higher academic stress levels than their male counterparts in higher education institutions. The reasons surrounding the higher stress levels reported by females in this study in comparison to the male group may corroborate studies done by Devchoudhury and Devasagayam (2022), and Staiger et al. (2020) due to their personalities and how they perceive academic stress. The sample of this study was predominantly

female (57.6%, n = 208), which meant that they may have influenced the reported levels of academic stress under the personal inadequacy category, especially for scenarios mentioned for items 1, 2, 5, 6, and 7 that are connected to a degree (see Table 2 and Appendix D).

4.2.5. Alcohol Consumption and Academic Stress. A one-way multivariate analysis of variance (MANOVA) was conducted to examine the effect of AUDIT category (medium level consumption/risk of high alcohol consumption, high alcohol consumption, very high alcohol consumption/dependence on alcohol) on five sources of academic stress: personal inadequacy, fear of failure, interpersonal difficulties with teachers/lecturers, teacher-pupil relationship, and inadequate lab or library facilities. The sample comprised 266 participants, with 4 in the medium consumption group, 116 in the high consumption group, and 146 in the very high consumption/dependence group.

Multivariate no significant effect of AUDIT category on the combined dependent variables associated with academic stress, Pillai's Trace = .02, $F(8, 522) = 0.51$, $p = .85$. Univariate tests of between-subjects effects (see Table 6) revealed no significant differences across AUDIT categories for all the academic stressors associated with academic stress (personal inadequacy, fear of failure, interpersonal difficulties with teachers/lecturers, teacher-pupil relationship, or inadequate lab or library facilities). Post-hoc comparisons using the least significant difference (LSD) test (see Table 6) indicated no significant pairwise differences between AUDIT categories for any dependent variable ($p > .05$).

These findings suggest that alcohol does not significantly influence perceived sources of academic stress in this sample. The small sample size in the medium consumption group (n = 4) may have limited the power to detect differences, warranting caution in interpreting these results. These findings do not corroborate the study by Henderson et al. (2021), which examined the stressors contributing to academic stress, focusing mainly on interpersonal/social interactions. This is due to the study's objectives, which are not focused on exploring interpersonal/social interactions related to academic stress. However, these findings corroborate research done by Blows and Isaacs (2022) as they mention that higher education institutions are places with academic stress that can promote the consumption of alcohol, among other influential factors. This study has three AUDIT categories (medium consumption, high consumption, and very high consumption/dependence) associated with the measurement of overall alcohol consumption where there were 4 participants (0.02%) in the medium consumption group, 116 participants (43.61%) in the high consumption group, and 146 (54.89%) in the very high consumption/dependence group. The sample has also reported varying levels of stress that can be connected to the AUDIT category that they are part of, which represents the level of alcohol that they consume. These findings corroborate research done by Mthabela and van der Heever (2021), as they say that over 50% of higher education students drink high levels of alcohol which connects to the findings of this study regarding the high consumption group percentage. Surprisingly, these findings do not corroborate the research done by Wolkowicz et al. (2022) who say that the influence of the

academic stress experienced by students is indicated to be associated with the consumption of alcohol as a tension reduction agent. Instead, no significant difference was found between the two variables overall, suggesting no connection in this study.

4.2.6. Age, Gender, and Alcohol Consumption on Academic Stress. A three-way multivariate analysis of variance (MANOVA) was conducted to examine the effects of age (18–20, 21–23, 24–26), gender (male, female), and AUDIT category (medium level consumption/risk of high alcohol consumption, high alcohol consumption, very high alcohol consumption/dependence on alcohol) on five sources of academic stress: personal inadequacy, fear of failure, interpersonal difficulties with teachers/lecturers, teacher-pupil relationship, and inadequate lab or library facilities. The sample consisted of 266 participants, with 154 in the 18–20 age group, 100 in the 21–23 age group, 12 in the 24–26 age group, 112 males, 154 females, 4 in the medium consumption group, 116 in the high consumption group, and 146 in the very high consumption/dependence group.

The findings overall suggest that age, gender, and AUDIT category (alcohol consumption), individually or in interaction, do not significantly influence sources of academic stress in this sample. The trend toward higher personal inadequacy stress among females warrants further investigation (influence of gender on academic stress), and the small sample size in the medium consumption group (n = 4) may have limited the power to detect significant effects (influence of alcohol consumption on academic stress). The previous

literature and their connection to these findings have already been broken down on an individual level with regard to the interaction of the variables of interest. This is due to these results being similar overall in the non-significance present between most of them which is indicative of the effect of chance that is at play in this study that produced the results presented.

The hypotheses of the study were addressed and the outcomes are as follows.

H1) Age Difference Will Predict Academic Stress. The hypothesis is not supported. The age MANOVA was non-significant (Pillai's Trace = .03, $F(8, 694) = 1.26$, $p = .26$). All univariate tests across stress facets were non-significant (e.g., personal inadequacy $F(2, 349) = 1.57$, $p = .21$). A single LSD post-hoc contrast showed higher *inadequate lab or library* stress for ages 24–26 vs. 18–20 (MD = –4.24, SE = 2.00, $p = .04$). However, this isolated pairwise difference should be interpreted cautiously given the small oldest group and non-significant omnibus test.

H2) There Will Be a Difference Between Male and Female Students on Academic Stress. This hypothesis is partially supported. The gender MANOVA was significant (Pillai's Trace = .05, $F(4, 347) = 4.16$, $p = .003$). Univariately, females reported higher personal inadequacy stress ($F(1, 350) = 12.57$, $p < .001$). In contrast, other domains (fear of failure, interpersonal difficulties with teachers/lecturers, teacher–pupil relationship, inadequate lab or library facilities) showed no significant gender differences. Effect sizes were small ($R^2 \approx .00–.03$).

H3) High Alcohol Users Will Report More Academic Stress Than Low Alcohol Users. This hypothesis is not supported. The AUDIT-category MANOVA was non-significant (Pillai's Trace = .02, $F(8, 522) = 0.51$, $p = .85$), and all univariate tests were non-significant across stress facets. No LSD pairwise comparisons reached significance. Note the very small "medium" group ($n = 4$), which likely reduced power for detecting differences resembling "low" vs. "high."

H4) There Will be a Significant Interaction between Age, Gender, and Alcohol Use. This hypothesis is not supported. In the 3-way MANOVA, main effects for age, gender, and AUDIT category were non-significant and all interactions (including the three-way) were non-significant ($ps > .05$). Univariately, only the overall model for personal inadequacy was significant ($F(13, 252) = 2.13$, $p = .01$), with a trend for higher personal inadequacy in females ($F(1, 252) = 3.67$, $p = .06$); age and AUDIT effects remained non-significant.

Finally, H1, H3, and H4 are not supported; H2 is partially supported (gender differences confined to personal inadequacy). Effects are uniformly small, and uneven/small subgroup sizes (e.g., ages 24–26; AUDIT "medium") constrain power and warrant cautious interpretation. This ultimately indicates that factors such as chance are present here.

Chapter 5: Conclusion, Limitations, and Recommendations

5. Conclusion, Limitations, and Recommendations

5.1. *Conclusion*

This study investigated the influence of age, gender, and alcohol consumption on academic stress among higher education students in Gauteng. The findings of this study indicated that academic stress, although high in some higher education, is mostly moderate in the higher education institution where the data was gathered. Alcohol consumption levels recorded were high with 266 (75.57%) participants of the 352 participants that reported to being active alcohol consumers. Less than one percent of those participants actively consuming alcohol from the sample (n = 4, 0.02%) fell under in the medium consumption group, whilst over 40% (n = 116, 43.61%) fell in the high consumption group, and over 50% (n = 146, 54.89%) fell under the very high consumption/dependence group.

Further findings revealed that age did not demonstrate a significant association with academic stress, despite the post-hoc comparisons using the least significant difference (LSD) test, finding a significant difference between the 18-20 and 24-26 age groups for inadequate lab or library facilities (one of the stressors associated with academic stress measurement). Gender demonstrated significant association with academic stress, specifically with females reporting higher levels of academic stress in comparison to their male counterparts for personal inadequacy (one of the stressors associated with academic stress measurement). Alcohol did not demonstrate significant association with academic

stress in this sample. The small sample size in the medium consumption group (n = 4) may have limited the power to detect differences, warranting caution in interpreting these results. Overall, the findings suggested that age, gender, and AUDIT category (alcohol consumption), individually or in interaction, did not significantly influence the measurement of sources of academic stress in this sample.

This research study was to examine the interaction between alcohol consumption, age, and gender in relation to academic stress among higher education students. The aim was to determine the influence of age, gender differences and alcohol consumption on academic stress among higher education students. The findings overall suggested that age, gender, and AUDIT category (alcohol consumption), individually or in interaction, did not significantly influence sources of academic stress measurement in this sample (as the trend toward higher personal inadequacy stress among females warrants further investigation, and the small sample size in the medium consumption group (n = 4) may have limited the power to detect significant effects). Furthermore, only H2 was partially supported out of the four hypotheses (as gender differences were confined to personal inadequacy). Effects were uniformly minor, and uneven/small subgroup sizes (e.g., ages 24–26; AUDIT “medium consumption” group) constrained power and warrants cautious interpretation.

This ultimately indicates that factors such as chance were present in this study. Chance can be associated with the overall mental states of the students who took part in the study when the study was released. The qualifications that the

participants were studying at the time could have not been as stressful as the researcher may have anticipated given what has been mentioned in previous publications on academic stress as a whole. Since the design was cross-sectional, changes in stress may not have been possible to be reported and recorded which restricted the ability to infer causal relationships between age, gender, and alcohol consumption on academic stress, thus leading to the non-significant results that have been discovered in this study between them. Response bias may have also influenced the data, as some may have answered the survey in groups where they would be less inclined to answer honestly if the survey required personal and sensitive information.

Further research into which qualifications cause more stress than others should be conducted on a larger scale. This is to heighten higher education institutions' understanding on which academic groups are at risk of depression and anxiety from stress. Further research of this calibre must be done in other institutions so that a more generalised outcome can be reached, given that only one higher education institution was where the participants came from. The conduct of longitudinal studies is advised to determine the direction and long-term relationship between the variables in this study, to support sounder conclusions. This study, on the other hand, confirms with previous studies that alcohol consumption is still an ongoing problem and that there are recommendations that are present in order to help combat this national problem along with points on how stress can be tackled as well.

5.2. *Limitations*

This study used convenience (volunteer) recruitment at a single institution, which limits external validity and may over-represent students who are comfortable discussing alcohol and stress. Notably, no respondent fell in the Low/Abstinent AUDIT range (0–7), so inferential comparisons were restricted to Medium, High, and Very High drinkers. Group sizes were uneven (particularly a small Medium cell) reducing statistical power and potentially affecting the robustness of MANOVA/ANOVA results. Although multivariate assumptions (normality; homogeneity of covariance/variance) were checked and Pillai's Trace with conservative post-hoc procedures applied when indicated, residual imbalance and distributional skew may still influence estimates.

All measures were self-reported in a single session, creating risk of recall error, social desirability bias, and common-method variance. The cross-sectional design further precludes causal inference between alcohol involvement and academic stress. Item-level missingness led to varying per-analysis Ns; listwise deletion may bias estimates if data were not missing completely at random. Finally, while the AUDIT captures alcohol use/problems and the ASS targets academic stressors, these instruments may not fully reflect drinking motives/patterns or broader stress domains that co-occur with academic demands.

5.3. *Recommendations*

The findings in this study bring about recommendations that can tackle challenges faced by higher education students during their academic journey. The first recommendation would be for the institution to implement stress-management

and mental health interventions that focus on how to handle stress and appropriate ways to deal with stress. The second recommendation would be the encouragement for the tailored stress interventions for females regarding stress management. This should be put in place to address the levels of personal inadequacy that females may experience so that they are able to effectively plan their tasks and find better ways to deal with stress when a stressful period approaches. The final recommendation is for alcohol seminars and initiatives should be held to address the dangers of high intake as well to heighten the awareness potential illnesses and hazards surrounding alcoholism. This will also ensure that professional help is sought after sooner rather than later to lessen the number of potential physical and mental health breakdown associated with alcohol addiction.

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Appendix A: Survey Information Letter

Master of Philosophy in Arts : Psychology

Researcher: Itumeleng Hans Mogomotsi

Student Number: ST10461997

Supervisor: Prof Erhabor S. Idemudia

Co-Supervisor: Dr Munira Wadiwalla

Study: Influence of Age, Gender, and Alcohol Consumption on Academic Stress among Higher Education Students in Gauteng

Dear Participant

My name is Itumeleng Hans Mogomotsi and I am a student at IIE MSA. I would like to conduct research to determine the influence of age, gender differences and alcohol consumption on academic stress among higher education students. This research is being supervised by Prof Erhabor S. Idemudia and co-supervised by Dr Munira Wadiwalla. I hope that this research will enhance our understanding of determining the influence of age, gender differences and alcohol consumption on academic stress among higher education students. I hope that this research will enhance our understanding of the given variables in order to heighten our knowledge on the interaction of these variables to heighten awareness for safety measures to be explored.

I would like to humbly request that you participate in this research because I would like to further my understanding of academic stress and to find out how it is influenced by age, gender differences, and the consumption of alcohol. If you decide to participate in this research, I would like to request that you complete an online survey of my design that will ask questions related to the already mentioned variables.

Whether or not you decide to participate in this research, there will be no negative impact on you. There are no directly major risks or benefits to you if you participate in this study. However, the study may heighten your awareness on the potential academic stress that you may be experiencing and alcohol that you consume (if you consume it).

This study is not to formally diagnose you into thinking that you have a problem with alcohol or academic stress as it is only for research purposes in establishing an understanding with regards to the variables of the study that have been given above. However, should you start to have concerns about the level of alcohol that you think that you may consume or academic stress that you might be experiencing after finishing the survey questionnaire, information on counselling provided at IIE MSA will be stipulated after the last set of survey questions just before the end of the survey.

The survey has 3 parts that need to be completed which consist of the demographic form (for information such as your gender, age, religion, year of study etc.), the Alcohol Use Disorder Identification Test (AUDIT), and the Academic Stress Scale (ASS). The usage of the Alcohol Use Disorder Identification Test (AUDIT), and the Academic Stress Scale (ASS) are strictly for data collection purposes and not to formally diagnose you. All the data that you will provide will be handled with the highest level of confidentiality and your full names will not be requested so that you can remain anonymous. Therefore, I humbly request that you complete the survey as honestly as possible.

Please be aware that participating in this study is completely voluntary.

If you do not wish to participate in this study, you have every right not to do so.

Even if you agree to participate in this study, you may withdraw at any time without having to provide an explanation for your decision.

I Consent to participating in this study

I Do Not Consent to participating in this study

Appendix B: Demographic Form

Please take the time to fill out the requested information below as it will be extremely helpful in grouping the data required to complete this study. Please note that all information given will be handled with the utmost care and confidentiality has and will be adhered to throughout the entirety of this study. Completing this study will be greatly appreciated in furthering this study for greater discoveries. Thank you.

Gender

Male ☐

Female ☐

Race

Black/African ☐

White/Caucasian ☐

Coloured ☐

Asian ☐

Age

18-20 ☐

21-23 ☐

24-26 ☐

Year of Education

1 ☐

2 ☐

3 ☐

4 ☐

5 ☐

Post-Grad ☐

Language

English ☐

Other Please Specify ☐

Nationality

Please Specify

Religion

African Traditional ☐

Christianity ☐

Islam ☐

Hinduism ☐

Judaism ☐

Buddhism ☐

Other ☐

None ☐

Appendix C: Alcohol Use Disorder Identification Test (AUDIT)

Please complete the test. Data is only for data collection purposes and not to diagnose.

1. How often do you have a drink containing alcohol?

Never	Monthly or less	2-4 times a month	2-3 times a week	4 or more times a week
0	1	2	3	4

2. How many drinks containing alcohol do you have on a typical day when you are drinking?

1 or 2	3 or 4	5 or 6	7 to 9	10 or more
0	1	2	3	4

3. How often do you have six or more drinks on one occasion?

Never	Less than monthly	Monthly	Weekly	Daily or almost daily
0	1	2	3	4

4. How often during the last year have you found that you were not able to stop drinking once you had started?

Never	Less than monthly	Monthly	Weekly	Daily or almost daily
0	1	2	3	4

5. How often during the last year have you failed to do what was normally expected of you because of drinking?

Never	Less than monthly	Monthly	Weekly	Daily or almost daily
0	1	2	3	4

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	Less than monthly	Monthly	Weekly	Daily or almost daily
0	1	2	3	4

7. How often during the last year have you had a feeling of guilt or remorse after drinking?

Never (0) Less than monthly (1) Monthly (2) Weekly (3) Daily or almost daily (4)

8. How often during the last year have you been unable to remember what happened the night before because of your drinking?

Never (0) Less than monthly (1) Monthly (2) Weekly (3) Daily or almost daily (4)

9. Have you or someone else been injured because of your drinking?

No (0) Yes, but not in the last year (2) Yes, during the last year (4)

10. Has a relative, friend, doctor, or other health care worker been concerned about your drinking?

No (0) Yes, but not in the last year (2) Yes, during the last year (4)

Appendix D: Academic Stress Scale (ASS)

There are no right or wrong answers. However, for the data to be meaningful, you must answer each statement given below as honestly as possible. Please select the box that BEST describes the level of stress you feel in your response to each of the following statements.

1. Lecturers make too many extra demands on students.

No Stress Slight Stress Moderate Stress High Stress Extreme Stress
0 1 2 3 4

2. Poor interest in some modules.

No Stress Slight Stress Moderate Stress High Stress Extreme Stress
0 1 2 3 4

3. Progress reports to parents

No Stress Slight Stress Moderate Stress High Stress Extreme Stress
0 1 2 3 4

4. The lecturer does not show humour towards us.

No Stress Slight Stress Moderate Stress High Stress Extreme Stress
0 1 2 3 4

5. Lack of concentration during study hours.

No Stress Slight Stress Moderate Stress High Stress Extreme Stress
0 1 2 3 4

6. Difficulty in remembering all that is studied.

No Stress Slight Stress Moderate Stress High Stress Extreme Stress
0 1 2 3 4

7. Worrying about the examinations.

No Stress Slight Stress Moderate Stress High Stress Extreme Stress
0 1 2 3 4

8. Lack of self-confidence.

No Stress Slight Stress Moderate Stress High Stress Extreme Stress
0 1 2 3 4

9. The lecturers do not listen to our ideas.

No Stress Slight Stress Moderate Stress High Stress Extreme Stress
0 1 2 3 4

10. Conflict with friends/higher education institute authorities.

No Stress Slight Stress Moderate Stress High Stress Extreme Stress
0 1 2 3 4

11. Lecturers give more punishment in the lectures.

No Stress Slight Stress Moderate Stress High Stress Extreme Stress
0 1 2 3 4

12. Worry about results after examinations.

No Stress Slight Stress Moderate Stress High Stress Extreme Stress
0 1 2 3 4

13. Hesitate to ask the lecturer for detailed explanation.

No Stress Slight Stress Moderate Stress High Stress Extreme Stress
0 1 2 3 4

14. Biased attitude of the lecturer.

No Stress Slight Stress Moderate Stress High Stress Extreme Stress
0 1 2 3 4

15. Inadequate space or room for study at home.

No Stress Slight Stress Moderate Stress High Stress Extreme Stress
0 1 2 3 4

16. Not knowing how to prepare for the examinations.

No Stress Slight Stress Moderate Stress High Stress Extreme Stress
0 1 2 3 4

17. Lack of assertiveness (confidence) in the lecture.

No Stress Slight Stress Moderate Stress High Stress Extreme Stress
0 1 2 3 4

18. Lack of opportunity to meet lecturers.

No Stress Slight Stress Moderate Stress High Stress Extreme Stress
0 1 2 3 4

19. Lecturer shows socio-economic status on students.

No Stress	Slight Stress	Moderate Stress	High Stress	Extreme Stress
0	1	2	3	4

20. Slow in getting along with the curriculum.

No Stress	Slight Stress	Moderate Stress	High Stress	Extreme Stress
0	1	2	3	4

21. Exam papers are tough and not valued well.

No Stress	Slight Stress	Moderate Stress	High Stress	Extreme Stress
0	1	2	3	4

22. Unable to complete the assignment in time.

No Stress	Slight Stress	Moderate Stress	High Stress	Extreme Stress
0	1	2	3	4

23. Lack of communication between lecturers and students.

No Stress	Slight Stress	Moderate Stress	High Stress	Extreme Stress
0	1	2	3	4

24. Monotonous (boring or tedious) lecturing style by the lecturer.

No Stress	Slight Stress	Moderate Stress	High Stress	Extreme Stress
0	1	2	3	4

25. Not enough discussion in the lecture.

No Stress	Slight Stress	Moderate Stress	High Stress	Extreme Stress
0	1	2	3	4

26. Lack of mutual help among lecture mates.

No Stress	Slight Stress	Moderate Stress	High Stress	Extreme Stress
0	1	2	3	4

27. Lack of fluency while speaking the language other than the mother tongue.

No Stress	Slight Stress	Moderate Stress	High Stress	Extreme Stress
0	1	2	3	4

28. Difficulty in public speaking.

No Stress	Slight Stress	Moderate Stress	High Stress	Extreme Stress
0	1	2	3	4

29. The lecturer is fast and does not use blackboard legibly.

No Stress Slight Stress Moderate Stress High Stress Extreme Stress
0 1 2 3 4

30. Lecturers lacking interest in students.

No Stress Slight Stress Moderate Stress High Stress Extreme Stress
0 1 2 3 4

31. Examination syllabus is too heavy in some modules

No Stress Slight Stress Moderate Stress High Stress Extreme Stress
0 1 2 3 4

32. Feeling of inferiority.

No Stress Slight Stress Moderate Stress High Stress Extreme Stress
0 1 2 3

33. Unable to discuss academic failures with parents. 4

No Stress Slight Stress Moderate Stress High Stress Extreme Stress
0 1 2 3 4

34. Not able to grasp the subject matter.

No Stress Slight Stress Moderate Stress High Stress Extreme Stress
0 1 2 3 4

35. Incomplete and confusing study material.

No Stress Slight Stress Moderate Stress High Stress Extreme Stress
0 1 2 3 4

36. Eleventh hour preparation for the examinations.

No Stress Slight Stress Moderate Stress High Stress Extreme Stress
0 1 2 3 4

37. Importance of the subject matter.

No Stress Slight Stress Moderate Stress High Stress Extreme Stress
0 1 2 3 4

38. Difficulty in adjusting with opposite gender.

No Stress Slight Stress Moderate Stress High Stress Extreme Stress
0 1 2 3 4

39. Inadequate subject knowledge of the lecturer.

No Stress	Slight Stress	Moderate Stress	High Stress	Extreme Stress
0	1	2	3	4

40. Inadequate lab and library facilities.

No Stress	Slight Stress	Moderate Stress	High Stress	Extreme Stress
0	1	2	3	4

Appendix E: Counselling Services

Counselling services are available at the counselling centre at IIE MSA, Building F (IIE MSA, 2024). The mental health professionals are standing by to listen and provide professional short-term counselling services in the form of individual, or group counselling session arrangements (IIE MSA, 2024). Concerns that you wish to address include:

- Adjustment to tertiary education studies
- Academic challenges
- Relationship concerns
- Anxiety
- Depression
- Stress management
- Grief/loss
- Self-esteem
- Family concerns
- Friend/roommate difficulties
- Alcohol or drug problems
- Sexual orientation or identity concerns
- Sexual and relationship violence
- Stress management

Counselling services are available from 8am to 4pm Monday to Friday (IIE MSA). These services can be accessed by visiting the Counselling Centre or by booking an appointment via email at: councelling@iiemsa.co.za (IIE MSA, 2024).

Appendix F: Ethics Approval Letter

THE INDEPENDENT INSTITUTE OF EDUCATION

vega

Varsity College

ROSEBANK COLLEGE

MSA

SCHOOL OF HOSPITALITY & SERVICE MANAGEMENT
A school of The IIE

Our Ref: M. 910325
Enquiries: research@iie.ac.za

27 March 2025

Proposal and Ethics Clearance for Master of Philosophy in Arts.

Student name: Itumeleng Hans Mogomotsi
Student number: [redacted]
Brand and campus: IIEMSA

Dear Itumeleng,

We are pleased to inform you that the Higher Degrees Committee considered and approved your research proposal titled: ***Influence of Age, Gender, and Alcohol Consumption on Academic Stress among Higher Education Students in Gauteng.***

Your ethical clearance application has been approved as well. This means that you may proceed with data collection. You are reminded to inform the IIE's Higher Degrees Committee of any changes made to the research methodology or title of the research prior to examination. Kindly ensure that all ethical considerations are duly applied whilst collecting, analysing and interpreting the data for the completion of your research.

If you have any questions, please feel free to contact your programme team or supervisor directly

All the best with your research studies.

[redacted]
Dr Reza Hosseini

Chair: Higher Degrees Committee

MSA
STUDENT SERVICES
05 MAY 2025

Appendix G: Research Study Poster

THE INDEPENDENT INSTITUTE OF EDUCATION

MSA

Master of Philosophy in Arts : Psychology

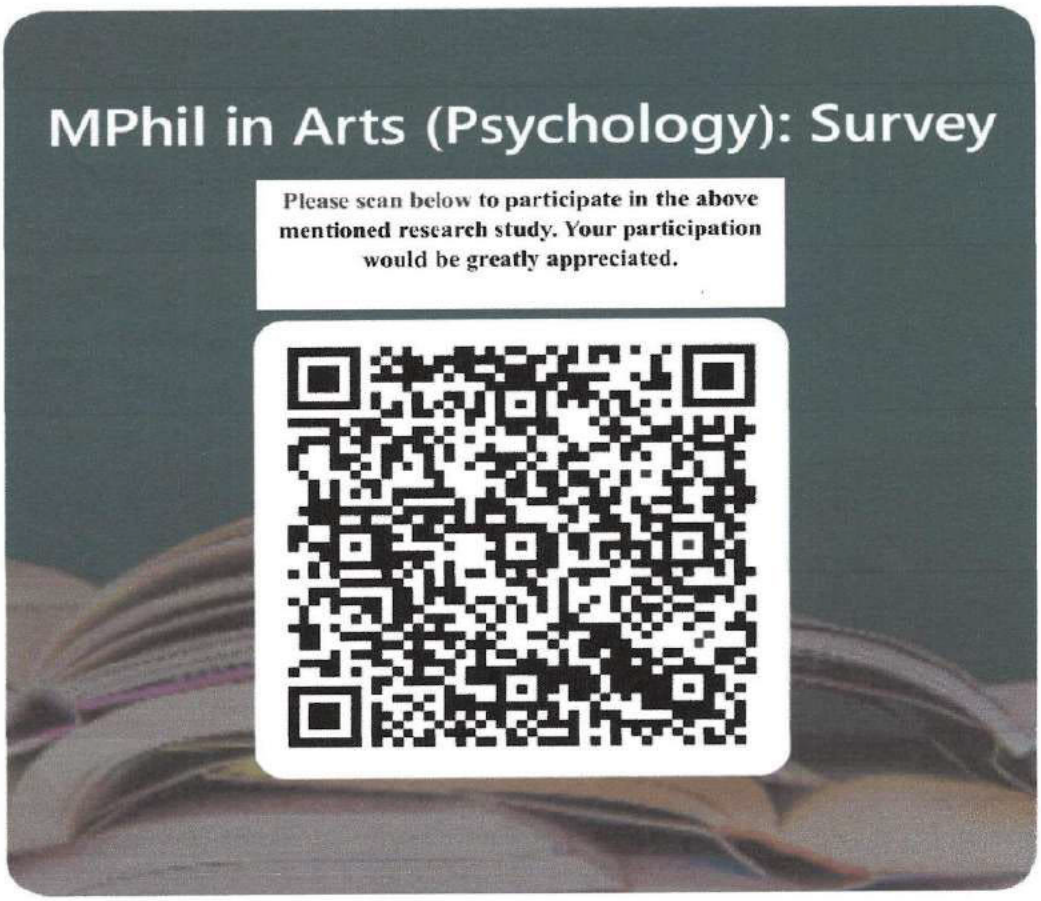
Researcher: Itumeleng Hans Mogomotsi

Student Number: [redacted]

Supervisor: Prof Erhabor S. Idemudia

Co-Supervisor: Dr Munira Wadiwalla

Study: Influence of Age, Gender, and Alcohol Consumption on Academic Stress among Higher Education Students in Gauteng



MSA
STUDENT SERVICES
05 MAY 2025