Exploring the stress levels and alcohol use amongst first entering students at the University of Limpopo (Turfloop Campus)

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Declaration

With the submission of this mini-dissertation, I declare that this is my own work. I am the only author unless otherwise referenced. I have referenced all sources, and to the best of my knowledge, have not plagiarised.

Signature_____Date_____

Acknowledgements

Abstract

The study explored the stress levels and alcohol use amongst first entering students at the University of Limpopo. There are various reasons that students' use and abuse alcohol for instance, academic workload, peer pressure, negative life events and boredom. In this study a cross-sectional survey design was used with a random sample of 217 first year psychology students. The Perceived Stress Scale (PSS), which measures individual stress and the Alcohol Use Identification Disorder Test (Audit), which measures alcohol use were used. Descriptive statistics, the chi-square test and an independent t-test were used to analyse data. Findings revealed that the majority of students drink alcohol but only a few drink to excess. Stress was reported mostly in the low to moderate range. However, female students did report significantly more stress than males in the sample. Some findings, although not significant, were problematic as for instance, a portion of students stated they could not remember what they were doing the night before after drinking and one female student was found to be dependent on alcohol. The Self-Medication Model (SMM) posits that people in a group are likely to self-medicate if certain conditions are met in order to avoid stress, this appears to be the case in this study. It was recommended that a larger study be undertaken with a qualitative component to ascertain reasons why students are drinking alcohol in ever increasing numbers. It was also recommended that the institution run programmes related to the dangers of alcohol use and about stress and its consequences.

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CHAPTER 1: INTRODUCTION

1.1 Introduction to the study

The study explored the stress levels and alcohol use amongst first entering students at the University of Limpopo. There is gap in South African literature that focuses on stress and alcohol usage amongst tertiary students which the current study intends to fills. Mogotsi (2011) stated that tertiary students in many institutions experiment with alcoholic beverages which impacts negatively social, academic and emotional problems. Amongst the factors that lead students to alcohol use (and abuse) are stress, academic workload, peer pressure, negative life events and boredom (Hendricks, 2015).

According to Kumar and Bhukar (2013), university life can be very demanding and stressful to students. Parents, family members and others who have university experience tend to idealise their university experience. Many students attending university, on the other hand, find the university life stressful and frustrating and begin drinking alcohol to cope with their challenges. Attending tertiary education is a life changing experience for any individual and students have to be able to make social and academic adjustments in order to succeed. These changes usually put first entering students under stress and only those with high levels of personal resilience are able to cope effectively (Kumar & Bhukar, 2013).

Young people, worldwide, are high users of alcohol for recreational purposes (Chikere & Mayowa, 2011). Stress is something that creates problems for students and they often begin using alcohol not just recreationally but in order to cope with the stressors they experience (Sonia, 2015). Academic Stress among students is just one stressor in student life another that is often reported is lack of finances. Parents may not be able to fully fund students and/or bursaries do not cover every part of student life. Students may, therefore, take to drinking as alcohol is cheap and they can drink it in their rooms (Mogotsi, 2011).

Despite global concerns about alcohol use, and many adverts and programmes in the media educating people about the use and abuse of alcohol, many young people appear to have limited awareness in terms of the negative effects of drinking alcohol. (Chikere & Mayowa, 2011).

1.2. Background of the study

Stress is everywhere and only one thing is certain no individual is immune from stressors (Isaacs, 2008). Stress is a problem in contemporary society (World Health Organisation

[WHO], 2012). It can be associated with psychological disorders or physical diseases (Keyes, Hatzenbuehler, & Hasin, 2011). The more the role of stress is ignored the more susceptible and detrimental it is to an individual's health. This facilitates the need to acquire help from doctors and allied health professionals as, according to WHO (2012), people are in denial about the amount of stress they experience, particularly in South Africa. Many people appear to be unaware of just how much stress they are really under and the serious health risk(s) this carries (WHO, 2012). Research shows that stress is part of daily life and that most university students go through increased stress due to the complexity of academic and social life experienced on campuses of higher education (Seipone, Mphele, Gralewski, & Bolugan, 2013). Students also face challenges of transition to a new environment, as well as academic challenges, which are very stressful (Thawabieh & Qaisy, 2012).

Everyone is predisposed to stress including students at universities. The causes of stress are numerous and differ from individual to individual, although there are some commonalities (Banyard & Grays, 1996; Olivier, 2008). There are individuals who cannot cope with peer relationships, those that cannot cope with academic life and these individuals are likely to resort to alcohol (or other substances) to cope with stress (Naidoo, Van Wyk, Higgins-Opitz, & Moodley, 2014). According to Naidoo et al. (2014), stress can influence students adversely in terms of their overall well-being (both physical and mental). This means that academic performance can also be affected. The impact of stress in terms of health can manifest as burnout, suicidal ideation, depression, and substance use and abuse (Bendonlos, Noonan, & Wells, 2013).

South Africa has one of the highest rates of alcohol consumption in the world (Mogotsi, Nel, Basson, & Tebele, 2014). Alcohol in South Africa has a long history of abuse and students in particular, seem unable to stop themselves from its over-use and abuse (Mogotsi et al., 2014; WHO, 2002). Mogotsi et al. (2014), explain that university students globally consider alcohol consumption a rite of passage. There are events such as fresher's dances and other activities, which always entail drinking large amounts of alcohol (Cherian, Mboweni, Mabasa, & Mafumo, 2014). There is also no parental or guardian supervision for most students when they enter university, which encourages them to engage in drinking activities. As a result, some students do not cope with the environment personally, socially and/or academically.

The mortality, mental health problems and physical trauma caused by alcohol use and abuse is also high for instance, motor-vehicle accidents (MVAs), physical assault, suicide, unsafe sexual practices and crime (Peltzer & Ramlangan, 2009). Alcohol use is often related to anti-social behaviours such as fighting and discriminatory and racist comments (Cherian et al., 2014). University students in South Africa, in the last decade have shown an increase in alcohol use, it is estimated that over 80% of male and female students use alcohol to some degree (Mogotsi et al., 2014). It must be stated that there are many factors that play a role in alcohol abuse for instance, bullying and inability to cope in a new environment (Mogotsi et al., 2014; Peltzer & Ramlangan, 2009).

1.3. Research problem

According to WHO (2012), stress is a phenomenon poorly acknowledged in South Africa. Many individuals do not admit that they are struggling to cope with stress as a result, they endure increased levels of stress, which have negative effects on their mental and physical health. Thawabieh and Qaisy (2012) indicate that many students are faced with stressors at universities and that these affect them differently. The ever-increasing alcohol consumption of students attending tertiary institutions is a growing problem as they use it as a coping mechanism in order to cope with stress (Seipone et al., 2013; WHO, 2012). Other stressors include heavy workloads and problems in their social lives which makes students experiences of higher education difficult (Mcguigan & Shevlin, 2010).

There are existing studies on alcohol use at various universities such as Mogotsi et al. (2014), and Peltzer & Ramlangan (2009). However, there is no study focusing on alcohol use and stress levels amongst students at the University of Limpopo thus this study helped fill that gap. The researcher thus initiated research on the topic. It is important to conduct research on this topic as the findings of the proposed study may help in terms of interventions for instance, workshops providing knowledge about stress and alcohol use (separately and/or together) on the campus.

1.4 Aim of the study

The aim of the study is to explore the stress levels and alcohol use amongst first year psychology students of the University of Limpopo both male and females.

1.5 Objectives of the study

The research has the following objectives:

- To establish the existence of stress levels related to alcohol use amongst first year psychology students.
- To identify if there are any gender differences between alcohol use and stress levels amongst first year psychology students.
- To recognise if there is any association between stress levels and alcohol use amongst first year psychology students.

1.6 Research hypothesis

The study has the following hypotheses:

- First year psychology students at the University of Limpopo have no stress and do not drink alcohol.
- There is no gender difference in stress amongst first year psychology students at the University of Limpopo.
- There is no association between stress levels and alcohol use amongst first year psychology students at the University of Limpopo.

1.7 Significance of the study

Students, all over the world, experience stress and drink alcohol (at high levels) at higher institutions of learning. This has been reported in literature worldwide (Mogotsi et al., 2014; Seipone et al., 2013,). South Africa has a very high alcohol use (WHO, 2012) and students are high users of alcohol (Mogotsi et al., 2014). This study presents knowledge and understanding of stress linked to alcohol use amongst first year psychology students enrolled at the University of Limpopo.

The outcomes of this study have thus added value to University management. It is hoped that this, and possible other studies, may be of use in designing intervention strategies that are aimed at reducing levels of stress and preventing alcohol abuse amongst students at the University. The study also adds to existing literature on the topic.

1.8 Chapters of the study

The organisation of the chapters throughout the dissertation will follow this manner:

Chapter 1: Introduces and provides background of the study.

Chapter 2: Reviews of relevant literature of the study.

Chapter 3: Gives the theoretical framework for the study.

Chapter 4: Provides the methodology for the study.

Chapter 5: Explains the study results and analysis.

Chapter 6: Discussion results of the study.

Chapter 7: Gives the methodological limitations, strengths and recommendations of the study.

1.9 Summary

This chapter introduced the study gave its background, research problem, aim objectives, research hypotheses and gives a brief overview of chapters of the study.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction to the chapter

University students come across many stressors in their educational environment at tertiary institutions before they graduate (Mogotsi et al., 2014). Sometimes stress is positive but it can also be negative, which impacts negatively on their academic performance. Stress is a widespread phenomenon in all spheres of life, it is a universal experience. The manner that people react to and manage stress is different from person to person (Govender, Mkhabela, Hlongwane, Jalim, & Jetha, 2015). In many instances the results of stress occur when an individual is incapable of coping with difficulties in their past or present lives (Naidoo et al., 2013). Stress can provoke feelings of uselessness, incompetence, fear, guilt, anger and aggression. If stress is unresolved, it can even lead to physical and psychological illnesses amongst students (Naidoo et al, 2013).

Students have to deal with stressors in relation to academic pressure, financial issues and social adjustment as well as inter-personal relationships and dealing with unresolved issues at home According to Kumar and Bhukar (2013), students in higher institutions face stress because of their busy schedules and find it difficult to balance academic work with having a social life. Young people enrolled in institutions of higher learning are particularly susceptible to stress as tertiary institutions are a very competitive environment and, as a result, students may resort to negative coping mechanisms such as the use of alcohol or other substances (Kumar & Bhukar, 2013; World Health Organisation, [WHO], 2002).

To ensure the topic is properly covered a review of the literature on stress which indicates its causes and characteristics, effects and coping mechanisms is undertaken. This is followed by global literature (including Africa and South Africa) on stress and students, which often overlaps with the use of negative coping mechanisms such as alcohol use. This, in turn, is followed by literature on alcohol use and abuse plus a review of literature on alcohol use by students where there is some overlap with literature on stress.

2.2 Causes of stress

A number of factors which cause stress, both generally and specifically, amongst students at universities are discussed as follows.

2.2.1 Academic pressure

Hamaideh (2011) posits that one source of stress experienced by students can be academic pressure, which at times overwhelms students. When students engage in challenging assignments, stress coping techniques are required and when students do not have such coping skills they may end up performing poorly and/or dropping out. In this regard, tertiary institutions should provide students with stress information by giving workshops and talks on the subject. Lecturers can be involved by giving students (particularly first entering students) assignments on stress and anxiety which would require them to gather information on the topic fundamentally, educating themselves.

Students experience various kinds of stress which can disturb their social activities and impact on their academic performance. Academic stress suffered by students results from things such as writing tests, unclear assignment topics and other university requirements that may exceed their abilities (Thawabieh & Qaisy, 2012). Other potential causes of stress are excessive test preparation and conflicts with lecturing staff and peers however, academic work is the most reported stressor by students when they report increased levels of anxiety (Hamaideh, 2011).

2.2.2 Environmental issues

The new tertiary environment on its own may be a cause of stress due to students failure to adjust (Hilmert & Kvasnicka, 2010). Students coming from secondary schools find it challenging in their new environment and those who stay in university accommodation find it even more difficult. According to Thawabieh and Qaisy (2012), first entering students face new modes of teaching, different academic requirements, new peer relationships and sometimes new romantic relationships all with their own set of stressors. Their new environment is quite different from the one they are used to at high school and home which is a major stressor in itself. This causes some students extreme negative stress as they do not have the required coping mechanisms.

2.2.3 Financial issues

Universities are expensive (Callahan, 2015). In South Africa students have a burden in terms of settling their fees which was attested by the 'Fees Must Fall Campaign' in 2016. This campaign emerged to address high tertiary education fees. In 2017, the South African government announced free education which started in 2018. However, there are hidden fees such as clothes and books which may not all be covered by the new grants. Students before

2018 however, still have to pay back their loans as no moratorium has been placed on loans before this date (National Student Financial Aid Scheme [NSFAS], 2017].

Choi (2008) reports that many first year students experienced high stress levels related to increased cost of living and education. Dealing with a significant debt is discouraging as students may not know if they can afford their next year (or post-graduate) of study. First entering students also experience higher stress as sometimes they do not budget properly and have weeks in the month when they 'run out' of money.

2.2.4 Unplanned pregnancies

Pregnancy can cause stress if it is unwanted particularly amongst students (Guttmacher Institute, 2017). Pregnancy is usually mistimed when it occurs amongst a very young, unmarried population (or a population without a long-term relationship. In 2011, in the United States of America (USA) 2.8 million pregnancies country-wide were reported as unwanted, mistimed and unintended. The pregnancy rate of students is alarming in South Africa as Skobi & Mafokane, 2015) explains students who become pregnant in their school years leads them to drop out of their schooling or failing their modules. This occurs at tertiary level as well. Students do not only stress about unplanned pregnancies but also about the reactions of their parents and how they will provide for their unborn babies. When a woman has an unplanned pregnancy the risk of negative health problems as a result of stress doubles (Bate, 2011).

2.2.5 Relationship challenges

Students at universities do not exist in isolation they have relationships (social and romantic) that they develop with their peers. Callahan (2015) states that relationships are sometimes stressful particularly romantic ones as their balance of daily activities can be upset for instance, by meeting with their significant other instead of studying or attending lectures. Most students are young and are still developing emotionally thus romantic relationships can be emotionally taxing and stressful. Students who have poor relationships with lecturers, their fellow students or family usually develop stress and some form of negative coping mechanisms (for instance, drinking alcohol).

2.2.6 Poor sleeping habits

According to Richards-Gusrafson (2015), not having enough sleep at night predisposes one to stress than those who sleep enough. Sleep allows an individual's brain and body to recharge which is necessary in terms of keeping the immune system strong. Inadequate sleep result in a lack of energy which, in turn, means an individual will struggle to concentrate particularly on

academic work. It is recommended that young people should sleep 8.5 to 9.25 per night, and keep a regular sleep schedule.

2.2.7 Full Schedules

Kumar & Bhukar (2013) stipulate that students should understand that university studies are demanding because of the time needed to complete assignments, tests, quizzes and self-study.

> "If time is not managed correctly to insure that all of these tasks are completed, many students will experience stress (Kumar & Bhukar, 2013, p. 6).

Baitaineh (2013) investigated academic stress among undergraduate students at King Saud University. The result of the study showed that inadequate studying, academic overloads, overwork, low motivation and difficult exams result in stress. This can cause negative coping mechanisms such as drinking alcohol or procrastination (for instance, sleeping late).

2.2.8 Family problems and parental divorce

Fagan and Churchill (2012) state that parents who divorce causes lasting harm to all parties involved particularly to children. Students who experience parental divorce experience very high levels of stress which often results in poor academic performance. Skobi and Mafokane (2015) report that marital problems cause children stress at home, socially and academically which affects all areas of their lives. However, it is not only divorce that causes stress to a family but marital problems which result in persistent arguments.

2.2.9 Parental pressure

Families are the primary social institutions for students. They motivate students but they can also put unrealistic pressure on them which causes stress. High family anticipation can result in moderate to extreme stress amongst students. Parental (or guardian) pressure elicits fear of failure and which is a major source of stress amongst many students (Bataineh, 2013). This type of stress includes psychological distress or an acute awareness of the likelihood of academic failure (Deb, Strod, & Sun, 2015). These authors state that parents often put pressure on students to succeed as they are concerned about their children's welfare and understand how competitive the world but this type of pressure is often a cause of much stress. High pressure from parents can even result in suicide attempts and depression

According to Deb et al. (2015, p. 31), "the data revealed that parents with low level of education that is, non - graduates, pressure their children more than the parents with graduation and post-graduation background do".

Pressure from parents and schools who pressure scholars to attain high performance creates a mind-set in students that anything less than a distinction is not good-enough (Deb et al., 2015; Palmer, 2005;). Some students engage in 'cheating,' to try to live up to unreasonable standards which results in more stress if they are caught. When students fail to complete modules or fail they often develop depression (Sonia, 2015).

2.2.10 Experience of grief

A study conducted at Purdue University in the United States of America (USA), established that university students who experienced death of friend or family members often drop out of their courses as they experience overwhelming stress and anxiety, followed by poor academic performance (Coyne & Beckman, 2012; Lafayette, 2006). Many bereaved students have stress after the loss of loved ones. Parents have a big role to play in their children's lives and when they pass away their offspring experience grief and anxiety (Coyne & Beckman, 2012). In this respect losing a parent has negative effects on a student's overall well-being which also affects their academic performance.

2.2.11 Students with learning disabilities

Students with learning disabilities have transition problems which are associated with high levels of stress. They are more likely to feel the effects of stress in an educational environment especially in the transition from secondary education as they often feel an increased pressure to do well as compared to their non-learning disabled peers. The academic requirements of tertiary institutions may be overwhelming for these students and can lead them to believe that they are incompetent, which may well result in them using inappropriate coping mechanisms such as alcohol (Daniel, Berkowitz, n.d).

2.3 The characteristics of stress

When individuals experience stressful events their body reacts by activating the nervous system which discharges hormones such as cortisol and adrenalin. Physical changes also known as the 'fight or flight' syndrome occur. This helps individuals respond effectively in stressful situations. The change that occurs physically equips people to meet the challenges of stressful situations by for instance, running from danger or sometimes addressing danger head on (Australian Psychological Society [APS], 2012). Psychological symptoms can occur as a result of highly stressful and traumatic situations for instance, if someone is attacked they may later develop Post Traumatic Stress Disorder (PTSD).

2.3.1 The effects of stress

The APS (2012), states that on-going stress causes the following symptoms: headaches, or somatic pains, anxiety, anger, irritability, sleep disturbance, upset stomach, diarrhoea, indigestion, depression, fatigue, tearfulness, feeling moody, feeling overwhelmed, high blood pressure, difficulty concentrating, lack of self-confidence all of which can contribute to heart disease. The psychological and physical effects of stress are now discussed.

2.3.2 The psychological effects of stress

The effects of stress in individual can manifest as difficulties in attention and concentration, memory problems and feelings of anxiety (Lee & Jang, 2015). Stress effects are also linked to sleep problems, anxiety, depression, interpersonal conflict, and poor academic results (Mogotsi, 2011). Stressful events can lead to alteration in behaviours, such as heavy breathing, nail biting, teeth clenching, fatigue and hand wringing. People may experience cold hands and feet, stomach-aches and sometimes-increased heart rates which affect an individual's overall feelings of well-being. The outcomes of negative stress or distress are many for instance, feelings of loneliness, nervousness, sleeplessness, substance use, excessive worrying (Lee & Jang, 2015).

Stressors can impact adversely on the health of individuals causing emotional exhaustion and cognitive disturbance (Naidoo et al., 2013). The effects of stress on the mental health of students can manifest in depression, burnout and/or suicidal behaviour. Learning amongst students, in turn, is impacted negatively which leads to poor overall academic performance and possible failure. It has been reported that individuals who worry about debt acquired during their studies perform below average in their course work and examinations (Lee & Jang, 2015).

2.3.3 The physical effects of stress

According to University of Limpopo Centre for Student Counselling and Development (Personal Communication with psychologist 3.5.2018), the effects of stress can manifest in many ways that can be physiological. They reported that the body temperature of an individual can increase as they do not eat properly making them feel tired. When this happens the body is not-balanced and there is no homeostasis. This occurs because the endocrine systems and autonomic nervous system are out of kilter and do not operate together this often results in arrhythmias. Physiologically an individual's body systems cope with distressing events however, cognitive or emotional coping systems of coping are different for everyone and some

individuals cannot deal with emotional stress. This leads to negative self-perceptions and mental health problems (Kumar & Bhukar, 2013).

2.4 Negative and positive coping mechanisms used for stress

Learning how to cope with stress may help students handle every day social and academic pressures, and have a better tertiary education experience. Effective time management is one strategy that can help increase academic performance. Academic assistance by senior students also helps younger students cope with stress (Kumar & Bhukar, 2013). Workshops on skills acquisitions which help students identify which work must be carried out first also helps. Activities can sometimes be broken into small tasks and then into larger tasks and worked into a timeTable thus avoiding 'rushing' everything at the last minute. Students that regularly disregard these strategies find themselves in distress before submitting assigned activities and writing exams. Another positive coping strategy relates to students adjusting expectations of how much they can do in a specific amount of time. This will help them cope with many different scenarios in university life.

According to Sonia (2015, p. 384), "social support is considered as one of the most important way of coping with academic stress." To be able to cope with stress university responsibilities, problems, or difficulties academic activities should be dealt with in a thoughtful and calm manner. Students should do physical exercise as this produces a 'feel-good' factor when endorphins, one of the chemicals in the brain that acts as a natural painkiller, are released. This chemical also improves an individual's ability to sleep which decreases stress levels in the body. Other activities recommended for positive coping are meditation, massage therapy, acupuncture; even breathing deeply such as relaxation technique can cause your body to produce endorphins (Kumar & Bhukar, 2013).

Negative coping mechanisms include cigarette smoking, drinking alcohol, illicit drug use (for instance, Marijuana), procrastination ("I will do it later") and using social media or watching television and visiting friends. In the short term this will help an individual feel better but over-time some of these can lead to addiction and others to chronic procrastination which both lead to academic failure (Kumar & Bhukar, 2013).

2.5 A brief review of global literature on stress in student populations

2.5.1 Literature on stress in student populations in India

Patkar et al. (2016), report that the prevalence of stress amongst medical students in India needs attention. The authors reported that stress amongst medical students was, in their research, often related to problems linked to living in university residences (lack of privacy and noise). Pariat, Rynjat and Kharjana (2014) investigated stress levels of college students they found that academic stress was also linked to financial and social stressors. On the other hand, Kumari and Jain (2014) indicated that university students, in a study they conducted, experienced high levels of stress due to very high workloads, inability to study properly (poor study methods) and inability to prepare properly for classes (due to lack of information about what was required for a specific module). Additionally, it was noted that when stress was excessive high levels of anxiety existed which often resulted in poor academic achievement. Kumar and Jejurkar (2005) determined that stress levels amongst first year students exists due to abrupt changes of environment from high school to higher education. Alcohol use was, in some instances, linked to excessive stress, anxiety and poor academic achievement.

Darshan, Raman, Rao, Ram and Annigeri (2013) investigated depression, professional stress and alcohol use amongst Information Technology (IT) students in India. The results from the study revealed that the sample was stressed and many participants were depressed and resorted to alcohol intake as a coping mechanism to resolve their negative psychological state. Students found that this worked in the short term but made depression worse in the medium to long term.

2.5.2 Malaysian students and stress

Stress of undergraduate tertiary students in higher institutions in Malaysia was explored using a sample of 376 participants (Elias, Wong, & Abdullah, 2011). Findings of the study indicated that amongst undergraduate students stress and anxiety were prevalent. Rathakrishnan, Molugulu, Parasuraman and Narasappa (2012) found that heightened levels of stress impact negatively on students capacity to face both social and academic problems when they attend tertiary education institutions. Furthermore, stress may have the potential to interfere with student's studies, taking into account the stress experienced by certain students. Extreme stress was found to affect individuals' resilience (Elias et al., 2012; Rathakrishnan et al., 2012).

2.5.3 Students in China and stress

Chen and Feely (2015) state that studying for an undergraduate degree is challenging because of the transition from high school to higher education (often leaving friends and family behind). Stressors commonly reported by students during this period are: problems with peer relationships, academic work, financial obligations and familial relationships (Chen et al., 2013). Sometimes tests and examinations are the major basis of academic stress which was found in a study amongst medical students in China (Zhao, Selman, & Haste, 2015). Findings of the aforementioned study revealed that toxic levels of stress have been found in students who take the Chinese national college entrance exam which takes place in June each year.

2.5.4 Japanese students and stress

The characteristics, influence and structure of the degree being undertaken are sources of stress found in a sample of students in research in Japan (Broadby, 2017). More than 150 participants completed survey questionnaires that consisted of stressor items and physical-mental well-being items which measured depression and happiness. Stressors were found and classified into 5 factors such as Financial Anxiety, Academic Problems, Interpersonal Problems, Health/Living Problems, and Environmental Problems. The research concluded that unnecessary competition (amongst peers) is stressful to students which can lead to under-performing students becoming unwell with depression which later led to them dropping out of institutions of higher learning in Japan.

2.5.5 French speaking students and stress

According to Saleh, Camart & Romo (2017) students in different universities in France undergo numerous stress influences for instance, constant work overload, pressure to succeed, peer-to-peer relationship difficulties and future concerns in relation to securing employment. These authors investigated the occurrence and relationship between substance use, perceived stress and behavioural addictions. The results of the study depicted that stress is a phenomenon that needs to be measured as it is linked to potential risky behaviours which could lead to heightened use of substances amongst students. They also stated that issues of identity amongst French speaking students (particularly those of colour) causes them stress and impacts negatively on their well-being. Moreover, Broadby (2017), states that time and time again students experience stressful circumstances which they do not discuss with anyone leading to increased stress and anxiety which, in some cases, led to substance abuse (for instance,

alcohol). This includes adjusting to university, the selection of specific degrees and academic pressure. Fundamentally, some students coped well with this but others struggled with emotional problems related to anxiety and stress.

2.5.6 Students in the United Kingdom (UK) and stress

Lorant, Nicaise, Soto and d'Hoore (2013), explored the level of stressors, stress and responses to stress amongst a female sample of UK nurses. Findings were that students reported frequent symptoms related to stress such as concentration difficulties, anxiety/nervousness, headaches, back pain and mood swings. Conclusions of this study suggest that perceived stress levels drops in accordance to university exposure and study levels (in other words the higher the level of the student the less stress they experience). In addition, data from the study indicated that stressors experienced by students were mostly related to academic workload and complicated assignments.

Denovan, Dagnall, Dhingra and Grogan (2017) studied the experiences of stressors that students goes through daily. In this UK study it was found that the sample were stressed by their medical concerns (any condition they might have), their emotional state and endeavoured to conceal any mental illnesses. Findings of the study indicated that as well as the aforementioned financial concerns, relationship concerns, isolation, loneliness and examinations were major stressors.

2.5.7 German students and stress

Bedewy and Gabriel (2015) studied the perception of educational stress and sources of stress amongst university students in Germany. The results of the study concluded that first year students' experienced moderate stress which many were able to cope with. This stress increased to higher levels during tests, presentations and exams. It was determined that the academic demands at German universities create considerable stress for students. Herrera et al. (2017), examined chronic stress among young adults in transition from high school to university, results of this study revealed that the increase in workload was difficult for students to adjust to when making this transition, especially for those who work and study simultaneously.

2.5.8 Students in the United States of America (USA) and stress

Baghurst and Kelley (2014) explored stress amongst university students in a State in the USA and found that transition from high school to university is one of the most highly stressful events in students' lives. It was suggested that as exercise reduces stress students should be

encouraged to partake in regular exercise to help reduce this stressor. This was suggested as a positive coping mechanism in order that students did not resort to negative coping mechanisms such as drinking (alcohol) or taking other illicit and over-the counter substances. According to Ross, Niebling and Heckert (2008), university students have much pressure on them from their parents to earn good marks which further exposes them to stress. Aselton (2012) investigated the causes of stress amongst American university students with depression. Findings indicated that students diagnosed with depression are under extreme stress from different sources (social, academic and financial). These students often used alcohol as a negative coping mechanism (Aselton, 2012).

2.5.9 African students and stress

Nakalema and Ssenyonga (2014) studied academic stress, academic performance and the study habits of 196 undergraduates attending a Ugandan tertiary institution utilising a cross-sectional survey research design. Results of the study revealed that students found daily academic hassles the most stressful followed by personal problems (relationships with family, peers, lecturers and romantic partners). It was also found that academic stress is heightened if the student has financial hardships (Nakalema & Ssenyonga, 2014). In Egypt, an investigation was conducted to study the level of perceived stress amongst a sample of nursing students in order to give a picture of probable predicting factors for stress (Amr, El-Gilany, El-Moafee, Salama, & Jimenez, 2011). Data was acquired from 373 respondents using a self-administered questionnaire. Results revealed that high stress level which resulted in depression and anxiety, were common and due to workload and poor working relationships (Amr et al., 2011).

A study conducted on a large (605) sample of Nigerian undergraduate students which measured their stress levels found that high stress levels were prevalent (Kio, Omeonu, & Agbede, 2015). According to these authors (p.18), "stressed students are also more likely to be poorly motivated, less productive, less safe at work and vulnerable to social vices such as drug abuse and violence." Melaku, Mossie and Negash (2015) state that high levels of stress are found amongst medical students world-wide and is replicated in Africa. High stress levels cause students to think of cheating during tests and exams as they have difficulties in concentration. Medical students also report high levels of interpersonal conflict, loss of objectivity, absenteeism and/or bunking classes, impaired judgement and social withdrawal as a result of work overload stressors (Melaku et al., 2015).

2.5.10 South African students and stress

Naidoo et al. (2014), investigated medical undergraduate's experiences of stress and its effects. It was reported that this sample of medical students had maladaptive stress which affected them at different levels. They were unable to cope effectively with stressors and displayed little resilience thus many used alcohol as a coping mechanism (Mogotsi et al., 2014). Research by Thawabieh and Qaisy (2012) assessed the levels of stress that students go through at universities (sample size 471). Their findings revealed that the students experienced moderate to high stress levels because of demanding academic workloads, their new environment and social life pressures. According WHO (2012), the occurrence of stress related conditions range from anxiety to obesity, insomnia, mood disorders and/or depression. Alcohol and substance abuse are growing rapidly in South Africa, which may be a factor in the growing role that stress plays in individuals lives. Not all university students talk about events of stress in their lives and some try to hide it though there are those that seek help (Mogotsi et al., 2013).

Thenga, Mutshaeni and Mashau (2015) examined high school learners' stress and coping skills. The results from the study were that stress has negative effects on physical and mental well-being. In addition, South African learners are often exposed to higher levels of bullying, violence and crime at their schools. Naidoo et al. (2014) stated that substance use and abuse where sometimes used by learners used to relieve stress. Pillay and Ngcobo (2010) indicated that university drop out is often facilitated by stress that cannot be managed which results in reduced throughput nationally. Pillay and Ngcobo (2010) examined the stressors experienced by students at a rural university. Findings suggested that finance, accommodation problems, fear of failing were common stressors and that death and bereavement was an extremely high stressor. These stressors all resulted in poor academic progress amongst the sample.

2.6 Alcohol use and its causes

This section of the review will look at literature that relates to alcohol use amongst student populations and the reported causes of that use and abuse.

2.6.1 Peer pressure and alcohol use

Peer pressure plays a major role in alcohol and drug use during any kind of student initiation (Mukhtar, 2014). Young people begin use alcohol with the encouragement and support of their friends as they need the approval of their peers. They are afraid of being rejected and thus conform to the social roles that they see as the norm. Peer pressure is intense and associated

with alcohol use and abuse both for males and females at higher institutions of learning. Mogotsi et al. (2014), indicate that peer pressure is a critical factor in influencing students to drink alcohol. This pressure can be indirect or direct but it leads to students (particularly first years) doing things they would not normally engage in such as drinking alcohol and for instance, smoking Marijuana. Students who are peer pressured into drinking alcohol often make their decisions based on their fear of being excluded by the in-group (the popular group) which can lead to hazardous drinking behaviours (Mogotsi et al., 2014; Sibuyi, 2014).

Students in tertiary institutions in South Africa use alcohol for reasons of companionship and sometimes can become addicted to the substance (Hendricks, 2015). According to Mogotsi (2011), students value peer relationships for the sake of support, intimacy and stability in their lives which means they are often easily persuaded to engage in behaviour(s) that they would not usually support (away from friends and family). Findings in another study revealed a significant positive relationship between peer social group influences and youth alcohol use (Mukhtar, 2014). Additionally, in a study conducted in KwaZulu-Natal findings revealed that 28% of respondents agreed that friends encouraged them to conform to social drinking (alcohol) patterns (Chauke, Van der Heever, & Hoque 2015). Peltzer et al. (2012) indicated that peer pressure that is high influences use of alcohol that is harmful amongst young adults.

2.6.2 Boredom and alcohol use

Many students in universities consume alcohol over weekends because they are bored. This suggests that sometimes the institution does not have adequate recreational facilities particularly in peri-urban campuses in South Africa. A higher level of boredom and vulnerability is one of the common features of sensation-seeking which is associated with binge drinking. According Biolcati et al. (2016, p. 71), "boredom is defined as a complex phenomenon in which the level of stimulation is perceived as too low; the failure to reach optimal arousal results in the experience of boredom". Boredom in relation to either too much leisure time, or poor recreational facilities, has been indicated as playing a significant part in young persons substance use (Sharp et al., 2011).

Students that feels bored are more likely to be involved in alcohol use or eventually abuse in order to escape from boredom and/or activities they find overwhelming. Stress reducing activities can be used to deal with boredom such as exercises such as jogging, aerobics, yoga or meditation. Bioalcati et al. (2016) report that males have boredom levels that are higher than females which may be the reason that males tend to be associated with higher drinking patterns.

Hendricks (2015) established that boredom in students is one of the reasons that young people involve themselves in drinking as a leisure activity and that alcohol is also used to relieve loneliness (which is a significant stressor).

2.6.3 Alcohol use as a rite of passage

First entering students at universities often drink alcohol in order to be accepted in various peer groups (Mogotsi et al., 2014). Students enrolled at higher institutions view alcohol use as an essential part of their lives and, as a result, often drink irresponsibly (Seipone et al., 2013). Students globally often consider alcohol consumption as a rite of passage (Govender, Nel & Mogotsi, 2015). The aforementioned authors report that usage of alcohol among female students has been growing and report that females have more health associated risks if they drink excessively as their bodies are less able to deal with alcohol (than males) at a physiological level. University functions for students usually involve drinking alcohol, often excessively, which leads to problems the 'morning after' in terms of risky behaviours (sexual activity) and inability to finish academic tasks (Bioalcati et al., 2016; Govender et al., 2015; Seipone et al., 2013). This leads to high stress levels amongst higher education students.

2.6.4 Environmental factors and alcohol use

In a study conducted by Lorant et al. (2013), it was discovered that the more students get exposed to institutional influences, the more they are at risk of alcohol abuse. Further, the results of the study indicated that alcohol use increased amongst students living on campus premises, particularly those living in a residence with several roommates. According to Seipone et al. (2013), students become familiarized to different environments through social gatherings and social gatherings often include alcohol use. At social gatherings students form new peer groups and, as they drink alcohol at most gatherings, both themselves and their peers continue this behaviour. Poor drinking behaviours are not sanctioned by institutions of higher learning but are often associated with social functions on campuses. In this regard, Mogotsi et al. (2014) report that drinking behaviours, even excessive ones, are seen as normative behaviours on campuses. Furthermore, drinking behaviours are also influenced by various personal factors such as personality characteristics, cognitive processes, stressors and coping mechanisms.

2.6.5 Freedom as a factor in alcohol use

Tertiary education is a time when many students gain their first taste of freedom and independence from parental/guardian monitoring as they are often far from home. This is a

time for exploration amongst young adults who, in other circumstances, might not put their well-being at risk by long bouts of alcohol use and misuse (Mcatee, 2012). Alcohol has been part of university culture for aeons and drinking is often what first entering students do when experiencing freedom from their home environment, it is a behaviour which they believe means that they are their own person not 'handicapped' by parental values (Mogotsi, 2011).

Biolcati et al. (2016), suggest that that alcohol consumption amongst tertiary education students always starts in social environments and is regarded as a sign of independent living in terms of having freedom, reduced parental monitoring, enlarged social homogeneity, the extensive availability of alcohol activities such as pre-partying, pre bashes other extra-curricular recreational activities facilitated by student bodies. Mogotsi (2011) indicated that many first entering university students arrive at campus premises away from parental monitoring for the very first time in their lives which means that they have a naive sense of freedom which results in their accidence to peer pressure and over-use of alcohol.

2.6.6 Marketing and the media's influence on alcohol use

Alcohol advertising and promotions are used to appeal to different segments of the population and on such target market is that of students (Sibuyi, 2014). Currently, advertising to the growing number of young people depicts alcohol drinking as sophisticated, happy, fun and sexy. These commercials both in social, electronic and print media influence young people to involve themselves in drinking as drinking is depicted as exciting. For example, many new drinks containing alcohol are brightly coloured and have eye-catching packaging and flavours, so do not taste like alcohol but rather like cool drinks. It is also true that when sports or celebrities endorse alcohol products young people use them to 'be like' their idol (Sibuyi, 2014). These drinks are often pitched at young people particularly women, who might not like the taste of beer or strong spirits such as whisky or brandy.

2.6.7 Cultural influences on alcohol use

Ethnic drinking cultures can significantly influence alcohol consumption amongst students as they come to university used to drinking behaviour(s). Many cultures drink some form of alcohol in various contexts (Seipone et al., 2013). According to Sibuyi (2014), socio-cultural influences contribute to an individual's way of thinking, beliefs, attitudes and values in relation to the use of alcohol. Cultural practices that involve alcohol drinking are among the following various religious practices and family and ethnic customs. When an individual with a specific set of beliefs and expectations about alcohol drinking comes into contact with individuals who

have different definitions of alcohol use. In this case the individual may be put into a situation which demands social drinking at a level that he or she would previously have considered alcohol misuse (Seipone et al., 2013). This causes stress and anxiety for that person which unfortunately often precipitates more alcohol use.

2.6.8 Parental modelling and its role in alcohol use

Parents who use substances such as alcohol, Marijuana, and cigarettes put their children at risk of 'copycatting' those behaviours. On the other hand, adolescents that have been exposed to rigid parenting rebel, and in many instances drink alcohol (Mogotsi, 2011). Young adults often adopt drinking styles that have familial patterns but ironically, parents who use and abuse alcohol often punish their children for doing the same. Nonetheless, familial patterns of alcohol abuse are a result of the young person modelling their drinking behaviour on the adults they associate with (Seggie, 2012).

Many young people aspire to be like their familial role models and want to be like them in every way possible (Mogotsi et al., 2014: Seggie, 2012). It was discovered that teenagers that were provided with alcohol at home were twice as likely to drink alcohol at school and more likely to drink alcohol on social occasions than those who were not (Seggie, 2012). Teenagers who were permitted to serve alcoholic beverages, or mix alcohol drinks on behalf of parents at homes, were also vulnerable for excessive alcohol use as parental social values indicated that this was the norm. Parents of teenagers who drink often imitate their parents who drink as they are their first role models (Hendricks, 2015).

The university environment can be riskier for students who are predisposed to alcohol use and abuse as a result of parental drinking. According to the Department of Social Development (2013, p.13), "Research shows that when parents use alcohol frequently, their adolescents have an increased likelihood of exposure to alcohol and related risk behaviours". Additionally, the role of parents in young people's alcohol use has not been paid much attention in South Africa (SA) which is problematic as SA has a very high per capita alcohol use in 2015 it was 27 litres of pure alcohol per capita per year, the third highest in Africa and one of the highest in the world (Business Tech, 2016). According to Chauke et al. (2015), gender (male), age (12 – 18 years) and parental alcohol use were contributing factors to alcohol use and abuse amongst learners in KwaZulu-Natal.

2.6.9 Self-esteem as a factor in alcohol use

Alcohol can be used for many reasons and to bolster low self-esteem is one of them (Hendricks, 2015). It was also suggested that students with low self-esteem drink alcohol as the lack self-resources and have unmet self-efficacy needs. Furthermore, low self-esteem is likely to put tertiary education students at risk of excessive alcohol use. Mcatee (2012) posits that low of self-esteem may predict if one will be heavy alcohol user or not with low self-esteem being the indicator of high alcohol use. Alavi (2013) established a positive association between low self-esteem and high substance use. It was concluded that low self-esteem is related to higher substance use and higher self-esteem is linked to lower substance use. This was supported in another study by Tesfai (2016) who found that students with either low self-worth or low self-esteem are prone to high alcohol use.

2.6.10 Loneliness as a factor in alcohol use

Loneliness is an emotional aspect which can explain alcohol use amongst higher education students. Loneliness is an aspect of stress thus using alcohol to relieve it indicates an individual is stressed (Chen & Feeley, 2015). Chen and Feeley (2015, p. 138) pointed out that "College students often experience many changes in their levels of social contact, and such changes may trigger feelings of loneliness". It was also established that lonely male university students were more likely to drink excessively and to have negative self-perceptions than lonely female students'. Moreover, Chen and Feeley (2015) report that loneliness and stress leads students to initiate high alcohol consumption which they use to cope with their psychological distress.

2.6.11 Curiosity and experimentation as factors in alcohol use

Experimentation and curiosity are often what motivates students to use alcohol. Many students enjoy social experimentation when they enter a higher education institution (Chen & Feeley, 2015). The initial experience is likely to one that gives pleasure, elevation of mood and happiness which facilitates more alcohol use. However, when alcohol is used more frequently then much more alcohol is consumed than at the initial experience. This can lead to alcohol abuse or binge drinking (Chen & Feeley, 2015).

Twelve percent (12%) of South African youth experiment with alcohol before the age of 13 years (DSD, 2013). Many young people in the country experiment with alcoholic beverages because there is tolerance and support of alcohol intake from society in general. According to the DSD (2013), the high intake of alcohol amongst South African youth is a growing cause of concern. Alcohol use has been associated with other risks such as unprotected sex and the

associated risk of Sexually Transmitted Infections (STIs) such as HIV, dropping out of school, teenage pregnancy and anti-social or criminal behaviour (DSD, 2013). According to Mogotsi et al. (2014), risky sexual behaviour is likely to occur after alcohol use.

2.7 The effects of alcohol use

2.7.1 Violence

Excessive drinking in university students has been associated with different consequences ranging from risky sexual behaviour(s), to violence, blackouts and severe hangovers (Mogotsi, 2011). Acts of aggression are related to problems that are associated with use and abuse of alcohol among university students (Govender et al., 2015). According to Ali, Ryan, Beck and Daughters (2013) problematic alcohol use and trait aggression among college students is on the rise. Their study results indicated that distress tolerance and trait aggression are linked to high alcohol use, which is problematic as this can lead to destruction of property or violence against others. It was concluded that high aggression precipitates problems which can cause criminal acts. In another study it was reported that more than 10% of women and adolescents in secondary school report being raped by males under the influence of alcohol in South Africa, (Freeman, 2006; Sibuyi, 2014). Freeman (2006) reported that in Cape Town, Johannesburg and Durban 15% of people arrested indicated they have carried out crimes such as house breaking and used lethal weapons when drunk. In South Africa Seggie (2012) reports that many studies have demonstrated the link between domestic violence and sexual assault.

2.7.2 Cardiovascular Disease (CVD) and Cerebrovascular Accidents (CVAs)

The association between cardiovascular disease and alcohol use are complex (WHO, 2012). Heavy alcohol consumption for instance, during binge drinking creates blood vessels injuries which sometimes lead towards strokes (cerebrovascular accidents [CVAs]) and heart attacks (Cardiovascular Disease [CVD]). To some extent alcohol use and abuse is a risk factor in alcohol cardiomyopathy which is a life threating disease that weakens heart muscles and causes atrial and ventricular fibrillation. Atrial fibrillation occurs when heart muscles (atria) shudder and do not have a proper rhythm which can cause blood clots that can cause a stroke or heart attack. This may also lead to loss of consciousness. By contrast, epidemiological literature indicates that there is a lower mortality for light drinkers as for instance, drinking a glass of red wine in an evening, reduces vulnerability to cardiovascular illnesses (Klatsky, 2015). Healthier patterns of drinking are ones which do not cause a negative impact. Peltzer et al. (2012), point

out that overall disease patterns caused by alcohol intake which eventually leads to death are found in approximately 7.1% of the population.

2.7.3 Cirrhosis and pancreatitis related to alcohol use

Alcohol intake makes it difficult for an individual's sympathetic system to function. Alcoholic beverages are toxic to cells in the liver (Sibuyi, 2014; WHO, 2011). This leads to heavy drinkers of alcohol developing pancreatitis which is inflammation of the pancreas and cirrhosis of the liver which is a terminal condition that scars the liver such that it is unable to function. However, it is not ineviTable that all heavy drinkers of alcohol will develop either pancreatitis or cirrhosis. This depends on genetic predispositions and individual lifestyles as some people drink moderate amounts of alcohol and do get cirrhosis while a few (extremely fortunate) individuals drink alcohol excessively but do not get either pancreatitis or cirrhosis. Nonetheless, high consumption of alcohol creates an exponential risk factor for many diseases which are referred to as alcohol induced (WHO, 2014). It must be noted that high alcohol consumption can lead to advancing conditions such as Senile Dementia and Parkinson's Disease (WHO, 2012).

2.7.4 Foetal Alcohol Syndrome (FAS)

Seggie (2012) points out that alcohol risks the lives of unborn children thorough miscarriage and FAS or Foetal Alcohol Syndrome. According to Colman (2009) FAS causes permanent cognitive damage to the foetus when an expectant mother abuses alcohol. Cases of FAS can be avoided if the expectant mother stops consuming alcohol when she finds out she is pregnant (Seggie, 2012). Children are always cognitively impaired with FAS and also show some physiological damage the severity of which depends on numerous factors. Females who become pregnant by default and who carry on drinking during their pregnancies are essentially at fault however, addiction to alcohol is a difficult illness thus blame should not be apportioned to an individual as addition can ultimately be seen as a social problem. Nonetheless, the health of neonates threatened by women who drink alcohol (WHO, 2014).

2.7.5 Diabetes Mellitus and alcohol use

Diabetes Mellitus is a metabolic disorder that results in very high glucose levels (Kim & Kim, 2012). The ongoing use of alcohol makes individuals prone to the disease which causes cell and insulin dysfunctions in the body. Alcohol has been recognised as a diabetogenic factor in the metabolic processes. Impaired insulin and insufficient insulin production cause difficulties

for the liver which results in homeostasis of glucose. The sensible use of alcohol reduces the risk of Diabetes Mellitus in some individuals (Kim & Kim, 2012; WHO, 2014).

2.7.6 Disability and alcohol use

According Ferreira-Borges, Parry and Babor (2017, p. 3), "alcohol consumption has been identified as a leading risk factor for death and disability in sub-Saharan Africa and the leading risk factor for disability-adjusted life-years (DALYs) among African male adolescents aged 15–24 years." The authors point out that disabled students who drive and who use alcohol are very vulnerable to traffic-accidents as they often drive under the influence. They are also a danger to pedestrians and other road users as they may cause accident, or injury to them. Unintentional injuries occur after alcohol intake due to low levels of attention and concentration for instance, drowning, falls and poisoning (WHO, 2012).

2.7.7 Unprotected sex and alcohol use

Alcohol use is linked to high levels of STI infections and pregnancies because of unprotected sex. It is also a risk factor for HIV positive individuals who may forget to take antiretroviral treatment (ART) and/or have unprotected sex (which is a danger to themselves and others). Individuals who consume high amounts of alcohol often to not adhere to ARV treatment because they are away from home (where their medication is kept) when drinking (Tesfai, 2016). A study conducted in KZN reported that 46% of respondents who were 30 years old were influenced by alcohol before they had sex (Mutinta, Gow, Govender, & George, 2013). The study further reported that respondents stated that they usually use alcohol before having sex which led to unprotected sex (Mutinta et al, 2013).

2.7.8 Alcohol dependence

According to WHO (202), alcohol dependence can be considered as an individual's inability to control their alcohol consumption. Furthermore, alcohol dependence impairs an individual's functioning for instance, cognition, emotional behaviour and impacts on their physiological behaviour (for instance, inability to walk properly). Tolerance of alcohol, for people that are dependent on it, increases all the time and they need ever-more alcohol units to feel the same sort of pleasure or to 'pass out' than they did previously. The more individuals consume the higher the risks for cardiovascular diseases and specific cancers for instance, cirrhosis of the liver.

2.7.9 Suicide and deaths related to alcohol use

Alcohol use and abuse is associated with mental illnesses such as stress and depression which aggravate the likelihood of suicide. A major cause of death amongst people between the ages of 14, and 25 years globally is alcohol induced suicide. Aggression and impulsivity play a role in suicidal behaviour and impulsivity which have been linked to suicidality in relation to self-destructive behaviour(s) such as drinking when, and before. Individual's with Borderline Personality Disorder and mood disorders are also likely to be impulsive after consuming alcohol which can cause para-suicides (attempts at suicide that are not successful). Alcohol use causes attributable deaths which are those deaths that could be avoided (Sibuyi, 2014). In the early 2000's South African transport related death were approximately 38% for pedestrians followed by drivers of Motor vehicles at 18%, in most of these cases alcohol was attributed to the cause of the accident (Freeman, 2006). In South Africa in 2018 there were over 500 deaths over the Easter weekend (South Africans Against Drunk Driving [SADD], 2018), many of them attributable to alcohol. Inclusive recent statistics are not available as alcohol related accidents are often not reported separate to accidents that are not alcohol related.

2.8 A brief review of literature on alcohol use amongst students

2.8.1 Alcohol use amongst students in the United States of America (USA)

In the (USA), university students enjoy social gatherings that foster and encourage alcohol consumption. According to Huang (2014), alcohol abuse compromises the health of these students. The way young people drink alcohol, when they are away from parental supervision, is reported as a recipe for disaster in many life situations (Stolle, Sack, & Thomasius, 2009). Similarly, Biolcati, Passini and Mancini (2016) explored alcohol use and stress in first year students at an American university and found that they were highly stressed and used alcohol as a coping mechanism. A study undertaken by the Substance Abuse and Mental Health Services Administration (SAMHSA, 2012) in America reported that 61% of full time students were current drinkers and 39% were binge drinkers which indicates high alcohol use. They also found that 40% of students (aged 17 – 30 years) at another American university reported risky and heavy drinking behaviour(s).

In the USA alcohol use amongst adolescents and university students demonstrate heightened rates of alcohol use and abuse and binge drinking (Biolcati et al., 2016). Initiation of alcohol use in USA is estimated at around 12 years old, especially if parental supervision is lacking. Early use of alcohol increases the probability of mental health conditions, physical conditions,

alcohol dependence and social problems in students. Many of these students use alcohol as coping mechanism for stress related life events. Huang (2014) investigated alcohol consumption amongst American Asians he found that the stated causes of alcohol consumption were gender issues, marital status, race, poverty, affiliation in social groups, sexual orientation, geographical location and education. Additionally, it was found that alcohol consumption amongst Americans Asians depended on specific communities perceptions towards drinking alcohol.

2.8.2 Indian students and alcohol use

Goel, Khandelwal, Pandya and Kotwal (2015) found that undergraduate students are exposed to alcohol on their arrival at university. As a result, when they are exposed to everyday stressors they resort to drinking which often leads to alcohol and other substance. The youth in India have a prevalence of alcohol use that ranges from 8.3% and 19.0% depending on the geographical location. Goel et al. (2015), indicated that alcohol use for undergraduate and post-graduate students was 16.6%, and 31.5% respectively in a study which spanned 8 Medical Universities across India.

Darshan et al. (2013) state that alcohol consumption pre-empts risky behaviours such as violent altercations, aggressive behaviours and unplanned pregnancies. In their study high levels of alcohol consumption were found in Information Technology (IT) professionals and students. The authors state that this follows the patterns of alcohol use and abuse in student communities globally. They continue to consume and abuse alcohol in spite of knowing about the negative mental and physiological health effects. According to WHO (2011) studies worldwide, including those in India, have a probability incidence rate of substance use and abuse ranging from 20 to 40% amongst university students.

2.8.3 Students in the United Kingdom (UK) and alcohol use

Alcohol consumption and abuse is of widespread concern in the UK. Studies in the UK indicate that alcohol results in thousands of deaths especially, non-communicable disease such as various types of cancer, ischaemic heart disease, high cholesterol, obesity, cirrhosis of the liver and CVAs.

Binge drinking is particularly problematic as in 2015 it was reported that at least 18% of people aged 16 to 24 and 65 years plus engaged in this type of drinking at least once a week. This total had fallen since 2005 but it is still a problem as hospital reported alcohol admissions had risen

by 115% in this period. This type of drinking is at its peak in Scotland. It is also seen more amongst student populations across the country (Chapman, 2018).

2.8.4 Chinese students and alcohol use

Feng and Newman (2016) indicated that between 2003–2010 there was a 36 % rate of growth of alcohol ingestion per capita in China amongst adolescents (15 years and above) and adults. Heavy episodic drinking is high in china in both the youth and adults (Feng & Newman, 2016). Chu, Jahn, Khan and Kraemer (2016) explored the prevalence of alcohol consumption amongst students in German and Chinese tertiary institutions. Results from the study indicated that German students used and abused more alcohol as compared to Chinese students. Furthermore, gender differences were found and German males and females consumed more alcohol than their Chinese counterparts. Patterns of alcohol use were also evaluated by the authors in a Chinese context. Results of this part of the study indicated that alcohol consumption rates for Chinese males were higher as compared to Chines females. These studies were amongst the first of their kind in China as alcohol use is an under-explored phenomenon in the country.

2.8.5 African students and alcohol use

Onongha (2012) reports that African countries do not differ from others in terms of alcohol use and abuse. The author reported that alcohol use is particularly high in student communities and tends to increase over-time (it escalates through the year levels). Students are usually involved in risky behaviour(s) during and after alcohol use such as smoking Marijuana, unsafe sex and reckless driving which results in poor academic performance and related stressors. Chikere and Mayowa (2011) found that in Nigeria alcohol use amongst students results in many negative health issues for instance, broken legs and depressive illnesses. Additionally, the author reported that in Nigeria substance use and misuse, particularly alcohol, has been an issue for many years and needs urgent attention in order to avoid alcohol related life-style diseases. Onongha (2012) revealed that in Nigeria parental conduct and lifestyle plays a part as a primary socialisation agent in learning alcohol consumption behaviour(s). Parents who indulge frequently in alcohol are modelled by their children who often abuse alcohol as they start drinking at an early age. Moreover, these parents often give their young children sips of alcohol and do not educate or caution them as to the risks involved in over-consumption.

A study conducted in Ethiopia investigated stress and its association to substance use and academic performance in a medical university (Melaku, Mossie, & Negash, 2015). The study findings demonstrated that stress is associated with increased alcohol intake and smoking

tobacco. Furthermore, results indicated that stress impacts negatively on academic performance and increases the risk of alcohol abuse. Onongha (2012) postulated that prolonged experience of stressful circumstances leads to a drop in academic performance, poor peer to peer relationships, loss of memory and unhappiness in day-to-day life. Osei-Bons et al. (2017), studied prevalence and factors that influence alcohol use among youth in Ghana. Findings from the study indicated that alcohol use is high amongst young people particularly those aged 15-39 years. It was stated that the prevalence of alcohol consumption amongst students differs in different geographical locations in the country. However, students attending university always consume alcohol at high levels.   Ferreira-Borges et al. (2017), explored the harmful consumption of alcohol and workable solutions in different areas of Sub-Saharan Africa. They found that commercial alcohol use is on the rise and it is attributable to many lifestyle diseases. Further, results indicated that alcohol use and its negative health implications receives limited attention from lawmakers and that workable solutions to the problem were difficult.

2.8.6 South African students and alcohol use

Alcohol is a legalised drug in South Africa but it is open to abuse when over used (Hendricks, 2015; Mogotsi et al., 2014). The drinking of alcohol has a long history in African cultures, especially when related to rituals and customary practices (Mogotsi et al., 2014; Sibuyi, 2014). There is an ever increasing use of alcohol amongst students and the general population in the country and if used in moderation it causes little harm but if abused it can lead to illness and even death (Seipone et al., 2013). Small amounts of alcohol that are consumed are not a problem to universities and their students however, when alcohol is abused it becomes a serious problem as violence, damage to property and rape have been reported when students are under the influence (Hendricks, 2015; Mogotsi, 2011).

According to Department of Social Development and (DSD, 2013), youth drinking is associated with the transition from childhood to adulthood. This transitional change amongst the youth can bring about instability and stress in their lives. In South Africa, the first age of alcohol use is around nine years old (DSD, 2013) which is problematic. Mogotsi (2011) investigated use of alcohol by first year students at a previously disadvantaged university. The results underpinned the fact that students use and abuse alcohol which has negative social and academic outcomes. Furthermore, the study revealed that the sample had poor knowledge about the negative consequences of alcohol use.

Most students who develop drinking problems have lower self-esteem and fewer positive coping strategies than those who do not (Seipone et al., 2013). Results of a study conducted by these authors indicated that a large number of students associated alcohol consumption with stress. These results are underpinned by an earlier study by Olivier (2008) who investigated alcohol consumption amongst South African dentists. Results in this study indicated that dentists indulged in high alcohol consumption to relieve stress. In addition, the author suggested that the dentists acquired their habit of alcohol use at university.

Watt et al. (2014), conducted a study which found that women used alcohol as a coping mechanism for negative emotions and stressors that were sometimes associated with pregnancy. On the other hand, Sibuyi (2014) explored alcohol use amongst undergraduate female students and discovered a wide variety of reasons that female students drank alcohol but they were all were related to some kind of stressful event. Tesfai (2016) investigated substance and alcohol use amongst university students in Kwazulu-Natal. It was concluded that rates of substance and alcohol use were very high. Additionally, students also reported being involved in hazardous binge drinking.

According to Seggie (2012) South Africans are heavy and hard drinkers. This is demonstrated by the findings that South Africans drink approximately 5 billion litres of alcohol annually. Peltzer, Ramlagan and Sathekge (2012) studied drinking problems, risk factors and alcohol use amongst the youth in a large South African study. The results indicated that 40.7% of young males ingested alcohol as compared to 24.3% of young females. Similarly, results revealed that harmful drinking is more prevalent in young males at 24.3% as compared to young females at 12.9%.

2.9 Summary

This chapter briefly covered literature on stress and alcohol use amongst students worldwide. It also reviewed the causes, effects and characteristics of stress and also of alcohol use. The following chapter presents the theoretical framework underpinning the study.

CHAPTER 3: THEORETICAL FRAMEWORK

3.1 Introduction

A theoretical framework helps ground a study and helps the researcher when data is analysed as findings can be linked to the theory. In this case, an appropriate framework was considered as The Self-Medication Model (SMM).

3.2 The Self-Medication Model (SMM)

The Self-Medication Model (SMM) was pioneered by Khantzin in 1985. It has been used since then to underpin research studies. The model focuses on why and how people are drawn together and self-medicate using various substances either illicit or over-the counter medications and, in some cases, herbal remedies and/or different types of exercise or diet. In this study the emphasis is on alcohol as a factor in self-medication. All Individuals of any gender, age, ethnic group, and various socioeconomic background engage in self-medication according to this model. People self-medicate for varying reasons including societal pressure, and day-to-day stressors that they face. Stressors generally are caused by interpersonal conflict, unemployment, crime, violence, ill health and varying types of abuse. It is likely that stressors in students that lead to self-medication (using alcohol) are related to poor peer relationships, academic pressure, parental pressure, academic pressure (poor grades), financial problems, unplanned pregnancies as reported by many studies (Govender et al., 2015; Mogotsi et al., 2014).

The SMM seeks to explain the development of habits in individuals who use and sometimes abuse different types of substances on a regular basis for instance, alcohol (Hartney, 2016; Khantzian, 1997). According to Gottfredson, Andrea and Hussong (2011) it suggests that people deliberately consume alcohol to treat psychological symptoms that they may suffer from. Fundamentally, the frequent consumption of alcohol is reinforced as it successfully reduces the negative affect (mood) of individuals over the short-term (Gottfredson et al., 2011). Consequently, when experiencing negative affect (or a depressed mood), students indulge in alcohol consumption in order to feel better essentially self-medicating. The SMM posits that people are likely to use alcohol during periods of intensified negative affect (depressed mood).

Self-medication using alcohol comes in many forms for instance, not just depressed mood it can be in reaction to distress that is caused by trauma (Dantas & deAndrade, 2008). The SMM assumes that people consume substances such as alcohol to compensate for (and alleviate) psychological problems (and symptoms) that they are experiencing (Hartney, 2016). The SMM argues that individuals who self-medicate fundamentally legitimise their substance of choice particularly alcohol, as they use it as a means of resolving emotional problems. The SMM has been widely used in African and South African contexts in different cultural backgrounds and has proven efficacy thus it was used in this research (Dannatt, Cloete, Kidd, & Weich, 2014; Lachman, Nassen, Hawkridge, & Emsley, 2012; Langa & Wilson, 2007; Morisano, Babor, & Robaina, 2014; Salami & Adesanwo, 2015; Sevalie, 2015).

The SMM was underpinned by the tension-reduction model pioneered by Conger (1956), as that model suggested that drinking alcohol is an encouraged conduct aimed at alleviating stressful and negative states in an individual (Gould, Hussong, & Hersh, 2012). These authors report that there are numerous studies which employ the SMM utilising cross-sectional and longitudinal designs which examine the link between stress and/or mood and alcohol use in terms of self-medication.

Khantzian (1997) postulates that individuals suffering from mental illness caused by stress and anxiety such as depression seek to relieve their symptoms through the use of alcohol and/or other substances. Alcohol use is a negative coping strategy for individuals who suffer from adaptive problems (either social or academic). Alcohol use causes extroversion when people drink it and people become less inhibited. However, alcohol is a depressant and the medium to long term effects are negative both psychologically and physiologically. Self-medication behaviour(s) can be addictive due to the nature of the substances (or diets or exercises) being used (Lagoni & Crawford, n.d).

According to Esposito-Smythers, Penn, Stein, Lacher-Katz and Spirito (2008), the SMM conceptualises alcohol use as a poor or negative coping skill that many people use to manage negative psychological symptomology. This model indicates that using alcohol to deal with stress is an emotion-focused strategy which temporarily alleviates emotional pain but has very negative effects in the medium to long term (sometimes in the short term if binge drinking takes place). Studies suggest that solution-focused strategies work best when dealing with stressors and problems in general for instance, creating a work conducive environment and learning positive coping skills. Emotion-focused strategies usually worsen problems over-time

and increase the risk of, in the case of alcohol, excessive and binge drinking (drinking many bottles of beer or glasses of spirits in one drinking spree). People who self-medicate with alcohol are unlikely to find permanent solutions to their problems (Esposito-Smythers et al., 2008; Gould et al., 2012).

3.3 Summary

The SMM deals with self-medication behaviour(s) related to negative and psychological states induced by for instance, stress related to academic and social challenges at higher education institutions. The model is appropriate for use in this study since it helps in identifying, and investigating alcohol use and abuse and its link to negative emotions such as stress and depression.

CHAPTER 4: RESEARCH METHODOLOGY

4.1 Introduction to the chapter

This chapter discusses the research methodology that was adopted in this study. The steps taken in the research are clearly indicated including the research design, sampling, data collection, data analysis and ethical implications.

4.2 Research design

The study adopted a cross sectional survey design to obtain data for this exploratory research. The approach is quantitative in nature. Quantitative research does not need the researcher to write down notes on interactions between the researcher and respondents but uses test-instruments to gather information related to the nature of the study. The study explored the stress levels and alcohol use amongst first year psychology students at the University of Limpopo. Colman (2009) indicates that exploratory studies are appropriate in finding out preliminary information and in expanding on existing knowledge.

4.3 Sampling

4.3.1 Population and sample

A population is a particular population which participated in specific research (Babbie, 2016). The population consisted of all first year psychology students at the University of Limpopo. Only registered male and female first year students in psychology registered at the University of Limpopo participated in this research study. According to the Assistant Registrar's Office (Faculty of Humanities) at the University of Limpopo (2017), the number of male and female first entering psychology students was 500 for both semesters. The researcher had restricted resources, limited time and to gain access to the whole first year population of the University, or even the whole first year population of the Humanities or Social Sciences, was too challenging hence the demarcation of first year psychology students (as they were a manageable number) as the population under investigation.

4.3.2 Area of study

The University of Limpopo is approximately 30km East of Polokwane, in the Capricorn District of Limpopo Province.

4.3.3 Sampling Method

Stratified random sampling was employed in order to provide every first year psychology student with a chance of being selected to participate in this study. According to Babbie (2016), this method uses a procedure that provides respondents with an equal chance of selection. In stratified sampling populations should be organised into homogenous subgroups called strata before sampling, from there a random sample within each subset is drawn (Babbie, 2016). The population of the study was heterogeneous (males and females), meaning a sample population of N units were divided into subgroups. Stratified random sampling guarantees that selection of respondents is random. The researcher developed a random number generator from subgroups to make sure that there is representivity in stratum (males and females). This method helps to prevent respondent under-representation or respondents not represented at all (Gravetter & Forzano, 2011). Stratified random sampling utilises specific information known about the respondents in making the sampling process efficient.

According to Delice (2010, p. 201), "the criteria for sample size are determined by the study size." In this case, a sample size Table created by Krejcie and Morgan (1970) was used to find the appropriate number of the sample (Appendix 5). A random sample of two hundred and seventeen (217) first-year psychology students was drawn in two stratums from the total first-year psychology population of 500 students registered at the institution (Assistant Registrar's Office, 2017). Therefore, in this study, 217 students was required for proper representation. In the sample, females were 60% (which is 130 students) and males 40% (which is 87 students) as this reflected the male and female intake ratio at the Department of Psychology at first year level in 2017.

4.4 Data collection

To collect data, a self-report survey was used for this investigation. Survey questionnaires are a quick and convenient method with which to collect data (Gravetter & Forzano, 2011). Respondents were required to fill in the survey questionnaires by following the instructions at the top of the protocols.

The researcher visited the first year psychology students after getting permission from the course coordinator, lecturer, the University Gate-keeper (The Registrar) and being cleared ethically by Turfloop Research Ethics Committee (TREC). Students were informed about the research and told how the sample was constituted (random sampling). The researcher further informed them that a list of selected students was to be placed on the Department of Psychology

information board. Another list was pasted at the entrance of the department. The selected students were given the survey questionnaires to fill in at the end of a lecturing period. When they had completed the surveys the researcher collected them. It took between 15 to 30 minutes for the respondents to complete the questionnaires. On the first page of the questionnaire there was information about the study, ethics pertaining to the research and voluntary participation. This included the consent form which the respondents signed. The questionnaires were checked for accuracy and inaccurate ones (that were not completely filled in) were discarded.

4.4.1 Research instruments

The study instruments (Appendix 1) used in the research had a demographic section (Section A) and two standardised questionnaires (Sections B and C). The standardised self-report questionnaires used were the:

- Perceived Stress Scale (PSS) is a self-administered questionnaire which is an individual stress measurement instrument (Cohen, 1983).

The Perceived Stress Scale (PSS) is a psychological self-report instrument that measures the perception of stress in individuals. It measures the extent in which circumstances in an individual's life are judged as stressful. Items are intended to tap into how uncontrollable, unpredicTable, and how overloaded a respondent feels at the point in time when they fill in the survey questionnaire. It is a 10 item questionnaire which contains a number of direct questions about levels of experienced stress. The Perceived Stress Scale (PSS), as it is a standardised instrument that has undergone accurate testing is both reliable and valid. It has a Cronbach's alpha (α) between .84-.86 as reported by Cohen, Kamarck, and Mermelstein (1983). Test-retest reliability of .85 was discovered by Cohen et al., (1983). The Perceived Stress Scale has acceptable Psychometric properties as indicated by Eun-Hyun (2012). Daeppen, et al. (2000) reported Cronbach alpha of 0.85 in their study, which indicates very good internal reliability.

- Alcohol Use Identification Disorder Test (AUDIT) is a questionnaire that can be used to measure alcohol use amongst individuals which includes university students.

The Alcohol Use Identification Disorder Test (AUDIT) was developed by the World Health Organisation. It was used to measure alcohol use amongst the student sample in this study. Meneses-Gaya, Zuardi, Loureiro and Crippa (2009) found that in 47 global research studies the AUDIT had acceptable validity and reliability. Daeppen et al. (2000) reported internal

reliability coefficients (Cronbach Alpha) for all items on this tool ranged from .69 to .75 which is average.

These survey questionnaires are in the public domain and thus available for researchers to use.

4.5 Data analysis

In order to give a broad picture of the data, descriptive statistics were employed to present an holistic overview of the data. Descriptive analysis of data, including demographic data, are presented using frequencies and cross tabulation Tables as well as bar graphs. The chi-square statistic was also used. The chi-square test was used to see if there were any associations between variables. It is a test employed to determine if there is a significant difference between the observed frequencies and the expected frequencies in one or more categories. The use of the Pearson r statistic was also used to determine the association between stress levels and alcohol use.

4.5.1 Research hypotheses for the study

The following research hypothesis were formulated:

(1) There are no gender differences related to perceived stress levels between male and female psychology students.

(2) There are gender differences related to alcohol use between males and female psychology students.

(3) There is a correlation between perceived stress and alcohol use amongst first year psychology students

4.6 Bias

According to Šimundić (2012), various kinds of bias exist in research. Research bias is a process in which the researcher influences the results of the study. Each respondent had an equal chance of being included in the sample, which reduced coverage error. Random sampling reduces numerous errors and biases in research. For instance, voluntary response bias will be eliminated by using this mode of sampling. Random sampling removes self-selection bias because after using a number generator, the researcher will generate a randomised list of possible respondents. This control measure was used in order to minimise bias and generate objective results. The study selection sample is random and the questionnaires are standardised

and validate which also help alleviate bias. All respondents were administered the survey at the same time which eliminated administrative bias.

4.7 Reliability and validity

Reliability is the extent to which an instrument measures what it is purports to measure while yielding similar results (Babbie, 2016). Reliability involves accuracy and fairness of the data that leads to the study's conclusion. The researcher ensured reliability by clarifying the methods used for instance, data collection and analysis. The study further ensured reliability by using standardised, structured questionnaires. The questionnaires that were used by the study have been used in many populations around the world and have been proven to be reliable and valid.

4.7.1 Cronbach Alpha (reliability testing) for the scales

Table 1: Reliability testing for the 2 scales and overall scales

Items	Cronbach's Alpha	Average inter-item Correlations	N of items
Perceived stress scale	0.727 (Acceptable)	0.21	10
Alcohol use Scale	0.801 (Good)	0.29	10
Overall	0.747 (Acceptable)	0.137	20

Based on the Table above, overall Cronbach's Alpha and both scales Cronbach's Alpha is greater than the acceptable mark of 0.70 which implies that the internal consistency is acceptable. This is based on Tavakol an Dennicks's (2011) acceptable Cronbach Alpha Table.

Table 2: Tavakol and Dennick's (2011) Cronbach's Alpha interpretation Table

Cronbach's alpha	Internal consistency
$\alpha \geq 0.9$	Excellent
$0.9 > \alpha \geq 0.8$	Good
$0.8 > \alpha \geq 0.7$	Acceptable
$0.7 > \alpha \geq 0.6$	Questionable
$0.6 > \alpha \geq 0.5$	Poor
$0.5 > \alpha$	Unacceptable

4.8. Ethical considerations

The study was underpinned by ethical guidelines for the Discipline of Psychology from the Health Professions Council of South Africa (Psychology Board). Before data was obtained from the participants the researcher applied for ethical clearance from the Turfloop Research Ethics Committee (TREC). The ethical approval number from the UL ethics committee is TREC/389/2017:PG. Gatekeeper permission was sought, and obtained, from the Registrar, University of Limpopo. Participants signed informed consent forms. Names and identity were not required on the questionnaires. Survey questionnaires had cover letters attached assuring respondents of their anonymity and confidentiality. The researcher informed the participants that they would not be deceived and explained the nature of the study. The participants were alerted about any risks for them arising out of the study and were informed about voluntary participation. They were told the study (for them) had no material benefits. Respondents were not forced to participate and had been told that even in the middle of answering the questionnaire they could withdraw if they wanted to. They were informed that should they should they feel uncomforTable in any way they should tell the researcher or his supervisors (their names and e-mail addresses were on the letter explaining the research) for referral or debriefing intervention. No respondents reported feeling uneasy or troubled after filling in the survey (Appendices 2, 3 and 4).

4.9. Summary

This chapter explained the research methodology employed by the study. It indicated the research design and other procedures discussed in the chapter. The following chapter presents the results of this research investigation.

CHAPTER 5: PRESENTATION AND ANALYSIS OF RESULTS

5.1 Introduction

This chapter will outline and present the study results. The demographical information is presented first followed by results from the psychological tests used in the study. All 217 respondents handed in completed surveys thus there was a 100% return and no attrition rate.

5.2 Section A: Demographics

Section A focuses on the demographical data of the study which is presented using Tables, frequencies, and figures (where appropriate).

Table 3: Home language

Home language	Frequency	Percentage %
Sepedi	123	56.7
Tshivenda	31	14.3
Xitsonga	38	17.5
English	1	0.5
Other	24	11.0
Total	217	100%

Frequency Table 3 indicate that 56.7% of the respondents were Sepedi speaking (123 participants). Thirty-one respondents (14.3 %) were Tshivenda Speaking, 17.5% were Xitsonga speaking (38 participants) and 0.5 % of the respondent spoke English (1 participants). Other African (international students) were reported as home languages by 11.0% (24) participants which makes a total of 217 participants.

Table 4: Age categories

Age	Frequency	Percentage %
17-20 years	136	62.7
21-25 years	62	28.6
26-30 years	16	7.4
31-40 years	3	1.3
Total	217	100

Frequency Table 4 indicates that 62.7% of respondents were between 17 and 20 years of age (136 participants); sixty-two respondents (28.6%) were aged between 21 and 25 years and 7.4%

were between 26 and 30 years of age (16 participants). Finally, 3 participants were between 31 and 40 years of age and can be categorised as mature students (1.3%).

Table 5: Frequency of Gender

Gender	Frequency	Percentage %
Male	87	40.1
Female	130	59.9

Frequency Table 5 indicates that 87 (40.1%) of the respondents were males and 130 were males (59.9 %) which reflects the student demographic at the University of Limpopo.

5.3. Section B: Perceived Stress Scale (PSS)

The Tables presented will indicate the percentage of respondents who answered Never, Almost Never, Sometimes, Fairly Often and Very Often across all items. A brief explanation is presented for every Table.

Table 6: <u>In the last month, how often have you been upset because of something that happened unexpectedly?</u>

Never	Almost never	Sometimes	Fairly often	Very often	Total
6%	23%	30%	25%	16%	100%

Frequency Table 6 indicate that 6% of the respondents admitted that in the last month, they have never been upset due to something that occurred unexpectedly, 23% state that they in the last month they have been upset because of something that transpired unexpectedly. Thirty percent (30%) of respondents indicated that sometimes they were upset because of something that happened unexpectedly last month while 25% responded that this had happened fairly often in the last month and 16% of respondents indicated they were very often upset in the last month due to something that took place unexpectedly.

Table 7: <u>In the last month, how often have you felt that you were unable to control the important things in your life</u>?

Never	Almost never	Sometimes	Fairly often	Very often	Total

6%	20%	35%	28%	11%	100%

According to frequency Table 7, 6% of the respondents indicated that in the last month they never felt that they were able to control important things in their lives and 20% of the respondents indicated that they were almost never able to control important things in their lives. Thirty-five percent (35%) of respondents indicated that sometimes they would be unable to control things in their lives while 28% indicated that fairly often they would be unable to control important things in their lives and 11% indicated that that in the last month they were very often unable to control the important things in their lives.

Table 8: <u>In the last month, how often have you felt nervous and stressed?</u>

Never	Almost never	Sometimes	Fairly often	Very often	Total
5%	7%	27%	43%	18%	100%

Frequency Table 8 indicated that 5% of the respondents in the last month never felt nervous and stressed, 7% indicated they almost never felt stressed and nervous in the last month while 27% of the sample indicated they sometimes felt stressed and nervous in the last month. The majority of respondents, that is 43%, reported that they felt stressed and nervous fairly often in the last month and 18% of the sample indicated that in the last month they very often felt nervous and stressed.

Table 9: <u>In the last month, how often have you felt confident about your ability to handle your personal problems?</u>

Never	Almost never	Sometimes	Fairly often	Very often	Total
12%	25%	39%	18%	5%	100%

Frequency Table 9 indicates that 12% of the respondents in the last month never felt confident about their ability to handle their personal problems and that 25% indicate they almost never felt confident about handling the personal problems in the last month. The majority of the

sample, that is 39%, sometimes felt confident in their ability to handle personal problems while 18% indicated that fairly often they were able to do this and 5% of respondents felt confident in their ability in handling personal problems very often.

Table 10: <u>In the last month, how often have you felt that things were going your way?</u>

Never	Almost never	Sometimes	Fairly often	Very often	Total
9%	25%	40%	21%	5%	100%

Respondents in frequency Table 10, indicated that 9% that in the last month they never felt that things were going their way and 25% of respondents indicated that they almost never felt that things were going their way. Forty percent (40%) of the sample indicated that they sometimes felt that things were going their way while 21% reported that things were fairly often going their way and 5% indicated that things were very often going their way.

Table 11: <u>In the last month, how often have you found that you could not cope with all the things that you had to do?</u>

Never	Almost never	Sometimes	Fairly often	Very often	Total
5%	22%	36%	29%	9%	100%

According to frequency Table 11, 5% of the respondents indicated that they could never not cope well with the things they had to do while 22% indicated that they almost never found that they could not cope with things they had to do. Thirty-six percent (36%) of the sample reported that they sometimes found that they could not cope with the things that they had to do and 29% of respondents indicated that fairly often they could not cope with what they had to do while 9% of the sample indicated that very often they could not cope with what they had to do.

Table 12: <u>In the last month, how often have you been able to control irritations in your life?</u>

Never	Almost never	Sometimes	Fairly often	Very often	Total
10%	32%	34%	19%	5%	100%

Frequency Table 12 indicates that 10% of the sample in the last month had never been able to control irritations in their lives over the last month while 32% reported that they almost never

were able to do this. Thirty-four percent (34%) of the respondents reported that they were sometimes able to control irritations in their lives and 19% indicated that they had fairly often been able to control irritations in their lives over the last month while 5% indicated they were very often able to control irritations in their lives over the last month.

Table 13: In the last month, how often have you felt that you were on top of things?

Never	Almost never	Sometimes	Fairly often	Very often	Total
11%	32%	33%	19%	5%	100%

According to frequency Table 13, eleven percent (11%) of respondents indicated that they never felt that in the last month they were on top things. Thirty-two percent (32%) reported that they almost never felt on top of things in the last month while 33% stated that they sometimes felt on top of things in the last month. Nineteen percent (19%) of the sample indicated that they fairly often felt on top of things in the last month while 5% of the respondents indicated that very often they felt that they were on top of things, in the last month.

Table 14: In the last month, how often have you been angered because of things that were outside of your control?

Never	Almost never	Sometimes	Fairly often	Very often	Total
6%	23%	28%	32%	12%	100%

Frequency Table 14 indicates that 6% of the sample had never, in the last month, been angered because of things that were outside their control and 23% indicated that they were almost never angered because of things that were outside their control. Twenty-eight percent (28%) of respondents indicated that sometimes they were angered due to things outside of their control while 32% indicated that they fairly often were angered because of things that were outside of their control. Finally, 12% of the sample reported they were very often angered because of things that were outside of their control.

Table 15: In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

Never	Almost never	Sometimes	Fairly often	Very often	Total
8%	24%	34%	22%	13%	100%

Eight percent (8%) of the respondents in frequency Table 15 indicated that they had never, in the last month, felt difficulties were piling up that they could not overcome. Twenty-four percent (24%) indicated that they had almost never felt difficulties were piling up so high that they could not be overcome while 34% of the sample indicated that they sometimes felt that difficulties were piling up so high that they could not be overcome. Twenty-two percent (22%) of respondents reported that they fairly often felt that difficulties were piling up so high they could not be overcome while 13% indicated that they very often felt that difficulties, in the last month, were piling up so high they could not be overcome.

5.3.1. Gender and levels and perceived stress amongst respondents

Cross tabulation Table 1: Gender and perceived stress

			PSS			
			Low perceived stress	Moderate perceived stress	High perceived stress	Total
Gender	Male		13	68	6	87
			6.0%	31.6%	2.8%	40.5%
	Female		4	94	30	128
			1.9%	43.7%	14.0%	59.5%
Total			17	162	38	215
			7.9%	75.3%	16.7%	100.0%

Cross tabulation Table 1 indicates that 6% of the male respondents (13 participants) reported low perceived stress. Sixty eight male respondents (31.6%) reported moderate perceived stress and lastly 2.8% or 6 male respondents reported high perceived stress levels. Four females (1.9%) reported low perceived stress levels and 43.7% (94 female respondents) reported moderate perceived stress levels while 14% of females respondents (30) reported high perceived stress levels. Overall, 7.9% (or 17 male and female) respondents reported low perceived stress while 75.3% (162 male and female respondents) reported moderate perceived stress levels. Thirty six male and female respondents (16.7%) reported high perceived stress levels.

Chi-Square Test Table 1: <u>Gender and perceived stress (marked effects significant p ≤0.05)</u>

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	17.765	2	.000
Likelihood Ratio	18.807	2	.000
Linear-by-Linear Association	17.369	1	.000
N of Valid Cases	217		

Based on Table 1 the Chi-square (X^2) was employed to test the relationship between two variables (namely males and females). The Pearson Chi square test statistic reported value is 17.76 (df 2). The p value is = .000 which is not significant (p ≤0.05). This result indicates that there is no significant difference between gender and perceived stress levels.

5.4 Section D: The Alcohol Use Disorders Identification Self Report Test

The following results are from The Alcohol Use Disorders Identification Test (2001). The results are presented with an explanation for each figure, Table and chi-square test (marked effects significant p≤00.00).

Figure 1: <u>How often do you have a drink containing alcohol?</u>

	Never	Monthly or less	2 to 4 times a month	2 to 3 times	4 or more times a week
■ Frequency	54	135	17	8	3
■ Percent	24,9	62,2	7,8	3,7	1,4
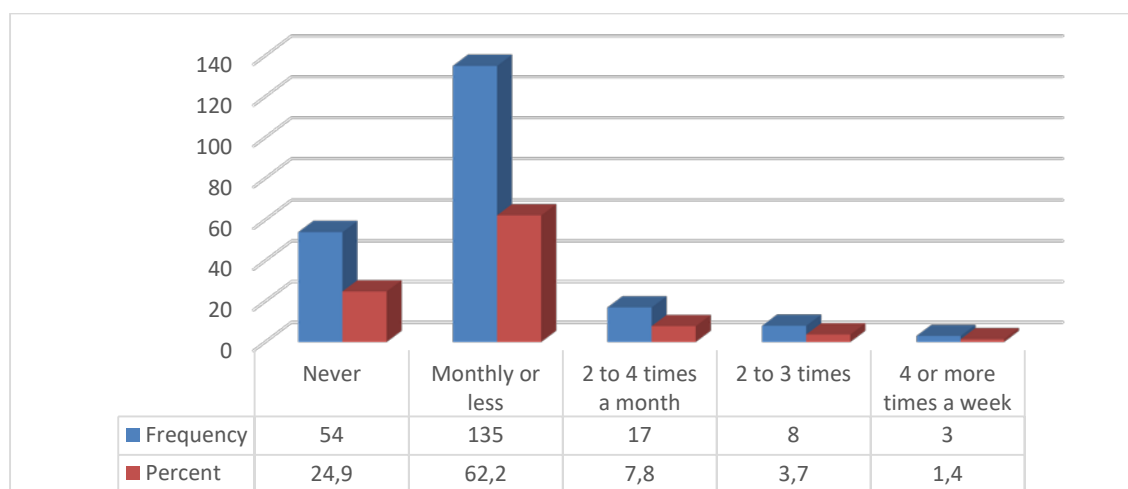
Figure 1 indicates that 24.9% (54 respondents) of the sample stated that they have never had a drink containing alcohol. The majority of respondents 62.2% (135) consumed a drink containing alcohol in a month or less than a month while 17 (7.8%) respondents indicated that they consumed a drink containing alcohol 2 to 4 times a month. Eight (3.7%) of the respondents have had a drink containing alcohol 2 to 3 times a week while 3 (1.4%) had a drink containing alcohol 4 or more times a week.

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

Title: How many drinks containing alcohol do you have on a typical day when you drinking?
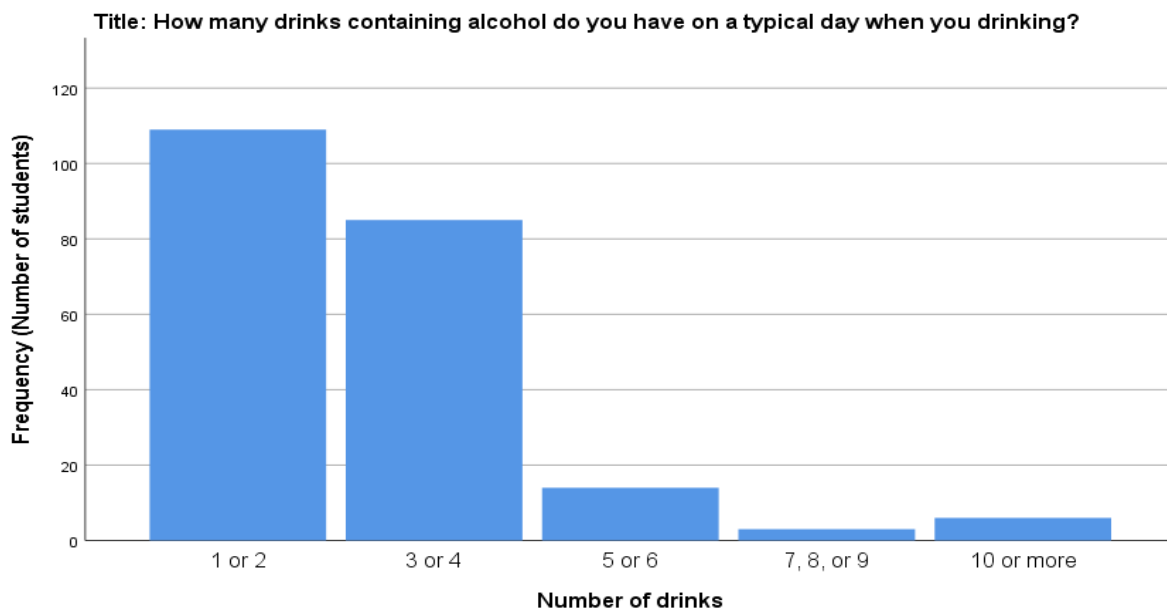
Figure 2 indicates that 109 respondents (50.2%) drink 1 or 2 drinks that contain alcohol on a typical day when they are drinking while 85 (39.2%) drink up to 3 or 4 drinks that contains alcohol in that time frame. Fourteen respondents (6.5%) of the respondents have 5 to 6 drinks containing alcohol on a typical day of drinking while 3 respondents (1.4%) typically have 7, 8, or 9 drinks in that period. Six respondents (2.8%) have 10 or more drinks containing alcohol on a typical day of drinking.

Table 16: How often do you have six or more drinks on one occasion?

Never	Less than monthly	Monthly	Weekly	Daily or almost daily	Total
51%	37%	11%	1%	0%	100%

Frequency Table 16 indicates that 51% of respondents never have six or more drinks on one occasion while 37% never have six or more drinks in a month or less. Eleven percent of the

sample have 6 or more drinks on one occasion monthly while 1% have that amount weekly. No respondents reported drinking 6 or more drinks on one occasion daily or almost daily.

Table 17: 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	Total
67%	28%	5%	0%	0%	100%

Frequency Table 17 indicates that 67% of respondents found that during the last year they were not able to stop drinking once they had started while 28% indicated that they were not able to stop drinking once they had started in a month or less. Five percent (5%) of the sample were not able to stop drinking once they had started in a month and no respondents were not able to stop drinking once they had started daily or almost daily.

Table 18: How often during the last year have you failed to do what was normally expected from you because of drinking

Never	Less than monthly	Monthly	Weekly	Daily or almost daily	Total
74%	18%	6%	1%	1%	100%

Seventy-four percent (74%) of respondents in Table 18 indicated that reported that they had never failed to do what was normally expected of them because of drinking while 18% reported that this had occurred at a period less than monthly. Six percent (6%) of the respondents reported that they had failed to do what was expected of them because of drinking monthly and 1% reported that this had occurred weekly another 1% reported that they had failed to do what was normally expected of the daily or almost daily.

Table 19: 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	Total
70%	23%	6%	1%	1%	100%

Respondents in Table 19 indicated that 70% of them did not need a first drink in the morning to get themselves going after a heavy drinking session while sample answered that during the previous year they have not sought a first drink in the morning to keep them going after heavy drinking, 23% demonstrated that this happened less than monthly, 6% did need a first drink to help them keep going on monthly basis, and 1% have needed a first drink to support them get going on a weekly basis, while the last 1% needed a first drink daily or almost daily to help them get going after a heavy drinking session.

Table 20: <u>How often during the last year have you had a feeling of guilt or remorse after drinking?</u>

Never	Less than monthly	Monthly	Weekly	Daily or almost daily	Total
69%	23%	6%	2%	1%	100%

Frequency Table 20 indicates that 69% of respondents reported that they had never experienced feelings of remorse or guilt after drinking in the last year while 23% reported to have experienced guilt and remorse after drinking less than monthly. Six percent (6%) have had feelings of guilt and remorse monthly after drinking while 2% of the sample had feelings of guilt and remorse after drinking on a weekly basis. One percent (1%) of the sample reported to experiencing feelings of guilt and remorse daily or almost daily after drinking.

Table 21: <u>How often during the last year have you been unable to remember what happened the night before because you had been drinking?</u>

Never	Less than monthly	Monthly	Weekly	Daily or almost daily	Total
75%	18%	4%	2%	1%	100%

Frequency Table 21 indicates that 75% of the sample reported that they had never been unable to remember what happened the night before because they had been drinking while 18% reported that this had happened less than monthly. Four percent (4%) of the sample reported that the were unable to remember what happened the night before because of drinking on a monthly basis while 2% stated that this occurred on a weekly basis. One percent (1%) of the sample reported that they were unable to remember what happened the night before because of drinking on a daily or almost daily basis.

Figure 3: Have you or someone else been injured as a result of your drinking?

	No	Yes, but in the last year	Yes, during the last year
Frequency	200	7	10
Percent	92,2	3,2	4,6
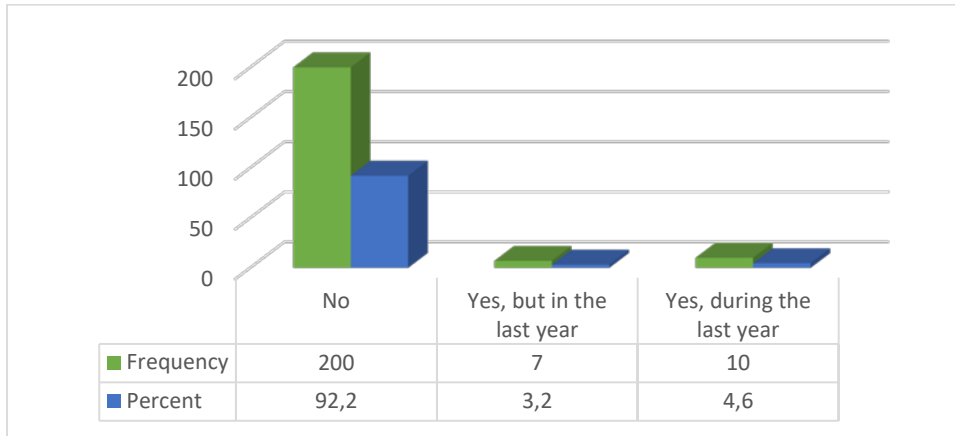
Figure 3 indicates that 92.2% (200 participants) of respondents reported No, they or someone else had not been injured due to their use of alcohol while 7 (3.2%) reported that Yes they or somebody else had been injured due to their drinking but not in the last year and 10 (4.6%) respondents stated Yes, they or someone else had been injured during the last year because of their drinking.

Figure 4: Has a relative or friend or a doctor or another health worker been concerned about your drinking or suggested you cut down?

	No	Yes, but not in the last year	Yes, during last year
Frequency	204	12	1
Percent	94,0	5,5	0,5
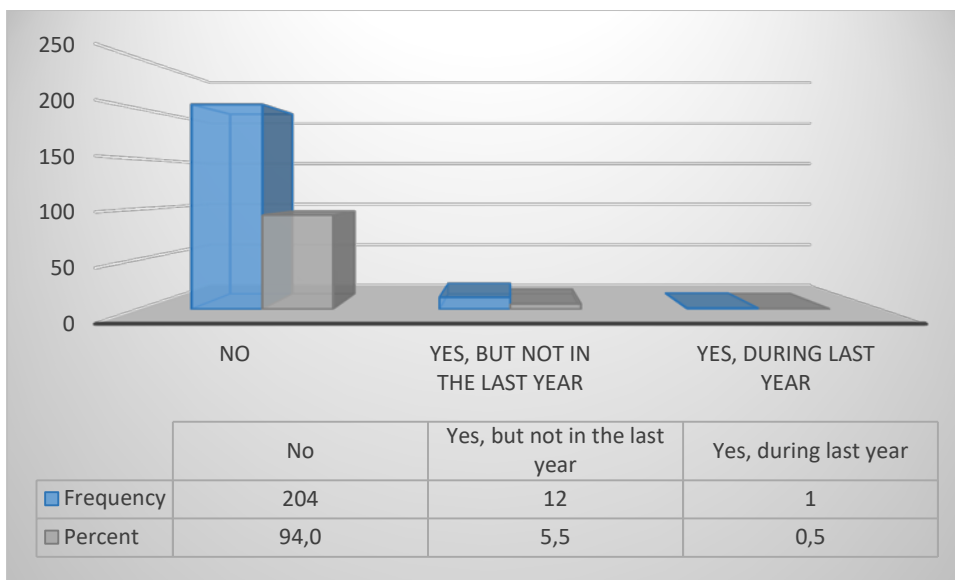
Figure 4 specifies that 94% (204) of the sample reported that No, a relative or friend or doctor or another health worker had been concerned about their drinking and suggested they cut down (alcohol use) while 5.5% (12) of the sample reported that Yes, someone had been concerned about their drinking and advised them to cut down. Half a percent (0.5%) reported that Yes, during the last year a relative, friend or doctor was concerned about their drinking and advised them to cut down.

5.4.1 Gender and levels of alcohol use among respondents

Cross tabulation 2: Gender and Alcohol use

			Alcohol use				Total
			Low-risk	Risky or Hazardous level	High-risk or harmful level	Almost or certainly dependent	
Gender	Male		65	20	2	0	87
			30.0%	9.2%	0.9%	0.0%	40.1%
	Female		103	24	2	1	130
			47.5%	11.1%	0.9%	0.5%	59.9%
Total			168	44	4	1	217
			77.4%	20.3%	1.8%	0.5%	100.0%

Cross tabulation Table 2 indicates that 30% (65) of male respondents reported a low risk of alcohol use and 9.2% (20) of the male respondents reported risky or hazardous levels of alcohol use. Furthermore, 0.9% (2) of the male respondents reported high-risk or harmful levels of alcohol use. None of the respondents reported what could be considered alcohol dependence. One hundred and three (47.5%) of the female displayed low-risk on alcohol use while 11.1% (24) of the female sample reported risky or hazardous drinking. Furthermore, 2 ().9%) of the female respondents reported high-risk or harmful levels of alcohol use. One respondent (0.5%) reported what can be considered alcohol dependence. Overall, 77.4% (168) of the entire sample reported low risk on alcohol use while 20.3% (44) of the entire sample indicated risky or hazardous levels of alcohol use. One female participant (0.5%) of the entire sample indicated what could be considered alcohol dependence.

Chi-Square Test Table 2: Gender and Alcohol use (significance level p ≥0.05)

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	1.497[a]	3	.683
Likelihood Ratio	1.843	3	.606
Linear-by-Linear Association	.286	1	.593
N of Valid Cases	217		

Based on Table 2 the Chi-square (X^2) = 1.497 (df 3) the p= 0.683 which is greater than the significance level of p ≥0.05. This finding, suggests that there is no association between gender and alcohol use.

5.4.3 Perceived stress levels and alcohol use of respondents

Cross tabulation 3: Perceived stress scale and Alcohol use

		Alcohol use				
		Low-risk	Risky or Hazardous level	High-risk or harmful level	Almost certainly dependent	Total
PSS	Low perceived stress	14	3	0	0	17
		6.5%	1.4%	0.0%	0.0%	7.9%
	Moderate perceived stress	126	32	4	0	162
		58.6%	14.9%	1.9%	0.0%	75.3%
	High perceived stress	26	9	0	1	36
		12.1%	4.2%	0.0%	0.5%	16.7%
Total		166	47	4	1	217
		77.2%	20.5%	1.9%	0.5%	100.0%

Cross tabulation Table 3 indicates that 14 of the respondents (6.5%) had low risk of alcohol use and low perceived stress while 3 (1.4%) of the sample reported risky or hazardous levels of alcohol use and reported low perceived stress. One hundred and twenty-six (58.6%) respondents reported moderate perceived stress and low risk of alcohol use while 32 (14.9%) reported moderate perceived stress and risky or hazardous levels of alcohol use. Four (1.9%)

respondents reported moderate perceived stress and high risk or harmful alcohol abuse. Twenty-six (12.1%) of the respondents reported high levels of perceived stress and low risk of alcohol use while 9 (4.2%) reported high perceived stress levels and risky or hazardous levels of alcohol use. One (0.5%) participant reported high levels of stress and almost certain dependence on alcohol.

Chi-Square Test 3: Perceived stress scale and Alcohol use (significance level p ≥0.05)

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	6.930	6	.327
Likelihood Ratio	6.468	6	.373
Linear-by-Linear Association	1.301	1	.254
N of Valid Cases	217		

Based on Table 3 Chi-square (X^2) = 6.930 (df 6) and p=0.327 which is greater than the required p of 0.05. This indicates that there is no significant association between alcohol use and perceived stress.

5.5 Hypotheses results

Independent t-test 1: Hypothesis 1: There are no gender differences related to perceived stress levels between male and female psychology students (significance level p ≥0.05)

Group	Observations	Mean M	Standard Deviation SD	Standard Error	p-value	T-statistic	df
Male	87	18.63	5.24	0.56	<0.001	4.69	0
Female	130	22.16	5.53	0.49			
Total	217	20.73	5.67	0.39			

The Independent t-test relates the means of two independent groups in determining whether there is statistical evidence that the associated sample means differ. The t-test was used to see if there were any gender differences in the perceived stress levels of first year psychology students in the sample The p-value is less than 0.05 which indicates that there is a significant difference between males and female on perceived stress levels among first year psychology students. More females with (M=22.16; SD= 5.53) presented with moderate perceived stress

than male participants that presented with (M=18.63; SD= 5.24), t= -4.69, p<0, 05. Therefore, it can be stated that female psychology first year students have more moderate perceived stress than males and the results are statistically significant (p<0.001). The results thus do not support the hypothesis as females report more moderate perceived stress levels than males.

Independent t-Test 2: Hypothesis 2: <u>There are gender differences related to alcohol use between males and female psychology students (significance level p ≥0.05)</u>

Group	Observations	Mean M	Standard Deviation SD	Standard Error	p-value	T-statistic	df
Male	87	4.93	3.00	0.56	<0.83	0.97	0
Female	130	4.33	2.85	0.49			
Total	**215**	**4.57**	**3.00**	**0.30**			

An Independent t-test was used to identify gender differences on alcohol use among first year psychology students in the sample. The p-value is greater than 0.05 which reveals that there is no significant difference between males (M= 4.93; SD=0.56) and females (M=4.33; SD= 0.49), pertaining to alcohol use amongst first year psychology students in the sample (t=0, 97; p>0.83). The results are not statistically significant. Hypothesis 2 is not supported as there are no significant gender differences related to alcohol use between male and female students.

Scatterplot 1: Hypothesis 3: <u>There is a correlation between perceived stress and alcohol use amongst first year psychology students</u>

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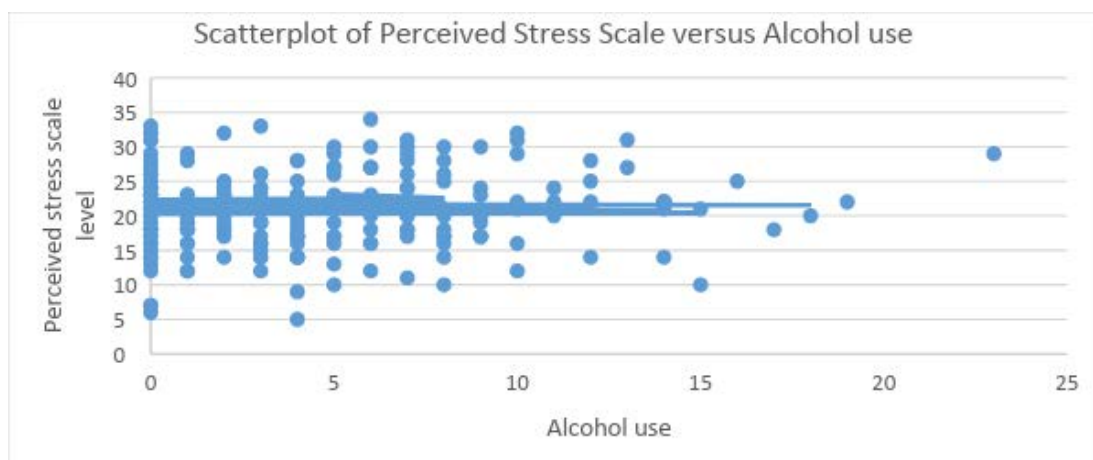
Scatterplot 1 indicates the perceived stress and alcohol use of the sample of first year psychology students. Pearson's correlation coefficient (Pearson's r) was carried out to look for relationships between perceived stress and alcohol use amongst the sample of first year psychology students. he points on the scatterplot are randomly scattered which reveals that there is no clear pattern (relationship) or association between perceived stress and alcohol use amongst the respondents. The trend line in the figure is indicated as a solid line. The slope is equal to 0.1321, which confirms the result of the correlation coefficient which is positive. The correlation coefficient of r-squared = 0.0109 (1.09%). This means that only 1% of the variation of first year psychology students in the sample who report perceived stress can be attributed to alcohol use. It can be concluded that there is no evidence of a significant linear correlation between stress levels and alcohol use based on the study sample. Hypothesis 3 is not supported by the study results because the results indicated that there is no significant linear correlation between stress levels and alcohol use in the study sample.

5.6 Overall discussion of major results

Generally, 88% of the respondents reported to experiencing some levels of stress in the period of a month. However, an independent t-test revealed that female respondents in the study experienced more moderate perceived stress than males which did not support the study hypothesis which indicated that there would be no significant differences in perceived stress between the genders. This result is echoed in cross-tabulation Table 3 where female respondents 43.7% (94) presented with moderate perceived stress and 31.6 % (68) of the male respondents males reported moderate perceived stress. This finding is supported by other studies for instance, a study by Lorant (2013) where female nurses reported to stressors experienced because of high academic workloads. Alcohol use was also reported by 75% of the respondents in different times frames (for instance, monthly, weekly, daily) which indicates that there are a high percentage of students who do consume alcohol fairly frequently. This is supported by various studies for instance, an investigation by Seipone et al. (2013) who concluded that more than a third of first year students in his research use alcohol frequently.

It was found that overall there was no correlation between perceived stress and alcohol use amongst first year students who participated in the study. However, one female student who was highly stressed was found as very likely to be dependent on alcohol and 1% of the sample reported perceived stress that could be attributed to alcohol use.

Nonetheless, there were some results, though not significant, that are worrying. For instance, 61% of respondents felt nervous or stressed often or very often and 38% of the sample felt that they could not cope with things they had to do in specific timelines. Furthermore, 44% of the sample experienced anger because of things out of their control and 35% felt things were piling up so high they could not be overcome (again different timelines). Worryingly, 10% of the sample had 10 or more drinks on a typical day of drinking and a further 8% could not do what they were supposed to do because of their drinking. Moreover, another 8% of the sample had to have a drink first thing in the morning to be able to go on with their day. Nine percent (9%) of the sample felt guilty or remorseful at some point because of their drinking and even more problematic 7% of the sample were unable to remember what happened the night before after drinking. These statistics support various studies which indicate that student drinking is problematic for instance, Mogotsi et al. (2014) and Govender et al. (2015).

The aforementioned results indicate that some of the sample are likely to be using alcohol to alleviate negative emotions particularly those caused by stress. These results supports the theoretical underpinnings of the Self-Medication Model (SMM) which postulates that people are drawn together (in this research students) and self-medicate using various substances (in this research alcohol) in order to relieve various symptoms for different reasons (in this case student stress). This is underpinned by findings that indicate that individuals are likely to drink alcohol to help them cope on a temporary basis as this helps them escape from negative affective states for instance, stress (Mobach & Macaskill, 2011).

This study aimed at exploring stress levels and alcohol use amongst first year's psychology Students at the University of Limpopo. The study revealed that males and female first year students registered in psychology discipline at the University of Limpopo (Turfloop Campus) are reportedly drinking alcohol and have stress. This may be because there are lot of causes that makes students and individuals generally be stressed and use alcohol (Wang & Chen 2015). The majority of the sample both males and females 77.2% of the respondents reported to be on low risk of alcohol use. On the other hand, 75.3% of the respondents presented with moderate perceived stress. The findings further indicated that there was no significant relationship between perceived stress and alcohol use. The results of the current study generally underpin previous study conducted Seipone et al. (2013), pertaining to stress levels and alcohol use. However, there was no relationship between stress levels and alcohol use among participants. More females' respondents 43.7% (94 participants) presented with moderate perceived stress than male participants 31.6% (68 respondents). This results may be due to the fact the sample

contained of more females than male as females first year students registered in psychology were more than males.

5.7 Conclusion

This study aimed at exploring stress levels and alcohol use amongst first year psychology Students at the University of Limpopo. The study revealed that males and female first year students registered in the discipline of psychology do drink alcohol most moderately but some to excess. Many of the students in the sample report some stress however, this is mostly low to moderate. However, females did report significantly more stress than males in the sample. Although some findings related to the study are not significant there is a worrying trend that some of the sample for instance, do not remember what they are doing the morning after drinking and one female student was found to be dependent on alcohol. The Self Medication Model (SMM) emphasises that groups of people are likely to self-medicate thus it is likely that students (as a group) are likely to be influenced by peers and drink to avoid stress even if only a few drink to excess. A larger study using a more comprehensive sample and a qualitative component are recommended and educational awareness programmes about the dangers of alcohol use should be undertaken by the institution. Stress and its consequences should also be explained to first year students using workshops.

5.8 Strengths of the study

The methodological strengths of the study are:

- The questionnaires were standardised and validated.
- Random sampling was used.

5.9 Methodological weaknesses of the study

- The sample involved only first year psychology students registered at the University of Limpopo.
- There was no qualitative element to the study.
- The students had to self-report their alcohol use which they may be underestimating its use. They may not have insight or be afraid of being stigmatized, so may "under-disclose' its use.

5.10 Recommendations arising out of the research

The study makes the following recommendations.

- A large study over all the student population should be undertaken.
- A qualitative study should be undertaken to find out why students drink alcohol when stressed.
- The University of Limpopo needs to ensure first year students are properly educated about alcohol and its use.
- Educational awareness interventions should be introduced at first year so that students understand what stress is and where they can find help if they experience high stress levels.
- All first year students should be counselled on the dangers of alcohol use, the relationship between stress and alcohol use as well as how to cope with stress (stress management) generally by UL Student Counselling as a preventative measure.

References

Alavi, H. R. (2011). *The Role of Self-esteem in Tendency towards Drugs, Theft and Prostitution*. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3905528/

Ali, B., Ryan, J. S., Beck, K. H., & Daughters, S. B. (2013). Trait aggression and problematic alcohol use among college students: The moderating Effect of distress tolerance. *Journal of Alcoholism, Clinical and Experimental research, 37* (12), 2138-2144.

Amr, M., El-Gilany, A., El-Moafee, H., Salama, L., & Jimenez, C. (2011). *Stress among Mansoura (Egypt) baccalaureate nursing students*. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3201591/

Aselton, P. (2012). Sources of tress and coping in American college students who have been diagnosed with depression. *Journal of Child and Adolescent Nursing, 25*(3), 119–123.

Australian Psychological Society (2012). *Flight or fight syndrome*. Retrieved from https://www.psychology.org.au/

Babbie, E. (2016). *The practice of social research (4th ed.)*. Boston, MA: Cengage Learning.

Baghurst T., & Kelley, B. C. (2014). An examination of stress in college students over the course of a semester. *Health Promot Pract*, *15*(3), 438-479.

Baitaineh, M. Z. (2013). Academic stress among undergraduate students: the case of education faulty at King Saud University. *International Disciplinary Journal of Education, 2*(1), 82 – 88).

Banyard, P., & Grays, A. (1996). *Introducing Psychological Research*. Washington: New York university press.

Bate, C. (2011). *Unwanted Pregnancy Double Women's Risk of Mental Health, But Option for Abortion Has No Impact.* Retrieved from http://www.dailymail.co.uk

Bedewy, D., & Gabriel, A. (2015). *Examining perceptions of academic stress and its sources among university students: The Perception of Academic Stress Scale*. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/28070363

Bendonlos, J. S., Nooanan, M., & Wells, S. Y. (2013). Mindfulness and alcohol problems in college students: the mediating effects of stress. *Journal of American College of Health*, *61*(6), 371- 378.

Biolcati, R., Passini, S., & Mancini, G. (2016). "I cannot stand the boredom." Binge drinking expectancies in adolescence. *Addictive Behaviours' Reports, 3*, 70–76.

Business Tech. (2016). *South African alcohol consumption vs. the world*. Retrieved from https://businesstech.co.za/news/lifestyle/124939/south-africa-alcohol-consumption-vs-the-world/

Broadby, D. (2017). Perceived stress amongst Japanese tertiary students. Retrieved from file:///C:/Users/kathryn.nel/Downloads/acabungo103_17_broadby_deborah%20(1).pdf

Callahan, R. (2015). *What are the causes of stress among college students?* Retrieved from http://www.livestrong.com/article/133023-what-are-causes-stress-among-college-sudents/.

Chapman, S. (2018). *Student drinking culture*. Retrieved from https://uk.cochrane.org/news/student-drinking-culture-change-and-cochrane

Chauke, T. M., van der Heever, H., & Hoque, M. E. (2015). Alcohol use amongst learners in rural high school in South Africa. *African Journal of Primary Health Care and Family Medicine, 7*(1), 1-6.

Chen, J., Wu, J., Yi, H., Li, Z., Eshita, Y., Qin, P., & Sun, J. (2013). The impact of academic stress on medical students attending college in the inner Mongolia area of China. *Open Journal of Preventive Medicine, 3* (2), 149-154.

Chen, Y., & Feeley, T. H. (2015). Predicting binge drinking in college students: rational beliefs, stress, or loneliness? *Journal of Drug Education*: *Substance Abuse Research and Prevention, 45(4),* 133-155.

Cherian, L., Mboweni, M., Mabasa, L., & Mafumo, T. (2014). Patterns and prevalence of alcohol use among University of Utopia students in South Africa. *Mediterranean Journal of Social Sciences, 5* (20), 1573-1579.

Chikere, E. I. C., & Mayowa, M. O. (2011). Prevalence and perceived health effect of alcohol use among male undergraduate students in Owerri, South-East Nigeria: a descriptive cross-sectional study. *BMC Public Health, 11*(118), 2-6.

Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior*, *24*, 385-396.

Choi, K. W., Abler, L. A., Watt, M. H., Eaton, L. A., Kalichman, S. C., Skinner, D., Pieterse, D., & Sikkema K. J. (2014). Drinking before and after pregnancy recognition among South African women. *BMC Pregnancy Childbirth, 5*, 14-97.

Colman, A. M. (2009). *Oxford Dictionary of Psychology* (3rd ed.). New York, NY: Oxford University Press.

Coyne, C. & Beckman, T. O. (2012). Loss of a parent by death: determining student impact. *International Journal of Psychology,* 10 (1), 109-123.

Daeppen, J., Yersin, B., Landry, U., Pecoud, A., & Decrey, H. (2000). Reliability and validity of the Alcohol Use Disorders Identification Test (AUDIT) imbedded within a general health risk Screening Questionnaire. *Clinical and Experimental Research, 24* (5), 659-665.

Daniel J., & Berkowitz, M. A. (n.d). *Stress and students with learning disabilities*. Retrieved from http://www.learningassistance.com/2000/Sep00/stress_and_students.htm.

Dantas, H. D., & Deandrade, A. G. (2008). Comorbidity of posttraumatic stress disorder (PTSD) with alcohol and drug abuse and dependency: a literature review. *Revista de Psiquiatria Clinica*, *35*(1), 55-60.

Darshan, M. S., Raman, R., T. S. Rao, S., Ram, D., & Annigeri, B. (2013). A study on professional stress, depression and alcohol use among Indian IT professionals. *Indian Journal of Psychiatry, 55* (1), 63–69.

Deb, S., Strode, E., & Sun, E. (2015). Academic stress, parental pressure, anxiety and mental health among Indian high school students. *International Journal of Psychology and Behavioral Sciences, 5*(1), 26-34.

Delice, A. (2010). *The Sampling Issues in Quantitative Research* (Unpublished doctoral thesis). Marmara University Turkey: Marmara University Press.

Denovan, A., Dagnall, N., Dhingra, K., & Grogan, S. (2017). Evaluating the perceived stress scale among UK students: implications for measurement and management. Retrieved from http://www.thenationalstudent.com/Student/2017-08-31/82_of_students_suffer_from_stress_and_anxiety.html

Department of Social Development. (2013). Substance use, misuse and abuse amongst the youth of Limpopo Province. Pretoria: Government Printers.

De Vos, A., Delport, C., Fouché, C., & Strydom, H. (2011). *Research at grass roots: A primer for the social science and human professions (4th ed.)*. Pretoria: Van Schaik Publishers.

Elias, H., Wong, S. P., & Chong, A. M. (2011). *Stress and academic achievement among undergraduate students in University Putra Malaysia*. Retrieved from https://www.researchgate.net/publication/257715041_Stress_and_Academic_Achievement_among_Undergraduate_Students_in_Universiti_Putra_Malaysia

Esposito-Smythers, C., Penn, J. V., Stein, L., Lacher-Katz, M., & Spirito, A. (2008). A Test of problem behaviour and self-medication theories in incarcerated adolescent males. *Journal of Child & Adolescent Substance Abuse, 17* (4), 41-56.

Eun-Hyun, L. R. N. (2012). Review of the psychometric evidence of the perceived stress scale. *Asian Nursing Research*, *6*, 121-127.

Fagan, F. F., & Churchill, A. (2012). The effects of divorce on children. *Marriage and research institute,* 1-48.

Feng, Y., & Newman, I. M. (2016). Estimate of adolescent alcohol use in China: a meta-analysis. *Archives of Public Health, 74* (45), 1-12.

Ferreira – Borges, C., Parry, C.D.H., & Babor, T. F. (2017). *Harmful Use of Alcohol: A Shadow over Sub-Saharan Africa in Need of Workable Solutions*. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5409547/

Freeman, M., & Parry, C. (2006). *Alcohol use literature review*. Retrieved from http://saapa.net/research-and-resources/research/alcohol-use-literature-review.pdf

Goel, N., Khandelwal, V., Pandya, K., & Kotwal, A. (2015). Alcohol and tobacco use among undergraduate and postgraduate medical students in India. *Central Asian Journal of Global Health,* 4 (1), 1-11.

Gottfredson, N. C., & Hussong, M. A. (2011). Parental involvement protects against self-medication behaviors during the high. *Addictive Behaviours*, *36*, 1246–1252.

Gould, L. F., Hussong, A. M., & Hersh, M. A. (2012). Emotional distress may increase risk for self-medication and lower risk for mood-related drinking consequences in adolescents. *International Journal of emotional Education, 4* (1), 6-24.

Govender, I., Nel, K., Mogotsi, M. M. (2015). Experiences and opinions of first year students at a previously disadvantaged medical university in South Africa about alcohol consumption. *Journal of South African Family Practice, 8* (1), 313-317.

Govender, P., Mkhabela, S., Hlongwane, M., Jalim, K., & Jetha, C. (2015). Student's experiences of stress and coping. *South African Journal of Occupational Therapy, 45* (3): 34-39.

Gravetter, F. J., & Forzano, L. B. (2011). *Research Methods for the Behavioural Sciences (3rd ed.).* Belmont, CA: Cengage Learning.

Guttmatcher Institute. (2017) *Unintended Pregnancy in the United States.* Retrieved from https://www.guttmacher.org/fact-sheet/unintended-pregnancy-united-states

Hamaideh, S. H. (2011). Stressors and reactions to stressors among university students. *International Journal of Social Psychiatry*, *57(*1), 69–80.

Hartney, E. (2016). *The self-medication theory of addiction*. Retrieved from https://www.verywell.com/the-self-medication-theory-of-addiction-21933.

Hendricks, G. (2015). *The effect of peer pressure and leisure boredom on substance abuse among adolescents in low-income communities in Cape Town.* Retrieved from http://etd.uwc.ac.za/xmlui/bitstream/handle/11394/4180/hendricks_g_ma_chs_2015.pdf;sequence=1

Herrera, R., Berger, U., Genuniet, J., Gerlich, J., Nowak, D., Schlotz, W., Vogelberg, C., Von Mutius, C., WeinMayr, G., Windstetter, D., Weigl, M., & Radon, K. (2017). *Chronic Stress in Young German Adults: Who Is Affected? A Prospective Cohort Study*. Retrieved from http://www.mdpi.com/1660-4601/14/11/1325/htm

Hilmet, C., & Kvasnicka, L. Blood pressure and emotional responses to stress. *Social and Personality Psychology Campus*, *4*(7), 470-483.

Hornby, A. S. (2010). *Oxford Advanced Learners Dictionary-Definitons*. New York: Oxford University Press.

Huang, A. (2014). Alcohol consumption among Asian Americans in the U.S: a systematic review. *Global Journal of Medicine and Public Health,* 3 (6), 1-9.

Isaacs, A. S. A. (2008). *Stress, coping strategies and social support amongst grade 11 students in historically disadvantaged schools*. (Unpublished Masters dissertation), University of the Western Cape: Cape Town.

Keyes, K. M., Hatzenbuehler, M. L., & Hasin, D. S. (2011). Stressful life experiences, alcohol consumption, and alcohol use disorders: the epidemiologic evidence for four main types of stressors. *Psychopharmacology, 3*(7*),* 56 -63.

Khantzian, E. J. (1997). The self-medication hypothesis of drug use disorders: a reconsideration and recent applications. *Harvard Review of Psychiatry*, *4*, 231-244.

Kim, S., & Kim, D. (2012). Alcoholism and diabetes mellitus. *Diabetes and Metabolism Journal, 36* (2), 108-115.

Kio, J. O., Omeonu, P. E., & Agbede, C. O. (2015). Assessment of stress levels among undergraduates in Nigeria: implication for mental health policy. *IOSR Journal of Nursing and Health Science, 4* (1), 18-23.

Klatsky, A. (2015). Alcohol and cardiovascular diseases: Where do we stand today? *Journal of Internal Medicine, 10* (11), 238-250.

Krejcie, R.V. & Morgan, D.W. Sample size Table. *Educational and Psychological Measurement*. 30, 07 – 610.

Kumari, A., & Jain, J. (2014). Examination stress and anxiety: a study of college students. *Global Journal of Multidisciplinary Studies*, *4 (1)*, 31-39.

Kumar, S., & Bhukar, J. P. (2013). Stress level and coping strategies of college students. *Journal of Physical Education and Sports Management, 4*(1), 5-11.

Lachman, A., Nassen, R., Hawkridge, S., & Emsley, R. A. (2012). A retrospective chart review of the clinical and psychosocial profile of psychotic adolescents with co-morbid substance use disorders presenting to acute adolescent psychiatric services at Tygerberg Hospital. *South African Journal of Psychiatry, 18*(2), 53-60.

Lafayette, W. (2006). *Grief has impact on college students' academic performance.* Retrieved from http://www.purdue.edu/uns/html4ever/2006/060404.Seib.study.html

Lagoni, L., & Crawford, E.C. (n.d). *An example of the self-medication hypothesis, treatment completion and outcome.* (Unpublished Masters dissertation). Creighton University: United States of America.

Langa, F. M., & Wilson, K. (2007). An exploratory investigation of co-occurring substancerelated and psychiatric disorders. *Journal of Substance Abuse, 1*, 1–16.

Lee, J., & Jang, S. (2015). An exploration of stress and satisfaction in college students. *Services Marketing Quarterly*, *36*, 245–260.

Lorant, V., Nicaise, P., Victoria Eugenia Soto, V. E., & d'Hoore, W. (2013). Alcohol drinking among college students: college responsibility for personal troubles. *BMC Public Health, 13* (615), 2-9.

Madhyastha, M., Lath, K.S., & Kamath, K. (2014). *Stress coping and gender issues amongst third year medical students.* Retrieved from https://www.researchgate.net/publication/263655905_Stress_Coping_and_Gender_Differences_in_Third_Year_Medical_Students

Mcatee, J. R. (2012). *Self-esteem, alcohol consumption, and risky sexual behaviors in college fraternity males* (Unpublished Masters dissertation). Oklahoma State University, Oklahoma, USA: Oklahoma State University Press.

Melaku, L., Mossie, A., & Negash, A. (2015). Stress among medical students and its association with substance use and academic performance. *Journal of Biomedical Education, 20* (15), 1-9.

Menesses-Gaya, C., Zuardi, A. W., Loureino, S. R., & Crippa, S. A. S. (2009). Alcohol use disorder identification test: an updated systematic reviews of psychometric properties. *Psychology and Neuroscience, 2(*1), 87-97.

Mobach, T., & Macaskill, A. (2011). Motivation to drink alcohol in first year university students: having a good time or simply coping? *Health Psychology Research Archives*, 20 (2), 1-23.

Mogotsi, M. (2011). *Alcohol use by first year students at the University of Limpopo, Medunsa Campus, Gauteng, South Africa.* (Unpublished Masters dissertation). University of Limpopo, Medunsa Campus, Ga-Rankuwa.

Mogotsi, M., Nel, K., Basson, W., & Tebele, C. (2014). Alcohol use by students at an emerging University in South Africa. *J Sociology Soc Anth*, *5*(2), 187-195.

Morisano, D., Babor, T. F., & Robaina, K. A. (2014). Co-occurrence of substance use disorders with other psychiatric disorders: implications for treatment services. *Nordic Studies on Alcohol and Drugs*, 31(1), 5-24.

Mukhtar, S. A. (2014). Substance abuse and stress coping strategy among secondary school students in Kano: causes and consequences. *IOSR Journal of Humanities and Social Science, 19*(1), 21-24.

Naidoo, S. S., Van Wyk, B.J., Higgins-Opitzb, S. B., & Moodley, K. (2014). An evaluation of stress in medical students at a South African university. *South African Family Practice*, *56*(5), 1-5.

Nakalema, G., & Ssenyonga, J. (2014). Academic stress: its causes and results at a Ugandan university. *Journal of African Teacher Education, 3* (3), 1-14.

National Student Financial Aid Scheme [NSFAS]. (2017). *Annual Report*. Retrieved from https://pmg.org.za/committee-meeting/25268/

Olivier, J. H. (2008). *A profile on alcohol consumption among South African: dentists a dentist's perspective.* (Unpublished Doctoral dissertation), University of Pretoria: Pretoria.

Onongha, G. I. (2012). Influence of some factors on alcohol use and abuse among education students of Osun State University, Nigeria. *International Journal of Humanities and Social Science, 2* (11), 276-284.

Osei-Bonsu,E., Appiah, P. K., Norman, I. D., Asalu, G. A., Kweku, M., Ahiabor, S. Y., & Boadu , S (2017). Prevalence of alcohol consumption and factors influencing alcohol use among the youth in Tokorni-Hohoe. *Science Journal of Public Health, 5* (3), 205-214.

Pariet, L., Rynjah, A., & Kharjana, J. (2014). Stress levels of college students: interrelation between stressors and coping strategies. *IOSR Journal of Humanities and Social Sciences*, *19*(8), 40-46.

Peltzer, K., & Ramlagan, S. (2009). Alcohol use trends in South Africa. *Journal of Social Science, 1*, 1-12.

Pillay. A. L., & Ngcobo, H. S. B. (2010). Sources of stress and support among rural-based first-year university students: an exploratory study. *South African Journal of Psychology, 40* (3), 234-240.

Rathakrishnan, B., Molugulu, N., Parasuraman, P., & Narasappa, N. (2012). *The Relationship of Stress, Alcoholism and Sexual Behavior with Mental Health among Secondary School Students: A Study in Sabah, Malaysia.* Retrieved from file:///C:/Users/kathryn.nel/Downloads/1908526230.Articulo5.pdf

Richards-Gustafson, F. (2015). *Common Causes of Stress among Students.* Retrieved from http://www.livestrong.com/article/137914-common-causes-stress-among-students/

Ross, S. E., Niebling, B. C., & Hekert T.M. (2008). Sources of stress amongst college students. *College Students Journal*, *33*(2), 312.

Salami, K. K., & Adesanwo, O. J. (2015). The practice of self-medication for treatment of illnesses for under-five children by mothers in Ibadan, Nigeria. *Research Journal of Drug Abuse 2015, 31*(11), 1-2.

Saleh, D., Camart, N., & Romo, L. (2017). *Predictors of stress in college students*. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5263159/

Seggie, J. (2012). Alcohol and South African youth. *South African Medical Journal, 102* (7), 108-115.

Seipone B. M. M., Gralewski, C., & Balogun, S. (2013). Stress and alcohol use among college students: a case of Molepolole college Students. *IOSR Journal of Humanities and Social Science*, 8 (3), 01-06.

Sevalie, S. (2015). *The association between substance use disorder and schizophrenia among patients attending outpatient services in Mathari teaching and referral hospital.* (Unpublished Doctoral dissertation*).* University of Nairobi: Kenya, University of Nairobi Press.

Sharp, E. H., Coffman, D. L., Caldwell, L. L., Smith, E. A., Wegner, L., Vergnani, T., & Mathews, C. (2011). Predicting substance use behavior among South African adolescents: the role of leisure experiences across time. *International Journal of Behavioral Development, 35*(4), 343–351.

Sibuyi, X. M. (2014). *An investigation into alcohol use amongst female undergraduate students at the University of Limpopo (Turfloop Campus).* (Unpublished Masters dissertation). University of Limpopo. Mankweng: University of Limpopo Press.

Šimundić, A. (2013). Lessons in Biostatitics. *Biochemia Medica, 23,* 12-5.

Skobi, F., & Mafokane, M. (2015). *Reflections of social workers on the experiences of pregnant teenagers during group work sessions*. Retrieved from http://socialwork.journals.ac.za/pub/article/viewFile/566/533

Sonia, S. (2015). Academic stress among students: role and responsibilities of parents. *International Journal of Applied Research, 1*(10), 385-388.

South Africans Against Drunk Driving [SADD]. (2018). *Statistics*. Retrieved from https://sadd.org.za/education/statistics/

Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's Alpha. *International Journal of Medical Education, 2*, 53 -55.

Tesfai, A. H. (2016). *Alcohol and substance abuse among students at University of Kwazulu-natal, South Africa: The protective role of psychological capital and health promoting lifestyle* (Unpublished Doctoral dissertation). University of Kwazulu-natal: Durban. UKZN Press.

Thawabieh, M., & Qaisy, M. (2012). Assessing Stress among University Students. *American International Journal of Contemporary Research, 2(*2), 110.

Thenga, N. E., Mutshaeni, H.N., & Mashau, T.S. (2015). *Secondary school learners stress coping strategies.* Retrieved from http://policyresearch.limpopo.gov.za/bitstream/handle/123456789/1172/Secondary%20School%20Learners%20Stress%20Coping%20Strategies.pdf?sequence=1

Wang, Y., & Chen, X. (2015). Stress and alcohol use in rural Chinese residents: a moderated mediation model examining the roles of resilience and negative emotions. *Drug and Alcohol Dependence, 155*, 76-82.

Watt, M. H., Eaton, L. A., Choi, K. W., Velloza, J., Kalichman, S. C., Skinner, D., & Sikkema, K. J. (2014). "It's better for me to drink, at least the stress is going away": Perspectives on alcohol use during pregnancy among South African women attending drinking establishments. *Social Science & Medicine*, *116*(3), 119-125.

World Health Organisation. (2002). Alcohol in Developing Countries: a public health approach. Geneva: *Mediterranean Journal of Social Sciences, 5*, *20.*

World Health Organisation. (2012). *Global status report on alcohol*. Geneva: World Health Organisation.

World Health Organisation. (2014). Lifestyle Diseases. Geneva: World Health Organisation.

Zhao, X., Selman, R. L., & Haste, H. (2015) Academic stress in Chinese schools and a proposed preventive intervention program. *Cogent Education, 2* (1), 1-14.

APPENDIX 1: SURVEY PROTOCOL

QUESTIONNAIRE FOR STUDENTS STRESS LEVELS AND ALCOHOL USE IN THE UNIVERSITY OF LIMPOPO.

The purpose for this questionnaire is to gather information about stress levels and alcohol use amongst University of Limpopo first year psychology students. Information collected through this questionnaire will be made available to legitimate and interested stakeholders in order to establish partners for development of strategies in relation to solving problems of stress and alcohol use. This questionnaire is not a test but simply an information exercise. Please answer the questions as honestly as possible. Remember that there is no right or wrong answer. Your responses will be treated confidential and anonymous. In order to know more about stress levels and alcohol use at the University of Limpopo, your contribution in this research is valued. Therefore, you are kindly requested to provide the researcher in this questionnaire with accurate information. Your participation will be voluntary, should you wish to withdraw you can do so. Please do not write your name or student number on this paper. A computer will be used to process your responses. **Thank you for your participation.**

Instructions: All fields in the questionnaire should be filled by circling or ticking the appropriate number in the box.

Do you agree to participate?

YES	NO

Section A: Demographic questions

1.Home Language	Sepedi	1
	Tshivenda	2
	Xitsonga	3
	English	4
	Other	5
2.Age	17-20	21-25

(circle your age)	26-30	31-40
3.Gender	Male	1
	Female	2
4.Ethnicity	White	1
	African	2
	Indian	3
	Coloured	4

Section B: (**Perceived Stress Scale) PSS**

Instruction: for each question choose from the following alternatives (circle the answers that apply to you). There is no right or wrong answers.

Statement	Never (0)	Almost never (1)	Sometimes (2)	Fairly often (3)	Very (4)
5. In the last month, how often have you been upset because of something that happened unexpectedly?	0	1	2	3	4
6. In the last month, how often have you felt that you were unable to control the important things in your life?	0	1	2	3	4
7. In the last month, how often have you felt nervous and stressed?	0	1	2	3	4
8. In the last month, how often have you felt confident about your ability to handle your personal problems?	0	1	2	3	4
9. In the last month, how often have you felt that things were going your way?	0	1	2	3	4

10. In the last month, how often have you found that you could not cope with all the things you had to do?	0	1	2	3	4
11. In the last month, how often have you been able to control irritations in your life?	0	1	2	3	4
12. In the last month, how often have you felt that you were on top of things?	0	1	2	3	4
13. In the last month, how often have you been angered because of the things that happened that been outside of your control?	0	1	2	3	4
14. In the last month, how often have you felt that difficulties were piling up so high that you could not overcome them?	0	1	2	3	4

Section C: The Alcohol Use Disorders Identification Test

Instructions: Your answers will remain confidential so please be honest. Circle the number in the boxes that apply to you. There is no right or wrong answer.

15. How often do you have a drink containing alcohol?		16. How many drinks containing alcohol do you have on a typical day when you are drinking?	
Never [Skip to Qs 9-10]	0	1 or 2	0
Monthly or less (2)	1	3 or 4	1
to 4 times a month	2	5 or 6	2
2 to 3 times a week	3	7, 8, or 9	3
4 or more times a week	4	10 r more	4
17. How often do you have six or more drinks on one occasion?		18. How often during the last year have you found that you were not able to stop drinking once you had started?	
Never	0	Never	0
Less than monthly	1	Less than monthly	1
Monthly	2	Monthly	2

Weekly	3	Weekly	3
Daily or almost daily	4	Daily or almost daily	4

19. How often during the last year have you failed to do what was normally expected from you because of drinking?		20. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?	
Never	0	Never	0
Less than monthly	1	Less than monthly	1
Monthly	2	Monthly	2
Weekly	3	Weekly	3
Daily or almost daily	4	Daily or almost daily	4

21. How often during the last year have you had a feeling of guilt or remorse after drinking?		22. How often during the last year have you been unable to remember what happened the night before because you had been drinking?	
(0) Never	0	(0) Never	0
(1) Less than monthly	1	(1) Less than monthly	1
(2) Monthly	2	(2) Monthly	2
(3) Weekly	3	(3) Weekly	3
(4) Daily or almost daily	4	(4) Daily or almost daily	4

23. Have you or someone else been injured as a result of your drinking?		24. Has a relative or friend or a doctor or another health worker been concerned about your drinking or suggested you cut down?	
No	0	No	0
Yes, but not in the last year	2	Yes, but not in the last year	2
Yes, during the last year	4	Yes, during the last year	4

Appendix: 2- TREC Clearance certificate

University of Limpopo
Department of Research Administration and Development
Private Bag X1106, Sovenga, 0727, South Africa
Tel: (015) 268 4029, Fax: (015) 268 2306, Email:Abdul.Maluleke@ul.ac.za

TURFLOOP RESEARCH ETHICS
COMMITTEE CLEARANCE CERTIFICATE

MEETING: 02 November 2017

PROJECT NUMBER: TREC/389/2017: PG

PROJECT:

Title: Exploring the stress levels and alcohol use amongst first entering
                        students at the University of Limpopo
Researcher: TK Nekgotha
Supervisor: Prof K Nel
Co-Supervisor: Prof S Govender
School: School of Social Sciences
Degree: Masters in Clinical Psychology

PROF TAB MASHEGO
CHAIRPERSON: TURFLOOP RESEARCH ETHICS COMMITTEE

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

Note:
i)   Should any departure be contemplated from the research procedure as approved, the
        researcher(s) must re-submit the protocol to the committee.
ii)   The budget for the research will be considered separately from the protocol.
        PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES.

Finding solutions for Africa

APPENDIX: 3- Gatekeepers permission

University of Limpopo
Office of the Registrar
Private Bag X1106, Sovenga, 0727, South Africa
Tel: (015) 268 2407, Fax: (015) 268 3048, Email: Office.Registrar@ul.ac.za

12 December 2017

TK Nekgotha

Email: Kathryn.Nel@ul.ac.za

Dear TK Nekgotha,

GATEKEEPER PERMISSION TO CONDUCT RESEARCH

TITLE: **EXPLORING THE STRESS LEVELS AND ALCOHOL USE AMONGST FIRST
ENTERING STUDENTS AT THE UNIVERSITY OF LIMPOPO**

SUPERVISOR: **Prof. K Nel**
CO-SUPERVISOR: **Prof. S Govender**
SCHOOL: **School of Social Sciences**
DEGREE: **Masters in Clinical Psychology**

Kindly be informed that Gatekeeper permission is granted to you to conduct research at the
University of Limpopo entitled: "Exploring the stress levels and alcohol use amongst first
entering students at the University of Limpopo".

Kind regards,

DR. JEFFREY MABELEBELE
UNIVERSITY REGISTRAR

Cc.   Prof. RN Madadzhe, Acting Deputy Vice-Chancellor: Teaching and Learning
       Mr. T Mabila, Acting Director: Research Development and Administration
       Prof. TAB Mashego – Chairperson: Research and Ethics Committee
       Ms. N Monene – Office Manager: Research Development and Administration

Finding solutions for Africa

Appendix: 4 – Ethics forms (Turfloop Research Ethics Committee)

Date: ……………………

<div align="center">

FORM B – PART I

</div>

PROJECT TITLE: EXPLORING THE STRESS LEVELS AND ALCOHOL USE AMONGST FIRST ENTERING STUDENTS AT THE UNIVERSITY OF LIMPOPO

PROJECT LEADER: Mr Thapelo Kleinboy Nekgotha

DECLARATION
I, the signatory, hereby apply for approval to conduct research described in the attached research proposal and declare that:

1.   I am fully aware of the guidelines and regulations for ethical research and that I will abide by these guidelines and regulations as set out in documents (available from the Secretary of the Ethics Committee); and

2.   I undertake to provide every person who participates in this research project with the relevant information in Part III. Every participant will be requested to sign Part IV.

Name of Researcher: Mr Thapelo Kleinboy Nekgotha

Signature: …………………………………

Date: …………………………………

For Official use by the Ethics Committee:

Approved/Not approved

Remarks:………………………………………………………………………………...

………………………………………………………………………………………………..

………………………………………………………………………………………………..

………………………………………………………………………………………………..

Signature of Chairperson:…………………………………………

Date:……………………

FORM B – PART 11

PROJECT TITLE: EXPLORING THE STRESS LEVELS AND ALCOHOL USE AMONGST FIRST ENTERING STUDENTS AT THE UNIVERSITY OF LIMPOPO

PROJECT LEADER: Mr Thapelo Kleinboy Nekgotha

Protocol for conducting research using human participants

1. Department: Psychology

2. Title of project: **EXPLORING THE STRESS LEVELS AND ALCOHOL USE AMONGST FIRST ENTERING STUDENTS AT THE UNIVERSITY OF LIMPOPO**

3. Full name, surname and qualifications of project leader:

    Thapelo Kleinboy Nekgotha

    B.A (Social Sciences)

    B.A. Honours in Psychology

    Post-Graduate Certificate in Education (Senior Phase and FET)

4. List the name(s) of all persons (Researchers and Technical Staff) involved with the project and identifies their role(s) in the conduct of the experiment:

Name:	Qualifications:	Responsible for:
Thapelo Kleinboy Nekgotha	B. A (Social Sciences)	Carrying out Research
	B.A. Honours in Psychology	
	Post-Graduate Certificate in Education (Senior Phase and FET)	

5. Name and address of principal researcher: Thapelo Kleinboy Nekgotha:

    P.O. Box 181, Babirwa, 0716

6. Procedures to be followed:

Self-report survey/questionnaires will be used for this investigation. Informed consent will be sought from each participant.

7. Nature of discomfort:

The self-report survey could trigger sad memories that could cause anxiety and anger. Affected participants will be referred to clinical psychologist for intervention.

8. Description of the advantages that may be expected from the results of the study:

    a. The study could provide ways of student in dealing with stress while at university

    b. Students could also be made aware of the alcohol usage levels

    c. To recognise if there is any association between stress levels and alcohol use

amongst students.

    d. The body of knowledge regarding stress and alcohol use would be contributed to.

       Signature of Project Leader: ………………………………………………

INFORMATION FOR PARTICIPANTS

PROJECT TITLE: EXPLORING THE STRESS LEVELS AND ALCOHOL USE AMONGST FIRST ENTERING STUDENTS AT THE UNIVERSITY OF LIMPOPO

PROJECT LEADER: Mr Thapelo Kleinboy Nekgotha

1. You are invited to participate in the following research project: **EXPLORING THE STRESS LEVELS AND ALCOHOL USE AMONGST FIRST ENTERING STUDENTS AT THE UNIVERSITY OF LIMPOPO**

2. Participation in the project is completely voluntary and you are free to withdraw from the project, without providing any reasons, at any time.

3. It is possible that you might not personally experience any advantages during the project, although the knowledge that may be accumulated through the project might prove advantageous to others.

4. You are encouraged to ask any questions that you might have in connection with this project at any stage. The project leader and the researcher will gladly answer your questions. They will also discuss the project in detail with you.

5. It may be that you feel discomfort when answering questions about what triggers stress and alcohol usage as a student. However, I will ensure that this is discussed properly with you and if you do find that you have any problems with answering questions. I will ensure that you have proper referral to a professional counsellor/psychologist. The benefits of answering the questionnaire me may be that you are better able to understand the position you are in. The research can help others in your situation.

6. Should you at any stage feel unhappy, uncomforTable or concerned about the research please contact Ms Noko Shai-Ragoboya at the University of Limpopo, Private Bag X1106, Sovenga, 0727, tel: 015 268 2401

PART IV - CONSENT FORM

PROJECT TITLE: EXPLORING THE STRESS LEVELS AND ALCOHOL USE AMONGST FIRST ENTERING STUDENTS AT THE UNIVERSITY OF LIMPOPO

PROJECT LEADER: Thapelo K Nekgotha

I,_____, hereby voluntarily consent to participate in the following project: **EXPLORING THE STRESS LEVELS AND ALCOHOL USE AMONGST FIRST ENTERING STUDENTS AT THE UNIVERSITY OF LIMPOPO**

I realise that:

1. The study deals with the stress level and alcohol use amongst students of the University of Limpopo.

2. The research may hold some psychological risk for me that cannot be foreseen at this stage.

3. The Ethics Committee has approved that individuals may be approached to participate in the study.

4. The research project (that is, the extent, aims and methods of the research) have been explained to me.

5. The project sets out the risks that can be reasonably expected as well as possible discomfort for persons participating in the research. It also sets out an explanation of the anticipated advantages, for myself or others, that are reasonably expected from the research and alternative procedures that may be to my advantage.

6. I will be informed of any new information that may become available during the research that may influence my willingness to continue my participation.

7. Access to the records that pertain to my participation in the study will be restricted to persons directly involved in the research.

8. Any questions that I may have regarding the research, or related matters, will be answered by the researcher and her promoter.

9. If I have any questions about, or problems regarding the study, or experience any undesirable effects, I may contact Mr T.K. Nekgotha (knekgotha@gmail.com) or Prof K.A. Nel (Kathryn.Nell@ul.ac.za)

10. Participation in this research is voluntary and I can withdraw my participation at any stage.

11. If any medical/psychological problem is identified at any stage during the research, or when I am vetted for participation, such condition will be discussed with me in confidence by a qualified person and/or I will be referred to my doctor.

12. I indemnify the University of Limpopo and all persons involved with the above project from any liability that may arise from my participation in the above project or that may be related to it, for whatever reasons, including negligence on the part of the mentioned persons.

SIGNATURE OF RESEARCH PARTICIPANT_____

SIGNATURE OF WITNESS_____

SIGNATURE OF PARTICIPANT_____

Signed at_____ **this** ____ **day of** _____ **20**__

Appendix 5: Sample size Table (Krejcie & Morgan, 1970).

Table 3.1

Table for Determining Sample Size of a Known Population

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	1000000	384

Note: N is Population Size; S is Sample Size   Source: Krejcie & Morgan, 1970

PART II

PROJECT TITLE: Exploring the stress levels and alcohol use amongst first entering students at the University of Limpopo

PROJECT LEADER: TK Nekgotha

Protocol for conducting research using human participants

1. Department: Psychology
    Title of project: Exploring the stress levels and alcohol use amongst first entering students at the University of Limpopo

3. Full name, surname and qualifications of project leader: Kleinboy K Nekgotha. M1 CLINICAL PSYCHOLOGY STUDENT. BA Psychology Honours.

4. List the name(s) of all persons (Researchers and Technical Staff) involved with the project and identify their role(s) in the conduct of the experiment:

    Name:Nekgotha, TK   Qualifications: BA HONS   Responsible for ALL RESEARCH

5. Name and address of principal researcher: Nekgotha, TK, PO Box 181, Bochum, Babirwa, 0716.

6. Procedures to be followed: Participants will be informed about the nature, significance and relevance of the study and will be asked to sign a consent form.

7. Nature of discomfort: The research may hold some psychological risks, participants may experience uncomforTable feelings after filling in the survey questionnaire. They will be referred for counselling if this happens.

8.   Description of the advantages that may be expected from the results of the study:

A better understanding of the stress levels associated with alcohol use amongst first entering students will emerge

Signature of Project Leader:………………………..

Date: ………………………………………………………

PART II

INFORMATION FOR PARTICIPANTS

PROJECT TITLE: Exploring the stress levels and alcohol use amongst first entering students at the University of Limpopo

PROJECT LEADER: TK Nekgotha

1.   You are invited to participate in the following research project:

2.   Participation in the project is completely voluntary and you are free to withdraw from the project (without providing any reasons) at any time.

3.   It is possible that you might not personally experience any advantages during the project, although the knowledge that may be accumulated through the project might prove advantageous to others.

4.   You are encouraged to ask any questions that you might have in connection with this project at any stage. The project leader and her/his staff will gladly answer your question. They will also discuss the project in detail with you.

5.   It may be that you experience or feel discomfort when filling in the questionnaire. You may contact me at through my supervisor if this happens and I will ensure that you are referred to someone that you can discuss the issue with. If you prefer you may contact my supervisor Kathryn.Nel@ul.ac.ac (internal phone 2944) who will also ensure that you get the help you need. The advantage of talking to someone will be that the individual will be a professional and able to understand the position you are in. The results of the study will help guide future research regarding areas that still need investigating on the subject

6.   Should you at any stage feel unhappy, uncomforTable or is concerned about the research, please contact **Ms Noko Shai-Ragoboya at the University of Limpopo, Private Bag X1106, Sovenga, 0727, tel: 015 268 2401**.

CONSENT FORM

PROJECT TITLE: Exploring the stress levels and alcohol use amongst first entering students at the University of Limpopo

PROJECT LEADER: TK Nekgotha

I, hereby voluntarily consent to participate in the following project: Exploring the stress levels and alcohol use amongst first entering students at the University of Limpopo
I realise that:

1.   The study deals with the exploring the levels of alcohol use amongst first entering students at the University of Limpopo (Turfloop Campus).

2.   The procedure or treatment envisaged may hold some risk for me that cannot be foreseen at this stage.

3.   The Ethics Committee has approved that individuals may be approached to participate in the study.

4.   The research project, i.e. the extent, aims and methods of the research, has been explained to me.

5.   The project sets out the risks that can be reasonably expected as well as possible discomfort for persons participating in the research, an explanation of the anticipated advantages for myself or others that are reasonably expected from the research and alternative procedures that may be to my advantage.

6.   I will be informed of any new information that may become available during the research that may influence my willingness to continue my participation.

7. Access to the records that pertain to my participation in the study will be restricted to persons directly involved in the research.

8. Any questions that I may have regarding the research, or related matters, will be answered by the researcher/s.

9. If I have any questions about, or problems regarding the study, or experience any undesirable effects, I may contact a member of the research team or Ms Noko Shai-Ragoboya.

10. Participation in this research is voluntary and I can withdraw my participation at any stage.

11. If any medical problem is identified at any stage during the research, or when I am vetted for participation, such condition will be discussed with me in confidence by a qualified person and/or I will be referred to my doctor.

12. I indemnify the University of Limpopo and all persons involved with the above project from any liability that may arise from my participation in the above project or that may be related to it, for whatever reasons, including negligence on the part of the mentioned persons.

SIGNATURE OF RESEARCHED PERSON

Signed at_____ this ____ day of _____ 20__