



A Model to Prevent Substance Use/Abuse by Student Nurses at the Limpopo College of Nursing, Limpopo Province, South Africa

by

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DECLARATION

I, **Doris Matodzi Netshiswinzhe**, hereby declare that the thesis titled “**A Model to Prevent Substance Use/Abuse by Student Nurses at the Limpopo College of Nursing, Limpopo Province, South Africa,**” hereby submitted to the **University of Venda** for the degree **Doctor of Philosophy in Health Studies**, has not previously been submitted for a degree at this or any other University. It is my own original work in design and execution and all materials that I have used or cited have been indicated and acknowledged by means of complete references in the text and the list of sources.

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DEDICATION

To our Heavenly Father, in whose strength I stand forever. Above all, I praise God's grace for giving me good health, courage, commitment, wisdom and for making it possible for this thesis to be completed.

- ❁ I dedicate this thesis to all the people who were instrumental in supporting me throughout the course of my study.
- ❁ In loving memory of my late parents: Mr Johannes Mmbulaheni Mudau, whose love, guidance and strength geared my life to this day; Rosina Nyawasedza Muthuhadini Mudau Mamuremi, who saw the value of education and taught me patience and perseverance. Mma, you will always be in my mind.
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ABSTRACT

Substance use/abuse is a persistent public health problem in tertiary institutions around South Africa. Alcohol and illegal drugs are the most commonly-used substances by youths in tertiary institutions, including student nurses at the Limpopo College of Nursing (LCN). This study sought to develop a model to prevent substance use/abuse by student nurses at the LCN, South Africa. A convergent parallel mixed-method was used to collect and interpret the data.

A phenomenological research approach was utilized for gathering data from the lecturers, student affairs officers and student nurses in the qualitative design which was explorative and descriptive in nature. The population comprised of student nurses, lecturers and student affairs officials who were purposefully selected. Data were collected through unstructured in-depth interviews and analyzed through Tesch's open-coding steps for qualitative empirical research to develop themes and categories. Data generated the following themes: *The Consequences of Socialization Factors on the Incidence of Substance Use/Abuse by Student Nurses* and *The Effect of Environmental Factors on the Incidence of Substance Use/Abuse by Student Nurses*. Within each theme, sub-themes emerged. Trustworthiness of the collected data were ensured.

A quantitative design was employed to collect data from all student nurses in five campuses of LCN. A stratified sampling technique was used to select respondents and structured questionnaires were used to collect data. A total of 445 questionnaires were collected. Quantitative data were analyzed numerically and through descriptive and correlation statistics using the Statistical Package for the Social Sciences (SPSS) version 24. The results showed that substance use/abuse is more prevalent among students of the age group of between 21 and 24 years that represented the majority in LCN. Data were analyzed independently for which a convergent analytic approach was used to merge the data sets. Validity and reliability were ensured. Ethical considerations were adhered to.

The overall findings highlighted that substance use/abuse by the student nurses was widespread. Various factors, including behavioural, environmental and student earning stipend, have contributed to the problem. The concept “prevention” was analyzed using Walker & Avant’s (2014) steps. The results of both the empirical study and concept analysis formed the basis for model development. The framework of Dickoff, James and Wiedenbach (1963) was used to develop a model. The developed model was validated by the group using a close-ended checklist, analyzed using simple descriptive statistics. The model was in accordance with the legislative provisions of the LCN lease agreement, Higher Education Act as well as the National Institute on Drug Abuse (NIDA, 2003).

Keywords: model, prevention, student nurses, substance use, substance abuse.

LIST OF ABBREVIATIONS AND ACRONYMS

CALS	Centre for Applied Legal Studies
CAPT	Center for Applications of Psychological Type
CDA	Central Drug Authority
CNS	Central Nervous System
COSAD	Council of Smoking, Alcohol and Substance Dependence
CSAP	Centre for Substance Use/Abuse Prevention
DFC	Drug-Free Communities
DOE	Department of Education
DOH	Department of Health
DSD	Department of Social Development
DSM	American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders
EU	European Union
FGD(s)	Focus Group Discussion(s)
GBD	Global Burden of Disease
GHB	Gamma-Hydroxy-Butyrate
GNC	Giyani Nursing Campus
GPA	Grade Point Average
HIV	Human Immunodeficiency Virus
ICD	World Health Organization's International Statistical Classification of Diseases
LCN	Limpopo College of Nursing
LSD	Lysergic Acid Diethylamide
MDMA	Methylene Dioxymethylamphetamine
NACADA	National Campaign against Drug Abuse
NDMP	National Drug Master Plan
NICRO	National Institution of Crime Prevention and the Reintegration of Offenders

NIDA	National Institute on Drug Abuse
ONDCP	The Office of National Drug Control Policy
PEI	Prevention and Early Intervention
POSIT	Problem-Oriented Screening Instrument for Teenagers
SA	South Africa
SAB	South African Breweries
SACENDU	South African Community Epidemiology Network on Drug Use
SADC	South African Development Community
SAMHSA	Substance Use/Abuse and Mental Health Services Administration
SANCA	South African National Council on Alcoholism and Drug Dependence
SFC	Substance Free Community
SKNC	Sekhukhune Nursing Campus
SNC	Sovenga Nursing Campus
SPSS	Statistical Package for the Social Sciences
STAR	Students Taught Awareness and Resistance
STI	Sexually Transmitted Infections
TNC	Thohoyandou Nursing Campus
UNODC	United Nations Office on Drugs and Crime
UNODCSA	United Nations Office on Drugs and Crime South Africa
USA	United States of America
UVRPC	University of Venda Research and Publication Committee
WHO	World Health Organization
WNC	Waterberg Nursing Campus
YRBS	Youth Risk Behaviour Survey

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CHAPTER 1

ORIENTATION OF THE STUDY

1.1 Introduction and background of the study

The prevalence of substance use/abuse has received widespread scholarly attention because of its consequences on the individual's quality of life. Substance use/abuse denotes the harmful or hazardous use of substances such as alcohol and other drugs (Lewis & Theron, 2015). The effect of substance use/abuse primarily leads to dependency syndrome, which is a cluster of behavioural, cognitive and psychological phenomena that develop after repeated use of substances. Substance use/abuse has become a common perpetual social norm among nursing students in Limpopo College of Nursing (LCN) that has caught the attention of some experts, including social behavioural health scientists and public health practitioners.

The impact of substance use/abuse among students have occasioned quite a lot of social and emotional harm, such as fighting, stealing, driving under the influence of alcohol, including factors such as depression, nonattendance/absence from classes (bunking school or classes), poor academic performance, bullying, violent acts, and suicide (Department of Health/DOH, 2013; Ebersohn, Gouws, Lewis & Theron, 2015). The preceding social and emotional problems associated with substance use/abuse, further have poor and precarious health consequences later in life, considering the predominant young ages of the students involved (Bezuidenhout, 2013).

Alcohol and other drugs are commonly used by students in tertiary institutions (DOH, 2013). It is an undisputed fact that most tertiary/college campuses struggle with preventing and/or controlling the use/abuse of substances by their students. Hence, the main aim of this study was to develop a model to prevent substance use/abuse by student nurses at LCN campuses.

Research focusing on substance use/abuse prevention often tends to address the risk factors in identified individuals or groups. A critical observation of old and current studies, in general, shows that these factors are assumed to either increase the odds or decrease the probability that problems will occur amidst substance use/abuse (Bezuidenhout, 2013; Tuwei, 2014).

The link between risk and preventive factors is complicated due to the fact that the salience of a risk factor may change depending on the cultural and physical context, or the presence of other risk and preventive factors, and the developmental status of the group or the individual. Prevention studies on substance use/abuse often rely on a systems perspective to aid in understanding the influences of multiple contexts on human behaviour.

This perspective helps clarify how the individual both influences and is influenced by these contexts and the people and events in them over the course of development. Substance use/abuse is a public health problem with no sovereign boundaries. The concern is a worldwide phenomenon shared by developed and developing countries. Thus, urbanization, a revolution in transportation and communication, with increasing articulation of local and global economies, the involvement of gender roles, growing

youth cultures, and the distance between the cultural experience of the youths and their elders, all influence substance use/abuse (WHO, 2011). For this reason, substance use/abuse in tertiary institutions is a global scourge affecting almost all aspect of students' livelihood (Ebersohn et al 2015). The situation in South Africa is no different.

The main concern of substance use/abuse is the fact that the prevalence occurs in the perils of every race, religion and ethnicity. The study by Ebersohn (2015) noted that any person can develop problems of substance use/abuse or dependence. Having a close relative, such as a parent or sibling, who has a problem with drugs or alcohol, can increase an individual's risk of substance usage and abuse (Tuwei, 2014).

Being closely involved with someone, such as a family member, spouse, or friend, who displays alcoholic or addictive behaviour can also lead to emotional conflicts and subsequent problems in managing relationships and getting along with others. At a particular point in every individual's life, there is always a concern about the use of alcohol or other drugs by that individual or a close relative. However, it is often frightening to consider the possibility of a serious problem.

Most behavioural philosophers explained that a natural first reaction to such fears is to ignore them or to deny that anything could be wrong (Dodds, 2009). It is without a doubt that most substance use/abusers often suffer from social vulnerabilities and helplessness impacts. Dodds (2009) explained that the people who are most often deemed as being 'at risk' or 'vulnerable to social problems' are described as suffering

from 'learned helplessness' and this assumes that those 'at risk' are, on at least some occasions, unable to act in their own best interests, despite the evident danger. A constant anxiety in the mind of a researcher focusing to understand substance addiction is common, and difficult to answer the questions that usually arise. Why do students use alcohol and drugs? However, there is no straightforward or static answer to that question yet, and might still not come up anytime soon.

Alcohol and other drugs act by either depressing or stimulating the central nervous system (CNS), which seems to provide people with predictable and effective ways to change how they feel (Department of Health and Human Services, Centres for Medicare & Medicaid Services (CMS), 2013). Often people choose substances that help them in some way, such as to increase pleasure, or to decrease emotional or physical pain, or to gain a sense of belonging socially and so on.

Therefore, there is always a reason behind substance use/abuse, either defined by the individual or defined to them through social occurrences. The same drug can affect people in different ways, so in the quest to understand an individual pattern of substance use, it becomes pertinent to find out what the particular drug experience means for them (Griffin & Botvin, 2011; van Zyl, 2013). There are quite a number of drugs that people take to attain a particular experience. But these are the three main types of psychoactive drugs that people take to change how they feel or behave, viz., depressants, stimulants or hallucinogens (Griffin & Botvin, 2011). In addition to these, some people also use steroids in ways that can cause harm. However, depressant drugs slow down or depress the functions of the CNS (Department of Health and Human Services, Centres for Medicare & Medicaid Services (CMS), 2013). This does

not mean that they make one depressed; rather the quantity, concentration, environment and mood of the user all contribute to the effects. When taken in smaller quantities, they can cause the person to feel more relaxed and less inhibited (Ebersohn et al., 2015). Hence, when taken in larger quantities they may cause unconsciousness, vomiting and, in some cases, death. Depressants affect concentration and coordination (Griffin & Botvin, 2011). They slow down a person's ability to respond to unexpected situations.

Depressants include alcohol, opiates and opioids (including heroin, opium, morphine, codeine, methadone, pethidine and palfium), cannabis (marijuana, hashish), tranquillizers and hypnotics (including Rohypnol, Valium, Serepax, Mogodon, Eupynos, Ativan, Ketamine, barbiturates (including Seconal, Tuinal, Amytal), some solvents and inhalants (petrol, glue, paint thinners, lighter fluid). When taken in combination, depressants increase their effects and increase the danger of an overdose (Potenza, 2013). Stimulants speed up or stimulate the CNS and can make the user feel more awake, alert, or confident. Stimulants also increase heart rate, body temperature and blood pressure.

Depending on the dose, other physical effects include loss of appetite, dilated pupils, talkativeness, agitation and inability to sleep. Higher doses can 'overstimulate' the user and cause anxiety, panic, seizures, headaches, stomach cramps, aggression and paranoia. Prolonged use of stimulants can also cause these effects. Strong stimulants can 'mask' the effects of depressants such as alcohol, and this can increase the potential for aggression, or pose problems with driving (Thompson, 2015). Mild stimulants include tea, coffee, cola drinks, tobacco/nicotine and ephedrine

(used in cough medicines). Stronger stimulants include amphetamines, cocaine, ecstasy (also classified as a hallucinogen), slimming tablets (Ghuman, Meyer-Weitz & Knight, 2012; van Zyl, 2013).

Hallucinogens distort perceptions of reality. Fantegrossi, Murnane and Reissig (2008) explained that the users may see or hear things that do not actually exist, or that are exaggerated in relation to normal sensory experience. The effects of hallucinogens are not easy to predict, they often depend on the mood of the user and the context of use. The main physical effects are dilation of the pupils, loss of appetite, increased activity, talking or laughing, jaw clenching, sweating, stomach cramps and nausea. The hallucinogenic drugs include LSD (lysergic acid diethylamide), magic mushrooms (psilocybin), mescaline (peyote cactus), ecstasy (MDMA: methylene dioxymethylamphetamine), cannabis (in higher concentrations, as well as being a depressant).

Anabolic steroids do not fit in the above categories as their primary action is to affect body growth and the development of muscle tissue. Some people use anabolic steroids to enhance performance in sport and for body-building. Side effects or consequences of anabolic steroid use include: dependence and tolerance, depression (in withdrawal), organ disease or cancer, increased blood pressure, autoimmune suppression, decreased libido, breast tissue changes in men and women, growth of facial hair and deepening of the voice in women (National Institute for Public Health and the Environment, 2012). With a critical observation of the prevalence of substance use/abuse, a major background for this phenomenon is the school environment where vulnerable young students play an active role.

The concern for substance use/abuse has led to most school-based interventions to generally focus on increasing academic achievement and skills training, including social, decision-making, communication and refusal skills among students. Notwithstanding, the commonness of school-based interventions, research has also demonstrated that other contexts within the social ecology are appropriate and important points of contact for interventions.

This include the family, recreational and religious settings, the community and the workplace. This thesis focuses on developing model-based interventions that would maximize the incorporation and utilization of the various contexts of substance use/abuse to facilitate preventive measures. The next section presents the public health and social burden of substance use/abuse.

1.2 Public Health and Social Burden of Substance Use/Abuse

The incidence of substance use/abuse is a global social problem considered under public health with immediate harmful effects as well as future well-being. Over time, public health experts have been facing the challenges that provide many opportunities for human growth and change. Among these are decisions regarding the role that alcohol and other drugs have on the life of human beings and the community at large (WHO, 2011). The everyday encountering opportunities to use alcohol or other drugs, suggests that everyone have to make informed decisions and choices. Hence, when wrong choices of substance use/abuse are made, it can and does affect immediate relationships, work or academic performance, the chance of contracting a sexually transmitted disease or developing other acute or chronic physical problems, or even their chances of getting into trouble with the law.

Unlike other public health concerns posing severe challenges, which social contexts extensively vary with respect to a country's developmental status ranging from developed-to-middle income as well as developing the economy? The patterning of substance use/abuse tends to have a more similar universal social context. Every now and then, global increases in problems of illicit drugs both reflect and contribute to international tensions. The origins of some of these tensions are clear: rapid changes in political alignment, reduced family and community cohesiveness, increased unemployment and underemployment, economic and social marginalization and increased crime (WHO, 2011; Ebersohn et al., 2015).

At a time when dramatic improvements are taking place in several social and economic sectors, such as communications and technology, the improvement of the quality of life for many people has fallen far short of the potential that exists and the rising expectation of people who know life can be better.

The prevalence of substance use/abuse in South Africa is quite disturbing and a major contributor to most social, economic and health concerns afflicting her population. Substance addiction statistics show that alcohol and illicit drugs consumption in South Africa is twice the global average and rank among the top in Africa (UN World Drug Report, 2014). The average age of drug dependency in South Africa is 16 years and is decreasing in recent times (Thomson, 2015). South Africa is rated among the top 10 drug and alcohol abusers in the world (UN World Drug Report, 2014). In every 100 persons, 15 have a drug and alcohol problem (Thomson, 2015). Hence, the preceding effects contribute to major social crimes and over 86% of all cases preserved for drugs abuse in 2012 was a link to the usage of cannabis, heroin and cocaine.

Thus, considering the average age of 16 at which involvement in substance use/abuse in South Africa is common, statistics further indicate that the addiction also has a sub-optimal parenting implication. The studies by Choate (2015) noted the implication of adverse family characteristic and/or the sub-optimal parenting practices on youths as a greater risk of substance use/abuse and the likelihood of committing crimes before their 21st birthday. Alcoholism and other drug abuse instigate delinquency among youths. Therefore, young children alcoholism and other drug abuse affect the proper functioning of a family (Choate, 2015).

The preceding effects change how families relate and the roles that each member plays. The habit becomes the family's priority. Gruber & Taylor (2006) presented a logical argument that alcoholism and drug abuse must be seen primarily from a family perspective to be properly understood. Most studies pay too much attention to peer influence on youth who have substance use/abuse or dependency problems. The studies are not out of order, considering the fact that substance use/abuse is viewed under social behavioural problem.

A better understanding of family functioning with an alcoholic and drug abuser can be understood through personal experience from one's family or the teenager perspective. Thus, a view of family background or life experience of the students involved in substance use/abuse would do more in aiding the understanding of the prevalence in colleges. The study by Usher, Jackson & O'Brien (2007) observed families who have young students abusing alcohol and/or other drugs and found that the negative effects of drug use that a parent might experience are seen across a diverse range of the youth's schooling-life, health and family relationships, however,

the causes of the effects are not immediately apparent. This indicates that most of the students involved in substance use/abuse come from a family with substance addiction. The studies by Estefan (2014) and Jackson, Usher & O'Brien (2006) noted that families are sometimes fractured by adolescent substance use when the adolescent has serious and on-going illicit drug use. Based on their studies, substance use touches all aspects of family life.

This includes parents who are feeling that the family is being torn apart while also experiencing the youth as complex, demanding, overwhelming and highly stressful. Most families get to a point where they tend to engage with the problem of alcoholism and drug addiction directly, either tolerate it or withdraw from the problem. Smith & Estefan (2014) noticed that alcohol and drug addiction impacted families very broadly, but that there are often barriers to disclosing or talking about the problems. Divulging family secrets is seen as harmful, which reinforced the need to protect the secrets of substance use/abuse within families.

The act of an illicit substance usage below the age of 18 in South Africa, is a statutory crime under the Liquor Act 59 of 2003 and a grave concern in itself to the community. This concern has a potentially short-and long-term hostile effect on the individual well-being (Stevanovic, Atilola & Balhara, 2015). A study in the Vhembe Region of Limpopo Province revealed that substance use amongst students resulted to poorer health and negative social consequences such as unintentional injuries, cancer, homicides and suicides, depression, personality disorders, unplanned sexual activity and increased sexually transmitted diseases (Tshitangano & Tosin, 2016).

Substance use/abuse also contributes to the high rate of school dropout, poor academic performance, unemployment, high level of crime as well as poverty, which are detrimental to the economy of a country (Rezahosseini, Roohbakhsh, Tavakolian & Assar, 2014; Thomson, 2015). These concerns have not been properly addressed by the provincial education department. Until date, there is a very poor attitude on addressing substance use/abuse, addiction and the usage in higher learning education colleges and the campuses in South Africa and Limpopo Province. This is a major concern because of the harm substance use/abuse has on students.

Hence, this is the clear brief description of the issues that this study intend to address by focusing on substance use/abuse preventive measures, in order to improve students' social, academic, and economic well-being in Limpopo College of Nursing. A focused study on drinking patterns among the students in the University of Limpopo from a sample of Northern Sotho, Venda and Tsonga-speaking students demonstrated the trend of alcohol consumption's primary influences, including gender rates. It was found that 79 per cent of male students had consumed alcohol at least once in their lifetime, while 57 per cent had done so consistently (CALSA, 2012).

Among female students, the rates were 26 per cent and 5 per cent, respectively. The study also showed that 34 per cent of males had started using alcohol between the ages of 10–16 years and 47 per cent had started at 17 years or older. With respect to a female student, the rates were 13 per cent and 10.5 per cent respectively. Regarding the consumption influence, 46 per cent of the participants were introduced to alcohol by friends and acquaintances, while 6 per cent were introduced by a family member or relative.

Remarkably, none of the female participants was introduced to alcohol consumption by family members. While research evidence is not available for other tertiary institutions in Limpopo Province, news reports do point to the prevalence of alcohol use both on and off campus (CALS, 2012). Hence, the intervention measures that are often used for substance use/abuse prevention have been based on views rather than verification and one of the models adopted was the vigilant measures to reinforce the message that substances are dangerous.

The incidence of substance use/abuse has primary and secondary factors. These factors are mostly promoted through personal and social influences, in addition to the environment. The primary factors encompass personal influences through rebelliousness, tolerance of deviance, a high value on independence and non-conformance, low school commitment and achievement, positive beliefs and attitudes towards substance use, and lack of self-efficacy to refuse offers of illegal substance and alcohol (Bezuidenhout, 2013; Onifade, 2011; WHO, 2011). The secondary factors embody social influences that favour substance use/abuse among individuals with low socio-economic status and minimal parental education, family disorder and conflict, weak family bonds, low parental supervision, parental permissiveness (Bezuidenhout, 2013; Reza Hosseini et al., 2014).

Thus, influences in itself are the lack of rules regarding substance use, including a family history of substance use, peer substance use, perceived adult approval of use, and perceived peer approval of use (Bezuidenhout, 2013). The environmental influences on substance usage include the legal, economic, and physical availability of illegal drugs and alcohol as well as cultural norms around use. In practice, there are

basically five approaches of substance use/abuse prevention, each based on a different set of fundamental assumptions about behaviours of substance use/abuse and their motivations (Duncan & Gold, 1982 cited in Prevention and Early Intervention /PEI, 2016).

The following are the approaches for the prevention of substance use/abuse:

- ❄ **The Law Enforcement Approach**—Prohibition laws played a substantial role along with the threat or infliction of punishment to prevent substance use/abuse. This model is based on the assumption that substance use/abuse is a moral issue and that people who abused substances must be punished for their own good, not to mention the good of society (PEI, 2016). Another aspect of this model emerges out of the fact that certain substances are characteristically evil or at least too potent for people to be allowed to use. Therefore, only the threat of punishment can keep people from being tempted to experiment with substances and become hopelessly addicted. However, this model has not been completely successful. The study by WHO (2010) explained that prohibition of substances resulted in more substance use/abuse and escalated crime, along with a growth in a substance-rich black market.

- ❄ **The Medical Approach**—this approach looks at substance use/abuse as an infective prevalent. It relies on early identification and isolation of people who use/abuse substances before they can infect others. The model incorporates plans and guides that tell parents and teachers how to identify substance-using/abusing teens (PEI, 2016). The measures might consist of having

parents search their children's rooms for substances or to allow strip search of school lockers when there is adequate suspicion. Jails are replaced by involuntary treatment. Just like the law enforcement model, neither has the medical model ever been successful. The Office of National Drug Control Policy [ONDCP] (2014) noted that substance users labelled as such by this model might become a self-fulfilling prophecy and live up to the expectations engendered by the label.

- ❖ **The Educational Approach**—this approach assumes that substance use/abuse results from poor choices made in ignorance of the hazards and effects of substances (Duncan & Gold, 1982 cited in PEI, 2016). Thus, it is anticipated that educating people about the dangers of substance use/abuse will assist them in making the right decisions and avoid substance use/abuse. Scare tactics, as well as skill-building, are the main bids of this model. Unfortunately, substance education has not been the great success story either, especially not for young people, including students.

- ❖ **The Psychosocial Approach**—Substances are used as a means of coping with the day-to-day frustrations and problems. Prevention then needs to provide opportunities to deal with the concerns from frustration and daily problems. The measures for preventing substance use/abuse might include peer counselling, crisis hotlines, inspirational consideration otherwise called transcendental meditations and so forth. Duncan and Gold (1982 cited in PEI, 2016) explained that activities such as adventure and self-expression are also great alternatives to using substances based on this model.

❄ **The Sociocultural Approach**—this approach focuses on the root of substance use/abuse in the country, not in the individual person. The solution then is in changing communities, society, not in changing the individual (ONDCP, 2014). Those societies that discriminate against the marginalized (such as ethnic minorities) are expected to use and abuse substances. Societies that look the other way given gender discrimination, for example, will not be able to prevent substance use/abuse.

Societies that advertise pills as solutions to problems will find its youth turning to illicit substances for solutions (Sonoma County Department of Health Services, 2007). The ONDCP (2014) recognizes the value of prevention efforts and promotes such approaches as the most cost-effective, common-sense ways to encourage healthy and safe communities.

Several studies have corroborated the connection between substance use/abuse and poorer academic performance, lost productivity, traffic-crash deaths, sexually transmitted infections (STI), hepatitis C, human papillomavirus (HPV), and so on (Bhengu, 2014; PEI, 2016). In addition, substance use/abuse further contributes to high rates of human immunodeficiency virus (HIV) transmission and puts children at risk for abuse and neglect. Therefore, preventing substance use/abuse and dependence before it ever begins can help save lives and reduce costs related to health care and criminal justice. The researcher has identified some gaps that need to be filled in order to prevent substance use/abuse by the student nurses at LCN. The next section presents the problem statement.

1.3 Problem Statement

Substance use/abuse and addiction by the students is a social problem and also a public health issue in Limpopo College of Nursing (LCN). Student nurses are mostly adolescents transiting to adulthood with high social behavioural vulnerabilities impacting on substance use/abuse. The students' youthful vulnerability is further highlighted in the manner in which they repeatedly consume alcohol and other illicit drugs on and off campuses. Substance use/abuse resulting from the student youthfulness is not unexpected considering their age, with its associated changing demands and expectations from different role models and society at large requiring adjustment (Oliha, 2014). So, the incidence of substance use/abuse by the student nurses is assumed to be part of their socialization process.

The prevalence of substance use/abuse by the student nurses in the LCN inflicts a social, health and economic burden on them, including minimizing their full academic potentials. Most students use more than the required years to complete their studies due to poor academic performance. While others fall pregnant and become parents without intention before they complete their studies. In addition to these concerns, there are other social problems such as truancy, academic difficulties, theft, and violent acts committed by the student's consequence of substance use/abuse.

Substance use/abuse is a grave social concern in all the five (5) nursing campuses in Limpopo Province, because of the poor attitude and lack of recognition accorded to it by the provincial education body. Substance use/abuse is responsible for destruction of property, such as doors, fire extinguishers, etc., in the campuses and student residences, rising health care costs in clinical facilities as well as broken families in

the society. It is a problem which may also negatively affects quality patient care as it may result in shortage of staff. This study is based on the researcher's observation as one of the lecturers in one of the nursing campuses at LCN. During theoretical (block) and clinical (practical) exposure, the researcher identified a trend of absenteeism and poor performance by some student nurses (Clinical and theoretical attendance registers, Remedial teaching books). The observations were supported by remarks from some student nurses who alleged that their colleagues are not reporting for class/duty due to effects of substance use.

The researcher also held counselling sessions with some of the students who were involved in physical brawls with security guards, absenteeism and poor academic performance, as a result of substance use/abuse (Counselling book, Incidence book, Class attendance registers as well as the Vice-Principals' communication book and Copies of identified student nurses' written statements.

The Education Laws Amendment Act (2007) provides for random search, seizure, and drug testing at schools, however, the efforts are barely observed in LCN. The Prevention of and Treatment for Substance Use/Abuse Act (2008) requires establishment and registration of programmes and services, including prevention, early intervention, treatment and reintegration, and after-care; and facilitate collaboration among government departments and other stakeholders; establishment of the Central Drug Authority (CDA) to monitor and oversee activities of the CDA. Yet, the efforts are hardly observed in LCN. The study by Tuwei (2014) noted a higher rate of alcohol consumption and other substances among newly admitted students compared to the old students in tertiary institutions.

The student nurses are recruited and admitted without any recognition and profile of substance use/abuse. Considering the fact that the phenomenon of substance use/abuse has family and environmental background influence, therefore, students are admitted into the college with the substance addiction behaviour. Support staff especially cleaners, although they were not participants in this study, mostly raised their concern that there were positive evidence as well as observations on the extent of student nurse's involvement in substance use/abuse.

Cleaners also revealed that waste collection bins were overflowing over the weekends with bottles of alcohol and empty cigarette packets. Likewise, security officers usually reported that they were tired of confronting some students who were trying to sneak in substances to the college campus. It was indicated that some students also jumped the fence in order to gain entrance after the prescribed time which is 22h00 which may expose them to injuries. The above-mentioned circumstances warrant that substance use/abuse has become prevalent among student nurses at LCN (Figure 1.1).

1.4 Rationale of the Study

The study was deemed worthy of undertaking because it contributes to the gaps identified in the problem statement, such as the lack of recognition of substance use/abuse from new intakes in the admission and recruitment process of students into LCN despite efforts from Education Laws Amendment Act, 2007 and CDA 2008. Although the focus on profiling new intakes on substance addiction potentials might seem like ignoring the senior students, this study did so with complete priorities on gaining an understanding and addressing ongoing behaviours related to the substance use/abuse among older students.



Figure 1.1: Alcohol drinking by students as evidenced by empty bottles in one of the students' residences

Thus, the main rationale to undertake this study was to develop a model that can be used to prevent substance use/abuse by the students in LCN. Another rationale to undertake this study was that the family background of nursing students on substance

addiction has not been taken into consideration, therefore, a message on preventing substance use/abuse should be initiated for students, mainly from homes with a history of substance addiction. Another rationale for undertaking this study was that the LCN communities were contributing to the prevalence of substance use/abuse—therefore, this study also sought to probe the socialization patterns and practices responsible for the prevalence of substance use/abuse.

1.5 Significance of the Study

Researchers on substance use/abuse within the African context have theorized that phenomenon is the product of socialization (Bezuidenhout, 2013; Reza Hosseini et al., 2014; Tuwei, 2014). Awosusi (2013) and Thomson (2015) explained that in South Africa the incidence of substance use/abuse is potentially determined in the developmental process of the person. This suggests that substance use/abuse incidence is anchored around the development of children and their socialization values. The context of substance use/abuse in LCN by students has a peculiar difficulty arising from lack of its profiling, thus allowing the prevalence of substance use/abuse to penetrate all facets of campus communities without appropriate prevention measures and control.

The significance of this study adds to the literature on preventing substance use/abuse by students in LCN and other colleges with similar social contexts. This study would help nursing education administrators (particularly colleges of nursing, as well as lecturers) and the students, on the tactic to prevent and/or reduce substance use/abuse. The study would also benefit the policymakers, government departments, particularly the South African National Council on Alcoholism and Drug Dependence

(SANCA), in designing future preventive programmes and policies, that places priorities on substance use/abuse in tertiary institutions, and due recognition would be accorded, as well as researchers in view of the findings.

1.6 Purpose of the Study

This study critically observed the prevalence of substance use/abuse by students at LCN, in order to develop a model that can prevent substance use/abuse in the various nursing campuses in Limpopo Province. This study will further empower students studying at LCN with the chance of healthy development, good academic performance and achievements.

1.7 Objectives of the Study

In order to achieve the purpose of this study, the following objectives were pursued:

1.7.1 Phase 1: Stage 1—Qualitative Approach Objectives

- ✿ To explore the factors responsible for the incidence of substance use/abuse by the student nurses at LCN.

Specific Objectives

- ✿ To explore if the family background of the students who use/abuse substances in LCN plays a role;
- ✿ To explore the role played by the LCN on the prevalence of substance use/abuse; and,
- ✿ To explore and describe the factors contributing to the incidence of substance use/abuse by students at LCN.

1.7.2 Phase 1: Stage 2—Quantitative Approach Objectives

- ✿ To examine the correlation between substance use/abuse and its consequences on the quality of life of student nurses at LCN.

Specific Objectives

- ✿ To examine the type of substance use/abuse by the students in the LCN;
- ✿ To examine the impact of the substance use/abuse on the students' academic achievement in LCN and
- ✿ To examine the impact of the substance use/abuse on the quality of life of students at LCN.

1.7.3 Phase 2: Concept Analysis and Model Development

1.7.4 Phase 3: Model Validation

1.8 Research Hypothesis—Quantitative Approach

Phase: 1

There is a correlation between substance use/abuse by students LCN and their academic achievement.

- ✿ **H1**—the type of substance use /abuse by the students in the LCN is affecting their academic performance.
- ✿ **H2**—the substance use/abuse by the students has an impact on their academic achievement in LCN.
- ✿ **H3**—the substance use/abuse by the students has an impact on their quality of life.

1.9 Research Question—Qualitative Approach

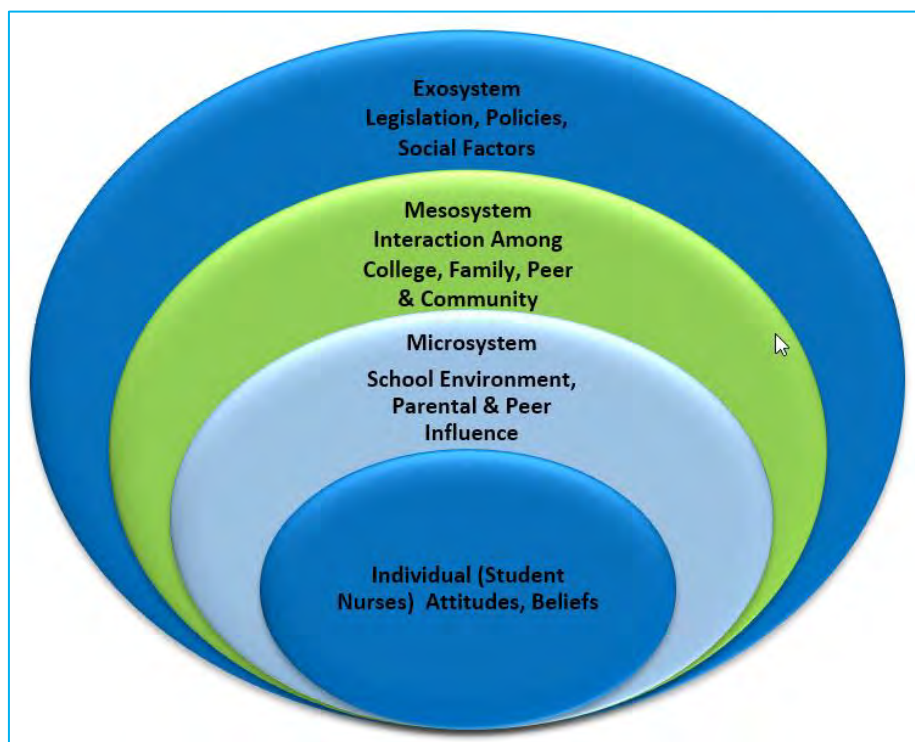
The qualitative research component was guided by the following questions:

- ✿ What are the factors responsible for the incidence of substance use/abuse by the students at LCN?
- ✿ What is the role played by the family background of the students who use/abuse substances in LCN?
- ✿ What is the role played by the LCN on the prevalence of substance use/abuse?
- ✿ What are the social factors contributing to the prevalence of substance use/abuse by the students in LCN?
- ✿ What are the suggestive measures that can be used to prevent substance use/abuse by the students' at LCN?

1.10 Overview of the Ecological System Theoretical Framework

A framework is the overall conceptual underpinning of a study. It is a theory on which a study is based (Polit & Beck, 2017). In this study, Bronfenbrenner's Ecological Systems Theory (Bronfenbrenner, 1989) was applied because it relates to the prevalence, contributory factors of substance use, consequences on the quality of life, academic performance as well as the developing a model to prevent substance use will serve as a theoretical framework for this study (Figure 1.2). The concepts that guided ecological system theory has a history of development based on the human-in-environment paradigm. Bronfenbrenner formulated the Ecological Systems Theory to describe how the inherent qualities of a child and his/her environment interact to

influence growth and development. Bronfenbrenner advocated the importance of studying a child in the background of multiple environments, likewise known as ecological systems in the attempt to understand his/her development. The groundbreaking work of Bronfenbrenner in human ecology from the family to economic and political structures have come to be viewed as part of the life course from childhood through adulthood.



Source: (Bronfenbrenner, 1989)

Figure 1.2: Bronfenbrenner's socio-ecological framework

A theoretical framework is a logical grouping of connected ideas created to draw numerous aspects that are relevant to a complex situation together (Brink et al., 2012). It is also based on propositional statements resulting from an existing theory. Bronfenbrenner's framework implies that individuals who use/abuse substances are

affected by different types of environmental systems. The nested structures of these environmental systems start with the individual purview, moving outwards to the microsystem, the mesosystem and finally, the exosystem (Figure 1.2). The ecological model takes a holistic view of the problem and demonstrates that factors contributing to substance use/abuse are interrelated and prevention measures or programmes to curb the scourge should as well be integrated. The pictorial view of the Bronfenbrenner socio-ecological framework provides a good description of the developmental stages. Mohasoa (2010) and Kane & Ballue (2013) further noted that the youth use substances because they are overwhelmed by the challenges in their own lives (developmental stages), families, school and society at large. For example, stressors in their own lives could be loss of a loved one which may lead them to take substances in order to escape the misery associated with the stressful environment.

An individual naturally finds him-/herself concurrently entangled in different ecosystems, from the most intimate home ecological system moving outward to the larger school system and the most expansive system which is society and culture. Each of these systems inevitably interacts with and influences each other in every aspect of the child's life (Bronfenbrenner, 1989; Awosusi, 2013).

The Bronfenbrenner model organizes contexts of development into different domains or levels of external influence. The levels are categorized from the most intimate level to the extensive one. Microsystem substance use/abuse and addiction influencing factors within the individual domain include gender, genetic predisposition, age, alcohol knowledge, low self-esteem, impulsivity and sensation seeking (Ramsoomar, 2015).

The LCN does not have strict substance prevention measures. Hence, high incidence of substance use-related problems by the student nurses. Moreover, it becomes easy for student nurses to bring substances in the premises and use them as they wish. Families, churches, schools and peer groups on the other hand the support system to ensure rehabilitation and harmony.

Microsystem and Mesosystem work interchangeably as a unit. The mesosystem involves the interactions and relationships between the microsystems. The unit views individuals in this study as students who are members of families, churches, schools and peer groups which, in many ways, influence their behaviour through primary and secondary socialization processes.

Student nurses are individuals who leave the microsystem and mesosystem which serve as a support system to enter the macrosystem which may have a different culture and environments which will shape their behaviour (Bezuidenhout, 2008; Atwoli, Mungla & Ndung'u, 2011). Behaviours that are untoward, such as substance use, require the functional specialization of health services to restore health, regardless of the students' age, gender, religion, ethnicity or racial orientation.

Macrosystem which takes into consideration the attitudes and ideologies of culture which may influence student nurses as living, social and cultural beings to behave according to the beliefs and values of the environment in which they found themselves (Donohew, Sypher & Bukoski 2012). Student nurses undergo training at college campuses and are exposed to clinical areas which have their unique organizational culture, climate and atmosphere which are capable of shaping their behaviour.

Exosystem embraces the socio-economic and political environment as sub-systems of the social system (Awosusi, 2013). Exosystem, according to Parsons' views of a social system, is integrated and viewed as the whole which is more than the sum of its parts, which is the system (George, 2012). The ecosystem views neighbours and mass media as agencies which shape students' behaviour either positively or negatively, depending on how these impact on their personality make up.

Neighbours are capable of becoming social movements that can resist the use of substances in their community and may develop social services to reduce the scourge of substance use by students. Neighbours, in this context, are peers in campuses of the College and hospitals which entered into an agreement with the LCN for student exposure and nearby communities where students can learn new behaviours including use of substances (Donohew, Sypher & Bukoski 2012).

Mass media is a source of information that influence students' behaviour either positively or negatively. On the other hand, mass media can be used for campaigning against substance use and promotion of healthy lifestyle (Ebersohn et al., 2015). Activities within the environment are sources of economy for the survival of the community such as outlets and should abide by the law of the country when manufacturing products such as substances that may be used as well as selling them (Awosusi, 2013).

Political environment is also responsible for establishment of institutions which assist in curbing the use of substances and should effective (Ebersohn et. Al, 2015). Legislations, policies as well as rules and regulations should be drawn and reviewed

in this environment. Therefore, to ensure sustainability of the system, sub-systems should perform their functional specialization to reduce behaviours which could be detrimental to the system as a whole. Based on the evidence provided above, this theory will inform the conceptualization of the research regarding the methodology, design, analysis procedure and model that would be used to prevent substance use by student nurses to sustain the ecosystem of LCN, South Africa.

1.11 Assumptions of the Study

The main assumption of the model to prevent substance use/abuse by student nurses at LCN required to be tailored in the context of a comprehensive socialization experience of the students. Therefore, this study primarily assumes that the lack of adequate recognition and observation of substance usage and addiction in LCN contribute to the incidence of substance use/abuse. This study further assumes that the family background of substance usage plays a substantial role and further contributes to the incidence of the substance use/abuse by student nurses in LCN. The study presupposes that the consequences of the substance use/abuse by students in LCN play a role in their poor academic achievement and quality of life. Thus, substance use/abuse and addiction imply the same item and were used interchangeably as each word fits appropriately in the contexts of this study.

1.12 Definitions of Terms

1.12.1 Model

A model is described as a symbolic depiction of reality by words (Brink et al., 2012). It provides a schematic representation of certain relationships by phenomena, and it shows symbols or diagrams, mathematics notation, pictorial or physical material to

represent an idea (Chinn & Kramer, 2012). In this study, a model refers to a method or tactics that LCN have to put in place to curb, delay initiation, to reduce and to abstain from substance use.

1.12.2 Prevention

Prevention is a proactive process that empowers individuals and systems to meet the challenges of life's events and transitions by creating and reinforcing conditions that promote healthy behaviour and lifestyles (Stevenson & Waite, 2011). It generally requires three levels of reducing action, namely: primary, secondary and tertiary. In the present study, prevention refers to activities and policies implemented/intended to enable student nurses to stay healthy and free from substance use.

1.12.3 Substance Use

Substance use refers to the consumption of alcohol and other drugs which does not lead to addiction, whereas it may come with the risk of addiction (Buddy, 2016). It is the casual, recreational use which is not harmful (Buddy, 2016). In this study, substance use shall mean the use of all chemicals such as alcohol and other drugs that produce occupational problems, academic difficulties, and risky behaviour by the student nurses in LCN.

1.12.4 Substance Abuse

Substance abuse refers to a long-term, pathological use of alcohol and/or other substances characterized by daily intoxication, inability to prevent consumption and impairment in social or occupational functioning (Awosusi, 2013). In this study, substance use/abuse shall mean the inappropriate consumption of alcohol and other

drugs and tobacco, including prescription drugs or other materials, including over-the-counter medicines for mood-altering purposes by student nurses in LCN.

1.12.5 Student Nurses

Student nurses refer to individuals studying at a university/college or other places of higher education such as persons who are enrolled in a school for professional nurses or school for licensed nurses (Stevenson & Waite, 2011). In this study, student nurses shall mean a male or female person, youth/adolescent from all ethnic or racial backgrounds, aged 18-25 years registered with the LCN, for the R425 SANC programme, leading to registration as a professional nurse, that is, Diploma in (General, Psychiatry, and Community) and Midwifery Science.

1.13 Research Design

1.13.1 Phases of the Study

The researcher used mixed-methods due to the nature of data which combines the qualitative and quantitative characteristics as supported by Cresswell & Clark (2011). In this study, an exploratory and descriptive mixed-methods research was used to supplement each other. Exploratory studies are interested to increase knowledge in a specific field of study in cases where previous studies have been piloted (Babbie & Mouton, 2003, cited in Du Toit & Mouton, 2013).

Descriptive studies have their main objective as indicated above. In addition, a convergent design was used to acquire different, nonetheless, balancing data on the same topic to best comprehend the research problem (Morse, 1991, cited in Cresswell et al., 2009). The current study is divided into three phases:

❖ **Phase 1: Stage 1—Qualitative Design Objectives**

The objectives of this stage were to:

- ❖ Determine the factors responsible for the incidence of substance use/abuse by the students at LCN;
- ❖ Explore if the family background of the students who are substance users/abusers in LCN plays a role in them;
- ❖ Explore the role played by the LCN on the prevalence of substance use/abuse; and
- ❖ Examine the social factors contributing to the prevalence of substance use/abuse by students at LCN.

❖ **Phase 1: Stage 2—Quantitative Design Objective**

The objectives of this stage were to:

- ❖ Explore and describe the correlation between substance use/abuse by students of LCN and their academic achievement;
- ❖ Examine the types of substances used and abused by the students in the LCN that are affecting their academic performance;
- ❖ Evaluate the impact of the substance use/abuse on the students' academic achievement in LCN, and
- ❖ Investigate the impact of the substance use/abuse on the students' well-being and health in LCN.

❖ Phase 2

This phase aimed to develop a model that can prevent substance use/abuse by the students at LCN under the following headings:

- ❖ Concept Analysis
- ❖ Model Development
- ❖ Description of the Model

❖ Phase 3

Validation of the model will be addressed in this phase.

1.13.2 Population

❖ Phase 1: Stage 1—Qualitative Approach

The targeted population that participated in the qualitative approach were twenty-three (23) students, nine (3) student affairs officers, and twenty-nine (29) college lecturers.

❖ Phase 1: Stage 2—Quantitative Approach

The target population comprised of all student nurses training at the LCN. Thus, a total of 449 students from the population of the LCN were sampled to participate in this study through a quantitative approach. LCN has five (5) campuses, hence student nurses were drawn from all the 5 campuses.

❖ Concept Analysis and Model Development

❖ Phase 3: For the validation of the model, the target population comprised of management, student affairs officers and lecturers.

1.13.3 Sampling

Non-probability stratified sampling was used to select participants from corresponding target populations, namely: student nurses, lecturers and student affairs officers as well as probability stratified random sampling to select student nurses.

1.13.4 Data Collection Instruments

During Phase 1: Stage 1, data were collected by means of in-depth interviews with the students, lecturers and focus group discussions (FGDs) with the student nurses. In Phase 1: Stage 2, data were collected from the student nurses by means of a self-administered questionnaire.

1.13.5 Trustworthiness of the Data

Trustworthiness in this study was ensured by applying Lincoln & Guba's (1985) criteria for judging the quality in qualitative design. The four constructs, namely: credibility, transferability, dependability and confirmability were applied and are described in detail in Chapter 3. Credibility was ensured through prolonged and varied field experience, collected data until saturation was attained, interview technique and referential adequacy (Polit & Beck, 2012).

Dependability was ensured by doing an inquiry audit of the data and appropriate supporting documents were scrutinized by an external reviewer as well as using a voice-recorder and the transcripts which were available to the external auditor for verification, when considered necessary. Confirmability was ensured by conducting the interview until data saturation was reached and an audit trail was developed, which was a systematic collection of documentation. Transferability was ensured by

describing the research setting richly and thoroughly, and also describing what transpired during the interviews in detail (Creswell, 2014, Polit & Beck, 2012; Gunawan, 2015).

1.13.6 Validity and Reliability for Phase 2

Validity was ensured by conducting a literature review and providing operational definitions of key concepts. The researcher ensured validity by applying basic ways to assess the validity of an instrument that included face, criterion, content, and construct validity. To ensure face validity, the researcher submitted the measuring instrument to experts who judged the instrument based on their knowledge and experience in social sciences. For criterion validity, the researcher structured questions on the instrument that were, for the greatest part, modified and resembled that link with study objectives.

In order to ensure content validity, the developed questionnaire was given to some experts in social sciences to scrutinize the content in relation to the study objectives. Furthermore, construct of the instrument was based on logical relationship among variables and the underlying theories. The researcher ensured that the information in the questionnaire was reliable and valid, based on the current research (Creswell et al., 2011; Polit & Beck, 2016). The researcher ensured reliability by developing the questionnaire from existing ones in consultation with the promoters.

1.13.7 Data Analysis

In Phase 1, Stage 1, the researcher used Tesch's open-coding technique to analyze the data (Creswell et al., 2009). During data reduction, the richness of the data was

maintained. The themes and patterns from data were identified (Burns & Grove, 2011). Phase 1—Stage 2 and Phase 3 data were analyzed by a statistician by means of the Statistical Package for the Social Sciences (SPSS) version 24. Finally, the researcher interpreted how the combined results answered the qualitative and quantitative, and mixed-methods questions (Creswell et al., 2011).

1.13.8 Ethical Considerations

In this study, ethical procedures encompassed ethical clearance, approval to conduct the study, quality of the researcher and the research project. Confidentiality, anonymity and informed consent are deliberated in full in Chapter 3.

1.14 Outline of the Dissertation

The study comprises of eight chapters, set out as follows:

Chapter 1 Orientation of the Study

This chapter provided details of the background of the study, the research problem, and the statement of the problem, the rationale of the study, the significance of the study, the purpose of the study, the objectives of study, the study hypothesis, and the research questions, the assumptions of the study, definition of terms, outline of chapters and summary of the chapter.

Chapter 2 Literature Review

This chapter covered the introduction, perceptions of substance use/abuse and health consequences, incidences of substance use/abuse developed nations, Africa and South Africa, the contributory factors of substance use/abuse, intervention and prevention measures of substance use/abuse. Theoretical framework provided the overview of ecological system theory, as well as the application of theory.

Chapter 3 Research Methodology

This chapter elaborated the research design and approach, the research site, the sampling procedure and recruitment, the study population, the data collection methods and procedures, close-ended questionnaire, the structured interviews method and procedures, reliability and validity, data analysis, ethical consideration and summary of the chapter.

Chapter 4 Analysis and Interpretation of the Results

In this chapter, the findings of the study were analyzed, interpreted and controlled through the literature.

Chapter 5 Concept Analysis

This chapter discussed the concept analysis of Phase 3 of this study.

Chapter 6 Model Development

This chapter discussed the model development and is a description of Phase 2 of this study.

Chapter 7 Model Validation and Justification of the Original Contribution to the Body of Knowledge

This chapter discussed the model evaluation of Phase 3 utilized in this study and focuses on the justification and contribution to the body of knowledge.

Chapter 8 Summary of Research Findings, Limitations, Recommendations and Conclusions

This chapter provides the conclusion, including strength and limitations of the research findings. There are also recommendations with reference to the presented research, guidelines to operationalize the model and future research.

1.15 Summary

This chapter presented a brief exposition of the study introduction and background that helped to lay out the social context from a global perspective and provide the research problem and then the statements of the problem that stipulated the focal points of the study. The chapter further specified the study rationale and the significance of the study, which purported to fill in gaps in both academic literature and applicable policies. Then, the purpose of the study and the research hypothesis/questions, and objectives were detailed with respect to critical adherence to the main research focus. The conceptual framework, definition of concepts and a brief discussion of research design, trustworthiness, ethical consideration as well as outline of chapters followed. The chapter basically located issues that subsequent chapters built on and addressed logically. Chapter 2 will focus on the literature review.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter is a review of literature relevant to the prevention of substance use/abuse by students. Numerous authors defined a literature review as a process of finding, reading, understanding and forming conclusions about published research methodology and theory by authoritative scholars on a particular topic. A literature review determines and compares previous studies, and assists to avoid duplication as well as preventable repetition (de Vos et al., 2011; Burns, Grove & Gray, 2011).

2.2 Scope of the Literature Review

This chapter describes background information and review the literature related to substance use/abuse among college students. This section presents relevant literature reviewed from national and international sources. The views of various scholars, researchers and/organizations were carefully scrutinized and analyzed in an attempt to reach a realistic account of the problem.

A literature review is the purposeful scanning of relevant publications, an intensive reading, critical analysis of the materials and selected publications (Brink et al., 2012).

A literature review is not a description of what has been written by an author or researchers, but it is a critical analysis, synthesis and development of an argument in a meaningful way.

It is an objective and a thorough summary of available and relevant research for the specific topic under study. A literature review is a written argument that supports a dissertation's evidence by building a case from credible sources or support from previous studies. It is an organized way to search a topic under study.

2.3 Purpose of the Literature Review

The purpose of a literature review is to afford orientation on what has been known concerning the specific topic under study. It assists the researcher to have a deeper insight and understanding about the topic along with the method that could be applied to achieve validity and reliability. It introduces the researcher to the context of phenomenon and provides additional justification for the intended study. A literature review aims to provide the researcher with up-to-date information, with current concepts on the topic and forms a justification for future studies (Tichapondwa, 2013). Therefore, a literature review evokes further information on the problem so that evidence-based outcomes can be designed and implemented. These can be materialized through law enforcement, programme designing and developing intervention strategies that could help to curb the problem under study (Tichapondwa, 2013).

2.4 Literature Search Methods and Mechanisms

2.4.1 Literature Search Methods

Literature review methods have specific strengths as Cronin et al. (2008) suggested that there are different methods of literature review that include narrative literature review which critiques, summarizes and discusses literatures under the chosen topic to help acquire a body of knowledge and draw conclusion about the topic under study.

This traditional way of literature review is selective with regard to the source of information searched, reviewed and included. According to de Vos et al. (2011), the ultimate purpose of a literature review is to provide the reader with wide-ranging background for understanding the literature in a chosen area and to highlight the significance of new research (Cronin et al., 2008).

Moreover, a literature review helps to identify gaps in the available research and to refine the research question as appropriate. A *Review* is useful for gathering the enormous volume of literatures for analysis and detailed synthesis. The second type is a *Systematic Review* where a more rigorous approach is applied to review literature in a specific study area. The purpose of this kind of review is to provide the reader with a complete list of a known inclusion and exclusion criteria to identify, critically evaluate and synthesize all literatures under a particular topic of interest (Cronin et al., 2008).

Different scholars suggested that before starting a literature review, it is important to establish the search terms and take into account how the information can be searched (Machi & McEvoy, 2012). This is followed by formulating the research questions and setting inclusion and exclusion criteria for the searched publications. This, in turn, is pursued by selecting and accessing data, detailing the time frame and assessing the quality of data explored. Finally, analysis and synthesis of the findings is done in order to come up with appraisal of evidence and intention of providing valuable recommendations (Machi & McEvoy, 2012). A literature review is a continuous process from the inception of a research study to the final submission of the dissertation.

The literature review is an aid to gathering sufficient information with the fundamental aim of providing comprehensive knowledge related to the topic under study. Therefore, to ensure whether the literature review has explored the area of study in a sound, inclusive and comprehensive manner, a systematic approach was undertaken to thoroughly search and explore recent literature from different sources (Aveyard, 2014).

In this study, the aim of the literature review was to outline the experiences of substance use/abuse in colleges and to discuss strengths and limitations of the existing approaches to curb the current practice. Henceforth, the current study employed both traditional and systematic reviews of available literatures to answer the research questions. In the light of the above, publications with content relevant to the topic under study were explored, repeatedly read and systematically analyzed. Some of the techniques like scanning and skimming were used to identify relevant publications thereby quickly checking contents and retaining it for further use.

2.4.2 How the Literature Review Was Conducted

Key steps for undertaking literature review, according to Machi and McEvoy (2012), involve selecting the review topic, carrying out a literature search, and reading, critiquing, analyzing, summarizing and finally writing key findings. Mostly, the steps followed for the literature review were: searching and identifying publications relevant to the topic under study; categorizing and sequestering the publications based on the relevancy to the topic and arranging the selected articles in order of relevancy; intensively reading and analyzing those articles which were identified as appropriate. The researcher checked the methodology used, adequacy of the sample size, data

analysis techniques and ethical issues followed for each searched publication. A critical appraisal based on key statements and arguments described was done. Major findings were summarized with exhaustive description of the subject. Finally, knowledge gaps in the area of substance use/abuse by students were identified and documented. This has assisted the researcher to develop a workable strategy in order to address the problem under study.

2.4.3 Sources of Literature, Search Tools and Criteria

In order to gain an in-depth insight and understanding concerning substance use/abuse, a detailed conceptual and practical literature review was done. Both primary and secondary sources were consulted. Online and print research publications, books, articles and journals from the University of Venda library and other sources were explored and consulted. The consulted sources were organized chronologically in alphabetical order in the reference section. Lastly, this was followed by critical reading and evaluating of what has been found, discussions on the findings and performing summary conclusion (Lyons, 2015).

2.4.4 Inclusion Criteria for Searched Articles

The review considered a set of criteria for inclusion of research publications. The researcher used the following requirements as criteria: literatures of recent publications that covered articles of the past five years, publications of some articles beyond five years like policies, books and magazines were also exceptionally considered as were studies that focused on substance use/abuse and related problems, all studies that were published in English, and only publications from trusted sites.

2.4.5 Exclusion Criteria for Searched Articles

A set of exclusion criteria was used to ignore certain literature. Criteria used by the researcher for exclusion of publications included: publications older than five years; studies published before 2010 were not considered, publications which were not relevant for the intended research objectives and research studies that were not written in English.

2.4.6 Article Searching Techniques

Literature searching techniques involve specifying an appropriate language for the search, brainstorming, scanning and skimming to determine what data should be included for the review. This technique of literature search usually generates the strongest evidence and support the topic under study. To do so, a developmental and/organized way was used to search the topic under study. Once hard copies or electronic documents were accessed, quick scanning of the article was done to locate keywords. In this specific study, scanning involved a swift look at the keywords related to alcohol and substance use/abuse. Then, skimming which is speed-reading through the articles was done in order to get basic idea and relevancy of the literature for the topic under study. Finally, a list of references was cited and/organized in alphabetical order (Machi & McEvoy, 2012).

2.4.7 Keywords Used for the Search

Throughout the literature review, keywords used for the search included: adolescents, adolescent's developmental changes, adolescent risk-taking behaviour, perspectives on substance use and abuse, available strategies to curb the problem under study, college students. However, the term 'substance use and abuse' were used with regard

to intake/consumption of substances. After identifying the review articles, appraisal was followed based on frameworks and techniques for quantitative and qualitative research publications (Cresswell, 2011). In this study, the literature review addressed the perception of substance use/abuse and consequences, as the patterned use of the substance in quantities that are harmful to the user and others, as well as a form of the substance-related disorder. Furthermore, the two major notions behind substance use/abuse are either a genetic disposition which is learned from others or a habit which, if addiction develops, manifests itself as a chronic debilitating disease.

The incidence of substance use/abuse in developed nations, Africa and South Africa, in particular, was also reviewed. The literature review further addressed the contributory factors of substance use/abuse, as a very individualistic phenomenon, despite the influence of several factors to developing an addiction. Vital to developing substance use/abuse is largely within the individual developmental features. The intervention and prevention measures for substance use/abuse were also addressed. Basically, the review compiled and evaluated the research available on each topic or issue. In this study, the literature review was guided by the research objectives, Bronfenbrenner's (1989) model and Mead (1934; cited in Woodward, 1982) and Bandura's (cited in Woodward, 1982; 1963; 1977) social learning theoretical framework.

2.5 The Perception of Substance Use/Abuse and Health Consequences

Substance use/abuse can as well be referred to as drug abuse which involves the patterned use of a drug in which the user consumes the substance in quantities and/or with a method that is harmful to him-/herself or others. It is also a form of the substance-related disorder. Several perceptions of substance use/abuse are used in

public health, medical and criminal justice contexts. In some cases, the criminal or anti-social behaviour occurs when an individual is under the influence of a drug, and long-term personality changes in the individual may occur as well (Jensen, Cushing, Aylward, Craig, Sorell & Steele, 2011).

In addition to the likelihood of physical, social and psychological harm, use of some drugs may also lead to criminal penalties, although these vary usually subject to the local authority. The drugs that are most often connected with substance use/abuse include alcohol, cannabis, barbiturates, benzodiazepines, cocaine, methaqualone, opioids and some substituted amphetamines (UN, 2012). Therefore, when any of these substances or a combination thereof is consumed in a repeated pattern and at once, it leads to abuse or addiction.

In most situations, the precise cause of substance use/abuse is often not clear or certain. There are basically two major theories behind substance use/abuse and addiction. It is either a genetic disposition which is learned from others or a habit which, if addiction develops, manifests itself as a chronic debilitating disease (NIDA, 2014). NIDA maintained that substance use/abuse and/or addiction is a chronic disease similar to other chronic diseases such as type II diabetes, cancer and cardiovascular disease. In 2010, approximately 5 per cent of people (totalling 230 million) used an illicit substance (UN World Drugs Report, 2012). Among the 230 million people, some 7 million have high-risk drug use otherwise known as recurrent drug use causing harm to their health, psychological problems or social problems that put them at risk of those dangers (UN, 2012).

In 2015, substance use disorders caused a total of 307,400 deaths, an increase from 165,000 deaths in 1990 (Global Burden of Disease, 2015). Among this group of substance use/abusers, the highest numbers of deaths are from alcohol use disorders at 137,500, opioid use disorders at 122,100, amphetamine use disorders at 12,200, and cocaine use disorders at 11,100 (Global Burden Disease, 2015). The effects of substance use/abuse have an obvious impact that shortens the life expectancy of the individual. This dangerous effect has posed a continuous utmost concern for public health practitioners.

Thus, these health threats to a population often constitute the basis for public health studies and intervention/prevention measures. Public health experts have tried to look at substance use and the addiction from an expansive perception rather than the individual in use, highlighting the role of the society, culture and availability. Some public health experts choose to avoid the terms alcohol or drug “abuse” in favour of the language they consider more objective, such as “substance and alcohol type problems” or “harmful/problematic use” of drugs (Magidson, Janan, Otjombe & Kathleen, 2016).

For instance, the Health Officers Council of British Columbia in their 2005 policy discussion paper titled “A Public Health Approach to Drug Control in Canada”, has adopted a public health model of substance use that challenges the one-dimensional black-and-white construction of the binary (or complementary) antonyms “use” vs. “abuse” (Nutt, King, Phillips & Lawrence, 2010). This model unequivocally recognizes a range of use, ranging from beneficial use to chronic dependence.

The term drug abuse is no longer a modern medical opinion in either of the most used analytical tools in the world as described by the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (DSM), and the World Health Organization's International Statistical Classification of Diseases (ICD). Thus, substance use/abuse has been adopted by the DSM as a comprehensive term to include 10 separate classes of drugs, including alcohol; caffeine; cannabis; hallucinogens; inhalants; opioids; sedatives, hypnotics and anxiolytics; stimulants; tobacco; and other substances (American Psychiatric Association, 2013).

On the contrary, the ICD uses the term 'harmful use' to cover physical or psychological harm to the user from use. Physical dependence, abuse of, and withdrawal from drugs and other miscellaneous substances are defined in the DSM to include an individual's continued use of alcohol or other drugs despite problems related to use of the substance, substance dependence may be diagnosed (American Psychiatric Association, 2013).

Nonetheless, compulsive and repetitive use may result in tolerance to the effect of the drug and withdrawal symptoms when use is reduced or stopped (DSM, 2011). Though other definitions differ, they may entail psychological or physical dependence (DSM, 2011), and may focus on treatment and prevention in terms of the social consequences of substance uses. On every encounter with this subject of study (substance use/abuse), there is always a value judgment attached to it. Jenkins (1999), a distinguished professor at the Baylor University of United States in book titled "Synthetic panics: the symbolic politics of designer drugs", advocated that there are two issues with the term "drug abuse".

First, what constitutes a “drug” is debatable. For instance, gamma-hydroxy-butyrate (GHB), a naturally occurring substance in the central nervous system (CNS) is considered a drug, and is illegal in several countries, while nicotine is not officially labelled a drug in most countries. Second, the word “abuse” hints at a recognized standard of use for any substance. In other instances, drinking an occasional glass of wine is considered acceptable in several countries, while drinking several bottles is seen as an abuse (Nutt et al., 2010).

Strict abstinence advocates who may or may not be religiously motivated and would see drinking even one glass as an abuse. Most people even condemn caffeine use in any quantity. At the same time, assuming the perception that any (recreational) use of cannabis or substituted amphetamines constitutes drug abuse suggesting that the substance is harmful, even in minute quantities (Barrett, Meisner & Stewart, 2008). This perception makes the substance or drug abuse a compound word, which has its varying considerations for what should be considered a “substance use or abuse”.

In the U.S., drugs have been legally classified into five categories, under the Controlled Substance Act. These drugs are classified on their deemed potential for abuse. However, usage of some drugs is strongly correlated (Fehrman, Muhammad, Mirkes & Egan, 2015). For example, the consumption of seven illicit drugs (amphetamines, cannabis, cocaine, ecstasy, legal highs, LSD, and magic mushrooms) is correlated and the Pearson correlation coefficient $r > 0.4$ in every pair of them; consumption of cannabis is strongly correlated ($r > 0.5$) with usage of nicotine (tobacco), heroin is correlated with cocaine ($r > 0.4$), methadone ($r > 0.45$), and strongly correlated with crack ($r > 0.5$) (Fehrman, 2015).

The classification and categorization of drugs into schedules I, II, III, IV, or V, seems to make it much easier to categorize the measures and avenues that individuals use and abuse the substance.

Another perception of substance use/abuse involves drug misuse. It is a term used frequently when prescription medication with sedative, anxiolytic, analgesic or stimulant properties are used for mood alteration or intoxication, ignoring the fact that overdose of such medicines can sometimes have serious adverse consequences. It on occasion involves drug diversion from the individual for whom it was prescribed (Barrett et al., 2008).

Prescription misuse has been defined differently and rather inconsistently based on the status of drug prescription, the uses without a prescription, intentional use to achieve intoxicating effects, route of administration, co-ingestion with alcohol, and the presence or absence of dependence symptoms (Barrett et al., 2008; McCabe, Boyd & Teter, 2009). Chronic use of certain substances leads to a change in the CNS known as a 'tolerance' to the medicine such that more of the substance is needed in order to produce desired effects. With some substances, stopping or reducing use can cause withdrawal symptoms to occur (Maithya, Okinda & Mung'atu, 2015), but this is highly dependent on the specific substance in question.

Recent evidence shows that the rate of prescription drug use is fast surpassing illegal drug use in the United States. According to the National Institute of Drug Abuse, 7 million people were taking prescription drugs for non-medical use in 2010. Among 12th graders, non-medical prescription drug use is now second only to cannabis

(NIDA, 2011). Nearly 1 in 12 high school seniors reported non-medical use of Vicodin; 1 in 20 reported such use of Oxycontin (NIDA, 2011). Both of these drugs contain opioids. The measures and avenues of obtaining prescription drugs for misuse are different: sharing between family and friends, illegally buying medications at school or work, and often “doctor shopping” to find multiple physicians to prescribe the same medication, without knowledge of other prescribers. Gradually, law enforcement agencies are holding physicians responsible for prescribing controlled substances without fully establishing patient controls in most countries, including the US, such as a patient “drug contract.” Eventually, concerned physicians are enlightening themselves on how to identify medication-seeking behaviour in their patients, and are becoming familiar with “red flags” that would alert them to potential prescription drug abuse (Burke, O'Sullivan & Vaughan, 2005). This is the new order measures taking place to prevent substance and addiction, not just in the western countries, but also in Africa.

The health consequences of substance use/abuse often depend on the actual compound. Drug abuse, including alcohol, may lead to health complications, social problems, morbidity, injuries, unprotected sex, violence, death, motor vehicle accidents, homicides, suicides, physical dependence or psychological addiction (Lancaster, Go, Thandie, Lungu, et al., 2016). There is a high rate of suicide in alcoholics and other drug abusers (UN, 2012). The reasons believed to cause the increased risk of suicide include the continuing abuse of alcohol and other drugs causing physiological distortion of brain chemistry as well as the social isolation (Lancaster et al., 2016).

Another factor is the acute intoxicating effects of the drugs may make suicide more likely to occur. Suicide is also very common in adolescent alcohol abusers, with 1 in 4 suicides in adolescents being related to alcohol abuse (Ancaster et al., 2016). In the USA, approximately 30% of suicides are related to alcohol abuse (UN, 2012).

Alcohol abuse is also associated with increased risks of committing criminal offences, including child abuse, domestic violence, rapes, burglaries, and assaults. This suggests that there is an easy estimation of the consequences that are developing out of substance use/abuse. Thus, drug abuse, including alcohol and prescription drugs, can induce symptomatology which resembles mental illness. This can occur both in the intoxicated state and also during the withdrawal state (Chesang, 2013). In some cases, these substance-induced psychiatric disorders can persist long after detoxification, such as prolonged psychosis or depression after amphetamine or cocaine abuse (Global Burden of Disease/GBD, 2015).

A protracted withdrawal syndrome can also occur with symptoms persisting for months after cessation of use. Benzodiazepines are the most notable drugs for inducing prolonged withdrawal effects with symptoms sometimes persisting for years after cessation of use (Van Der Vorst et al., 2009). Alcohol, barbiturate as well as benzodiazepine withdrawal can potentially be fatal (GBD, 2015). Thus, the abuse of hallucinogens can trigger delusional and other psychotic phenomena long after cessation of use.

Nonetheless, cannabis may trigger panic attacks during intoxication and, with continued use, it may cause a state similar to dysthymia (NIDA, 2014). Scholars have

found that daily cannabis use and the use of high-potency cannabis are independently associated with a higher chance of developing schizophrenia and other psychotic disorders (Di Forti, Marconi, Carra, Fraitetta, Trotta, Bonomo, et al., 2015; Di Forti, 2013). Severe anxiety and depression are commonly induced by sustained alcohol abuse, which in most cases decreases with prolonged abstinence.

Even sustained moderate alcohol use may increase anxiety and depression levels in some individuals (Di Forti et al., 2015). In most cases, these drug-induced psychiatric disorders fade away with prolonged abstinence (Di Forti, 2013). The evidence of alcohol use in some research production shows that alcohol is ranked top among other substances.

One of the common symptoms of unabated alcohol abuse is impulsiveness. Impulsivity is characterized by actions based on sudden desires, whims or inclinations rather than careful thought (The Free Dictionary 7th edition). Individuals with substance use/abuse have higher levels of impulsivity, and individuals who use multiple drugs tend to be more impulsive (American Psychiatric Association, 2013).

Several studies using the Iowa gambling task as a measure for impulsive behaviour found that drug-using populations made riskier choices compared to healthy controls (Chesang, 2013). There is an assumption that the loss of impulse control may be due to impaired inhibitory control resulting from drug-induced changes that take place in the frontal cortex (Potenza, 2011).

The neurodevelopmental and hormonal changes that occur during adolescence may

modulate impulse control that could possibly lead to the experimentation with drugs and may lead to the road of addiction (Brooks, Magnusson, Spencer & Morgan, 2012). Impulsivity is thought to be a facet attribute in the neuroticism personality domain that is overindulgence and/or negative urgency, which is prospectively associated with the development of substance use/abuse.

2.6 The Incidence of Substance Use/Abuse

2.6.1 Developed Nations

The prevalence of substance use/abuse in developed nations often starts with the innocent use of addictive substances, which is seen by society as acceptable behaviour as well as legal use. Individuals start to become addictive to substances such as alcohol by using it on a regular basis and the smoking of cigarettes, which is available and acceptable to buy and use. Considering the civility of the most developed nations in terms of culture, religious practices, and the maximum practices of human rights freedom, the tenacity of innocent use substance addiction is fertile.

However, the youths are the major peak developmental period for the onset of substance-use-related problems as most of them are in tertiary institutions. The study by WHO (2013) posited that in the USA approximately 79.1 per cent of teenage students consume alcohol. The study also noted that the USA and Japan have the highest percentage of smokers in the world. There is also a disturbing trend in recent times with gender implication that shows the increasing number of teenage girls who smoke marijuana in the United States, despite the fact that it is still an illicit drug in most of the states (UNODC, 2015).

In developed nations, marijuana is the most widely used drug because of its legality in most countries, and youths/students predominantly use marijuana (WHO, 2013). Over the period of three decades, the prevalence of substance use/abuse in a developed nation often doubled from 1 in 10 to 1 in 5 continuously (UNODC, 2014). Although, among the youths who use substances, approximately 60% use only marijuana and alcohol (WHO, 2013). The marijuana users also tend to become younger each year and two-thirds of new marijuana users in the USA are between the ages of 12 to 17. On the contrary, WHO (2013) states that an estimated 1.5 million Americans between the ages of 12 years and older are chronic cocaine users. A study also noted that many adolescents and students have been attracted to the inexpensive, high purity heroin that can be sniffed (American Psychiatric Association, 2013). Substance use/abuse among youth has increased and the age at which substance use/abuse begins has dropped. Although cigarettes, alcohol and marijuana are the substances mostly tried, the use of heroin, cocaine, amphetamine and inhalants is also on the rise. Thus, in most developed countries, the prevalence of substance use/abuse starts with the purported social smoking of a cigarette at a young age. This recreational smoking and drinking is the bedrock of one of the most devastating prevalences leading to deaths, particularly in the United States.

GBD (2015) noted that in the US, deaths resulting from the use of the substance, such as alcohol, cocaine/crack, ecstasy, heroin, Ritalin, marijuana, steroids, ketamine and nicotine in the USA, is estimated to be about 191,222 per year. At least 7% of adolescents in the USA are addicted to alcohol and marijuana, despite their knowledge of the dangers of these substances (WHO, 2013).

The main factor that seems to promote substance use and abuse in the developed nations is the nature of its recreational activities and freedom of legal use linked to these substances. According to United Nations Office on Substance and Crime (UNODC, 2011), 200 million people or 5 per cent of the total world's population aged 15 to 64 have used substances at least once in their lifetime. This means that no nation is immune to the devastating effects of substance use and abuse.

2.6.2 Africa

The prevalence of substance use/abuse in Africa was intensified since the political transition and transformation that witness a massive migration of rural people to urban cities. Most countries such as Tanzania and Zambia were even nerves to manage the substance problem, compared to other Africa countries like South Africa and Nigeria with what was considered baseless interventions and strategies (UNODC, 2011). These countries were applying and receiving support on the planning and implementation of evidence-based prevention strategies from developed nations (WHO, 2012), which led to the widespread prevalence in the African continent. The study by Njuki (2004) noticed that there were so many issues confronting Africa as a continent with respect to substance use/abuse that was not looked at as it should be or inappropriate in manner.

Both illicit substance trafficking and substance use/abuse was on the increase in Africa and also a fertile exporting marketplace to developed nations because of the continent's level of poverty. Cannabis, methaqualone, heroin and alcohol are included among the substances used across the African continent. The primacy of substance use/abuse in Africa has witnessed many people watching loved ones die, young

people graduating higher institutions without employment because of poor academic performance, and there are many who feel no joy and see no future. There are still old-fashion methods and ways used in responding to substance use/abuse crisis in Africa because of the cultural attitude of not regarding substance use/abuse a social and public health. Though it is still an assumption at this moment that African societies consider alcohol and other local substance use/abuse as an individual user's shame or his/her family's problem and not that of the public. This attitude has portrayed a high-level tolerance of substance use/abuse in Africa that continues to cut deep into all facet of the continent's institutions. The UNODC (2011) estimates that annual cannabis use prevalence rates in Africa stand at 2.9 per cent in Comoros, 2.1 per cent in Kenya, 9.1 per cent in Madagascar, 3.9 per cent in Mauritius, 2.5 per cent in Somalia, 3.9 per cent in Namibia, 4.3 per cent in South Africa, 9.5 per cent in Zambia, and 6.9 per cent in Zimbabwe. With regard to East Africa, specifically, the overall prevalence rate of cannabis is estimated to be between 1.7 per cent and among 6.5 per cent of the population (UNODC, 2011).

The annual drug use prevalence rate and the estimated number of opiate users for East Africa are 0.1–1.0 per cent of the population aged 15–64 years. More specifically, for this region, the annual prevalence rate of the use of opiates in Kenya is 0.73 per cent. In Mauritius, it is 1.9 per cent for opiates and the corresponding figures are 0.14 per cent for Rwanda, 0.16 per cent for Somalia, and 0.06 per cent for Uganda (UNODC, 2011). Mauritius has a prevalence rate of 1.04 per cent for the non-medical use of prescription opiates.

Kenya is the main country in East Africa where cocaine features with a prevalence

rate of 1.2 per cent (UNODC, 2011). However, the prevalence rate is not compared to Southern Africa with the South Africa population being the highest substance use/abusers. In Africa, substance use and abuse range from single substance to a mixture of substances, which makes the effects stronger and harder. The hardest substances often used in Tanzania are a mixture of heroin, cannabis (marijuana) and mandrax (UN-ODCCP, 2014).

Among Tanzania youths, 89.6 per cent use a mixture of heroin and mandrax, whereas 82.9 per cent, predominantly females, use a cannabis/mandrax mixture (UN-ODCCP, 2014). However, the inception of the substance use/abuse usually tends to take place within family circles and, to a lesser extent, through agencies such as health care services, and social acceptance of substance use/abuse is viewed as fashionable and a practice that produces enjoyment. The use of substances such as cannabis, heroin, cocaine and mandrax is very common and does not seem to be a problem in Zambia (WHO/UN-ODCCP, 2003), although it is often found to be the root cause of offences such as drunken driving, arrest for disorderly conduct, fights and arguments, drunk while operating a machine, and suspension or expulsion from school.

One of the common use and abuse substances in Africa is cannabis. Nigeria has the highest one-year incidence rate of Cannabis use (14.3 per cent) in Africa and ranks 3rd with respect to the one-year prevalence rates of cocaine use (0.7 per cent) (Maithya, Okinda & Mung'atu, 2015). The strategy used was the establishment of treatment centres to combat substance use/abuse in Nigeria (Onifade, 2011). Chesang's (2013) study of substance use/abuse by secondary school students in rural and urban communities of South Western Nigeria with a sample size of 542

participants, 266 males and 276 females, found that the prevalence rate of current marijuana smoking is 13.4 per cent and cigarettes use was 26.4 per cent.

The incidence of substance use/abuse by adolescents in Swaziland has increased drastically in recent years. The continual increase of substance use/abuse has affected families and society at large in terms of crime, violence, corruption, and drainage of human financial and other resources that could be used for social and economic development in the country (Council of Smoking, Alcohol and Substance Dependence/COSAD, 2010). The consequences of substance use/abuse among youths in Africa is often linked to and precipitated by adverse socio-economic factors. Substance use/abuse among school children and/or most youths in Swaziland had notable effects on their physical, mental, social, emotional and spiritual health (COSAD, 2010). These effects have made substance use/abuse in the African continent a major social problem which is not receiving adequate and appropriate attention, particularly among school going youths.

2.6.3 South Africa

The incidence of substance use/abuse in South Africa has been top of the roof over a long period now. The substance use/abuse is usually cited as one of the key factors contributing to risky behaviour (Adeoti, 2010). The study by Donohew et al. (2012) explained that despite the rising incidence of substance and alcohol use and abuse in South Africa, there is a mounting distress about the expanding problem of socially unacceptable and violent crimes committed by the substance use/abusers. The precedence of substance use/abuse in South Africa is always misleading between alcohol and other drugs. There is no common consensus on which of the two

substance use/abuse is riskier to deviant behaviour.

To some authors, both lead to deviancy and remains a major result of an antecedent history of dysfunctional social and cultural environment (Adeoti, 2010; Rungani, 2012). Adeoti (2010) noted that substances are used not only in affluent societies, but also in poor communities in South Africa. As a result, they inflict a very direct and heavy burden on the previously overstretched primary health care resources in almost all facet South African communities. The use of substances and their impact on the public health situation is particularly relevant today because it elevates the risk of substance use/abuse later in life (De Rocha Silva, 2013). Substance use/abuse by adolescents is an enduring public health issue in South Africa.

The study by Rungani (2012) posited that in South Africa, 12 per cent of youths experiment with alcohol use before 13 years of age. The study also found that the increase of substance use/abuse among South African adolescents is a major cause for concern with links to other risky behaviours such as unsafe sex and the prevalence of teenage pregnancies and the increased risk of HIV infection, dropping out of schools and delinquent or criminal behaviour (Mogotsi et al., 2014). South Africa has witnessed many social and political changes in the past decade, which also contributes to the increased substance use/abuse among her youths and student nurses, in particular.

The Department of Basic Education (2013) indicated that South Africa is faced with a growing problem of substance use and abuse that has grave implications for its citizens as it gives rise to crime, domestic violence, family breakdown and other

notable social problems. A study of substance use/abuse trends by adolescent patients admitted for rehabilitation in Durban, KwaZulu-Natal, found alcohol to be the second most commonly used substance, preceded by dagga/marijuana (Parry et al., 2007). The 2008 Youth Risk Behaviour Survey (YRBS) conducted by secondary school students reported an increase in the prevalence of having ever used alcohol, alcohol use and abuse in the previous month across gender and age groups (Parry et al., 2007).

The fast-growing rate of substance use/abuse among female students is especially alarming. White and coloured students were found more likely to use alcohol than black and Indian students in South Africa (Parry et al., 2007). While similar trends were reported in KwaZulu-Natal between 2002 and 2009 YRBS reports, the prevalence of substance use/abuse and alcohol binge drinking were found to be higher than the national rates (Parry et al., 2007). In that same study involving 1318 students in Grade 10 from 28 high schools in southern KwaZulu-Natal, 53 per cent of male and 25 per cent of females reported ever having used alcohol. This shows that the incidence of substance use/abuse in KwaZulu-Natal has always been on the high side, mostly involving young people and students.

Thus, the narratives of substance use/abuse among young students pose a serious health challenge considering their social vulnerabilities. Therefore, adolescent alcohol use/abuse should be considered within a developmental framework, as experimentation and risk-taking may occur during this stage with increased chances of negative short-and long-term consequences (Adegboyega, 2012). Peer influence is often a major contributor during this stage of alcohol misuse. However, parents and

parenting factors remain influential also during the adolescent years as younger adolescents listen to parents' opinions about alcohol, while older adolescents seek guidance from parents' own drinking habits (Adegboyega, 2012).

Research shows that when parents use alcohol frequently, their adolescents have an increased likelihood of exposure to alcohol and the related risk behaviours (Adegboyega, 2012; Adeoti, 2010). Therefore, parental and peer factors influence adolescents on alcohol use and abuse through the process of role modelling.

In addition, adolescents with parents who held permissive attitudes towards alcohol use were found more likely to engage in heavy binge drinking. Parental permissiveness also influences peer associations with a significant relationship between peer influence and alcohol use (Adegboyega, 2012). Absent parents and family disorganization have also been strongly associated with substance use/abuse as a coping mechanism for children (Bhengui, 2014). On the other hand, parents and relatives introduce alcohol to boys as part of family rituals. The home-made brews usually involved family, despite the description that it is more lethal than industrial brews.

The study by Mukthar (2014) noted that substance use starts within family rituals in most cases and the addiction and dependence of adolescents is the major consequences of substance use/abuse characterized by compulsive substance-craving-seeking behaviour. Adolescence stage is a period of physical and psychological development. It has also been described as a stage of increased curiosity, experimentation and the quest for personal identity (Tuwei, 2014).

Substance use/abuse notably causes changes in the biological function through its chemical actions. Mukthar (2014) explained that it modifies perceptions, behaviour, mood and body functions, which result in psychological and behavioural changes. Therefore, the modification of perception, mood and behaviour is the fundamental reason for the high rate of crime and other social problems associated with adolescents involved in substance use/abuse. Substance use/abuse is commonly the increasing amounts consumed and frequency of use. It is a common act of substance use everywhere.

Even Limpopo Province is no different, though there may be variations in the nature of use and abuse. Currently, use of substances has transformed from the traditional custom involving adults to a stage where the youth are more and predominantly involved. The study by Mogotsi et al. (2014) noted the vast number of unplanned pregnancies resulting from substance use/abuse as a student is likely to engage in unprotected sex when intoxicated. According to Chesang (2013), the subject of substance use/abuse has been a reality for many years and as old as human beings, which has been an integral part of most societies.

Presently, substance use/abuse is a problem experienced by both young and old, although its impact tends to be mainly extreme in the youth. Mogotsi et al. (2014) noted that the most commonly-used substances in Limpopo Province are cannabis (49%), inhalants (39%), bottled wine (32%), home-brewed beer (30%) and commercially brewed beer (greater than 4% alcohol per volume) used by 54.8% of the youth.

2.7 Contributory Factors of Substance Use/Abuse

The phenomenon of 'substance use/abuse' is very individualistic, so, there are several factors that combine, and all of them have significant contributory roles in the abuse. The fundamental contributors to developing substance use/abuse and/or addiction are mostly within an individual developmental feature. A study noted the reason as to why everyone who is exposed to certain factors develops a dependency on drugs and/or alcohol. The study by Kane & Ballue (2013) explained that there is a correlation between substance use/abuse and certain environmental, individual, genetic and social factors.

Therefore, the main contributory factors to substance use/abuse and addiction include the individual self, genetics, environment, and social factors. Several researchers including the present study author considered that the term "contributors" is used instead of "causes" because the absolute cause of substance use/abuse is unknown. Hence, a contributor to substance use/abuse denotes one possible variable out of many which are associated with drug use, the combination of which may vary in each individual case to establish the cause.

Thus, substance use/abuse is usually a collation of experiences, environments and motivations that impel individuals into different directions (Potenza, 2013). It is the unique makeup of an individual's story. Everyone is brought to the same ending from a different beginning. Although some experiences are shared, there are several risk factors that can contribute to the development of addiction. Most risk factors fall into one of several categories:

2.7.1 The Individual Factor

The individual self is a contributing factor in substance use/abuse. The biological development of an individual plays a critical role in predisposition to addictive behaviours, especially if the individual's first experience with abuse is early in life (Potenza, 2013; Chesang, 2013). Experimentation during the most critical stage of development can affect susceptibility and lead many to more serious abuse (Chesang, 2013). During the adolescent years, the brain is developing its ability to assess situations and manage emotions. Exposure to drugs and/or alcohol during this process can result in increased risk for poor decision-making and lead many towards riskier behaviour.

An individual's mental health contributes to substance use/abuse. Mental health and the development of co-occurring disorders can augment the side effects of drug and alcohol abuse (Grant et al., 2010). Many with issues such as depression use these substances in an attempt to self-medicate. In reality, dual-diagnosis treatment upholds the fact that the combination of mind-altering substances with mood disorders can intensify symptoms and increase mental distress.

The use of various substances to numb the pain and help those who are victimized by violence is common. To prevent further damage to family or to themselves, many do not seek medical help and use illicit substances to temporarily relieve pain and self-medicate (Rutherford, Mayes & Potenza, 2010). Thus, there are two main individual self-contributory factors of substance use/abuse, such as the biological development and mental health.

Despite these two important contributing factors of substance use/abuse, other individual factors include: being a victim of child abuse; personality disorders; extreme changes in family situation; inter-family dependence problems; academic stress; poor academic performance; social deprivation; depression, and suicidal behaviour (Rutherford et al., 2010; Strathearn & Mayes, 2010; Yip et al., 2011).

Substance use/abuse in these situations is especially vicious due to the “rebound effect” in which an individual coming off the effects of drugs and/or alcohol often experiences greater pain both mentally and physically. Nonetheless, traumatic events can leave a scar on an individual’s mind and, over time, victims choose to dull their pain with their drug of choice. These events include neglect, verbal abuse, physical abuse, sexual abuse, physical altercations, natural disasters, accidents, and terrorism (Potenza, Sofuoglu, Carroll, et al., 2011). The link between this kind of childhood trauma and adult substance use/abuse is often striking. Studies show that one in four American children experiences at least one of these traumas during childhood (Somerville, Jones & Casey, 2010). Other exposure to trauma, even after becoming an adult, has been shown to be correlated with an increased chance for addiction as well.

2.7.2 The Genetic Factor

Genetic factors basically contribute to substance use/abuse or addiction. Though some researchers uphold the fact that the roots of addiction lie deep within a person’s cellular level, however, there are as many variables as our individual DNA. Therefore, siblings often follow very different paths, some leading to addiction and some not (Potenza, 2013). That being highlighted, genetics do play a role by influencing an

individual in developing an addiction. According to the American Psychological Association, genes are very vital in addiction, and genetic factors contribute to about half of a person's tendency to become addicted.

An individual's genes have been linked to: a quicker reaction to drugs; a decreased ability to feel any negative effects; an increased euphoria; a quick involvement with repetitive behaviours, i.e., an addictive personality (Grant, Potenza, Weinstein, et al., 2010; Yip, Desai, Steinberg, et al., 2011). These genetic factors can cause experimental drug use to quickly spin out of control and make it difficult to stop thereby leading to addiction (Potenza, 2013). Nonetheless, genetics contribute to the increased likelihood that a young adult will abuse drugs or alcohol, and to what extent the substance use/abuse may escalate. Factors such as gene mutations in a person's DNA chemically predispose a person to addiction by as much as half (Yip et al., 2011). These can be passed along from family members over time, making it easier for one person to succumb to addiction than another.

2.7.3 The Environmental Factor

Several studies have revealed that genetics alone does not make a person an addict. Within the key contributing factor to substance use/abuse, the home that a substance addict and his/her siblings grew up in also plays a major role in their addiction (Somerville et al., 2010). There are a few factors that come into play such as divorce, frequent arguments, and drug or alcohol abuse. For instance, a child's parents stayed together, but fought frequently and intensely. Experts consider the stress level that this type of behaviour generates in the child can predispose the child to become addicted to killing the pain (Sinha, 2009; Somerville et al., 2010).

They also feel that some children grow up to mimic their parents' drug and alcohol abuse. The environment right outside an addict's front door also plays a part in contributing to substance abuse. If one lives in a neighbourhood where drug use is normalized, s/he begins to see it as normal, and the-everyone-is-doing-it rationale comes into play. It can also be stressful to live in that type of environment, which can lead to addiction by way of freezing the fear and worries one might experience. Thus, a person's earliest interactions in life socially play the biggest roles in their development. From early childhood to the ongoing development into adulthood, our relationships with family and peers have some of the greatest influences on the development of addictions.

Sociological philosophers such as Mead (1934) and Bandura (1963; 1977) classified and theorized such situations as the "social self" or the "social learning", respectively. Nevertheless, conflict within the household can amplify stress and cause some to seek an escape through these substances. For instance, children who are exposed to criminal behaviour and family members who abuse drugs/alcohol are at a greater risk of developing their own problems (Potenza, 2013; Sinha, 2009). This suggests that the earlier in life a person is exposed to illicit substances, the higher the risk of addiction.

The strength of relationships within the family, including the structure of authority and overall happiness, can affect the development and acceleration of abuse (Rungani, 2012). While the family is not the sole source of influence on many young adults, they play one of the most critical roles as they determine an individual's earliest social interactions.

Poverty experience contributes to substance use/abuse. Some studies found that an impoverished environment usually increases the likelihood of substance use/abuse (Chesang, 2013; Ebersohn, 2015; Fareo, 2012; Rungani, 2012). Poverty can affect generations of family members due to lack of education and limited access to employment or healthcare. Poverty-stricken environments leave many experiencing lifestyles, including incarceration, homelessness and poor health (Njangi, 2014). Those who drop out of school, are unemployed or live in unsafe areas are at higher risk, especially if their home environment has already exposed them to drugs and/or alcohol (Ebersohn, 2015).

In addition, the effects of poverty can leave many without access to treatment. Treatment and detoxification are difficult to accomplish, especially with limited resources. Those who have the ability to use public health services often have difficulty maintaining it for long-term due to family responsibilities (Potenza, 2013). Poverty is a vicious cycle that perpetuates itself as generations are born and raised in lifestyles of high-risk exposure. Despite the fact that familial and peer influences, as well as poverty, contributes to substance use/abuse, other environmental contributing factors include the availability of drugs, social changes, employment status, type of occupation and cultural attitudes (Bhengui, 2014; Njangi, 2014).

2.7.4 The Social Factor

The social factor specific to substance use/abuse in college students primarily begins with separation from family and friends. For many, college is the first time a young adult is away from family and friends. Thrust into an unknown world, the desire for companionship has been found to lead most student towards dangerous lifestyle

changes (Oliha, 2014). The college years constitute an impressionable time where the process of self-discovery leads some students off-track, especially when guided by a desire for acceptance, no matter the recourse.

The peer pressure factor comes into play at that instant. Substance use/abuse in this situation begins with recreational drug abuse and binge drinking and soon becomes normative behaviours among college-aged students (Mogotsi, Nel, Basson & Tebele, 2014). Furthermore, popular media continues to portray drugs and alcohol as acceptable, enjoyable ways to relate to others and have a good time. Peer pressure can make even the most steadfast young adult submit to experimentation and a “just this once” mind-set Bhengu (2012). Even with no other risk factors present, peer pressure is one of the most influential forces in an individual’s life. Another social factor contributing to substance use/abuse is the academic performance pressure. Social situations, especially in college, can be especially tolerant of heavy substance use/abuse and even go so far as to expect it (Atamba, Agesa & Muango, 2012).

With a new set of expectations, including academic performance and the development of independence, the world and its expectations can seem especially challenging and trying. Just as in the case of mental disorders, some may use drugs and/or alcohol to cope with these new challenges (Atamba et al., 2012; Ebersohn et al., 2015). In an effort to release stress, some see no other alternative and begin developing addictive behaviours of substance use.

Further enabled by the perception of social tolerance, many see no immediate risks or dangers in their choices. Hence, it is critical to indicate or reflect that there are help

and hope for anyone who has developed an addiction. With the proper intervention model, an addict can make the changes that will put him/her on the path to sobriety.

2.8 Intervention and Prevention Measures for Substance Use/Abuse

Every person is susceptible to substance use/abuse at different stages of their lives. Some people, however, are at higher risk for developing a serious addiction because of personal, family, or environmental circumstances. Hence, the impact of substance use/abuse often reaches beyond the user to family members, friends, co-workers, and society at large, including the national economy (Bezuidenhout, 2013; Tuwei, 2014). Studies have shown that a number of preventive measures can counteract substance use, including those at high risk. These measures share a common goal that includes strengthening “protective factors,” such as well-developed social skills, strong family bonds, attachment to school, and active involvement in the community and religious organizations while reducing “risk factors” that increase vulnerability to substance use (Ekpenyong, 2010). Resilience is also an important factor; even in high risk, adverse circumstances, many people are able to resist substance.

The risk factors for substance use/abuse can influence young adults in a variety of ways. Therefore, using early intervention measures to combat risk factors in youths is remarkably a viable measure. The more risks present in an individual’s life, the more likely drug and/or alcohol addiction may develop (Butler Centre for Research, 2010). Risk factors become more influential during particular stages of life and can affect individuals differently depending on their own unique experiences. For most, the key is a healthy balance between risk factors and protective factors.

Protective factors are characteristics that help reduce risk factors include parental supervision, time spent around positive influences, community or school that offers drug and alcohol education, academic competence, and a strong sense of self-control and self-worth (Kane & Ballue, 2013). Therefore, an early intervention in a young person's development can curb the effect of risk factors of substance use/abuse and serves to bolster protective factors to combat the cloud created by negative influences. Preventive measures of substance use/abuse are those activities designed to avoid substance use and/or abuse and reduce its social and health consequences. Actions may be aimed at reducing demand as shown in health promotions, e.g., and/or reducing supply, for instance, making substances less available (Medina-Mora, 2005 cited in PEI, 2016). Preventive measures seek to enhance protective factors and/or reduce risk factors for substance use/abuse (Kane & Ballue, 2013). The risk factors increase the likelihood of high-risk behaviours, which often lead to negative outcomes, whereas protective factors lower the probability of high-risk behaviours and promote positive outcomes (Butler Centre for Research, 2010). Thus, prevention of substance use/abuse is critical in the reduction of negative impact and outcomes associated with substance use/abuse and such messages have become one of the most effective prevention interventions.

Several studies have proven that consistent, pervasive messages to young people about substances can prevent substance use and/or abuse. In fact, effective prevention not only routinely repeats the same messages, but it is further delivered by multiple messengers such as peers, parents, schools, and the community at large (Butler Centre for Research, 2010).

Therefore, remodelling programmes for these messengers that enhanced “booster sessions,” activities would help prevent or delay the initiation of drinking, smoking, and using other drugs. The delayed initiation is beneficial because it gives children time to develop social competence and resistance skills of substance use/abuse. According to the National Institute on Alcohol Use and Alcoholism (2011), each year that children avoid alcohol use significantly decreases their risk of future dependence. The Department of Health and Human Services reports cited in Kane & Ballue (2013) noted that any delay in commencement to smoke during the early teen years improves the future prognosis for quitting.

Delayed onset of smoking is also associated with a lower incidence of disease and death. The main goal of prevention is to delay or prevent the onset of substance use and/or abuse. Delay alone is important. Research indicates youth that begin using substances prior to age 14 are significantly more likely to become substance dependent at some point in their lives (Butler Centre for Research, 2010; Center for Applications of Psychological Type/CAPT, 2012). Hence, the prevention messages are paramount.

Protective factors such as strong family bonds and proactive parenting additionally increase the probability that substance use/abuse will be delayed (Butler Centre for Research, 2010). Therefore, parental practices have a significant role to play in the prevention of substance use and/or abuse. In practice, there are basically five models of substance use/abuse prevention, each based on a different set of fundamental assumptions about behaviours of substance use/abuse and their motivations (Duncan & Gold, 1982 cited in PEI, 2016). The following are the models for the prevention of

substance use/abuse:

2.8.1 The Law Enforcement Model

Prohibition laws played a substantial role along with the threat or infliction of punishment to prevent substance use/abuse. This model is based on the assumption that substance use/abuse is a moral issue and that people who abused substances must be punished for their own good, not to mention the good of society (PEI, 2016). Another aspect of this model is rooted in the notion that certain substances are characteristically evil or at least too potent for people to be allowed to use. Therefore, only the threat of punishment can keep people from being tempted to experiment with substances and become hopelessly addicted. However, this model has not been completely successful. The study by WHO (2012) explained that prohibition of substances resulted in more substance use/abuse and more crime, along with a growth in a substance-rich black market.

2.8.2 The Medical Model

This model look at substance use/abuse as an infective prevalent. It relies on early identification and isolation of people who abuse substances before they can infect others. The model incorporates plans and guides that tell parents and teachers how to identify substance-using/abusing teens (PEI, 2016). The measures might consist of having parents search their children's rooms for substances or to allow strip search of school lockers when there is adequate suspicion. Jails are replaced by involuntary treatment. Just like the law enforcement model, neither has the medical model has ever been successful. The Office of National Drug Control Policy (ONDCP, 2014) noted that substance users labelled as such by this model might become a self-

fulfilling prophecy and live up to the expectations engendered by the label.

2.8.3 The Educational Model

This model assumes that substance use/abuse results from poor choices made in ignorance of the hazards and effects of substances (Duncan & Gold, 1982 cited in PEI, 2016). Thus, it is anticipated that educating people about the dangers of substance use/abuse will assist them in making the right decisions and avoid substance use/abuse. Scare tactics, as well as skill-building, are the main bids of this model. Unfortunately, substance education has not been the great success story either, especially not for young people, including students.

2.8.4 The Psychosocial Model

Substances are used as a means of coping with the day-to-day frustrations and problems. Prevention then needs to provide opportunities to deal with the concerns from frustration and daily problems. The measures for preventing substance use and abuse might include peer counselling, crisis hotlines, inspirational consideration otherwise called transcendental meditations, and so forth. The study by Duncan & Gold (1982, cited in PEI, 2016) explained that activities such as adventure and self-expression are also great alternatives to using substances based on this model.

2.8.5 The Sociocultural Model

This model focuses on the root of substance use/abuse in the country, not in the individual person. The solution then is in changing communities, society, not in changing the individual (ONDCP, 2014). Those societies that discriminate against the marginalized (e.g., ethnic minorities) are expected to use and abuse substances.

Societies that look the other way given gender discrimination, e.g., will not be able to prevent substance use and the misuse.

Societies that advertise pills as solutions to problems will find its youth turning to illicit substances for solutions (Sonoma County Department of Health Services, 2007). ONDCP (2014) recognizes the value of prevention efforts and promotes such approaches as the most cost-effective, common-sense ways to encourage healthy and safe communities. Studies have continuously shown the connection between substance use and poorer academic performance, lost productivity, traffic-crash deaths, sexually transmitted infections (STI), hepatitis C, human papillomavirus (HPV), and so on (Bhengu, 2014; PEI, 2016). In addition, the substance use further contributes to rates of human immunodeficiency virus (HIV) transmission and puts children at risk for abuse and neglect. Therefore, preventing substance use and dependence before it ever begins can help save lives and reduce costs related to health care and criminal justice.

The National Institute on Drug Abuse (NIDA, 2003) posited that there are fundamentally 16 prevention principles. The principles directives are that prevention programmes should:

- ❄ Reverse or reduce risk factors while enhancing protective factors;
- ❄ Address all forms of substance use and/or abuse, alone or in combination, including the under-age use of legal substances (e.g., alcohol or tobacco); the use of illicit drugs (e.g., heroin or marijuana); and the inappropriate use of prescription medications, substances legally obtained (e.g., inhalants), or

over-the-counter drugs.

- ❖ Speak to the type of substance use/abuse problem in the local community, strengthen identified protective factors, and target risk factors that can be modified.
- ❖ Tailored to address risks to audience characteristics or specific populations, such as gender, ethnicity, and age to improve program effectiveness.
- ❖ If family based, improve family relationships, including bonding and incorporate practice in developing, discussing and enforcing family policies on substance use/abuse; training in substance information and education; and parenting skills.
- ❖ Be designed to intervene as early as preschool to address risk factors for substance use and/or abuse, such as poor social skills, aggressive behaviour, and academic difficulties.
- ❖ In the event designed for elementary school children, target improvement of social-emotional and academic learning to address risk factors for substance use/abuse, such as academic failure, early aggression and school dropout. The educational component should focus on the following: academic support, especially in reading; communication; emotional awareness; self-control and social problem-solving.
- ❖ In the event designed for middle school/junior high or high school students, enhance academic and social competence with the following: communication;

substance resistance skills (such as the reinforcement of anti-drug attitudes and strengthening of personal commitments against substance use/abuse); peer relationships; self-efficacy and assertiveness; and, study habits and academic support.

- ❖ In the event that the programmes are aimed at the general public at key transition points, such as the transition from elementary school to middle school, this can produce beneficial effects even among high-risk children and families. These types of interventions do not single out risk populations and thus reduce labelling and increase bonding to school and community.
- ❖ If it is community-based and a combination of at least two effective programmes, they can be more effective than a single programme alone.
- ❖ If it is community-based and focused on populations in multiple settings, e.g., faith-based organizations, schools, and clubs, they are most effective when they present community-wide messages in each setting that are consistent.
- ❖ Retain core elements of the original research-based intervention when communities adapt programmes to match their needs, differing cultural requirements, or community norms.
- ❖ Be long-term and provide repeated interventions (i.e., booster programmes) to reinforce the original prevention goals. It has been shown that gains from middle school prevention programmes diminish if there are no follow-up programmes in high school.

- ❁ Include teacher training in effective classroom management practices, such as rewarding appropriate student behaviour. These measures help to enhance academic motivation, achievement, positive behaviour, and school bonding in students. Demonstrate the greatest effectiveness when they employ interactive techniques such as parent role-playing and peer discussion groups that allow for active involvement in learning about substance use and/or abuse and reinforcing skills. If research-based, they can be cost-effective.

The NIDA's principles for prevention are based on longitudinal research studies on the origins of substance use and abuse behaviours, as well as the common elements of effective prevention programmes. The study by Medina-Mora (2005) summarizes that prevention principles uphold firstly that the programmes should reduce or reverse risk factors and enhance protective factors. Secondly, the prevention programmes should be tailored to address risks targeted to audience characteristics or to the whole population. Thirdly, the prevention programmes should be long-term, incorporating repeated interventions such as booster programmes to reinforce the original prevention goals. Thus, the measures of substance use/abuse prevention model have levels. There are fundamentally three types of prevention of substance use/abuse levels such as the primary, secondary, and tertiary levels.

The levels are as follows:

❖ **Primary Level**

With respect to the primary level, high-risk individuals are helped to avoid developing addictive behaviours (NIDA, 2014), so that new cases can be prevented (Kane &

Ballue, 2013). This is the level where every reasonable effort is made to stop substance use/abuse/use/misuse from happening in the first place (ONDCP, 2014). At this level, the primary care physicians are highly encouraged to reinforce this level of prevention efforts. Young people might be encouraged to seek out and/or participate in educational and informational opportunities that address the consequences of tobacco and/or substance use. If programmes such as Students Taught Awareness and Resistance (STAR) are operating in the young person's school, he or she might be encouraged to participate. These programmes teach skills that help young people avoid high-risk activities. School-based programmes that involve youth supports such as peers, family, and community, tend to raise the level of effectiveness (NIDA, 2014). Such programmes might also be referred to as multiple-component programmes.

Some researchers have suggested using the Problem-Oriented Screening Instrument for Teenagers (POSIT) to screen for substance use and development risk factors in youth (NIDA, 2014). It can be administered to youth 12 to 19 years of age and is available from the National Clearinghouse for Alcohol and Drug Abuse Information (NIDA, 2014). The screening should assist with the identification of risk factors, which falls under primary prevention (Kane & Ballue, 2013).

This type of prevention should be considered for adults who might be entering or involved in risky situations, e.g., the adult is in or planning to enter a close relationship with an individual who abuses alcohol or other substance, as well. It is also imperative that women of childbearing potential are reminded about the extreme risks associated with substance use and/or abuse during pregnancy (NIDA, 2014). Because of the

potential impact of this level of prevention, it has been said that its priority needs to be raised.

❖ **Secondary Level**

The secondary level of prevention involves uncovering potentially harmful substance use before onset of overt problems or symptoms (NIDA, 2014). It is the level where new cases are identified very early and typically before the affected individual notices that there may be a problem. At this level, the clinician would screen for the disease and help the affected individual seek out appropriate resources (Kane & Ballue, 2013). This is also the level where early treatment occurs.

❖ **Tertiary Level**

The tertiary level involves the treatment of the medical consequences of substance use/abuse and facilitation of enrolment into treatment to minimize further disability is the aim of this level of prevention (NIDA, 2014). Rehabilitation, as well as prevention of disability or death, is the aim of this level of prevention.

2.9 Summary

This chapter reviewed the literature on the incidence of substance use/abuse and the consequences on the individual's well-being and health, as well as the people they socialized with. The review was carried out in a manner that coined out the gaps and identified critical gaps that the current study would address. The literature review vented the risk factors of substance use/abuse as well as the protective factors. That was done by addressing the contributory factors of substance use/abuse and what can be put in place to prevent its prevalence. The chapter further addressed the

prevalence of substance use/abuse in developed nations and the different social context of the incidence in developed and developing nations. There are peculiar as well as similar characteristics in developed and developing nations shared on the prevalence of substance use/abuse.

However, the characters are heavily centred on the individual social and economic background. In Africa, issues that have to do with substance use/abuse (mostly within the context of family socialization) heighten the prediction of addiction due to the social settings contributing to the prevalence. The prevalence of substance use/abuse in South Africa commonly occurs among youths, mostly in high schools and tertiary institutions.

The theoretical framework guided this study. The theories are the ecological system theory, the social 'self' theory and the social learning theory. The ecological system theory offered a comprehensive explanation of the entire developmental stages of an individual shaped the behaviour responsible for the prevalence of substance use/abuse. The fundamental ideas of ecosystem theory advocacy completely focus on the Individuals development through a chain of life transitions, all of which require environmental support and surviving skills. The ecosystem theory application traces the prevalence of substance addiction to their parenting experience as well as the family background. Ecosystem theory offers and explains the holistic understanding of the role of the environment from the perspective of survival experience. This theory addresses the social-behavioural development of an individual from the perspective of beliefs, attitudes, genetic predisposition, gender, and age.

The theory of the social 'self' covers the explanation of the theoretical assertion of substance use/abuse to sociological activities. The concept of 'self' as a dialogue of the "me" and the "I", was used to explain the basic part of the conscious and unconscious mental life of every substance addict. Thus the theory of the social 'self' focuses on the peculiar individuality in the shaping of substance use/abuse. The social 'self' presented the understanding that each substance use/abuser participates in the social process and the development of their perceived addiction. The factors that drive the concept of the 'self' are completely based on the individuals' sociological background. The social learning theory presented in this study the externalizing and internalizing behavioural influences on the prevalence of substance use/abuse through observation, imitation and modelling processes.

The account for social learning theory helped to understand the occurrence and reoccurrence of substance use, abuse, and repeatedly use from a learning behaviour perspective. The basic rules of social learning are advance on the basis that, learning the substance use/abuse behaviour was not purely behavioural, rather, it is a cognitive process that takes place in a social context. It is evident that learning a substance use/abuse behaviour also occurs by observing the behaviour and also the consequences of that behaviour. The learning processes involve observation, extraction of information from those observations, and making decisions about the performance of the observed behaviour, hence, implying that learning can also occur without an observable change in behaviour.

Nonetheless, in the learning process, the learner is not a passive recipient of information. Cognition, environment and behaviour all mutually influence each of the

processes. Thus, the ecosystem theory and the social learning theory were more psychologically inclined in approach, while the theory of the social 'self' provided this study with the understanding that the prevalence of substance use/abuse also occurs because of the individual's social activities.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

The previous chapter discussed the literature review undertaken for this study and focused on the perception of substance use/abuse and health consequences, the incidence of substance use/abuse in the developed nations, the incidence of substance use/abuse in Africa, the incidence of substance use/abuse in South Africa, contributory factors of substance use/abuse as well as intervention and prevention measures for substance use/abuse. This chapter presents in detail the research methodology that was used to conduct this study.

The research method is a systematic plan for conducting a study. Basically, the methodology centred on the study processes and the kind of tools and procedures used in the execution of this study. It provides a description of the precise techniques that were used, as well as the measuring instruments that were applied and the sequence of activities that were carried out in making the measurements (de Vos, Strydom, Fouche & Delport, 2011).

The research methodology provides information on the research design and approach, the study setting, the study population, the sampling procedure and recruitment, the data collection methods and procedures, data analysis and the ethical considerations.

Each section provides detailed information, thus, allowing the study to have its logical and scientific flow that helped achieve the study purposes. The research methodological designs of this study were qualitative and quantitative approaches because the information required in the study involved narrative as well as quantifying data. The deductive and inductive nature of the study design enabled the research approaches to complement each other.

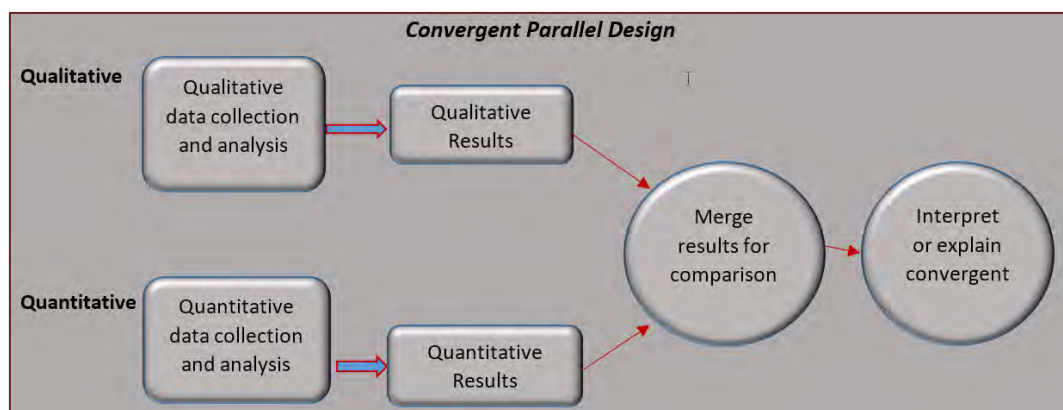
3.2 Research Design and Approach

A research design is a systematic plan to study a scientific problem (Gorard, 2013). According to Bless, Higson-Smith & Sithole (2013), a research design is the plan or blueprint to which data are collected to investigate the research question in the most economical manner. The method used to conduct this study is a mixed method which consists of qualitative and quantitative. The design chosen for this study is convergent parallel design where the researcher used simultaneous timing to implement the quantitative and qualitative strands during the same phase of the research process.

Thus, a research design is the overall strategy that a researcher chooses to integrate the different components of a study in a coherent and logical way, to ensure that the design effectively addresses the study problem. It also constitutes the blueprint for the collection, measurement, and analysis of data (Neuman, 2011). Because this study combined deductive and inductive approaches to research (quantitative and qualitative method), each method is empirically designed to follow the steps that are appropriate and/or suitable for its conduct. In this study, a convergent parallel mixed-method was used due to the nature of data characteristics of both qualitative and quantitative as attested by Creswell (2014).

A mixed-method research design is a procedure for collecting, analyzing, interpreting, and reporting data in a study (Creswell 2014). This research study used mixed or combined the quantitative and qualitative research techniques, methods, approaches, concepts or language into a single study. The descriptive-exploratory mixed design was used. Creswell & Clark (2011) further argued that a qualitative approach may be given propriety over the quantitative aspect, if quantitative data are much more detailed than the qualitative data. If the qualitative sample is much less important than the quantitative sample, it helps the researcher to get a more comprehensive discussion through interviews than a laborious quantitative investigation of the topic.

Figure 3.1 displays a descriptive-explorative mixed-method design.



Source: Creswell & Clark, 2011

Figure 3.1: Convergent parallel design

3.2.1 Mixed-method Research Design

Several authors have defined a mixed-methods research design as a methodology for conducting research that comprehends collecting, analyzing and assimilating or collaborating quantitative and qualitative research and data in a single study or a

longitudinal programme of enquiry. However, several definitions of mixed-methods have merged over the years, which integrate various elements of methods, research process, philosophy and research design (Tedie & Tashakkori, 2010; Johnson & Onwuegbuzie cited in, 2004; Denscombe, 2014; Creswell, Fetters, & Clark, 2009 & de Vos, 2011).

The mixed-method design is a two-strategy design wherein the researcher started with the collection and analysis of quantitative data, which was followed by the collection and analysis of qualitative data to test and generalize the initial qualitative findings. In this study, the researcher used an exploratory-descriptive design because it allowed the researcher to explore the phenomenon before testing or measuring it using the quantitative approach. It allowed the use of multiple worldviews or paradigms for a greater assortment of divergent views and perspectives and made the researcher alert to possibilities rather than issues. The mixed-method also allowed the researcher to develop a life skills programme and instrument to measure its effectiveness based on the qualitative information.

The design was straightforward to describe, implement and report the phenomena as supported by de Vos et al. (2011). This method also provided strength that offset the weaknesses of both quantitative and qualitative designs and therefore had the potential to provide better inferences. According to Creswell, Plano & Clark (2011), the mixed-method design is used to find different, but corresponding data on the same topic to best understand the research problem. The qualitative data provided a more detailed understanding of the problem while quantitative data provided a more general understanding to the problem. The qualitative data were required from the student

nurses, lecturers and the student affairs officers during the interviews. It was used to explore their in-depth perspectives, whereas quantitative understanding ascended from the student nurses (Creswell, 2011). Mixed-method was used as it encouraged the researcher to collaborate across some relationships between qualitative and quantitative researchers. Creswell,(2011) summarized the four major types of mixed-method designs as follows: exploratory, explanatory, convergent or triangulation, as well as embedded designs. Furthermore, two instances of designs that bring multiple design fundamentally together are transformative and multiphase designs (Creswell, 2014). In this study, a convergent/triangulation parallel design was used.

3.2.2 Convergent Design and Approach

A convergent design is a mixed-method design in which the researcher uses simultaneous timing to implement the quantitative and qualitative strands during the same phase of the research process, prioritizes methods equally, and keeps the strands independent during analysis and mixes the results during overall interpretation of data (Creswell et al., 2011; Creswell, 2014). According to de Vos et al. (2011), a convergent mixed-method design is a one-phase design in which the researcher uses both qualitative and quantitative methods during the same time frame and with equal weight to best understand the phenomenon of interest (Creswell, 2014). According to Creswell, (2014), a convergent design takes place when the researcher collects and analyzes both qualitative and quantitative data during the same phase of the research process and merges the two sets of results into inclusive interpretation. It is the most well-known and popular of the four mixed-methods designs.

It commonly involves the simultaneous, but discreet collection and analysis of qualitative and quantitative data to relate and contrast the different findings to see the degree to which they do not agree with each other (de Vos et al., 2011). This enabled the researcher to yield supplementary broad and sound validated conclusion. The purpose of convergent design is to acquire diverse, but corresponding data on the same topic to best understand the research problem. This design is used when the researcher needs to triangulate the methods by directly comparing qualitative findings and quantitative results for verification and validation purpose (Morse, 1991, as cited in Creswell., 2014).

Creswell, (2014) stated that a convergent design also illustrates qualitative findings with quantitative results to develop a more complete understanding of phenomena and comparing multiple levels within a system. The advantage of using a convergent design is that it makes intuitive sense. It is an efficient design in which both types of data can be collected during one phase of the research at roughly the same time. Each type of data can be collected and analyzed separately and independently, using techniques habitually related with qualitative and quantitative research. The challenge of convergence design is that more effort and expertise are vital to collect and analyze the two but separate sets of data prevalence (Creswell, 2014).

Convergence mixed-methods was used to compare qualitative findings with quantitative results in order to promote a more complete understanding of the phenomena and compare multiple levels within the system. Additionally, the intent to use this design is to bring together the different strengths and non-overlapping weaknesses of qualitative methods with those of quantitative methods (Patton, 1990,

cited in Creswell, 2014).

The researcher realized that there was equal value for collecting and analyzing both qualitative and quantitative data to understand the problem. The researcher managed all-embracing data collection and analysis activities as supported by Creswell, (2014). The procedures for a convergent design that outlines major steps were followed in this study. Firstly, the researcher collected both qualitative and quantitative data about prevention of substance use/abuse by student nurses at Limpopo College of Nursing (LCN) concurrently, but separately (Creswell, 2014).

The researcher analyzed the two sets of data separately and independently from each other, using typical qualitative and quantitative analytic procedures. Once the two sets of initial results were in hand, the researcher reached a point of interface and worked to merge the results. Finally, the researcher interpreted the results as to what degree and in what ways the two sets of results converge, diverge from each other, relate to each other and combine, to create a better understanding in response to the study's overall purpose.

The researcher thought to converge the methods by directly contrasting qualitative with quantitative results for corroboration and validation purpose. The researcher also wanted to develop a more complete understanding of phenomena and compare multiple levels within the system (Creswell, 2014). An explorative design was used in this study to compare qualitative findings with quantitative results to develop a model to prevent substance use/abuse by student nurses at LCN.

3.2.3 Qualitative (Exploratory) Design

Various authors defined an exploratory design as a study conducted to investigate the phenomenon, its manifestation and related factors. An exploratory design is conducted to explore the dimensions of a phenomenon in order to gain insight into the situation (Polit & Beck, 2012; de Vos et al., 2011; Brink et al., 2012). The exploratory aspect of this study design asked questions beginning with: what are they; or why; that also inquired about behavioural reasons, or questioning critical risky and preventive factors of substance use/abuse, and distinguishing features in the field of study. The exploratory design of this study dealt with the research questions.

An exploratory design was appropriate for this study to explore the persistent occurrences of substance use/abuse behaviour. Moreover, an exploratory design that employed a qualitative approach was planned to lead the study to insight and comprehension through in-depth and key participant interviews on the themes of substance use/abuse from an environmental impact approach rather than the collection of detailed, accurate and replicable data.

Thus, the combination of both approaches was necessitated, particularly because the concern for substance addiction is sensitive in its themes of study, a consequence of the fact that student nurses are undergoing a life-changing process to becoming health practitioners and may not be comfortable to share direct personal experiences and involvement of the use/abuse of substances. Therefore, in order to understand their lives, their situations, their difficulties, and issues, it became pertinent for the researcher to employ the qualitative approach to complement the quantitative research approach.

The qualitative approach enhances the shortcoming of the quantitative instrument, through the structuring of responses and making meaning of them. Thus, the qualitative research approach allowed the study participants to share their views and experiences to expand theoretical and practical knowledge and suggest possible interventions/measures for the positive model programme to circumvent the prevalence of substance use/abuse by students in LCN. The quantitative approach, on the other hand, sought to understand the meaningful relationships through the interpretation of social knowledge and quantifying experiences.

This study relied on interpretive, but the more critical approach, to collect qualitative data through interviews. Since there are some social variables that require quantifying to ascertain a definite stance, such as the social demography of the students and their parents, and another quantifiable variables to strengthen the study purpose—the quantitative approach therefore complemented the qualitative approach. Both approaches were chosen for the purposes of triangulation and to supplement each other (Creswell, 2014).

3.2.4 Quantitative (Descriptive) Design

A descriptive design refers to the accurate description of characteristics of the population. It involves the nature of the phenomenon in order to understand its relationships (Polit & Beck, 2016; Brink et al., 2012). Descriptives aspect of this study design asked questions beginning with: how many or what is the; which also established the correlation hypothesis that exists between substance use/abuse and student academic achievements, adopting the quantitative approach. The quantitative descriptive purpose of this study dealt with the research hypothesis.

Therefore, the spectrum of the descriptive purpose of this study solely lies in emphasis of frequencies with which specific characteristics or variables of substance use/abuse experienced, lead to academic under-achievement. It was based on the correlational inferences that led the study adopting the quantitative approach. The quantitative aspect of this study abides by the design of description, significantly because of the descriptive range in the context in which the questionnaires were formulated, including the retrospective reconstruction of numbers of the cases and the use of multivariate descriptive statistics such as contingency tables, correlations, and regression analysis.

Nonetheless, the descriptive design of this study was also aimed at indicating the causality between parental background and its impact on the behavioural development and events of substance use/abuse among students. This research was an appropriately thoughtful empirical study, designed to approach some aspect of the subjects with a self-administered questionnaire that would enable them to provide answers comfortably and reliably.

Thus, among other motives for the adoption of a quantitative approach to complement the qualitative approach, is the justification to provide a greater or wide range uniformity of responses, which can offer an easier process into the different consequences of substance use/abuse among student nurses. This study design was planned to gather a larger number of students' direct opinions about their parents. Experiences from both the category of students who were not substance users and the category of substance abusers, in order to ascertain the contributory factors.

In addition, some of the topics might appear to be uncomfortable for most of the students to share direct verbal information, particularly among the students who were from families with substance addiction and/or may become shy to provide honest answers. Therefore, a quantitative study approach that offers the opportunity for responses to be gathered from these vulnerable subjects who are hindered by social and/or cultural reasons to provide honest responses was adopted. All factors related to substance use/abuse by students were described.

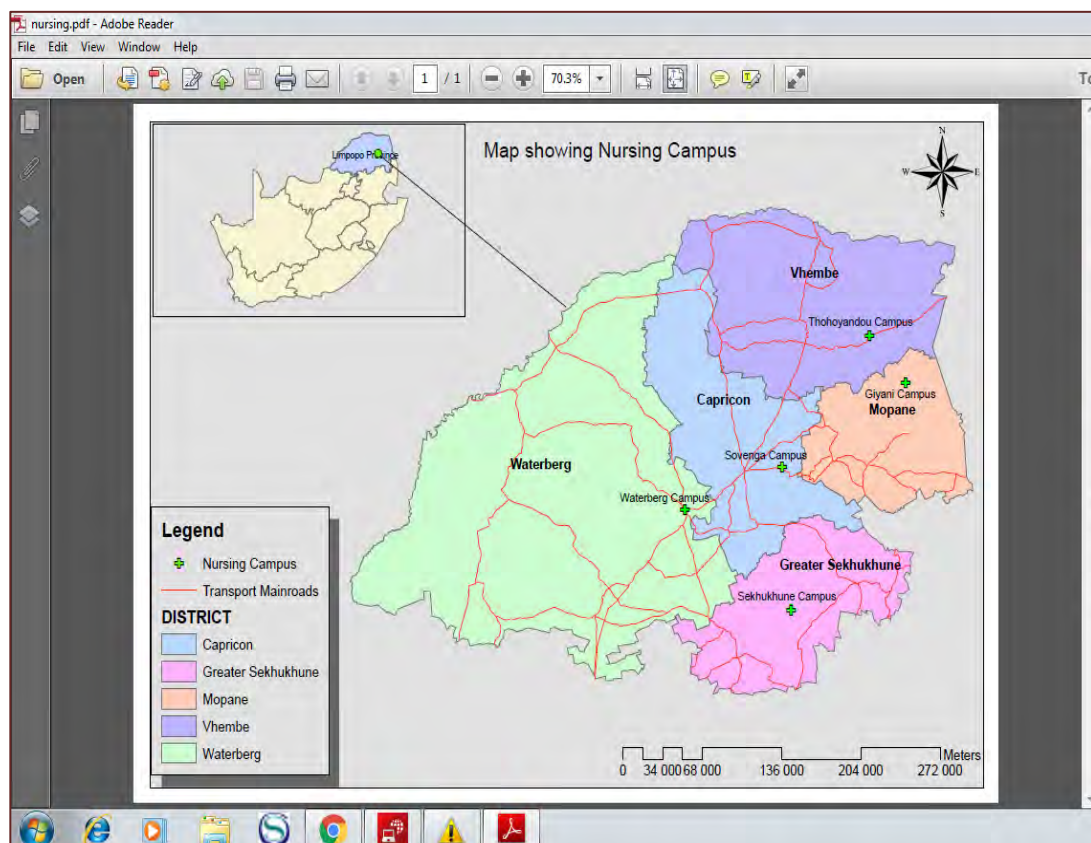
3.3 The Research Setting

Research setting is the location in which a research study is conducted (Miller & Salkind, 2002, cited in Burns & Grove, 2011). The context of this study presents detailed information about the location where the field of study was carried out. The information presented here gives the reader an insight view on what the research site was used for in the present study. Therefore, LCN was selected purposively for the present study's suitability.

Limpopo is one of the nine provinces in South Africa and is located in the northern part of the country. It shares borders with Zimbabwe and Botswana in the northwest and Mozambique in the southeast through the famous Kruger National Park. The Limpopo River valley forms the border between the country and its international neighbours. Limpopo Province is divided into five districts, namely: Capricorn, Mopani, Sekhukhune, Vhembe and Waterberg. In each district, there is a LCN campus, namely: Giyani, Sekhukhune, Sovenga, Thohoyandou and Waterberg campuses. Hence, all the campuses were accessed with few or no restrictions, but with the strict principles of ethical consideration.

The campuses had security guards at the main gate entrances who were expected to ensure that students do not get into the residences with liquor or any other illegal substances. However, the nurses' homes in the various campuses do not have a house mother or boarding master to maintain order in the residences.

Some of the nurses' residences are not too far from liquor outlets, which was an indication of easy access to obtain or purchase alcohol and other substances. Thohoyandou Campus is located in-between or surrounded by three (3) liquor stores, one of them was about less than a kilometre away, which is a walking distance from the campus. Figure 3.2 shows the map of the LCN campuses in the various districts.



Source: Limpopo Province map, 2017

Figure 3.2: The Limpopo College of Nursing within the five districts where each campus is located

3.4. Research Phases

The phases of the study are summarized in Table 3.1.3.4.1

Phase 1: Stage 1 Emperical Phase

Qualitative Approach

According to Burns & Grove (2011), it is stated that in qualitative design, people's natural setting is studied in order to discover the social world of the culture by observing and interacting with them. Therefore, the researcher is able to identify the characteristics and impact of human experiences as described by the participant and construed by the researcher. This is supported by various scholars who indicated that the focus of qualitative research is on perceptions and experiences in a natural setting where human behaviour and events occur (Hanson, 2006, cited in Mackey & Gass, 2015; Polit & Beck, 2013).

The qualitative study conducted in Phase 1—Stage 1 to cover the first four main objectives: to explore if the family background of the students who are substance use/abusers in LCN plays a role; and to explore the role played by the LCN on the prevalence of substance use/abuse; to explore and describe the factors contributing to the incidence of substance use/abuse by students at LCN.

Ecosystem theory is based on the following purviews: individual, microsystem, mesosystem and exosystem.

This theory addresses the social-behavioural development of an individual from the perspective of beliefs, attitudes, genetic predisposition, gender and age. The social 'self' presented the understanding that each substance use/abuser participates in the social process and the development of their perceived addiction. In this study, the social learning theory presented the externalizing and internalizing behavioural influences on the prevalence of substance use/abuse through observation, imitation and modelling processes.

Table 3.1: Phases of the study

Phase 1:					
Stage 1—Qualitative					
Objectives	Research Design	Population	Sampling Approach	Data Collection	Data Analysis
To explore the factors responsible for the incidence of substance use/abuse by the students at Limpopo College of Nursing.	Qualitative	Student nurses, Lecturers and Student affairs officers	Non-probability stratified purposive sampling	Focus group Discussions Interviews	Tesch's steps, Creswell et al., 2009
To explore if the family background of the students who are substance use/abusers in Limpopo College of Nursing plays a role in them.	Qualitative	Student nurses, Lecturers and Student affairs officers	Non-probability stratified purposive sampling	Focus group Discussions Interviews	Tesch's steps, Creswell et al., 2009
To explore the role played by the Limpopo College of Nursing on the prevalence of substance use/abuse; and,	Qualitative	Student nurses, Lecturers and Student affairs officers	Non-probability stratified purposive sampling	Focus group Discussions Interviews	Tesch's steps, Creswell et al., 2009
To explore and describe the factors contributing to the prevalence of substance use/abuse by students at LCN.	Qualitative	Student nurses, Lecturers and Student affairs officer	Non-probability stratified purposive sampling	Focus group Discussions Interviews	Tesch's steps, Creswell et al., 2009
Stage 2: Quantitative					
Objectives	Research Design	Population	Sampling Approach	Data Collection	Data Analysis
To examine correlation between substance use/abuse and academic achievement among students in Limpopo College of Nursing	Quantitative	Student nurses,	Probability stratified sampling	Questionnaire	SPSS version 24

To examine the type of substance use and abuse among the students in the LCN that is affecting their academic performance	Quantitative	Student nurses,	Probability stratified sampling	Questionnaire	SPSS version 24
To examine the impact of the substance use/abuse on the students' academic achievement in LCN	Quantitative	Student nurses,	Probability stratified sampling	Questionnaire	SPSS version 24
To examine the impact of the substance use/abuse on the students' well-being and health in LCN.	Quantitative	Student nurses,	Probability stratified sampling	Questionnaire	SPSS version 24
Concept Analysis and Model Development					
Eight steps in Chinn & Kramer (1999) and Walker & Avant (2014)					
Phase 2: Model Validation					
Objectives	Research Design	Population	Sampling Approach	Data Collection	Data Analysis
	Quantitative	LCN management, and lecturers	Probability stratified sampling	Questionnaire	SPSS version 24

This study primarily assumes that the lack of adequate recognition and observation of substance usage and addiction in LCN contribute to the incidence of substance use/abuse. This study further assumes that the family background of substance usage plays a substantial role and further contributes to the incidence of the substance use and abuse by students in LCN.

The study assumes that the effects of the substance use/abuse by students in LCN play a role in their poor academic achievement and social well-being. Thus, substance use/abuse and addiction imply the same thing and were used interchangeably as each word fits appropriately in contexts. Qualitative approach was used in this study because the researcher wanted to describe and analyze human experience in detail (Mackey & Gass, 2015).

3.4.1.1 The Study Population

Population in research is the abstract idea of a large group of many cases from which a researcher draws a sample and to which results from a sample are generalized (Neuman, 2011; de Vos, 2011). A study population is the hypothetically specified aggregation of study elements or the aggregation of the subset from which the sample is actually selected. In this study, the population was all student nurses, lecturers and student affairs officers from the LCN.

3.4.1.1.1 Accessible Population

In this study, the accessible population was lecturers and student affairs officers working at LCN.

Furthermore, the accessible population was the student nurses training at the following LCN campuses: Giyani, Sekhukhune, Sovenga, Thohoyandou and Waterberg. All campuses were accessible to the researcher.

3.4.1.1.2 Target Population

The target population refers to the actual specified large group of many cases from which a researcher draws a sample and to which results from a sample are generalized (de Vos et al., 2011). The targeted population that participated in the qualitative approach were twenty-three (23) student nurses, five (5) student affairs administrators and twenty-seven (27) college lecturers. The researcher had made prior arrangements with the vice-principals in all five campuses to avoid interrupting daily activities of the institutions.

3.4.1.2 Sampling

Sampling is the process of selecting participants (Husley, 2011; de Vos, 2011). A sample is a smaller set of cases selected from a large pool and generalizes the population (Neuman, 2011). The research sample was selected using purposive sampling because of the peculiar nature of the study regarding substance use and abuse. Thus, given that this study combined quantitative and qualitative approaches, the sampling procedure was based on probability and non-probability recruitment. The reason was that a probability sampling recruitment enhances each element's equal opportunity of selection independent of any other event in the selection process.

3.4.1.2.1 Sampling of Campuses

Purposive sampling was used to select all the five campuses under the LCN, namely: Giyani, Sekhukhune, Sovenga, Thohoyandou and Waterberg. All these campuses have similar characteristics.

3.4.1.2.2 Sampling of Campus Student Nurses, Student Affairs Officers and Lecturers

The LCN has 5 campuses; therefore, student nurses were drawn from all the 5 campuses. Other targeted populations were the student affairs officers and lecturers of the college who participated through a qualitative approach.

3.4.1.2.3 The Qualitative Sampling Procedure and Recruitment

The recruitment of the participants who participated in the qualitative approach was selected using the purposive and snowball sampling procedure. Accordingly, snowball sampling procedure, also called network, chain referral, or reputational sampling, is a non-random sampling procedure used for sampling cases in a network (Neuman, 2011). This sampling procedure is based on an analogy to a snowball, which started small, but became larger as it revolved on and pick up additional cases.

The snowball sampling procedure was appropriate for study recruitment, in which the members of the special population were difficult to locate. The snowball sampling procedure is particularly associated with the qualitative approach of research in which the researcher locates an individual or two from the population, and then asks those individuals to provide information needed to locate other members of that population, who they happen to know.

The participants who were recruited using snowball sampling were the nursing students who were particularly known to be substance addicts. All the participants were recruited through the abiding principle of snowball sampling. Eventually, the snowball sampling procedure recruited twenty-three (23) students in the field of study. The participants who were selected for the key participants' interviews were recruited using a purposive sampling procedure. Purposive sampling is a non-random sampling procedure in which the researcher uses a wide range of methods to locate all possible cases of a highly specific and difficult to reach population (Husley, 2011; de Vos et al., 2011).

The choice for the purposive sampling procedure is justified by the fact that a qualitative study is often particularly interested in studying different cases. Usually, the understanding of objectively regular patterns of attitudes and behaviours is further improved by examining those cases that do not fit into the regular patterns. In addition, the purposive sampling procedure is mostly associated with the qualitative approach in research, whereby the researcher selects a unique population that is especially informative.

Based on the judgment of the researcher, the participants recruited for the key participants' interviews were specifically purposive in mind. The participants were three (3) student affairs staff, and twenty-seven (27) college lecturers. Among other reasons for the inclusion of this category, is the justification that substance use/abuse themes of discussion with the students only would not always produce honest responses.

Apart from the fact that it may seem to intrude, the unwillingness of the participants to share their life experience that led to the substance use/abuse is socially an inappropriate behaviour. So, in order to garner vital answers to the research questions and achieve the purpose of this study, this informative category was included.

3.4.1.2.4 Inclusion Criteria

According to Brink et al. (2012), inclusion criteria refer to the number of individuals who will be included in the population. In this study, it refers to all student nurses enrolled in the R425 course from level 1 to level IV, both males and females, both substance users and non-users, student affairs officers, as well as lecturers related to those who need family support.

3.4.1.2.5 Exclusion Criteria

According to Polit & Beck (2012), exclusion criteria refer to those characteristics that people must not possess. In this study exclusion criteria were student nurses who did not register for the R425 course in the LCN.

3.4.1.2.6 Sample Size

De Vos et al. (2011) indicated that there are no rules for sample size in qualitative inquiry. However, sample size is being relatively limited, based on saturation, not statically determined and involving low cost and less time. In this study, the qualitative sample was influenced by the relative homogeneity and heterogeneity of the population, as well as the desired degree of reliability for the purpose of investigation (de Vos et al., 2011). Hence, twenty-three (23) student nurses, three (3) student affairs personnel, twenty-seven (27) lecturers were recruited to the study.

Six (6) focus group discussions (FGDs) were the sample size at the point of saturation. One group from each campus with about ten to fifteen participants.

Participants were student nurses from level 1 to level IV, both males and females.

3.4.1.3 Qualitative Data Collection Methods and Procedures

Data collection is the process of gathering information needed to address a research problem (Polit & Beck, 2008, cited in Cope, 2014). In this study the researcher used in-depth interviews to collect data from the lecturers, student affairs officers and student nurses. Unstructured and semi-structured interviews were used. Appointments were set with participants in all five campuses. Prior arrangement was made, particularly participants who were in Giyani, Sekhukhune, Sovenga, and Waterberg campuses because their locations were relatively far from Thohoyandou.

A special arrangement was made for issues such as introducing the researcher, how the researcher got participants, what the researcher aims to find out, when the researcher was about to visit the campuses, how long the interview was to be conducted as well as the researcher's contact details. This study was a survey that went beyond merely collecting statistical data—i.e., it sought discovery of the participants' subjective understanding of the realities that surround the subject under investigation.

Basically, this study collected data that borders on the participants' behaviours, attitudes, beliefs, opinions, characteristics, expectations, self-classification, and knowledge.

So, the prepared questionnaires and interview questions placed priorities on these preceding topics. All the participants who were sampled for this study answered the questions which were appropriate for the different study approaches and their categories.

The fieldwork itself involved activities such as observing ordinary events and the activities as they happen naturally, in addition to any unusual occurrences. The project leader and research assistant developed a direct connection with the participants and personally experienced the process of daily social life in the field setting, acquired an insider's point of view while at the same time maintaining the analytic perspective or distance of an outsider. A variety of procedures and social skills were used in a flexible manner as the situation demanded and produced data in the form of extensive written notes to provide detailed descriptions.

The events were looked at individually and from a holistic perspective (as a whole unit, not in pieces) in a social context. The researcher understood and developed empathy for the participants and not only recorded cold objective facts, but also noticed both explicit (recognized, conscious, spoken) and tacit (less recognized, implicit, unspoken) aspects of the interviews. The researcher observed the social process without imposing an outside point of view; and, managed the high levels of personal stress, uncertainty, ethical dilemmas, and doubts.

Research data collection is the empirical evidence or information gathered carefully according to established rules and procedures (Neuman, 2011). Due to the fact that this study required the participation of the inhabitants from the different campuses of

LCN, a letter of request to conduct the study was written to each of the campus vice-principals, requesting permission to conduct the study (ANNEXURE F).

After that process was achieved, a consent form (ANNEXURE I) and the approval letters by the vice-principal were then issued to the appropriate avenues for entry permission to carry out the study (ANNEXURE G1, including G2-G4). Prior to the entry, two research assistants were appointed through the University Research and Innovation Directorate to assist the researcher in the field work. The help of these research assistants was immeasurable since they made the data collection easier.

Essentially, the study used a range of data collection approaches. The use of a combination of methods was intended to improve the reliability and validity of the results and for triangulation purposes. Qualitative tools helped the field work to collect data through unstructured interviews, semi-structured interviews, and unstructured observations. With respect to the qualitative approach, the participants were interviewed face-to-face, in order to gauge their experiences and further shed light on the factors contributing to substance use and substance use/abuse in LCN. The interviews also allowed the discovery of the inner life of the participants, and their wordless everyday experiences, which provided more insights into the various events taking place in their lives (Neuman, 2011).

The qualitative approach gave room to step into the real life of the participants, whereby insights, emotions and understandings were suggested and evoked from mere words in the interviews, where reading these words is seeing, touching, feeling, hearing, and smelling another's lived experience, with the interview questions that

were used (Neuman, 2011). The research questions were approached with either qualitative or quantitative tool, as explained in the research approach section above.

Thus, listening to the voices of all the categories that were approached with qualitative instruments allowed a proper understanding of the common phenomenon in today's substance addiction culture. It was important for the participants to voice out their own stories to bring alive their experiences, lifestyles, and problems. Meanwhile, questionnaires provided the evidence of patterns amongst large populations; the qualitative interview data gathered more in-depth insights on participant attitudes, behaviours, thoughts, and parenting practices.

The data collection started in June 2017 and ended in September 2018. Additionally, one central/open-ended question was posed (de Vos et al., 2011).

What are the factors responsible for the incidence of substance use/abuse by the students at Limpopo College of Nursing?

The researcher recognized thin areas and probed follow-up questions to determine the factors contributing substance use/abuse by the student nurses at LCN (ANNEXURE J3). Hence, paraphrasing was used to unveil additional information and guide the discussion, and to ensure that the objectives were covered during the interview (de Vos et al., 2011). However, FGDs methods were used to collect data from the student nurses. Akinsola (2005. as cited in Nuq & Aubert, 2013) defined FDGs as a group of people who are highly homogeneous in all aspects such as age, gender and social characteristics. The researcher believes that FDGs facilitated active participation because student nurses were accustomed to class/group presentations.

Furthermore, FDGs were useful as a way to prepare for in-depth interviews (Akinsola, 2005, as cited in Nuq & Aubert, 2013).

Data were collected from six (6) focus groups, one group from each campus with about ten to fifteen participants.

Participants were student nurses from level 1 to level IV, both males and females. Those who use substances and non-users. All participants were interviewed from their campuses during lunch time. Interviews took place in a private and quiet environment. The total number of participants was determined by data saturation. During the first contact, appointments were made for interviews with those who gave informed consent to participate in the study. The researcher arranged with participants in order for them to choose the most suitable dates, time and place for their focus group interviews. The participants opted for lunch time as they were on block.

The researcher also developed and pre-tested the topic to guide the discussion. Furthermore, the researcher established rapport by introducing herself and facilitators to motivate the student nurses to speak and respond to each other amicably. Focus group interviews were conducted at all campuses.

Six (6) groups of 10-15 participants were interviewed until saturation was reached. The prevalence of substance use/abuse by student nurses, contributory factors of substance use/abuse, the type of substances uses and their effects on the quality of life all suggested a model to assist in prevention of substance use/abuse by student nurses at the LCN.

One open-ended question was asked to guide the discussion to ensure that all the objectives were covered during the interview (de Vos et al., 2011).

What is the role played by the Limpopo College of Nursing on the prevalence of substance use/abuse?

A voice-recorder was used to record the response and field notes were taken during the interviews.

Field notes were used in order to account for what the researcher heard, observed, saw, experienced and thought about in the course of the interview (de Vos et al., 2011). The researcher ensured that there were no interferences during interview. Finally, the researcher also practiced questions in advance to ensure they were sound, natural and comprehensive.

3.4.1.4 Unstructured and Semi-Structured Interview Methods and Procedures

De Vos et al. (2011) indicated that unstructured and semi-structured interviews method and procedures were used in the face-to-face interview session that give the highest response rate and permits asking of probing questions. The exercise was a short-term, secondary social interaction with the explicit purpose of obtaining viable and suitable information from the participants. The data obtained from the unstructured conversation as were provided and recorded in the same unstructured manner.

The procedure for data collection was challenging, due to the need to gain cooperation and establish rapport, yet remaining neutral and objective.

To encroach on a participant's time and privacy for information that was viewed as not a direct benefit to them was the first difficult lesson learned. This necessitated the need to reduce embarrassment, fear, and suspicion, so that participant could feel comfortable revealing information. Explanations were provided on the nature of the research and/or provided hints about social roles of an interview. This was achieved in keeping with a non-judgmental attitude and also not to reveal personal opinion verbally or nonverbally either by an expression of shock.

On several occasions, where the participants would ask for the researcher opinion, such questions were politely redirected to the participant and immediately indicated that such questions were inappropriate. Eventually, in almost all the interview sessions, trust and rapport were created. This helps in defining most situations and ensures that participants have the information sought, understood what was expected, provide relevant answers and motivated to cooperate. The unstructured and semi-structured interviews proceeded through stages, beginning with entry and introduction. The researcher approached the participants and showed authorization and reassurance and secure cooperation from the participants.

The main part of the interview consisted of asking questions and recording answers. Key participant interviews were used to obtain data from the college administrators, including the student affairs staff (ANNEXURE K1 ... K10). The interviews schedule for key participants were conducted with five (5) student affairs personnel, twenty-seven (27) college lecturers. Neuman (2011) indicates that a key participant, in field research, is a participant with whom a field researcher develops a relationship and who tells about or informs on the field.

Then, twenty-three (23) nursing students were also interviewed with unstructured questions. The key participant's interviews used semi-structured questions.

Semi-structured interviews are those interviews in which the questions asked are decided in advance (Babbie & Mouton, 2010). Furthermore, when used as an interviewing method, the interview questions are asked exactly as they were written, in the same sequence, using the same style, for all interviews (Babbie & Mouton, 2010). These formal interviews were helpful because participants for each category answered the same set of few questions, and this helped the researcher to compare their responses.

The researcher approached the participant with a consent form (ANNEXURE I) and held the interview guide as a follow up after consent had been obtained from the participants. After a brief explanation before issuing the consent form, the researcher proceeded with the interview guide to conduct the exercise. The interviews were conducted in all the five (5) campuses of LCN. All participants were receptive to the interviews and provided data to their best of knowledge. At the end of the exercise, the data gathered in these categories were very supportive in achieving the study objectives. ANNEXURE L details the questionnaire used for gathering the data.

3.4.1.5 Data Analysis

Data analysis is the systemic organization and synthesis of research data (Polit & Beck, 2012, as cited in Cope, 2014). In this study, Tesch's technique was applied to analyze data (Creswell, 2014). The following are eight steps of Tesch's inductive, descriptive open coding technique Creswell (2014) was used by following the steps

below:

❖ **Step 1: Reading through the data**

The researcher got a sense of the whole by reading all the verbatim transcriptions carefully. This gave ideas about the data segments and how they look like or what they mean. The meaning that emerged while reading the verbatim transcriptions were written down and all ideas as they came to mind. The researcher carefully and repeatedly read the transcripts of all the participants and understood them. An uninterrupted period of time to digest and thought about the data in totality was created. The researcher engaged in data analysis and wrote notes and impressions as they came to mind.

❖ **Step 2: Reduction of the collected data**

The researcher scaled down the data collected to codes based on the existence or frequency of concepts used in the verbatim transcriptions. The researcher then listed all topics that emerged during the scaling down. The researcher grouped similar topics together, and those that did not have association were clustered separately. Notes were written on margins and the researcher started recording thoughts about the data on the margins of the paper where the verbatim transcripts appears.

❖ **Step 3: Asking questions about the meaning of the collected data**

The researcher read through the transcriptions again and analyze them. This time the researcher asked herself questions about the transcriptions of the interview, based on the codes (mental picture codes when reading through) which existed from the frequency of the concepts.

The questions were “Which words describe it?” “What is this about?” and “What is the underlying meaning?”

❖ **Step 4: Abbreviation of topics to codes**

The researcher started to abbreviate the topics that has emerged as codes. These codes needed to be written next to the appropriate segments of the transcription. Differentiation of the codes by including all meaningful instances of a specific code’s data were done. All these codes were written on the margins of the paper against the data they represent with a different pen colour as to the one in Step 3.

❖ **Step 5: Development of themes and sub-themes**

The researcher developed themes and sub-themes from coded data and the associated texts and reduced the total list by grouping topics that relate to one another to create meaning of the themes and sub-themes.

❖ **Step 6: Comparing codes, topics and themes for duplication**

The researcher in this step rework from the beginning to check the work for duplication and to refined codes, topics and themes where necessary. Using the list of all codes, duplication was checked. The researcher grouped similar codes and recoded others were necessary so that they fit in the description.

❖ **Step 7: Initial grouping of all themes and sub-themes**

The data belonging to each theme were assembled in one column and preliminary analysis was performed, which was followed by the meeting between the researcher and co-coder to reach consensus on themes and sub-themes that each one has come up with independently.

❖ Step 8: Recoding, if necessary

Classification of themes was also done to simplify data retrieval. In addition, reflective remarks were made, where thoughts were recorded in double brackets at the end of the recording. During data reduction, the richness of data was maintained (Creswell et al., 2014). Thus, in this study, data were analyzed separately as soon as data collection started and not at the end of data collection. Verbatim transcripts were made by the researcher by listening to the audio recordings before data analysis was conducted.

The researcher analyzed data in three steps; namely, description, analysis and interpretation. The researcher familiarized herself with the data by reading and rereading the notes and transcripts. Audio recordings were listened to and transcribed as soon as possible (Burns & Grove, 2011). In addition, immersion of data and interaction with data by the researcher occurred. The researcher put brackets for the personal feelings about the phenomena identified and garnered separately. Reduction of data were done by selecting, simplifying and abstracting. Furthermore, for the current study, selection of codes and coding was done by independent coder with the purpose of identifying themes. Classification of themes was also done to simplify data retrieval. In addition, reflective remarks were made, where thoughts were recorded in double brackets at the end of the recording. Remarks were put in the right-hand margin and data were displayed where the main ideas of the research were conveyed (Burns & Grove, 2011).

Crucial features were identified and the interrelationships described. Themes and configurations from the data were also identified. Narrative analysis was used to obtain the central focus of the data (Burns & Grove, 2011). The researcher's own analysis of what was happening and what was done at this stage, focuses on effectiveness of findings about clinical practice or theorizing. Relationships emerge from sets, actions, participants, events and guesses. These were used to formulate cautious intentions. Validity was tested by distributing uncertain theories with participants and guesses were articulated and tested on the same sample since they were text-specific. Finally, conclusions were drawn (Burns & Grove, 2011)

For the qualitative data collected through key participants, matrices were created using content thematic analysis. The qualitative method of analysis revolves around describing the characteristics. The qualitative data were transcribed by the researcher. All transcripts were read and reread to identify common words, phrases, and perceptions that were coded. These common codes produced patterns, which were categorized accordingly under themes. The content in this respect refers to the words, ideas, and themes or all the messages that were communicated during the process of gathering the data (Babbie & Mouton, 2010; Polit & Beck, 2012).

The text, on the other hand, was all the written, observed, or spoken information that served as a medium for communication that was later grouped under themes to make meanings of them all. Content analysis revealed the content from the sources through communication by probing to discover themes in different ways.

3.4.1.6 Ensuring Trustworthiness

Trustworthiness is a method of instituting validity and reliability of qualitative research, and it is achieved when it precisely represents the experience of the study participants. It measures the truth value of a study. Trustworthiness is described as the degree of confidence qualitative researchers has in their data, assessed the criteria of credibility, transferability, dependability, confirmability and authenticity (Creswell, 2014; Polit & Beck, 2012). It is the ability of the qualitative study to accurately represent the practices of the participants. To enhance trustworthiness in this study, the researcher adhered to Lincoln and Guba's (1985) principles of truth value, which will be applied as follows:

3.4.1.6.1 Credibility

Credibility refers to confidence in the truth of the data and how well the data processes, analysis and interpretations address the intended focus of the study (Lincoln & Guba 1985, cited in Polit & Beck, 2008). To ensure credibility, the researcher remained in the field for a long period. An average period of about 45 minutes with each participant for a week during unstructured interview, guaranteed these criteria. To increase the probability that credible findings was produced, the following activities were conducted: prolonged engagement, persistent observation, triangulation, peer debriefing and member checking (Creswell, 2014).

3.4.1.6.2 Prolonged Engagement

Prolonged engagement refers to the investment of sufficient time with the participants to achieve certain purposes, learning the culture, testing for misinformation introduced by distortions in either the self or the participants, and building trust.

The purpose of prolonged engagement is to render the inquirer open to the multiple influences, mutual shapers and contextual factors that impinge upon the phenomenon being studied. In this study, the researcher spent adequate time with the participants by visiting them a day before the scheduled interview, to orientate, to know the culture and establish rapport and a trusting relationship with them.

The researcher also visited the different research settings before the commencement of the interviews and ascertain issues that might be a challenge during the interviews. In order to obtain rich and meaningful data with thick description. The researcher explained to the participants that the information that they will provide will be confidential not used against them (Lincoln & Guba, 1985 cited in de Vos et al., 2013).

3.4.1.6.3 Persistent Observation

Persistent observation involves identification of those characteristics and elements in the situation that is most relevant to the research problem or issue being pursued and focused on them in detail. It provides depth to the research study. In this study, the researcher wrote down field notes, observed, identified and assessed those salient factors and crucial, typical happenings that are relevant to develop a model to “prevent” substance use/abuse by student nurses in LCN, and focused on them (Creswell, 2014; Lincoln & Guba, 1985). The researcher asked probing questions in order to receive rich and in-depth data from the participants. That encouraged them to generate more ideas, viewpoints, opinions, perceptions and experiences of the phenomenon (de Vos et al., 2013).

3.4.1.6.4 Triangulation

Triangulation was used to improve the probability that findings and interpretations were credible according to Creswell. (2014). Triangulation refers to the use of multiple and different sources, methods, investigators and theories. In this study, the researcher invited expert researchers to act as peer reviewers during the interviews and data analysis (Creswell, 2014). Expert researchers assisted the researcher by guiding during interviews, with one as moderator and the other as assistant moderator.

3.4.1.6.5 Peer Debriefing

Peer debriefing refers to “the process of exposing oneself to a disinterested peer in a manner paralleling an analytic session and for the purpose of exploring aspects of the inquiry that might otherwise remain only implicit within the inquirer’s mind” (Lincoln & Guba, 1985, as cited in Creswell, 2014). In this study, the researcher presented the collected data to other expert researchers in order to ensure honesty (Creswell, 2014).

3.4.1.6.6 Member Checking

According Creswell, 2014-member checking requires the researcher to return to the participants who participated during the study and discuss the interpretation of the collected data. One of the purposes for conducting member checking is to give the participants the opportunity to correct errors and challenge interpretations. The researcher made appointments with students who used substances, vice-principals, lecturers and student affairs officers, who were requested to listen to the tape recorder, in order to verify the overall interpretation and meaning towards the final conclusion of the study.

Member checking also provided an opportunity to summarize the collected data, which was the first step towards data analysis (Lincoln & Guba, 1985, as cited in Creswell, 2014). In this study, after the interviews, the researcher discussed the interpretation of research findings with the participants to find out whether they are accurate and gave them an opportunity to volunteer additional information.

This also assisted the participants to recall additional points missed during the interviews. The researcher changed any piece of information which participants felt had not been correctly captured. The co-coder was given raw data to analyze in order to confirm the findings and ensure objectivity. At the end of data analysis, the researcher went back to some areas to discuss some findings with the participants. This was done in order to present the findings regarding development of a model to prevent substance use/abuse by student nurses in LCN. The findings were validated by the participants as the truth of what they had said during interview.

3.4.1.6.7 Transferability

Transferability is defined by Polit & Beck (2012) and Streubert & Carpenter (2003) as a term used in qualitative research to demonstrate the probability that the research findings have meaning to others in similar situations. This also refers to the extent to which qualitative findings can be transferred to other settings to test a study's trustworthiness. In this study the researcher provided sufficient information on the characteristics of the participants and setting as well as a full description of the data of the study (Lincoln & Guba, 1985, as cited in Creswell., 2011), suggest that during data gathering the description must be inclusive enough to be able to transfer the findings to other situations. In this study, this aspect was ensured through the

following: purposive sampling, description of methodology such as literature control and verbatim quotes from face to face interview. The descriptive interpretation resulting from the data analysis applied to other areas as the main aim of the study was to produce a rich database in order to gain an understanding of the concept 'prevention' of substance use.

The researcher periodically went back to the participants for a review of transcripts when developing the themes during data analysis. An expert researcher was requested to read the randomly selected transcripts. Identified the major categories independently that would further enhance transferability. These was equated with the researcher's own coding. The researcher and the external coder would discuss and reach a consensus regarding the coding system. That was done to enable the research to determine the applicability of the results to his or her setting. This was a probability that the study findings had the same meaning to other researchers in similar situation.

3.4.1.6.8 Dependability

Dependability refers to data stability over time and over conditions. This is met through securing credibility of the findings (Streubert & Carpenter, 2003). In this study, the researcher asked herself whether the research process was logical, well-documented and audited. This meant that the study was simulated with the same participants in the similar context, and it still yielded the same results. It is a criterion met once researchers have determined the credibility of the findings: there was no dependability without credibility. De Vos et al. (2011) indicated that the social world is ever-changing which makes the concept of replication of a study to be problematic.

Dependability involved appropriateness of investigation, decisions regarding methodological changes, investigator's bias and the extent to which decisions about the conduct of the investigation might be influenced by practical matters such as instability. Here dependability was ensured by describing the research method fully, discussed the research procedure with the research team and used an independent coder. A tape recorder was used to record all the interviews, hence increased reliability. In order to increase investigator's reliability, a pilot study was conducted to develop interview skills, even though the information gathered was not used in the main study.

3.4.1.6.9 Confirmability

According to de Vos et al. (2011) and Polit & Beck (2012), confirmability refers to the potential for congruence between two independent and more people about the data accuracy, relevance and meaning which also mean objectivity. It is concerned with establishing that the data represent the information provided by the participants, and not biases of the researcher. It is the way in which the researcher's document of the findings leaves an audit trail which is a recording of activities over time that another individual can follow. In this study, confirmability was achieved as follows: made use of an independent co-coder; the findings were discussed with experts in the field of research and they were given data for coding and the independent coder was expected to find more or less similar themes.

Confirmability was accomplished by incorporating an audit procedure. An audit procedure was achieved by clearly describing each stage of research process that was explained, and justified what was done, how it is done and why was it to be done.

To ensure conformability, the researcher recorded the interview during FGDs, unstructured, semi-structured interviews and transcribed the information verbatim. The information was taken back to participants for confirmation of what had been written after transcribing. The voice-recorder was kept safe for future references.

3.4.1.6.10 Authenticity

Authenticity refers to the extent to which the researcher has given a fair, faithful, honest and balanced account of social life from the viewpoint of someone who lives it every day, showing a range of different realities (Polit & Beck, 2012). Authenticity emerged in a report when it conveyed the ideas and perceptions of participants regarding development of a model to “prevent” substance use/abuse by student nurses in LCN.

In this study, the researcher provided a true report that invited readers to share the information regarding development of a model to “prevent” substance use/abuse by student nurses in LCN. Both concern connecting measures to the constructs of the study, which were significant because the construct was ambiguous, diffuse, and not directly observable (Babbie & Mouton, 2010).

Although it was not possible to practically achieve the perfect reliability and validity of the measurement, they remain the ideals the study strives for. Reliability refers to the dependability or consistency; which suggest that the same thing is repeated or recurs under the identical or very similar conditions (Neuman, 2011). Whereas, validity suggests truthfulness; which it refers to how well an idea fits with actual reality (Babbie & Mouton, 2010). Thus, the validity of the instruments is dependent on the extent to

which it measures what was supposed to be measured correctly. The qualitative approach of the study examines patterns of similarities and differences across cases and tried to come to terms with the diversity thereof. Reliability of the qualitative method applies its principles differently.

The fact that reliability means dependability or consistency, the qualitative method used a variety of procedure, such as unstructured and semi-structured interviews, participation and unstructured observations to record consistency (Babbie & Mouton, 2010). Measurement of validity in the qualitative study does not require demonstrating a fixed correspondence between a carefully defined abstract concept and a precisely calibrated measure of its empirical appearance.

The consistency that was ensured in this study was the different data sources recruited for the study. Validity in qualitative measurement means truthfulness. To achieve truthfulness, in qualitative measures, more interest is paid to authenticity than in the idea of a single version of the truth. Authenticity denotes giving a fair, honest, and balanced account of social life from the viewpoint of someone who lives it every day (Babbie & Mouton, 2010).

This study ensured that to authenticate true data, the claims needed to be plausible and inter subjectively good enough, as in, understandable by many other people. Plausible in this sense means that the data and statements about it are not exclusive; they are not the only possible claims nor are they exact accounts of the one truth in the study area. The study further ensured that empirical claims gain validity when supported by many sections of diverse empirical data. One specific empirical detail

alone was mundane or trivial. Hence, validity arises out of the cumulative impact of many small, diverse details that only together created weighty evidence (Babbie & Mouton, 2010). The study also ensured the validity of results through a continuous search of diverse data that shows connections of evidence. Validity here grows with the recognition of a dense connectivity in unrelated details. It grows with the creation of a web of dynamic connections across diverse study location and not only with the number of specifics that are connected (Babbie & Mouton, 2010).

3.4.2 Stage 2—Quantitative Approach

Creswell (2014) defined quantitative as an inquest into a social or human problem, constructed on testing a theory composed of variables, restrained with numbers and analyzed with statistical techniques in order to conclude whether the analytical generalization of the theory holds true. Several authors have distinguished quantitative from qualitative research design.

However, the quantitative category includes national systems, pre-experimental or hypothesis development, surveys or descriptive, quasi-experimental or associative studies and true experimental or cause-effect/explanatory relationships (de Vos et al., 2011; Neuman, 2014; Welman, Kruger & Mitchell, 2010, cited in Makhuzeni, Barkhuizen & Maubane, 2015). The quantitative approach addresses the three objectives. To explore and describe the prevalence, contributory factors and types of substances used by student nurse at LCN.

3.4.2.1 Population

Brink et al. (2012) defined population as a comprehensive set of events, people or things to which research findings are to be practical. In this study, the population were all the student nurses at the LCN in South Africa.

3.4.2.1.1 Accessible Population

According to de Vos et al. (2011), accessible population is the collective of cases that adapt to the labelled criteria and that are accessible to the researcher as a puddle of subjects for a study. In this study, the accessible population were all the student nurses at LCN.

3.4.2.1.2 Target Population

In this study, target population were all the student nurses training at selected campuses in the LCN.

3.4.2.2 Sampling

3.4.2.2.1 Sampling of Campuses

Akinsola (2005, cited in Nuq & Aubert, 2013) defined sampling as the process of selecting representative's units of a population study in a research investigation. In this study, purposive sampling was used to select nursing campuses as each campus has similar characteristics. The reason for choosing these five campuses is the fact that Limpopo has only one campus in each district. All five campuses were considered in order to make a realistic representation. However, probability stratified random sampling was used since the information about student nurses was well-known prior

to sampling in order to make the sampling method more efficient (Grinnel & Unrau, 2005, cited in de Vos et al., 2011). The researcher sought student nurses to explore and describe the prevalence, contributory factors, and type of substance used by students in five campuses of the LCN.

Population was divided into strata or sub-groups as follows: Campus A: Level 1; Campus B: Level 1; Campus C: Level II; Campus D: Level III; Campus E: Level IV; Campus C: Level II. Almost 445 (56.5%) student nurses were drawn from 788 student nurses in campuses of the LCN to achieve the greater degree of representativeness. Furthermore, population was stratified according to homogeneous characteristics, such as level of training, age, gender and campus.

The aim of the survey was to generate a representative sample of the whole student population taking into consideration sociocultural differences prevailing where the colleges were situated. Yamane (1973, cited in Creswell, 2011) formula for determining already known population size for stratified random sampling concurrently was applied. A census of students in LCN colleges showed a total number of 894 for the 2017 academic year.

A representative sample was determined by applying Yamane formula to the total population for carried out mathematically as shown below:

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

Where: n is the sample size; N is the population size; e is the level of precision (sampling error).

$$n=894/1+ 894(0.05)^2$$

$$n=276$$

The calculated sample size was 276. To compensate for non-response and non-reachable, 60% of 276 was added.

$$X=60*276/100$$

Where X is compensating for non-reachable and non-response.

$$X=165.6$$

$$\text{Total sample size}=276 +165.6 \sim 441.6$$

Table 3.2 shows the total number of student nurses, registered at LCN for the 2018 academic year.

Table 3.2: Population frame (N=788)

Level	Giyani	Sekhukhune	Sovenga	Thohoyandou	Waterberg	Grand Total
I		65	47		31	
II	82	0	31	31	0	
III	63	0	53	59	0	
IV	86	0	72	77	0	
Total	231	65	240	221	31	788

Source: Limpopo College Nursing Enrolment Register (2017)

3.4.2.2.2 Inclusion Criteria

According to Brink et al. (2012), inclusion criteria refers to a number of individuals who will be included in the population. In this study, it refers to all student nurses on R425

course from Level 1 to Level IV, both males and females, both substances users and non-users.

3.4.2.2.3 Exclusion Criteria

According to Polit & Beck (2012), exclusion criteria refers to those characteristics that people must not possess. In this study, exclusion criteria were student nurses who did not register for R425 course in LCN such as post basic, midwifery, bridging course, enrolled nursing as well as auxiliary nursing.

3.4.2.2.4 Sample Size

Sample size refers to the number of subjects, occasions, behaviours, or status quo that are scrutinized in a study (Burns & Grove, 2011). Sample size is fundamentally a function of the purpose of the investigation, the quality of informants as well as the type of the strategy used (Neuman, 2014). 445 (56%) student nurse were drawn from 788 student nurses registered at LCN. The sample size was from the target population at LCN (Table 3.3).

Table 3.3: Population frame (N=788) and sample size (n=110)

Student Nurses' Campus	Population	Percentage suggested	Sample number (participants)
Giyani	231	14%	32
Thohoyandou	221	14%	21
Sekhukhune	65	14%	9
Sovenga	240	14%	34
Waterberg	31	14%	4
Total	788	14%	n=110

3.4.2.2.5 Quantitative Sampling Procedure and Recruitment

Thus, in order to define a research target population, a researcher specifies the unit being sampled, the geographical location, and the temporal boundaries of the population. Thus, a total of 445 students from the population of the LCN were sampled to participate in this study through a quantitative approach. A non-probability sampling recruitment enhances selected elements to be selected using a procedure other than mathematically random process (Neuman, 2011). The quantitative approach of this study was designed to recruit participants through probability procedure. Whereas, the qualitative approach was designed to recruit participants through the non-probability procedure, because of the researcher's quest to understand the fairly regular patterns of attitudes and behaviours through further examination. The participants that were recruited for this study were drawn from different staff categories and student nurses in the LCN.

The recruitment of the participants who participated through close-ended questionnaires was selected using stratified random sampling procedure. Stratification procedure represents a possible modification in participant's recruitment. The stratified sampling procedure is a random sampling procedure typically affiliated with a quantitative approach of a research study, in which the researcher first identifies a set of mutually exclusive and exhaustive categories, divides the sampling frame by status (in this case were student nurses and staff members) and then uses random selection to select cases from the preferred category (Neuman, 2011).

Thus, this study abides by the principle of stratifying sampling procedure, because the

stratum of interest constitutes a percentage of the study population. The choice for the stratification procedure in recruiting participants for the study is justified by the fact that the subject of the study was students, with a specific status group.

However, stratified sampling procedure was used to recruit four hundred and forty-five (445) student nurses across the five (5) campuses in order to get full representation on the study.

3.4.2.3 Pilot Study

A pilot study refers to a small-scale version or trial run that is conducted to prepare for a major research study (Polit & Beck, 2016). The main aim was to assess the feasibility of the proposed study, to detect possible flaws in data collection method instruments and to develop a contingency plan for inaccuracies that might occur in the main study.

In this study, pilot study was done before the actual research, the developed tool was piloted on ten (10) respondents, bridging course students at Tshilidzini Nursing School (Satellite) which is under Thohoyandou campus for clarity of the questionnaire items and instructions and to eliminate ambiguity in wording by the researcher and the research assistant.

The respondents were not included in the research project. The other reason was to check on time taken to answer questions and complete the questionnaires. The questionnaire was modified accordingly based on the findings of the pilot study (de Vos, 2011). This increased the validity and reliability of the data collection instrument and also save time for the study during the implementation the main project.

3.4.2.4 Quantitative Data Collection Methods and Procedures

Data collection is the evidence systematically collected in the course of a study (Whitehead, LoBiondo-Wood & Haber, 2012). The instrument used to collect data under the quantitative approach was the self-administered questionnaire.

The quantitative tool was used to obtain data through a close-ended questionnaire.

❖ The Close-Ended Questionnaire

In this study, the researcher developed an instrument in relation to existing related literature reviews as well as instrument used in the previous studies to elicit information related to substance use/abuse by the students. The questionnaire (ANNEXURE L) was presented to the promoter, statistician, and an expert in social issues for review. The questionnaire was also pilot tested and the obligatory corrections were made before continuing with the main study.

A close-ended questionnaire was the data-collection method used to gather information from the student nurses. The choice of the close-ended structured questionnaire considered for the student nurses (respondents) was most appropriate for the purpose and practical limitations of the study.

A structured questionnaire was developed by the researcher following an extensive review of related studies on substance use among student's population (Osuafor, Maputle & Ayiga, 2016). A great deal of enlightenment helped in the process of administering the questionnaires. After the brief explanation to the participants on the research purpose (ANNEXURE H) and the importance of their participation, consent forms were then issued to them.

They were assured that their participation was strictly voluntary. Thus, close-ended questionnaires are those types of survey research questions in which participants choose answers from a list of answers provided in the questionnaire (Neuman, 2011; Creswell, 2014).

The constructed questionnaires were administered to the student nurses in the five (5) campuses of LCN. It was beneficial when an extensive amount of information about a subject exists and the response opinions were relatively well-known.

The respondents understand the questions better, questions can be answered within the same framework and response can be compared better with one another. Finally, answers were easier to code and statistically analyzed (de Vos et al., 2014 & Neuman, 2014). The exercise lasted for several months until the researcher had completed the 445 participants intended for the quantitative design. The questionnaire was self-administered to 445 students in LCN.

3.4.2.5 Quantitative Data Analysis

Data analysis is a process of bringing order, structure, and meaning to the mass of collected data (de Vos et al., 2011). Different data analysis methods were used to analyze the data. The methods that were used to collect the data informed the method for its analysis. On the other hand, the quantitative method is the opposite of a qualitative method because its main focus is numbers with significant percentages. Thus, data editing, coding, and cleaning were done before the actual analysis. The data collected through the quantitative method (close-ended questionnaires) were analyzed using the Statistical Package for Social Sciences (SPSS) programme

version 24.

Frequency tables were generated to categorize the demographic characteristics of the participants. Thereafter, multi-variant frequency tables were created to analyze other responses. Then cross-tabulations were generated to bring out certain distinct characteristics and seek significance relationships in most variables quantifications and also test performance on variables at a confidence level of 95%. Nonetheless, each per cent column showed the percentages of all cases, including the missing cases constituted by each category.

While the valid per cent category showed the percentages of only the non-missing cases falling into each category. In most cases, the researcher was more concerned with treating the missing values on a variable as just another category of that variable. In numerous cases, however, these missing cases were ignored. When the missing cases/values are insignificant or have no substantive interest, the valid per cent column provides an accurate picture of the distribution of the valid cases because the valid percentages are not deflated by the inclusion of the missing cases in the denominator.

Thus, in all the frequencies tables, the cumulative percentages are meaningful only for variables measured at the ordinal and interval-ratio levels. The values of nominal variables, however, were not ordered. Without such ordering, it is meaningless to talk about a percentage of cases falling at or below a particular value on the variable. For the cross-tabulation section, there were no such cumulative percentages because it only presented whether a relationship exists between value variables or not.

Finally, the researcher interpreted how the combined results answer the qualitative, quantitative and mixed-methods questions (Creswell, 2014).

3.4.2.6 Validity

Validity and reliability are two statistical properties used to evaluate the quality of a research instrument. Validity and reliability are usually complementary concepts when applied in a study, but in some special situations, they conflict with each other particularly when a study combines approaches just as the present study. Validity refers to the extent to which an empirical measure accurately reflects the concepts it is intended to measure (de Vos et al., 2011; Burns & Grove, 2012, cited in Lbitoye, 2016). Validity in mixed-methods research refers to employing strategies that address potential issues in data collection, data analysis and the interpretation of research results that may compromise the merging or connecting the qualitative and quantitative strands of the study and the conclusions drawn from the combination (Creswell, 2014).

Reliability

Reliability of quantitative measurement means that the numerical results produced by an indicator did not vary because of the characteristics of the measurement procedure or measurement instrument itself (de Vos et al., 2011). It addresses the aspect of stability across time; aspect of representativeness across subpopulations or groups of people and finally the aspect of the equivalence of the multiple indicators of the construct. The validity of quantitative measurement is the trueness and correctness of the construct. At its core, the measurement of validity often refers to how well the

conceptual and operational definitions mesh with each other (Neuman, 2011).

It addresses an aspect of judgment on the face of it; the aspect of the content of the conceptual definition holding ideas; the aspect of standard criteria to indicate a construct accurately. However, the analysis of the quantitative data was carried out with the avoidance of errors, false conclusions, and misleading inferences. In this study, the researcher ensured validity by conducting a literature review and providing operational definitions of key concepts. According to de Vos et al. (2014) the basic ways to assess the validity of an instrument are face, criterion, and content and construct validity. The criterion validity is an approach that defines the extent to which the different instruments reliably measure the same variable (Cronbach's alpha). Cronbach' alpha is a measure of internal consistency, which is considered to a measure of scale reliability using SPSS.

In this study, the researcher structured questions on the instrument that were, for the greatest part, modified, and reassembled that link with the objectives of the study. Face validity is the simplest definition of validity (Gravette & Forzano, 2003 as cited in de Vos et al., 2011). This means that on face value, the questionnaire appears to be a relevant measure of the content under discussion in the research. In order to ensure validity of the measuring instrument, the measuring instrument was submitted to experts who judged the instrument on their knowledge and experience in social sciences.

Content validity refers to the capability of the instrument's items to adequately cover all the content that it should with details to the variables (de Vos et al, 2014). In order to ensure content validity, the developed questionnaire was given to some experts in mental health to scrutinize the content in relation to the study objectives.

The questionnaire was sent to the experts via email with an information sheet and the objectives of the study. Comments on certain aspects and their relevance were elucidated and revised according to the remarks from the critics. Response options to some question items were adjusted, while some question items that seemed to be uncertain were rephrased based on experts' superior suggestions, prior to its usage in the study.

Construct validity refers to the extent in which the instrument can draw inferences about test scores related to the concept being studied (de Vos et al. 2014). The researcher understood the meaning of instrument, what was measured, why it was operated and the way it was structured. Furthermore, construct of the instrument was based on logical relationship among variable and theory underlying it. Reliability refers to the degree of steadiness or constancy with which the instrument measures the element it is designed to measure (de Vos et al., 2011; Polit & Beck, 2012).

In this study, the researcher ensured that the information in the questionnaire is reliable and valid, based on current research.

The instrument was pre-tested by administering the questionnaire to some respondents from a group, ten (10) bridging course students who did not partake in the main project

were asked to complete the questionnaire before the main study. The researcher also ensured the reliability by developing questionnaire from existing ones in consultation with the supervisors.

3.4.3 Phase 3: Model Validation

Model validation means to ascertain whether the model which have been made are reasonable with respect to the real system. It reproduce system behaviour with enough fidelity to satsisfy analysis objectives. In this sudy model validation was done to substantiate a developed model to prevent substance abuse by the student nurses at LCN.

3.4.3.1 Population

In this study, the population were the LCN lecturers, management as well as the student affairs officers from all the five campuses.

3.4.3.1.1 Accessible Population

In this study, the accessible population were the LCN lecturers, management and student affairs officers.

3.4.3.1.2 Target Population

In this study, the accessible population were lecturers and the LCN management who experienced the prevalence, contributory factors as well as the consequences of substance use/abuse by the student nurses on the quality of life.

3.4.3.2 Sampling of Campuses

Akinsola (2005, cited in Nuq & Aubert, 2013) defined sampling as the process of selecting representative units of a population study in a research investigation. In this study, probability random stratified sampling was used to select one nursing campus as each campus has similar characteristics of being selected.

3.4.3.2.1 Sampling of Lecturers and the LCN Management

In this study, probability stratified random sampling was used. The researcher wanted lecturers and the management to validate a developed model to prevent substance use/abuse by the student nurses in LCN.

3.4.3.2.2 Inclusion Criteria

In this study, it refers to the lecturers and the LCN lecturers, management and student affairs officers.

3.4.3.2.3 Exclusion Criteria

In this study exclusion criteria refers to student nurses as well as nursing school (satellite campuses) lecturers.

3.4.3.2.4 Sample Size

In this study (20=100% that is (18=90%) were drawn from lecturers (2=10%) student affairs officers as well the LCN management.

3.4.3.3 Data Collection

The researcher designed a questionnaire (checklist) to validate data for the model in quantitative data collection efforts. Prior arrangement with the LCN management were made. The researcher presented the model to management, lecturers and student affairs officials at LCN.

3.4.3.4 Data Analysis

Data were analyzed by a statistician using SPSS version 24. Tables displaying frequency computations and percentages of the values of the lecturers and student

affairs officers' variables, and descriptive data analysis that shows the maximum, minimum, mean and standard deviation of the variables was used.

3.4.3.5 Ethical Considerations

Ethical considerations are sets of rules of behaviour and morals to be honoured when conducting a study (Brink et al., 2012; Polit & Beck, 2008). This is a system of moral values that was concerned with the degree to which research procedures adhered to professional, legal and social obligations to the study participants. Ethical considerations were pertinent in this study because of the nature of the problem, the data collection methods and the kind of research participants that were student nurses. Some of them possibly involved in substance use.

The fact that human beings were the subjects of study in the nursing college, in planning research, the researcher needed to be aware of the agreements about what was proper and improper in scientific research. Therefore, ethical consideration was ensured as an integral part of the planning and implementation of this research. The researcher was responsible for designing and carrying out research both knowledgeably and ethically. The direct personal involvement of the field study of the social lives of other people raises many ethical dilemmas. Due to that reason, ethical steps were taken before and during the fieldwork. For the purpose of approval, the proposal was submitted (through the head of the department) to the Higher Degrees Committee of the School of Health Sciences prior to the execution of the research project for presentation (

ANNEXURE A, ANNEXURE B, ANNEXURE C).

Once accepted and approved by the school, the proposal was sent to the University Higher Degrees Committee and then to the University's research office for ethical clearance before the study was conducted (ANNEXURE B). Soon after the University's approval, an application letter for research requisition was written to the provincial Department of Health, Limpopo Province for research permission (ANNEXURE D). Letters to the College as well as the campuses heads were written requesting access to the research sites (ANNEXURE F).

The researcher issued an informed consent form (ANNEXURE I) to all the participants requesting their participation. The consent form explained what the research entails and the importance of their participation to its success (ANNEXURE H). Participation was strictly voluntary (Burns & Grove, 2011), which implies that any participant who

did not want to participate or wanted to pull out for any reason was allowed to do so. All the information provided by the participants for this study was treated with strict confidentiality and anonymity and was used for academic purposes only. The researcher honoured all the agreements in this study. The following ethical considerations were considered in this study to enhance the protection of participants.

3.4.3.5.1 Permission to Conduct Research

To achieve the objectives of the study, permission was sought from the following departments: The School of Health Sciences, University of Venda Higher Degrees Committee and Ethics Committee (

ANNEXURE A, ANNEXURE B, and ANNEXURE C), the Ethics Committee of the Department of Health Limpopo Province (ANNEXURE D, ANNEXURE E). The LCN Research Ethics Committee and Permission to interview students was requested from the vice-principal of each of the five campuses, namely: Giyani, Thohoyandou,

Sekhukhune, Sovenga and Waterberg Campus (ANNEXURE F, ANNEXURE G1 ... G4). Participants were asked to sign a consent form which described the study, assured participants' confidentiality, and indicating their freedom to withdraw from participation if they so wish (ANNEXURE H, ANNEXURE I).

3.4.3.5.2 The Right to Freedom from Harm and Discomfort

This is a fundamental ethical principle that sought to maximize benefits for study participants and prevented harm (de Vos et al., 2011, Polit & Beck, 2012). Participants might be harmed emotionally or physically during the interview. Therefore, protection of the participants against any form of physical or emotional discomfort rested with the researcher. Participants were protected from harm by thoroughly informing them beforehand about the potential impact of the study. The researcher ensured the principle of beneficence by ensuring an environment that was conducive during FGDs.

The researcher conducted the FGDs in private rooms where disturbances were minimal. Honesty and openness were regarded in order to promote rapport between the researcher and the participants both student nurses, student affairs officers and lecturers. The student nurses were not exposed to situations that might cause serious or lasting harm. Harm to subjects could be physical or emotional, and emotional harm to participants was often more difficult to predict and to determine than physical discomfort. For the purpose of this study, the researcher avoided asking questions that may lead to revelation of sensitive personal information that might cause emotional harm and discomfort.

3.4.3.5.3 Informed Consent

Brink et al. (2012) and de Vos et al. (2011) stated that this ethical principle emphasizes that participants should give their consent to participate only after researchers fully disclosed the purpose of the research, what it entailed, and its potential effects or consequences. The researcher gave the participants full information regarding the study that was: the nature, extent, and duration of the participation requested and disclosure of the risks and benefits of participation in the research. The goal of the investigation, the procedures that was followed during the investigation, the possible advantages, disadvantages and dangers to which participants might be exposed, as well as the credibility of the researcher, be rendered to potential subject or their legal representative.

In this study, participants were psychologically and legally competent to give consent. The participants signed a consent form indicating the aim, objectives of the study and the fact that participation was voluntary and that respondents and/or participants might withdraw from the study at any time they felt like doing so. Participants were also given sufficient time to ask questions before the commencement of the study, as well as during the study. Consent forms to be completed if participants wish to be part of the study were provided.

3.4.3.5.4 Confidentiality, Privacy and Anonymity

Confidentiality refers to agreements between persons that limit others' access to private information (Brink et al., 2012). According to Brink et al. (2012), anonymity means that no one, including the researcher, should be able to identify any subject

afterwards. This study adhered to this ethical aspect by ensuring that information provided by respondents and/or participants was safely stored and never shared with other people. To safeguard the privacy of the participants were kept in a private environment away from passers-by or intruders. The information was private and withheld from others inside or outside this study.

The study was designed in such a way that risks of breaking confidentiality were minimized. On this aspect, the participants in this study never disclosed their identity on questionnaires while fake names or codes were used to mask their identity in the focus groups sessions to ensure that they were not identifiable from the audio-recorded data. Hidden apparatus such as video cameras, microphones and one-way mirror were not used to ensure privacy. Only the researcher and her assistance were aware of the identity of the participants in this study.

3.4.3.5.5 Respect for Autonomy

This principle involves the autonomy and confidentiality of the individuals for participating in research. The researcher treated the prospective participants as autonomous agents by informing them about the proposed study and allowed them to voluntarily choose to participate or not (Burns & Grove, 2011).

In this study, the unstructured interviews and FGDs times and preferences were considered and the student nurses were assured that the information were not linked to their names. The ethical issues were also considered so as to protect the student nurses, student affairs officers and the lecturers involved in the study included.

The researcher ensured that the participants are respected throughout the research process.

3.4.3.5.6 Principle of Justice

This is an ethical principle that states that human subjects should be treated fairly (Burns & Grove, 2011).

Regarding identification of the participants, participation in this study was voluntary and withdrawal before the completion of the interview and FGD being possible without repercussion for potential participants. The researcher selected the participants fairly through the assistance of the lecturers and also according to the research plan. All student nurses from Level I to Level IV were interviewed.

The selection of participants was based on the research requirements not on vulnerability or position of other people. There was neither discrimination nor prejudice against individuals. All agreement made with the participants were honoured throughout the study.

3.4.3.5.7 Gaining Entry

Gaining entry is the process whereby the researcher gets permission from all the people who are related to the participants to carry out the study. The researcher engaged the vice-principals of the five campuses under the LCN requesting permission to conduct the study (ANNEXURE F). Ethical clearance certificates were attached as evidence of approval for data collection.

Written permissions were received from four (4) campuses while verbal permission

was granted by the Waterberg Campus telephonically. Later on, the researcher went to the campuses to organize about the dates on when the study would be conducted. The researcher was given written permission to conduct the study. The permission letters are in attached in the annexures (ANNEXURE G1 - G4).

3.5 Summary

This chapter presented the research study methodology. It is evident that the study used a combined approach. For that reason, the study design was deductive and inductive in approaches. The study used the quantitative description and qualitative exploratory methods of research and focused only on primary data. The study site and fieldwork took place in LCN, Limpopo Province, South Africa. The participants for the quantitative approach were mainly student nurses. The participants for the qualitative approach were recruited through snowball and purposive sampling procedure.

The participants were the nursing college lecturers, student affairs officers and nursing students who are into substance use/abuse. For the qualitative method, the thematic content analysis was used to analyze the data and responses were grouped in accordance with their themes. The data obtained with the closed-ended questionnaires were analyzed with the use of the SPSS version 24. In this chapter, an overview of the research design and model validation methods that guided the scientific activities of the study. The mixed-method research design Phase 1 and 2 utilized with regard to population and sampling, data collection and analysis, trustworthiness and ethical considerations were discussed. Chapter 3 presents the data analysis and interpretation.

CHAPTER 4

ANALYSIS AND INTERPRETATION OF THE RESULTS

Stage 1—Qualitative Design

4.1 Introduction

The research methodology and study designs were discussed in the previous chapter. The objective of this chapter is to analyze raw data and interpret the findings related to developing a model to prevent substance use/abuse by student nurses at Limpopo College of Nursing (LCN). This chapter presents the findings of the study, their analysis and interpretation. Both qualitative and quantitative analysis approaches have been used in data analysis, thus reflecting the mixed model research design approach followed in the analysis.

Designs were divided into two stages, i.e., Stage 1—Qualitative and Stage 2—Quantitative. Stage 1 addresses the following objectives: to explore the factors responsible for the incidence of substance use/abuse by the student nurses at LCN, to explore if the family background of the students who are substance use/abusers in LCN plays a role in them, to explore the role played by the LCN on the prevalence of substance use/abuse; and, to explore and describe the factors contributing to the prevalence of substance use/abuse by students at LCN (Table 4.1).

Table 4.1: Matrix sampling profile of student participants

Campus	Age (Years)	Gender	Level of Study	In-Depth Interview	Number of Participants	Focus Group Number
A	19-25	Males and females	III	1 Female	15	1
B	18-25	Males and females	II		13	2
C	18-25	Males and females	I		12	3
D	20-25	Males and females	IV	1 Male	15	4
E	18-25	Males and females	I		10	5
A	18-25	Males and females	II		10	6

4.2 Discussion of the Findings—The Consequences of Social and Environmental Factors on the Incidence of Substance Use/Abuse by Students in LCN

This chapter presents information on the consequences of social and environmental factors on the incidence of substance use/abuse among students in LCN. The information emerged as the major theme from the qualitative approach, which is phase one stage one of this study. The data were obtained through qualitative instruments as such, using unstructured and semi-structured interviews.

The presentation of this major theme was followed by a detailed analysis, as well as literature control and the backing of the theoretical framework guiding the study. The consequences of socialization and environmental factors that emerged from the results significantly played a role on the incidence of substance use/abuse among the students through family background experience of substance addiction, peer pressure and influence, household poverty experience, single-parenthood background, low

self-esteem, parenting approaches of the students, traditional practices and values, role modelling and imitation, as well as financial independence. At the level of environmental factors, the consequences that played a role on the incidence of substance use/abuse were lack of recognition of substance use/abuse in the college's administrative affairs, unavailability of recreational facilities, accessibility and affordability, poor professionalism of the nursing staff, and loose security measures for substance usage control. These sub-themes that emerged from the major theme collectively shaped the consequences on the incidence of substance use/abuse in LCN.

However, based on the emerged sub-themes, the pattern in which the incidence of substance use/abuse prevails was through the students' socialization experience and the environment that constructed the processes of their substance addiction. It is safe to say, based on the indications of the findings that the actual students learned substance usage and addiction behaviour through socio-environmental factors. The next section presents the theme and the sub-themes of the impact of socialization on the incidence of substance use/abuse.

4.2.1 Theme 1: The Consequences of Socialization Factors on the Incidence of Substance Use/Abuse by Student Nurses

This section presents information on the impact of socialization on the incidence of substance use/abuse among the students of LCN. The information was solely evidence that emerged from the socialization results, which were critical drivers on the incidence of substance use/abuse. As revealed by the results, socialization that contributed to the incidence of substance use/abuse was not just an event that occurs

at the college communities. Rather, some of the addictive behaviours were learned through the fundamental processes of families parenting pattern and norm. Therefore, the students' individual families exemplify the primary setting in which their lives were shaped and developed to the substance repeated usages.

The evidence from the results suggests that family unit as the first socialization agent exhibited the strong effect and continuous impact of substance addiction experience and further externalized such experience at the college communities. Table 4.2 presents the theme and explained the emerged sub-themes of the impact of socialization on the incidence of substance use/abuse among students.

Thus, socialization determinants of substance use/abuse negotiate socialization factors and the role each factor played to cause substance usage and addiction. Socialization was the process through which the individual students learned the substance use/abuse behaviour. Thus, socialization determinants of substance use/abuse phenomenally are very individualistic. So, there are several factors that combine, and all of them have significant contributory roles in the use/abuse.

The fundamental contributors to developing substance use/abuse and/or addiction are mostly within an individual developmental feature. A body of literature has expressed the reason as to while everyone who is exposed to those certain factors develops a dependency on drugs and/or alcohol. The study by Kane & Ballue (2013) noted that there is a correlation between substance use/abuse and certain environmental, individual, genetic and social factors. Therefore, the main contributory factors to substance use/abuse and addiction include the individual self, genetics, environment,

and social factors.

Table 4.2: Impact of social factors on the incidence of substance use/abuse among students

Theme	Sub-Theme	Description
1. Socialization factors	1.1. Family background	The incidence of substance use/abuse among student was cited as an experience of the student's family background
	1.2. Peer pressure and influence among students	Peer pressure was cited for alcohol and substance use/abuse among students
	1.3. Household poverty experience	The prevalence of substance use/abuse was mostly associated with a student from a poor household background
	1.4. Single parenthood background	The students involved in alcoholism and substance addiction largely belong to single-parent households
	1.5. Low self-esteem	Substance usage was repeatedly echoed by some students who felt the need and desire for identity and recognition
	1.6. Parenting approaches of the students	The students who experience uninvolved and permissive parenting approaches were cited as reasons for substance use/abuse
	1.7. Traditional practices and values	Traditional rituals were cited for most first-timers of substance usage
	1.8. Role modelling and imitation	Imitating role models play a role in the incidence of substance use/abuse among students
	1.9. Financial support	The monthly stipends the students receive in form of financial support aid in the prevalence of substance use/abuse

Some scholars, including the present study author, remarkably considered that the term “contributors” is used instead of “causes” because the absolute cause of substance use/abuse is still complicated to comprehend. Therefore, a contributor to substance use/abuse denotes one possible variable out of many which are associated with substance use/abuse, the particular combination of which may vary in each individual case to establish the cause. Thus, substance use/abuse is usually a collation of experiences, environments and motivations that impel individuals into

different directions (Potenza, 2013). It is the unique makeup of an individual's story. Everyone is brought to the same ending from a different beginning. Although some experiences are shared, there are several risk factors that can contribute to the development of substance use/abuse. Most risk factors fall into one of several categories mentioned previously. Pseudonyms were used to fit participants' details, including the age of the participant and gender, college campus affiliations, capacity or position of the participant, the date of the interview.

4.2.1.1 Sub-Theme 1.1: The Consequences of Family Background on the Incidence of Substance Use/Abuse

The impact of the family background of students played a role in the incidence of substance use/abuse. The results in matrix 1 revealed that the family background experience on substance use/abuse contributed to the incidence of substance addiction among the students. Evidence that emerges from the study results indicates that the common reason behind the prevalence of substance use/abuse and repeated usage came out of the manner in which the students' parents and/or guardians use the substances. The impact of parents' usage constituted severe factors that lead the students to the involvement. There were several indications that the students' involved in substance use/abuse have parents who have substance addiction behaviours.

So, observing usage behaviour created the room of influence on the students to indulge in the usage that led them to the prevalence of abuse and/or addiction. This conclusion/finding emerged as a common factor during the interviews with a female staff, as stated by the informant:

“To me family play a big role in influencing substance use/abuse. I would say in case a student is raised by family members who drink alcohol or smoke cigarettes he/she is at risk of doing the same thing. One of the students told me some time ago that he started to smoke because his father used to send him to buy the stuff (marijuana or dagga) for him. He is the one who introduced his room-mates to the stuff ... you see.” **(Participant 1; female; 65 years)**

The indication of these findings suggests that the incidence of substance addiction resulted out of the parents' affordability pattern and usage. The student is involved in the purchase of substances for his father learned how to use the substance. So, the typical incidence of substance use/abuse that occurs on the category of these students' points to the fact their parents played the role in the substance use/abuse.

The present study findings collaborate with some studies that noted the impact of role model in substance use/abuse and also the influence of parenting. The studies by Tuwei (2014) and Berg & Theron (2011) explained that having a close relative, such as a parent or sibling, who has a problem with drugs or alcohol can increase an individual risk of substance usage and abuse.

The evidence of this finding further suggests that learning of substance usage and abuse is a behavioural learning process that often occurs through being closely involved with the purchase. Berg & Theron (2011) observed that being closely involved with someone, such as a family member, spouse, or friend, who displays alcoholic or addictive behaviour lead to emotional conflicts and subsequent getting along with that behaviour. Thus, at a particular point in every individual's life, there is always a concern about the use of alcohol or other drugs by that individual.

The empirical finding that emerged from the results of this study is supported by the theoretical framework underpinning the study. The fundamental ideas that drive the social learning theory are heavily related to social behaviours and the activities thereof. Bandura's (1963) social learning theory advocate imitation as a behavioural learning tenet. Bandura theorized that individuals engage in behaviours previously witnessed by others.

The individual observes characteristics of the models, their behaviour and the aftermath of that behaviour, and then imitate them. To a large extent, the people with whom an individual is in immediate contact with will become a source of imitations (Akers & Sellers, 2004). Imitational social learning behaviour supports the incidence of substance use/abuse resulting in students who became addicts through their involvement in the purchase of substances for their parents from early childhood stage. The incidence of substance use/abuse as an experience of the student's parenthood is due to the fact that the social behaviour is learned and imitated by their parents. Social learning theory can be commendably used to understand the occurrence and reoccurrence of substance usage and abuse.

Other results that emerge revealed evidence of family careless attitude on the incidence of substance use/abuse. The evidence indicates that the common reason behind the prevalence of substance use/abuse by students emanates from the inappropriate carelessness of the students' family towards substance use/abuse. The indication was that most students were not raised in families where attitudes towards substance usages were not monitored and supervised. The findings also suggest that most students were not aware of the appropriate age to begin smoking and consuming

alcohol.

The careless attitude displayed by the families on restrictions and cautions constituted severe factors that lead the students to substance use/abuse. An informant explained during the interview that grandparenthood feckless was a contributory factor to the prevalence of substance use/abuse by students. This fact emerged during the interviews with the male staff in community nursing, as indicated by the participant:

“Family carelessness is a major problem leading our students in substance use/abuse. You will be surprised that for some students, no one ever told them not to smoke or drink alcohol in their early age. They did not caution or apprehended when they do it. In a way, I don’t blame the students, because some of them grew up under their grandparents’ roof. Is like saying they live alone because they do what they like and when they want. My understanding of this subject is very tricky. Do you know why? People no longer talk about the harms of substance use/abuse and I believe is very inappropriate. Not even parents these days take it seriously, not to talk of high school’s teachers and the principals. So, before the students enter the nursing college, they are already used to taking this substances”

(Participant 2; female; 53 years)

Another participant stated the following:

“I have been drinking liquor and smoking from long before started nursing college. No one ever says it was wrong. Even in my high school days, I use to smoke and drink. It was not only me who was doing it. My brothers and sisters also use to do it” **(Male student [2]; 21 years; level 1)**

In spite of the fact that most studies concentrate on peer influence on youth who have substance use/abuse or dependency problems. Although, those studies are not out of order, considering the fact that substance use/abuse is viewed under social

behavioural science. A more understanding of family functioning with an alcoholic and other drugs abuse tolerance and carelessness can be understood through personal experience from an addict family perspective. The evidence of this study collaborates with most studies that argued on the tolerance of substance use/abuse. Gruber & Taylor (2006) present a logical argument that alcoholism and drug abuse must be seen primarily from a family perspective to be properly understood. That is because the incidence of substance use/abuse has primary and secondary factors. These factors are mostly promoted through personal and social influences in addition to the environment in which the students grow up in.

The primary factors come under the students nurses personal influences through what can be called self-rebelliousness, tolerance of deviance (which usually takes place within the family), a high value on independence and non-conformance, low school commitment and achievement, positive beliefs and attitudes towards substance use (usually occur through social learning behaviour), and lack of self-efficacy to refuse offers of illegal substance and alcohol (Bezuidenhout, 2013; WHO, 2012).

The secondary factors come under social influences that favour substance use/abuse among individuals with low socio-economic status and minimal parental education, family disorder and conflict, weak family bonds, low parental supervision, parental permissiveness (Bezuidenhout, 2013;). Other scholars also have a contrary view of the type of family background influence on the incidence of substance use/abuse.

Those scholars noted that influences in itself are the lack of rules regarding substance use, including a family history of substance use, peer substance use, perceived adult approval of use, and perceived peer approval of use (Bezuidenhout, 2013; Onifade, 2011).

The findings that emerged on the student's family background on the incidence of substance use/abuse is empirically back by the theoretical framework guiding this study; given what is known about ecosystem theory explained in chapter three above. The concepts that guided ecological system theory has a history of development based on human-in-environment. Bronfenbrenner (1989) formulated the description of how the inherent qualities of a child and his environment interact to influence growth and development. This theory advocated the importance of studying a child in the background of multiple environments, to understand his development. Which therefore suggest that the students who are involved in substance use/abuse systematically develop the habit from a family background.

This upholds that a child naturally finds himself concurrently entangled in different ecosystems, from the most intimate home ecological system moving outward to the larger school system and the most expansive system which is society and culture. Each of these systems inevitably interacts with and influence each other in every aspect of the child's life (Bronfenbrenner, 1989). The Bronfenbrenner model organizes contexts of development into different domains or levels of external influence. The levels are categorized from the most intimate level to the extensive, with the family were the first and foremost category.

4.2.1.2 Sub-Theme 1.2: The Role of Peer Pressure and Influence on the Incidence of Substance Use/Abuse

Peer pressure and influence played a role in the prevalence of substance use/abuse among students. The evidence of this study revealed that the students also consume and abuse substances in order to gain social group acceptance. Friendship and group acceptance contribute to the prevalence of substance use/abuse among students in Limpopo College of Nursing. The evidence from the study revealed some students abuse substances when they are with friends in order to keep up to the expectations of the friendship group since everyone does the same. The indication that some students use substance use/abuse as an activity to keep up friendship was peculiar with the colleges' relationships.

However, peer and influence also played a role in the incidence of substance use/abuse among siblings. The evidence indicates that the students were also influenced by substance use/abuse by their siblings. The impact of this pressure and influence was found to be contributing to the prevalence of substance use/abuse in the campuses as articulated by one participant:

"It is peer pressure playing a role, depending on what the friend's group consume. For instance, you cannot see a gang of friends with an exception of one who does not drink and smokes. Is either you belong to one of them. If a student who does not take this substance wants to join the group of friends who do. It means he or she has to also take if not s/he would not be very well accepted in the gang. They go outing just to get drunk, the student who does not abuse substances does not join the rest who do on those outing and celebrating birthdates and baby showers with alcohol and dagga" (Participant 4 male; 53 years)

Another participant stated the following:

“I don’t use alcohol all the time though. I only get tipsy or drunk when I’m with my brothers. Or maybe birthdate party celebration with my school friends here on campus” (Female student [1]; 19 years; level 1).

One more participant indicated in following:

“I started drinking from home with my elder sisters. I am the youngest though and I was not working by then, so they buy and we drink together. But now I can afford what I want to drink” (Male student [4]; 22 years; level 3)

Given what has emerged from the study results, the implication of the nature of peer pressure and influence leads to the student's indulgence on substance usage and abuse. Existing studies on the prevalence of substance use/abuse demonstrated the impact of peer pressure and influence on the substance addiction, indicating that for most youths and particularly students it is not about the substance desires, but rather the justifying the expectations of the peer group (Adegboyega, 2012; Parry et al., 2010). The evidence of study findings suggests that the reasons for the prevalence of substance use/abuse were keeping to the standards of the group.

The evidence of peer pressure and influence led to friendship bond also took place within the family among siblings as indicated in the results. Peer pressure and influence among siblings was found to play a substantial role in the prevalence of substance use/abuse through the celebration of birthdates and baby showers.

The present study findings buttress some studies on the prevalence of substance use/abuse that for a young teenager having to grow-up with an older sibling who is involved in substance use/abuse, has an impact on the younger teenager for early substance usage and addiction (Potenza, 2013). The studies responding to the interplay of sibling influences on the prevalence of substance use/abuse posit that genetic factors also shape the incidence of substance addiction (Steinberg, et al., 2011).

Thus, the genetic factor fundamentally contributes to substance use/abuse or addiction. Some literature narratives uphold the fact that the roots of addiction lie deep within a person cellular level, though, there are as many variables as our individual DNA. This is why siblings of substance addict often easily influence each other, some leading to addiction and abuse (Potenza, 2013).

Sibling influence contributes to the increased likelihood that a young adult will abuse drugs or alcohol, and to what extent the substance use/abuse may escalate. Factors such as gene mutations in a person's DNA chemically predispose a person to addiction by as much as half (Yip et al., 2011). These can be passed along from family members over time, making it easier for one person to succumb to addiction and influence the other.

The evidence from the study findings on peer pressure and influence on the incidence of substance use/abuse are bound to two contexts; (i) social relations among peers/siblings; and (ii) genetic factor among siblings. The empirical evidence of social relations on substance use/abuse is theoretically supported by the fundamental

principle of differential association and definitions of social learning theory (Bandura, 1963). Where differential association as a fundamental principle of social learning theory supports the fact that an individual immediate contact both directly and indirectly, exposed them to acceptable behaviours as well as a variety of other behavioural models (Akers & Sellers, 2004).

Differential association spells out an individual social behavioural code of conduct. Meanwhile, definitions, on the other hand, are what an individual interprets to be acceptable behaviour and correct values and attitudes for themselves. This is a self-judgment principle of social learning theory. Definitions are usually developed and reinforced through the process of differential association.

4.2.1.3 Sub-Theme 1.3: The Consequence of Household Poverty Experience on the Incidence of Substance Use/Abuse

The impact of household poverty experience among the students played a role on the incidence of substance use/abuse in LCN. The evidence that emerges from the study findings indicated that students' parents' occupation played a significant contributed to the incidence of substance addiction. It was revealed that the students who are involved in substance addiction and abuse come from homes whereby parents were mostly unemployment. This emerges as a fact during the interviews with students who are involved in the used of substances.

Some student participants reported as follows:

“My dad is a retired policeman. He has been retired for a while now. He is very old, I can say 73 years now, yes 73. As you can see, my mother used to be a primary school teacher. But now they don’t work” **(Male student [4]; 22 years; level 3)**

“My grandmother is not working. I am not sure if she did ever work. I don’t know honestly. But she receives a SASSA grant monthly” **(Female student [7]; 24 years; level 4)**

“I live with my mother and grandmother. My mother works in the Venda Plaza and my grandmother works as a cleaner in the shopping complex” **(Male student [11]; 23 years; level 3)**

Other evidence that emerged from the study findings revealed that administrative staff and the lecturers also indicated that low-income earning households played a role in the prevalence of substance use/abuse among the students. This conclusion emerged as a shared factor during the interviews, as stated by one participants:

“It quite obvious that the students who are regularly involved in substance use/abuse in this campus mostly come from low-income homes. You know you can easily identify a struggling student from just looking at him or her. What I do not know is why they are always smoking.”

Mostly the boys in that matter. They come to class smelling of liquor or dagga. The truth is that I took some time a while back to check the profile of the students who are underperforming in my module as a result of substance use/abuse.

I noticed the majority of them come from very low socio-economic background” **(Participant 3 females; 53 years).**

Another informant indicated in the exact:

“You cannot excuse the family background of the students who abuse substances out of it. I have long realized that the students drinking alcohol and smoking all kinds of things, including dagga, come from the poor family background. Some of them stay alone without parents or maybe their elderly relative who do not even care what they do” (Participant 5; female; 55 years)

The implication of the emerged evidence indicates that although some of the students’ involved in substance addiction, parents were employed or earning social grants, the nature of their employment suggests that they belong to low-income earners households. Factors such as low-income earnings, unemployed parents or family members, and parents depending on the social grant, are factors that are associated with poverty experience. Existing studies have found that poverty experience creates a particular link on the incidence of substance use/abuse (Kaminski, Perou, Visser, Scott, Beckwith, Howard, Smith & Danielson, 2013). Poverty experience contributes to substance use/abuse.

A body of literature noticed that an impoverished environment usually increases the likelihood of substance use/abuse (Chesang, 2013; Ebersohn, 2015; Fareo, 2012; Rungani, 2012). The experience of poverty can affect generations of family members due to lack of education and limited access to employment or healthcare. The study by Simatwa (2014) argued that poverty-stricken environments leave many experiencing lifestyles including incarceration, homelessness and poor health. Those are characteristics or features that that normally leads young adults to substance usage and addiction.

The young adults who drop out of school, are often unemployed or live in unsafe areas are at higher risk, especially if their home environment has already exposed them to drugs and/or alcohol (Ebersohn, 2015). The effects of poverty can leave many without access to treatment. Treatment and detoxification are difficult to accomplish, especially with limited resources. Those who have the ability to use public health services often have difficulty maintaining long-term due to family responsibilities (Potenza, 2013).

Household poverty experience is a vicious cycle that perpetuates itself as generations are born and raised in lifestyles of high-risk exposure. Despite the fact that familial and peer influences, as well as poverty, contributes to substance use/abuse, other environmental contributing factors include the availability of drugs, social changes, employment status, type of occupation, and cultural attitudes that are prevalent in poor neighbourhoods. The evidence of these study findings that revealed household poverty experience on the incidence of substance use/abuse is empirically supported by the ecological system theory advocated by Bronfenbrenner (1989).

Ecological system theory focuses on the relationships that exist between two or more settings, one of which may not contain the developing child but affects him indirectly nonetheless. At the exosystem level, the focus is on access and availability of illegal substances that the youth may succumb to. Part of the risk factors considered under the exosystem consists, among others, is the social and economy-wide environment that inhibits/delays the onset of drug or alcohol abuse.

The same social and economy-wide environment aspect focused at the societal level, that looks at how factors such as poverty, unemployment, community tolerance on substances, slack border controls, etc., place the youth at risk to drug abuse (Ennett, Foshee, Bauman, Hussong, Cai, Reyes & Durant, 2008). The study by Thomson (2015) explained that these factors have contributed to rising levels of drug abuse in South Africa through widespread and severe poverty levels, rapid modernization and decline of traditional and social relationships, as well as porous borders.

4.2.1.4 Sub-Theme 1.4: The Impact of Single-Parenthood Experience on the Incidence of Substance Use/Abuse

The data showed that single-parent homes contributed to the prevalence of substance use/abuse among the students in LCN. The evidence that emerges from the study revealed that single-parent homes play a role in the prevalence of substance use/abuse. The results further indicate that female-headed homes were a leading factor behind the incidence of substance usage and abuse. These results suggested that the parents of students who abuse substances were either their biological mothers or grandmothers in female-headed households. These findings emerged as a shared factor during the interviews, as stated by informants:

“I manage to know a few students who are heavily involved in substance use/abuse. I can confirm that these boys and even the girls I know are living with their mothers and grandmothers. So they live in homes with no proper male authority. They live unsupervised and it is the same character they display here in campus” (Participant 6; female; 50 years)

Another informant also indicated the following:

“The concern for substance use/abuse among our students in Giyani campus is something I have come to noticed has a lot to do with their upbringing. You know this is a small community. We know ourselves very well; including family members. The young boys and girls who abuse alcohol and smoke dagga mostly belong to families where either their fathers go to work and return weekends or mothers are struggling with house responsibilities. I believe not being raised in a stable home contribute to them being vulnerable to smoking and drinking at an early age
(Participant 7; female; 53 years)

Thus, the implication for the emerged evidence is that single-parent households have an impact that heightens the vulnerabilities of students resulting in the prevalence of substance usage and abuse. The single parent home system denies a student the benefits of a positive balance parenting experiences built on the principle of father and mother. The notion of positive balance parenting typically underscored activities such as, nurturing behaviour, which are activities that respond to the child’s needs for emotional security, the provision of warmth and sensitivity embedded within the structure of the father and mother relationship (Roman, Makwakwa & Lacante, 2016). For instance, in a household composed of the father, mother, and children, there is a natural ‘parental structure’ that cultivates behavioural expectations. Parental structure implies setting boundaries and guiding the child’s behaviour through modelling of positive behaviours, without physical or psychological coercion from both father and mother perspective (Shaman et, al., 2007).

The study by Pecnic identified 'recognition' in parental structure, referring to the child's needs to be respected and acknowledged by both parents and to foster the potential for mutual understanding and influence to develop. This is also conceptualized as a process that necessitates an ongoing parental adjustment to the changing developmental tasks of children as they grow older, including different growth stages in teenage years and even when they are away from home for studies purposes.

The experience of being raised in a single parent home, particularly in a female-headed home, as a young boy/girl, has consequences not only on a socio-economic basis but also lessen the student social skills. Existing studies on single-parent homes with respect to the children social behavioural problems suggest that lack of a paternal sense of balance mostly in female-headed households constitutes a particular risk behavioural factor including the vulnerability of substance use/abuse (Usakli, 2013). This suggests that, in the life course of every young boys and girl, there comes a stage where paternal experience and involvement are highly needed to ensure their absolute development devoid of substance usage and abuse.

4.2.1.5 Sub-Theme 1.5: The Impact of Low Self-Esteem on the Incidence of Substance Use/Abuse

The impact of low self-esteem played a role on the incidence of substance use/abuse among the students. The evidence that emerged from the study results indicates that the students' low self-esteem contributes to the prevalence of substance usage and abuse in LCN. The emerged evidence suggests that the students' quests for esteem were the traits to the incidence of substance use.

This evidence suggested that desires for recognized status led some to participate in substance usage activities which they believe is a higher respected status resulting in substance use/abuse. This evidence further revealed that newly admitted students got involved in alcoholism and smoking because they want to befriend the old and senior student nurses out of self-esteem.

This common fact emerged during the interview, as the students involved in substance use and abuse stated their motives:

“I started drinking alcohol on our fresher’s ball party. I met some senior friends that I really like and they were all drinking and smoking. I figure out that if I also bring my alcohol and drink with them, I can become friends with them. That was also my first time tasting dagga. But after then I drink even in my room (Male student [5]; 24 years; level 3)

Another participant stated the following:

“Before I started drinking and smoking, I used to think drinking is for senior people, big girls and their boyfriends. I think that’s is the reason that made me drink for the first time” (Female student [11]; 24 years; level 4)

The implication of these results suggests that to attain a social high esteem was an indication of the students’ involvement with substance usage and abuse. An interpretation that is contributing to the prevalence of substance addiction. These findings further indicate that the pattern of socialization on college premises is deemed a risky habit because it shows the students vulnerability to negotiate high self-esteem without involvement in substance usage.

The quest for high self-esteem was a contributory factor in the prevalence rate of substance use/abuse. The present study findings collaborate with prevailing studies that have profiled the impact of low self-esteem on substance use/abuse. The study by Ramsoomar (2015) noted that substance use/abuse and addiction influencing factors within an individual domain include, among others, tendency, age, and low self-esteem.

On the other hand, Chungalwa, Ndurumo, Barasa & Poipoi (2012) explained that behaviours such as low religious involvement, short-term goals in life, depressive symptoms and a poor sense of well-being as well as low self-esteem make the youth give in to substance use/abuse. Psychologists, often link substance use/abuse to internal individual problems, such as low self-esteem and poor parental attachment (Musick, 1993, cited Neiterman, 2012). Therefore, when youths choose to involve in substance use/abuse and defend their decision as a consciously made choice, their claims are constructed as a response of psychologically unstable young girl or boy with low self-esteem who get involved for all the “wrong” reasons.

4.2.1.6 Sub-Theme 1.6: The Impact of Parenting Approaches on the Incidence of Substance Use/Abuse

Parenting pattern and practices play a role in the incidence of substance use/abuse among students. The evidence that emerges from the study revealed that the parenting pattern and practices of the students placed them vulnerable in the incidence of substance usage and abuse. The study results indicate that the common factor driving the student to the prevalence of substance usage and addiction emanated out of the approach in which they were raised.

Their parents' parenting practices and pattern instilled severe factors that lead the students in substance use/abuse. There were several indications that most students came from families where parents were not involved in parenting responsibilities, which leads to a lack of parental supervision and monitoring of their behaviours from an early stage Changalwa, Ndurumo, Barasa & Poipoi (2012). So the lack of supervision and monitoring created room for them to indulge in inappropriate activities that led them to the prevalence of substance use. This conclusion emerged as a common factor during the interviews with a male students' affairs personnel, as indicated by one participant:

“Allow me to be educative a bit with this question, because of my professional point of view. The phenomena of substance use/abuse among students mostly youths have a developmental history. It is something that young students get involved due to mental reasons, such as being raised in an uninvolved parenting home. This is a situation I regularly come across in my counselling sessions, where students start looking after themselves at a very early age. Not having any income and not knowing where the next meal would come from. This uninvolved parenting pattern we have in our community damage a lot of youths and leads some to substance addiction and even adolescent pregnancy” (Participant 8; female; 47 years)

The opinions of the informant also touched on the fact that though some students were raised by their own biological parents, yet uninvolved in parental responsibilities and lack the ability to supervise and monitor their social behaviour. They usually have no clear knowledge of their social activities; particularly when it concerns the time they return from their outing and who they were going out with; including the nature of their involvement and what they were doing during the hangouts.

The lack of awareness from the parents on children social activities, collectively showed that they are ignorant of their parenting obligations or they are not bothered by the consequences of the activities.

This parenting approach undoubtedly placed children on social problems as attested by Chagalwa et.al, (2012). The evidence of this parenting approach largely inhabits over-permissiveness by the parents on their children social activities, which were contributory to the incidence of substance use/abuse. In addition, parenting permissiveness also showed a clear lack of parents' involvement in the lives of the students. Emerging studies in the field of parenting practices, associated with the nature of these type of parenting approaches to permissive and uninvolved parenting approaches.

So, these present study findings associate the prevalence of substance use/abuse to the permissive and uninvolved parenting approaches. The study by Davids, Roman & Leach (2015) explained that permissive parenting approach typically maintains or enforce fewer if at all there are any household rules. Additionally, the children raised by permissive parents naturally show a lack of self-control and they are always egocentric and they are at risk of using drugs and alcohol and often display problematic behaviours.

On the other hand, uninvolved parenting approach also has similar consequences. However, it is the worst extreme of an aspect of parenting approach, owing to the fact that they sometimes neglect their children or reject them completely.

These parents characteristically have no strong emotional attachment to their children because they are not involved in their lives, so if they provide discipline, they are inconsistent with such discipline (Agadoni, 2014). They exhibit few or no expectations or demands for their children behaviours (Cherry, 2017).

These are fundamentally the parenting approaches leading the student to the prevalence of substance use/abuse. Researchers have often link children social behavioural development to their optimal start in life, suggestive of the fact that sub-optimal parenting approach instilled in the child inappropriate behaviours that include substance addiction and abuse. There was also evident from the students that revealed their parental background. The following was said during the interviews:

“I grow up in my grandmother’s house. She was very old and even when I started drinking alcohol, she did not know. Actually, she doesn’t care whether I am in the house or not. My own biological parent, I was told they died when I was young and I did not grow up with them” (Female student [01]; 20 years; level 1)

A different participant indicated that:

“In fact, my father, my mother, we have never ever stayed together. But they are alive. My father is forever drunk. For my mother, I see once in a while. My aunt is the one who sends us money for cooking (implying feeding). I can say we stay alone, my sister and I” (Male student [05]; 25 years; level 3)

Most substance use/abuse that is prevalent with young students essentially occurs to some who are still under unsupported parental-care. Therefore, the incidence of the abuse emanates from critical parenting practices.

Parenting is the basic mechanism through which a child learns appropriate and inappropriate behaviour, experiences right and wrong choices in decision-making, acquire skills; and understands the roles and norms of the community (Carr & Springer, 2010; Perez & Cumsille, 2012). Parenting plays a major part in child socialization, providing an early understanding of the self (Latouf & Dunn, 2010).

Hence, optimal parenting is associated with general adjustment towards adulthood (Lamborn & Groh, 2009) and psychological well-being, as well as a healthy high self-esteem and satisfaction with life (Roman, Mwaba, & Lens, 2008). On the other hand, suboptimal parenting is associated with externalizing behaviours, such as the anti-social and inappropriate behaviour of substance addiction.

4.2.1.7 Sub-Theme 1.7: The Impact of Traditional Practices and Values on the Incidence of Substance Use/Abuse

Traditional practices and values played a role in the prevalence of substance usage and abuse among students. The study results revealed that the traditional practices that bordered on the use of alcohol for its rituals gave younger youths the opportunity of consuming alcohol alongside the elders. These traditional practices are held occasionally, to enable family members to attend their number. Evidence from the study results revealed that youngest boys and girls of the family use that opportunity to engage in substance use. This emerges as a fact during the interviews as the male participants explained the following:

“There are times when our members come together for a family reunion. Our parents would cook and drink. While they were busy with their own drinking, we also took some and hide to drink. My siblings and relatives started drinking from our family reunions” (Male student [08]; 22 years; level 3)

Another participant indicated that:

“My first encounter with drinking was when I return from circumcision initiation school. At the initiation school, I saw my friends hiding and drinking. I bought my own drink when I returned. But I don’t drink every day” (Male student [05]; 20 years; level 1)

The implication of this evidence indicates that substance usage occurred in traditional events revealed the role of culture on the incidence of the abuse. For instance, the main idea behind the initiation schools is to teach young ones how to behave responsibly and be exemplary. Those are the main ideas that are behind the traditional initiation schools. It is still unclear, the reason for the ideological change to become an entry that promotes or allowed substance use for underage. The evidence that emerges shows that returnees of the initiations are becoming prone to the prevalence of substance use/abuse.

Another implication of the study evidence is the fact that, parents during family gathering are not bothered by the substance use of their children, even if they are perceived as youngsters. The fact that substances (alcohol and cigarette) are kept loose that makes them contributors to their children substance usage knowingly, which is a concern for the cultural values. The present study findings are sustained by the theoretical framework guiding this study.

Bandura's (1963) social learning theoretical assertion vehemently support the present study findings with the reliance on motivation as the reason for the occurrence of substance use/abuse. The social learning theory description of motivation is fundamentally based on environmental and thus social factors since motivational factors are driven by the functional value of different behaviours in a given society. A body of literature on culture has explained that traditional culture itself is a phenomenon that requires comparative practices in society (Bornstein, 2012; Pojman & Fieser, 2011). Although it was not revealed from the emerged evidence, whether parents were on the known that their children were partaking in the alcohol consumption.

4.2.1.8 Sub-Theme 1.8: The Impact of Role Modelling and Imitation on the Incidence of Substance Use/Abuse

The impact of role modelling and imitation contributed to the incidence of substance use/abuse among the students' nurses. There were indications for imitation of substance use among the junior student nurses that suggested they were modelling/exhibiting the behaviour of the senior students who were involved in substance use/abuse. Even though the modelling and imitation incidence was expectation demand of the junior student nurses, it contributed to the incidence of substance use/abuse. This self-expectation from the junior student nurses has not communicated directly with the senior students whom substance use behaviour they were imitating, rather it became a self-dialogue on substance use/abuse.

The evidence of these findings actually indicated that the modelling and imitation was an unspoken expectation of student nurses. This conclusion emerges as a fact that was shared during the interviews with the students' nurse.

Some student nurses verbalized the following during the interview:

"I was having a likeness for my big friend. When I got to college she was the first I seriously look up to. She accepted to be my friend and usually takes me an outing with some other friends of hers. At first, I wasn't drinking and smoking as they do. But after some time, I decided to drink with them too. Like it was after 3 months this happens" (Female student [14]; 22 years; level 2).

Another participant also stated the following:

"Alcohol drinking is a very nice social activity that I know. When love somebody and also feel like being the person. It can make you do things the person does. Even though I didn't say it to him, I started smoking and also drink because I wanted to be like him or let me say I feel like being just like him" (Male student [03]; 20 years; level 1)

The implication of the emerged results inferred that the incidence of substance use/abuse among the student nurse was a behaviour that was also imitated. The evidence from the results buttress some studies on social vulnerabilities of a young/adolescent on the incidence of substance use/abuse. The narratives of substance use/abuse among young students pose a serious behavioural challenge considering their social vulnerabilities.

This particular finding collaborates with the study by Adegboyega (2012) on the imitation as a major contributor of alcohol misuse. Research shows that role modelling and imitational factor remains influential on the incidence of substance use/abuse, giving an increased likelihood of exposure to alcohol of younger people admirers (Adegboyega, 2012; Adeoti, 2010).

The student youthful vulnerability was further highlighted in the manner in which they repeatedly consume alcohol and other illicit drugs on and off campuses. Oliha (2014) noted that substance use/abuse resulting from the student youthfulness is not unexpected considering their age, which is associated with changing demands and expectations also from different role models and society at large expecting adjustment. The evidence of these findings is deeply supported by Bandura's (1963) theoretical assertion of social learning theory guiding this study. Social learning theory back these findings on the externalizing and internalizing behavioural influences on the prevalence of substance use/abuse through observation, imitation and modelling processes.

The account for social learning theory helped to understand the occurrence and reoccurrence of substance use, misuse, and repeatedly use from an imitational perspective. The basic rules of role modelling and imitation are advance on the basis that, learning the substance use/abuse behaviour was not purely behavioural, rather, it is a cognitive process that takes place in a social context.

4.2.1.9 Sub-Theme 1.9: The Impact of Financial Support on the Incidence of Substance Use/Abuse

The financial assistant programme by the government contributed immensely to the incidence of substance use/abuse among student nurses. The evidence that emerged from this study result revealed the financial support student nurses receive monthly as an influence on the prevalence of substance use/abuse.

The indication that the prevalence of substance uses and abuse was also influenced by the student's affordability means for the substance, suggested that the monthly stipends which the students receive are been diverted or wrongly used. This emerged as a common fact when the students were asked about the factors they assume encourages the use of substances incident.

As indicated during the interviews:

"I'm not sure if I should say they are factors that make me drink alcohol. But the fact that I can buy it for myself without asking anyone to buy for me. It is a good thing for me actually. I drink whenever I want and I can afford what is in my mind from my small savings each month I get paid" **(Male student [03]; 20 years; level 1)**

Another participant also stated the following:

"From my monthly allowance, I always buy myself what to drink without men buy for me. Unlike my friend who buy expensive phone and cannot afford weekend chillas (that is weekends hangouts), myself I do because I always save money and make a small budget for buying of wine from my monthly stipends" **(Female student [11]; 25 years; level 4)**

The emerged findings are evidence of the fact that the encouragement from the government to promote youth education partly played a role in the incidence of substance use/abuse. These findings buttress some studies that have noted that the prevalence of substance use/abuse involving youths continuously increases once the youths are financially empowered. A study noted that the incidence of substance use/abuse by adolescents in Swaziland increased drastically in recent years due to financial aid programmes of the beneficiaries' youths (COSAD, 2010).

In addition, the financial provision programmes have notably caused the continual increase of substance use/abuse among youths which has affected families and society at large in terms of crime, violence, corruption, and drainage of human financial and other resources that could be used for social and economic development (COSAD, 2010).

The evidence of this present study findings, with that of collaborated studies, hinges on the fact that, the consequences of substance use/abuse among youths in Africa is linked to and precipitated by either adverse socio-economic factors or supportive social welfare programmes.

4.2.2 Theme 2: The Effect of Environmental Factors on the Incidence of Substance Use/Abuse by Student Nurses

This section presents information on the effect of environmental factors on the incidence of substance use/abuse among students in LCN. The data on environmental determinants revealed that the effect of policies associated with the recruitment and administration of students were the contributory factors on the incidence of substance

use/abuse among students in LCN. The collective sub-themes that emerged on the environment of the nursing college were found to play a role in the prevalence of substance addiction.

Table 4.3 shows the matrix of the themes and sub-themes.

Table 4.3: Impact of environmental factors on the incidence of substance use/abuse among students

Theme	Sub-Theme	Description
2. Environmental factors	2.1. Lack of recognition of substance use/abuse	The lack of recognition of substance use/abuse played a role in the incidence of substance use/abuse among students
	2.2. Unavailability of recreational facilities	The absence of alternative recreation centres on college campuses was cited as a reason for the prevalent rate of substance use/abuse
	2.3. Accessibility of substances	Easy access to close by beer halls and alcohol joints was cited as a factor for the substance use/abuse
	2.4. Poor professionalism of the nursing staff	Students expressed that the treatment that they received from the nursing staff in the clinical settings led to stress that resulted in them using substances

4.2.2.1 Sub-Theme 2.1: The Impact of Lack of Recognition of Substance Use/Abuse on the Incidence of Substance Use/Abuse

The lack of recognition of substance use by the LCN substantially played a role in the incidence of substance use/abuse among the student nurses. The evidence that emerges from this study results indicates the gross lack of recognition of substance use among the students from admission/recruitment process to the internal administration on the incidence of substance use/abuse. The emerged evidence from this finding that was commonly shared by the participant suggests that there is no policy/regulatory provision in the LCN that checks the incidence of substance use and abuse among the student nurses.

This conclusion emerged as a shared factor during the interviews with a participant, who stated the following:

“I recall very well, in those days, how the issue of substances both drinking of alcohol and smoking used to be handled with all amount of seriousness in the nursing college. I will try to get an old application form for you. Where strict measures were stipulated for substances abuse among student nurses. Each and every applicant was required to submit a testimonial from the previous school which would state the behaviour of the applicant. Applicants with behavioural problems were not taken, err ... is it discrimination, ooh I don't know but that's my suggestion. In recent years, there is no such thing like substances abuse preventive measures and control. The discontinuation of the past measures of substance use/abuse control among student nurses in nursing colleges is part of the reason for the current prevalence. ” (Participant 1; female; 65 years)

The indication of the lack of recognition of substance use/abuse regulatory measures amongst newly admitted students' nurses and also the old student nurses prohibits the norm that fundamentally regulates the incidences of substance addictive behaviours. The lack of recognition of substances abuse takes away such measures that check and profile early addictive behaviour among student nurses. Nonetheless, the lack of recognition of substance use/abuse/misuse revealed in the study results among student nurses further led to the situations where the students themselves were involved in the trade of substances. This finding emerged as a common fact during the interview sessions of the key informant participants. A male informant indicated the following:

“Due to economic benefits, most students sell substances to their fellow students inside the college residence. That is how bad the situation of substance use/abuse has become as we speak.” (Participant 4; female; 59 years)

The implication of this emerged findings suggests drastically poor control of substance use in the college campus residences. Given to what is known about substance use/abuse preventive measures, it is, to say the least, or without a doubt that the LCN has zero measures in place to tackle the prevalence of substance use/abuse among student nurses. Thus, the profiling of substance use/abuse that aims at preventive measures often layout several levels of interventions that seemingly cut across the global norm. However, no indication of those levels is currently recognized by the LCN.

The measures of substance use/abuse prevention model are fundamentally the primary, secondary, and tertiary levels (NIDA, 2014). The primary often focuses on the high-risk individuals requiring help to avoid developing addictive behaviours (NIDA, 2014), so that new cases can be prevented (Kane & Ballue, 2013). This is the level where every reasonable effort is made to stop substance use/abuse/use/misuse from happening in the first place (ONDCP, 2014). A situation that is highly lacking recognition in the LCN. If programmes such as Students Taught Awareness and Resistance (STAR) were operational in the LCN, student nurses might be encouraged to participate. These programmes have been found to be effective giving to teaching skills that help young people avoid high-risk activities that lead to substance use/abuse.

The study by NIDA (2013) noted that school-based programmes that involve youth supports such as peers, family, and community, tend to raise the level of effectiveness.

Such programmes might also be referred to as multiple-component programmes that if properly integrated it will be productive. The findings that revealed a lack of recognition of substance use/abuse on the prevalence of substance use/abuse/misuse is upheld by the ecosystem theory as the theoretical framework guiding this study. The ecosystem theoretical framework asserts that a substance user/abuser is affected by different types of environmental systems (Bronfenbrenner, 1979).

The nested structures of these environmental systems start with the individual purview, moving outwards to the microsystem, the mesosystem and finally, the ecosystem. The applications of this framework effectively support the lack of recognition of substance use/abuse on the incidence of substance among the student nurses.

4.2.2.2 Sub-Theme 2.2: The Impact of Unavailability of Recreational Facilities on the Incidence of Substance Use/Abuse

The unavailability of recreational facilities at the campus premises or residence contributed to the incidence of substance use/abuse among the student nurses. The evidence that emerges from the results largely suggests that the absence of social recreational centres that are devoid substance use activities for the student nurses played a role in the prevalence rate of substance use/abuse.

This emerged as a fact during the interviews with recreational the key informants and student nurses.

As revealed by participants during the interviews:

“Apart from attending classes and school work, or maybe practical’s at the hospital, nothing else bring us student fun except chilling with friends and drinking. If I have my way I would not mind to open a tavern here in future. Where student can always relax in the evenings and have drinks.” (Male student [3]; 20 years; level 1)

Another participant also stated the following:

“The students drink and smoke because they don’t have other extra curriculum activities to engage them socially. In my opinion, having to do school work and practicals at the hospitals is not enough to engage them socially. There should have recreational facilities for student nurses to engage them socially most of the time. This is causing them to go outing and drinking alcohol in the nearby taverns.” Participant 1(female; 65 years)

The indication of these findings suggests that in the instance were recreational facilities are available at the college campuses and residences, student’s nurses who are currently involved in substance use/abuse would automatically reduce. The present study finding is contrary to some existing studies that indicated substance use/abuse among youngsters and adolescent students in particular is often link to social recreational activities Muritala, Godwin, Anyio, Muhammad & Ajiboye (2015). The study by Buddy (2016) explained that consumption of alcohol and other drugs which does not lead to addiction, but rather, may come with the risk of addiction is often initiated from casual recreational use.

In most developed countries, the prevalence of substance use/abuse starts with the purported social smoking of a cigarette at a young age (Kaene, 2013).

This recreational smoking and drinking habit has been found to be the bedrock of one of the most devastating prevalences leading to deaths particularly in the United States. Global Burden Disease/GBD (2015) noted that in the US, deaths resulting from the use of the substance, such as alcohol, cocaine/crack, ecstasy, heroin, Ritalin, marijuana, steroids, ketamine and nicotine in the USA, is estimated to be about 191 222 per year.

WHO (2015) noted that recreational activities contributed to least 7% of adolescents in the USA addiction to alcohol and marijuana, despite their knowledge of the dangers of these substances. This is in contrast to the evidence that emerged from the present study findings that indicated recreational activities can purportedly divert the student nurses from the incidence of substance use/abuse.

Some literature narratives argue that the main factor that seems to promote substance use and abuse in the developed nations is the nature of its recreational activities and freedom of legal use link to these substances (UNODC, 2014). Similarly, Mogotsi et al. (2014) explained that substance use/abuse begins with recreational drug abuse and binge drinking and becoming normative behaviours among college-aged students. Furthermore, it is true of the fact that through recreational mentality the popular media continues to portray drugs and alcohol as acceptable and enjoyable ways to relate to others and have a good time.

The peer pressure that makes most steadfast young adult submit to experimentation and a “just this once” mind-set of substance use is mostly perpetrated through recreational activities (Bhengu, 2014). Therefore, even with no other risk factors present, recreational activity has been noted to be one of the most influential factors that leads to substance use/abuse/misuse in an individual’s life.

4.2.2.3 Sub-Theme 2.3: The Impact of Accessibility of Substances on the Incidence of Substance Use/Abuse

The impact of accessibility of substances play a role on the incidence of substance use/abuse among the student nurses. Evidence from the study results indicates that easy access to nearby taverns and alcohol joints contributed to the prevalence of substance use/abuse. The study results that emerged indicated that the close proximity of alcohol joints and taverns that are operating nearby the nursing college campuses and residences afforded the student nurses the opportunity to often purchase the substances. This conclusion emerges during the interviews with the participants on major contributory factors of substance use/abuse among student nurses

The participants indicated in the following:

“I believe everyone now understands that these taverns that are operating nearby is not good for the students. Loud music and the easy accessibility to get drinks and smokes is what in my opinion increases the habit of substances used.” (Participant 2; male; 36 years)

Another participant also stated the following:

“If you leave the college gate and walk left just 5 minutes, I mean walking and not driving, you will meet a joint where you can buy alcohol and dagga. Then if you walk taking the right hand side of the gate, you meet another tavern. How do prevent a student not to drink considering the accessibility of these substances? It is just impossible to do that.” (Participant 1; female; 63 years)

The implication of these findings suggest that the substances accessibility influence the prevalence of substance use/abuse among the student nurses. There has been an outstanding long-term notion of substance accessibility on the incidence of substance use/abuse linkage able to primary and secondary factors by researchers. These factors are mostly promoted through personal and social influences in addition to their immediate environment. The primary factors come under personal influences through a high value on independence and non-conformance and low school commitment and achievement, including attitudes towards substance use accessibilities (Bezuidenhout, 2013).

Whereas, the secondary factors come under social influences that favour substance use/abuse among individuals with early childhood behavioural problems resultant of low parental supervision and parental permissiveness (Bezuidenhout, 2013;). Therefore, the impact of accessibility influence on substance usage include among others the legal, economic, and physical availability of illegal drugs and alcohol as well as cultural norms around use. Nonetheless, the evidence from the study results also suggested that the substance use/abuse among student nurses at the LCN communities are heavily impacted on the situated locations.

When a community is well organized, few economic and social problems occur, and young people are less likely to abuse illegal substances (Rezahosseini et al., 2014). Similarly, if the community is intolerant of illegal drug abuse, the likelihood of youth accessing such substances is quite low. If societal norms favour drug abuse or if the community exposes youth to public drunkenness and peddling of drugs, then youth are at risk of drug dependency. This finding is further upheld by the theoretical framework guiding the study.

Bronfenbrenner's (1979) ecosystem assertion pertains to the relationships that exist between two or more settings, one of which may not contain the developing child but affects him indirectly nonetheless. At the exosystem level, the focus is on access and availability of illegal substances that the youth may succumb to. The risk factors considered under the exosystem consists, among others, of the legislative, social and economy-wide environment that inhibits/delays the onset of drug or alcohol abuse (Ennett et al., 2008). Therefore, at the college community's level, it is about how factors that includes community tolerance or slack limit controls, place the student nurses at risk to drug abuse.

4.2.3 Summary

This chapter addressed the consequences of social and environmental factors on the incidence of substance use/abuse among students in LCN. The consequences of socialization and environmental factors were found to determine the prevalence of substance use/abuse among student nurses through the collective impact of family background experience of substance addiction.

Peer pressure and influence, household poverty experience, single-parenthood background, low self-esteem, parenting approaches of the students, traditional practices and values, role modelling and imitation, and financial independence.

At the level of environmental factors, the consequences that played a role on the incidence of substance use/abuse were the lack of recognition of substance use/abuse in the college's administrative affairs, unavailability of recreational facilities, and accessibility. Early identification and intervention is critical in any students' life though it is not always possible. Approaches that target the students, family, college and the community may be effective preventive measures.

Stage 2– Quantitative Design

The Impact of Substance Use/Abuse on the Academic Performance of the Student Nurses in Limpopo College of Nursing

4.3 Introduction

This section presents the results that emerged from the quantitative approach of this study. The findings were based on the relationship between the prevalence of substance use/abuse by student nurses and academic performance. The demographic characteristics of the respondents are presented in a single below. Aside from frequency tables that presented the data that bordered on the substance use among the student nurses, clustered column charts, stacked column chart, and clustered bar charts also present some of the frequency data.

Then, multi-variant tables showed the relationships between substances used variables and the prevalence of substance use/abuse. Thus, substance use/abuse similarly influences the studying behaviour and patterning of the students' and subsequently impact on their academic performance. This chapter further presents in detail, the prevalence of substances uses by student nurses; the bivariate analysis of the prevalence of substance use by demographic characteristics was also detailed in this chapter. Perceived factors for substance use by the student nurses; as well as the factors contributing to substance use in different campuses were also presented.

The chapter also presents alcohol and stimulants/substances use among student nurses; including the amount of alcohol consumed in a setting. The stimulants/substances used in the last week and also the percentage distribution of substance use by campus was addressed; substance use-related problem on campus; bivariate analysis of substance use as problematic by socio-demographic characteristics of respondents; the effects of substances use among the surveyed students; and the unadjusted and adjusted multivariate analysis predicting substance use among student nurses.

4.3.1 Socio-Demographic Profile of the Respondents

This section presents information that showed the socio-demographic characteristics of student nurses. The socio-demographic characteristics of the student nurses showed their age grouping, ethnicity, campus affiliations, study level, academic performance, place of residence, and family wealth status, and religious affiliation. Table 4.4 shows the socio-demographic characteristics of the respondents by gender. The results showed that of the 445 student nurses surveyed, more than half (56.6%; n=252) were females.

Table 4.4: The frequency and percentage distribution of respondents by socio-demographic characteristics and gender

Characteristics	Total % (N=445)	Male % (n=193)	Female % (n=252)	P Value
Age (Years)				0.082
≤20	26.2 (112)	20.2 (39)	29.0 (73)	
21-24	66.5 (296)	72.0 (139)	62.3 (157)	
25+	8.3 (37)	7.8 (15)	8.7 (22)	
Ethnicity				0.070
Tshivenda	24.5 (109)	22.8 (44)	26.8 (65)	
Tsonga	24.3 (108)	24.9 (48)	23.8 (60)	
Sesotho	9.7 (43)	14.5 (28)	6.0 (15)	
Setswana	1.3 (6)	1.6 (3)	1.2 (3)	
Ndebele	1.6 (7)	1.6 (3)	1.6 (1)	
Sepedi	38.7 (172)	34.7 (67)	41.7 (105)	
Campus				0.050
Sekhukhune	8.5 (38)	10.4 (20)	7.1 (18)	
Thohoyandou	30.6 (136)	29.5 (57)	31.3 (79)	
Giyani	27.0 (120)	21.2 (41)	31.3 (79)	
Sovenga	29.2 (130)	32.1 (62)	27.0 (68)	
Waterberg	4.7 (21)	6.7 (13)	3.2 (8)	
Study Level				<0.001
Level 1	13.0 (58)	13.5 (26)	12.7 (32)	
Level 2	29.0 (129)	37.8 (73)	22.2 (56)	
Level 3	28.8 (128)	26.9 (52)	30.2 (76)	
Level 4	29.2 (130)	21.8 (42)	34.9 (88)	
Academic Performance				<0.001
Excellent	11.5 (51)	6.7 (11)	16.9 (40)	
Good	62.9 (280)	60.6 (117)	64.7 (163)	
Not too Good	22.9 (102)	31.1 (60)	16.7 (42)	
Poor	2.7 (12)	2.6 (5)	2.8 (7)	
Place of Residence				0.222
Rural	22.5 (100)	21.2 (41)	23.4 (59)	
Urban	7.9 (35)	10.4 (20)	6.0 (15)	
Campus	69.7 (310)	68.4 (132)	70.6 (178)	
Family Wealth Status				0.133
Very Poor	7.4 (33)	8.8 (17)	6.3 (16)	
Poor	61.8 (275)	57.0 (110)	66.5 (165)	
Rich	29.7 (132)	32.1 (62)	27.8 (70)	
Very Rich	1.1 (5)	2.1 (4)	0.4 (1)	
Religious Affiliation				0.003
None	21.1 (94)	28.0 (54)	16.9 (40)	
Catholic	14.8 (66)	11.9 (23)	17.1 (43)	
Methodist	7.0 (31)	4.1 (8)	9.1 (23)	
Anglican	11.0 (49)	10.4 (20)	11.9 (29)	
Adventist	3.8 (17)	3.1 (6)	4.4 (11)	
Pentecostal/Apostolic	22.0 (98)	26.4 (51)	18.7 (47)	
ZCC	20.2 (90)	16.1 (31)	23.4 (59)	

The majority of student nurses (66.5%, n=296) were aged between 21 and 24 years old. The incidence of substance use/abuse has often tended to be more prevalent among the youthful age group that represents the majority in LCN. With respect to ethnicity, more than one quarter were Sepedi speaking (38.7%; n=172).

Chi-square analyzes revealed a significant association between respondent's campus (p=0.050), level of study (p<0.001), academic performance (p<0.001), religious affiliation (p=0.003). Sovenga campus showed the highest percentage of males (32.1%; n=143). WHO (2010) noted that not only youthfulness but the involvement of gender roles and the growing youth cultures, as well as the cultural experience of the youths, all influence the prevalence of substance use/abuse.

Furthermore, Sovenga and Thohoyandou campuses had higher proportions of males compared to females (add the overall statistics). In Thohoyandou campus Level 2 students had the highest proportion of males (37.8%, n=168), whereas Level 4 had the highest proportion of females (34.9%, n=155). The findings revealed that most males (60.6%, n=270) and females (64.7%; n=288) indicated that their academic performance to be good.

This indication on good academic performance signal a great academic achievement potential by the student nurses. The results of this study are suggestive of the fact that even if student nurses were involved in substance use/abuse/misuse, their focus on educational attainment did not tally. Most of student nurses (69.7%, n=310) were residing on the campus.

However, factors such a settlement where young adults stay and live among themselves have been noted to present a greater risk of substance use/abuse and the likelihood of influence on other the behavioural problems (Maithya, 2015). As noted above from this study, the student nurses were mostly adolescents transiting to adulthood, with features of high social behavioural vulnerabilities habitually impacting on the substance use/abuse.

The study by Berg & Theron (2011) explained that student youthful vulnerability highlights the manner in which they repeatedly consume alcohol and other illicit drugs on campuses. So, the incidence of substance use/abuse by student nurses is assumed to be more prevalent as part of their socialization process in the campus.

Over two-thirds of student nurses (61.8%, n=275) reported that their family socio-economic status was low. Notably, the incidence of substance use/abuse has primary and secondary factors. The present study findings agree with those studies that highlight the secondary factor that promote substance use/abuse through socio-economic influences in addition to the environment.

The secondary factor come under social influences that favour substance use/abuse among individuals with low socio-economic status, which leads to minimal parental education, family disorder and conflict, weak family bonds, low parental supervision, and parental permissiveness (Bezuidenhout, 2013;).

The proportion of males (28.0%, n=125) who reported no religious affiliation was higher compared to female (16.9%, n=75) students. However, religious affiliation was not found to play a big role in substance use or non-use.

4.3.2 The Prevalence of Substance Use among the Surveyed Students

This section presents information on the prevalence of substance use among the student nurses at the LCN. The student nurses were examined on the basis of their most recent use of substance use within the last 12 months context. Figure 4.1 shows the percentages of the student nurses with the prevalence of substances use.

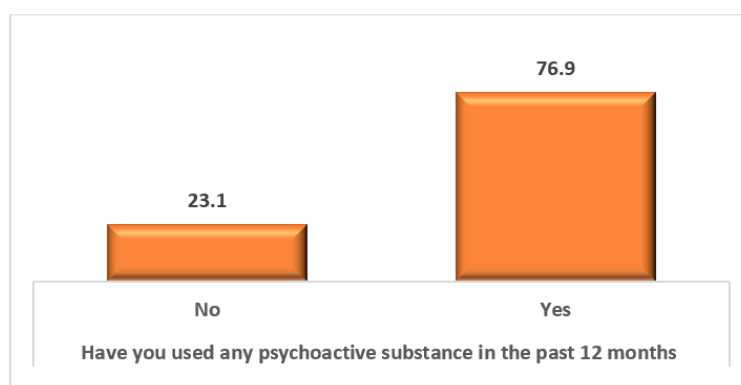


Figure 4.1: The prevalence of substance use among the surveyed students

According to Figure 4.1, 76.9% (n=342) of student nurses reported using substances in the 12 months preceding the survey on campus. The evidence of these findings shows the high incidence of substance use among the students in LCN. Substance use/abuse denotes the harmful or hazardous use of substances such as alcohol and other drugs. The effect of substance use/abuse primarily leads to dependency syndrome, which is a cluster of a behavioural, cognitive and psychological phenomenon that develop after repeated use of substances.

There are quite a number of substances that people take to attain a particular experience. But the three main types of substance that people take to change how they feel or behave; are depressants substance, stimulants, and hallucinogens substance (Griffin & Botvin, 2011). The findings of this present study out-rightly buttressed a study that focused on drinking patterns among students in the University of Limpopo, which demonstrate the trends of alcohol consumption with their primary influences (CALS, 2012). Therefore, this present study finding is evidence of the fact that substance use and abuse is common among student of a tertiary institution or higher learning.

4.2.3 The Prevalence of Substance Use by Demographic Characteristics

This presents information on the prevalence of substance use with certain significant demographic characteristics of the student nurses. The incidence of substance use among the student nurses was examined on the basis of their gender, campus affiliation, level of study, academic performance, place of residence, family wealth status, and religious affiliations. Table 4.5 presents the percentages of the prevalence of substances use with demographic characteristics.

The results in Table 4.5 shows that the most of male's students (87.6%, n=20) were more likely to use substance than their female counterparts. By campuses, the use of the substance was highest in Waterberg (96.2%, n=20), followed by Sekhukhune (84.2%, n=32), and least in Thohoyandou (62.5%, n=85). About 9 in 10 students in level 1 reported using substances. Reporting substance use showed a consistent increasing trend from excellent (62.7%, n=32) to poor (91.7%, n=11) academic performance.

Table 4.5 further revealed that substance use is common among urban (88.6%, n=31) students compared to those residing on campus (80.0%, n=248) and rural areas (57.0%, n=57).

Table 4.5: The frequency and percentage distribution of respondents by socio-demographic characteristics and gender

Characteristics	Total % (N=445)	No % (n=103)	Yes % (n=342)	P Value
Age				0.085
≤20	112	22.3 (25)	77.7 (87)	
21-24	296	21.6 (64)	78.4 (232)	
25+	37	37.8 (14)	62.2 (23)	
Sex				<0.001
Male	193	12.4 (24)	87.6 (169)	
Female	252	31.3 (79)	68.7 (173)	
Ethnicity				0.950
Tshivenda	109	22.0 (24)	78.0 (85)	
Tsonga	108	24.1 (26)	76.9 (82)	
Sesotho	43	18.6 (8)	81.4 (35)	
Setswana	6	33.3 (2)	66.7 (4)	
Ndebele	7	28.6 (2)	71.4 (5)	
Sepedi	172	23.8 (41)	71.4 (131)	
Campus				<0.001
Sekhukhune	38	16.8 (6)	84.2 (32)	
Thohoyandou	136	37.5 (51)	62.5 (85)	
Giyani	120	20.0 (24)	80.0 (96)	
Sovenga	130	16.2 (21)	83.8 (109)	
Waterberg	21	4.8 (1)	96.2 (20)	
Study Level				0.008
Level 1	58	10.3 (6)	89.7 (52)	
Level 2	129	18.6 (19)	81.4 (105)	
Level 3	128	31.3 (40)	68.8 (88)	
Level 4	130	26.4 (33)	74.6 (97)	
Academic Performance				0.006
Excellent	51	37.3 (19)	62.7 (32)	
Good	280	24.6 (69)	76.4 (211)	
Not too Good	102	13.7 (14)	86.3 (88)	
Poor	12	8.3 (1)	91.7 (11)	
Place of Residence				<0.001
Rural	100	37.0 (37)	57.0 (57)	
Urban	35	11.4 (4)	88.6 (31)	
Campus	310	20.0 (62)	80.0 (248)	
Family Wealth Status				0.392
Very Poor	33	24.2 (8)	76.8 (25)	
Poor	275	26.1 (69)	74.9 (206)	
Rich	132	19.7 (26)	80.3 (106)	
Very Rich	5	0.0 (0)	100.0 (5)	

Religious Affiliation				0.107
None	94	21.3 (20)	78.7 (74)	
Catholic	66	16.2 (10)	84.8 (56)	
Methodist	31	26.8 (8)	74.2 (23)	
Anglican	49	16.3 (8)	83.7 (41)	
Adventist	17	23.5 (4)	76.5 (13)	
Pentecostal/Apostolic	98	22.4 (22)	77.6 (76)	
ZCC	90	34.4 (31)	66.6 (59)	

However, the association between age, ethnicity, family socio-economic status, religious affiliation and reporting substance use were not significant. The findings that emerged from the results on gender prevalence of substances showed that male students are prone to substance use and abuse compare to female students. This finding portrays evidence that the prevalence of substance use/abuse is more of a muscling tendency, where men are more likely to involve in substance use than women.

The findings further collaborate with the study by CALS (2012) that found that the majority of male students had consumed alcohol at least once in their lifetime, while more than half had done so consistently; as against female students. Nonetheless, the findings that revealed a significant trend association with the different campuses on the prevalence of substance use shows that the incidence of the use is environmental fortified.

A related study by Thompson (2015) noted that the most significant influence on substance use/abuse is the environmental influence on substance usage which includes among others the physical availability of illegal drugs and alcohol. Factors such as the environment right outside nursing college campus or residence have been notably indicated that it contributes to substances abuse. This finding is supported by the theoretical framework guiding this study.

Bronfenbrenner's (1977) ecological theory assertion is an essential model that aids the understanding of the different campuses' prevalence of substance use. The emerged findings on the highly significant proportion of the incidence of substance use among Level 1 students is an indication of social influence on the prevalence of substance use/abuse.

This finding buttressed the study by Muritala, Godwin, Anyio, Muhammad & Ajiboye (2015) that noted the high incidence of substance use/abuse among first-year college students because they are away from parental supervision, therefore, they have an unrealistic sense of freedom during which they engage in many social activities. The evidence of this finding suggests that substance use is a sign of adulthood and virility to the level 1 student nurses.

The study by Chesang (2013) maintained that most students are still teenagers especially those in Level 1 & 2, and being a teenager entails substance use vulnerability including trying new things and deciding what they like to do as well as developing their own identity. Chesang (2013) noted that college social functions like fresher's board party that welcomes first years lead most Level 1 students to experiment and start involving in substances use.

This finding is also upheld by Mead's (1934) theory of the social "self", which he presented in his well-regarded and much-taught theory of the Mind, Self, and Society. Mead's theory of the social 'self' upholds that the conception a person holds of themselves in their mind emerges from social interaction with others.

Thus, the social 'self' theory offers an explanation of the dialogue which the Level 1 students' nurses have with themselves, whether consciously or unconsciously to engage in substance use/abuse. Despite the fact that family wealth status did not show any significant value on the incidence of substance use/abuse among the student nurses, the prevalence of greatly showed significant impact on the students' academic performance. The findings of this study show that the student nurses who are involved in substance use/abuse indicated consistent increasing trend from excellent (62.7%, n=85) to poor (91.7%, n=11) academic performance.

Substance use/ abuse have been noted to have some particular experience, which changes how people feel or behave; whether in form of depressants, stimulants or hallucinogens (Griffin & Botvin, 2011). However, depressant drugs slow down or depress the functions of the central nervous system (Centres for Medicare & Medicaid Services (CMS), 2013; Griffin & Botvin, 2011). Basically, the substance use/abuse that causes depressants feelings to affect concentration and coordination (Griffin & Botvin, 2011).

In addition, they slow down a person's ability to respond to unexpected situations. Essentially, the effect of depressant experience among the student nurses impacts on their performance through several factors that include poor concentration, poor academic coordination, poor personal ability to respond to unexpected situations, and other risk factors that do not promote good academic performance. Potenza (2013) noted that when depressant substances are taken in combination with other substances, it increases the effects and increase the danger of an overdose.

The other outcome of substance use/abuse on the student nurses' poor academic performance is the stimulant experience which speeds up or stimulates the central nervous system. Stimulants increase heart rate, body temperature and blood pressure (Griffin & Botvin, 2011). Although, depending on the dose, other physical effects or outcome include loss of appetite, dilated pupils, talkativeness, agitation and inability to sleep (GBD, 2015). In addition, higher doses can 'over stimulate' the user and cause anxiety, panic, seizures, headaches, stomach cramps, aggression and paranoia. These effects are undoubtedly not convenient for good academic work and can, therefore, lead to poor academic performance. With respect to hallucinogenic substances use/abuse, its effects are known to distort perceptions of reality. Fantegrossi, Murnane & Reissig (2008) explained that the users may see or hear things that do not actually exist, or that are exaggerated in relation to normal sensory experience (GBD, 2015). In addition, the effects of hallucinogens are not easy to predict, they often depend on the mood of the user and the context of use. The student nurses who consistently experience this type of situation due to substance use and abuse are banned to perform poorly as revealed from the findings.

There is an absolutely significant relationship between substance use/abuse among the student nurses and poor academic performance given the effects of the predominant substance use/abuse in LCN. Remarkably the student nurses who reside in urban areas are more involved in substance use/abuse than those residing in campuses and rural areas. The evidence of this results shows that substance use was common among urban students compared to those residing on campus and rural areas.

4.2.4 The Perceived Factors on the Substance Use Among the Student Nurses

This presents information on the perceived factors of the substance use among the student nurses at the LCN. The perceived factors were evaluated on the basis of their contribution to substance use. The percentages of the student nurses with the prevalence of substances use (Figure 4.2), and shows that peer pressure and aspiration appear to be accepted in a certain class were implicated as a driving factor for substance use among just above half of the student nurses (52.2%, n=232).

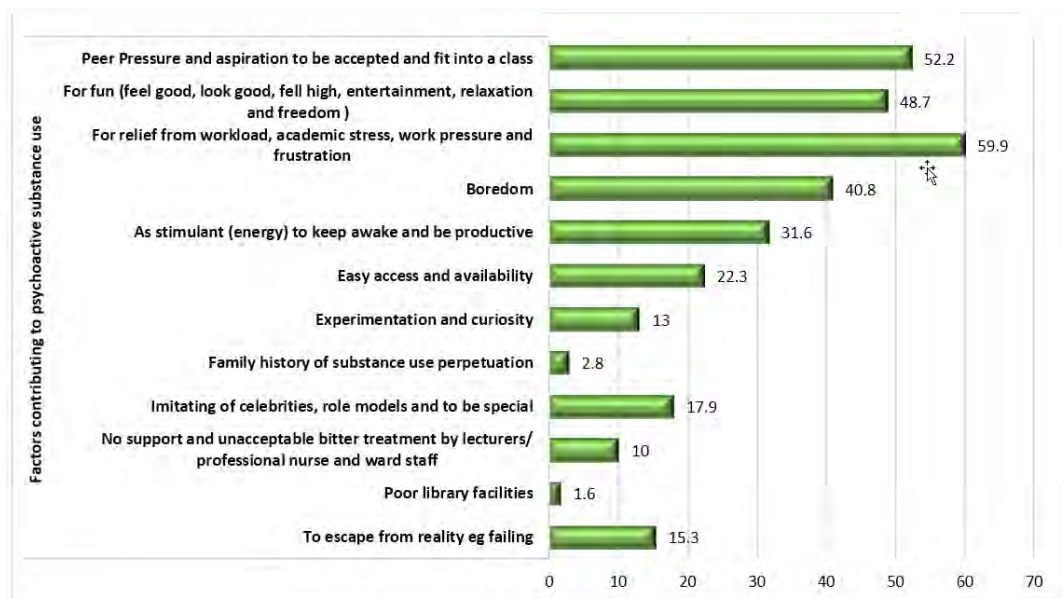


Figure 4.2: Factors that contribute to substance use among the student's nurses

Just below half of the student nurses (48.7%, n=217) indicated that their involvement in the use of substances was for fun. Another significant factor that contributed to the prevalence of substance use was the relief from the workload. Most of the student nurses (59.9%, n=267) indicated stress release from the workload that involved academic stress and frustration. Both boredom and stimulant were proven to be part of the factors that drive the prevalence of substance use and abuse.

The other notable factors that were indicated by the student nurses as reasons for the substance use and abuse are factors, they deem enhances productivity, easy access experimentation and curiosity of the experience. Additionally, further results evident shows that the incidence of substance use among the student nurses was also attributed to family history, emulation of celebrity, lack of support from lecturers, poor library facilities and as a means of bypassing realities such as poor academic performance. Among the apparent factors contributing to the prevalence of substance use/abuse in Limpopo College of Nursing, are prominently peer pressure and relief from the workload, academic stressed and frustrations.

For all the perceived right and wrong reasons, these factors as they appear often play a role in the poor academic performance of students as demonstrated above. With respect to peer pressure, it is often low self-esteem that results to such pressure. The narratives on low self-esteem/peer pressure factor from some studies have shown that it is one self-dialogue contributory factor in the prevalence of substance use/abuse. It is a behaviour among young people mostly adolescents who tend to have a lack of belief in themselves. Peer pressure/low self-esteem prevails with people that do not show assertive behaviour and usually do things impulsively. The study by Ebersohn (2015) maintains that low self-esteem and lack of self-confidence, shame or feeling guilty for perceived low social status are often the main reasons why adolescents persist in abusing drugs.

With respect to relief of workload, academic stressed, and frustration, it is common that young adults occasionally do not believe much in themselves and tend to exhibit all those feelings. Hence, they seek reassurance and acceptance by peers mostly. Substances and drugs may give them a feeling of self-confidence and security. They tend to believe that substance use will make all these stress-out worries or problems disappear, at least temporarily.

Chesang (2013 and Dumbili, 2016) explained that the prevalence of substance use/abuse tend to be more severe among young adults who are faced with the numerous problems that were thought to be adults' concerns, for instance by being pressured into sex by their partners, complicated issues like birth control, pregnancy and sexually transmitted diseases does create further incidence of substance use/abuse for adolescents.

4.2.5 Factors Contributing to Substance Use in the Different Campuses

This presents information on the prevalence of substance use in the respective campuses of LCN. The incidence of substance use among the student nurses at the various campuses was examined on the basis of their perceived influential factors. Table 4.6 shows the percentages of the prevalence of substances use in the different campuses. The results represent the examination of the factors driving substance use within the college campuses. The evidence shows that peer pressure, the aspiration to be accepted and fit into a class was common in all the colleges. Reporting fun, entertainment, relaxation and exercising of freedom as a reason for substance use in colleges were common in Sekhukhune (59.5%, n=22) and Giyani campuses (56.8%, n=67).

The use of the substance as relief from the workload, academic stress, work pressure and frustration were reported by over half of the students in all the campuses. Boredom was also reported as a reason for use of substances especially in Sekhukhune (54.1, n=20) and Sovenga (46.8, n=58) campuses.

Use of substances as a stimulant (energy) to keep awake to enhance productivity was common among Waterberg students; although the number of students reporting usage for the same purposes was more in other campuses. A smaller amount of student nurses in Giyani (14.4, n=17) and Sovenga (22.6, n=28) reported that availability of income was one of the driving factors for substance use among them.

Table 4.6: Factors contributing to substance use in different Limpopo Nursing College campuses

Contributory Factors	Total (N=431)	LNC 1 % (n=37)	LNC 2 % (n=132)	LNC 3 % (n=118)	LNC 4 % (n=124)	LNC 5 % (n=21)
Peer pressure and aspiration to be accepted and fit into a class	225	46.9 (17)	53.0 (70)	53.4 (63)	51.6 (64)	56.0 (11)
For fun (feel good, look good, fell high, entertainment, relaxation and freedom)	210	59.5 (22)	40.9 (54)	56.8 (67)	48.4 (60)	36.0 (7)
For relief from workload, academic stress, work pressure and frustration	258	70.3 (26)	68.9 (91)	52.5 (62)	54.0 (67)	60.0 (12)
Boredom	176	54.1 (20)	36.6 (47)	39.0 (46)	46.8 (58)	26.0 (5)
As stimulant (energy) to keep awake and be productive	136	40.5 (15)	12.9 (17)	26.4 (30)	49.2 (61)	66.0 (13)
Easy access and availability of money	96	36.1 (13)	24.2 (32)	14.4 (17)	22.6 (28)	30.0 (6)
Experimentation and curiosity	56	27.0 (10)	9.8 (13)	6.9 (7)	14.5 (18)	40.0 (8)
Family history of substance use perpetuation	12	0.0 (0)	3.8 (5)	1.7 (2)	3.2 (4)	6.0 (1)
Imitating of celebrities, role models and to be special	77	18.9 (7)	10.6 (14)	20.3 (24)	22.6 (28)	20.0 (4)
No support and unacceptable bitter treatment by lecturers/professional nurse and ward staff	43	6.4 (2)	10.6 (14)	13.6 (16)	8.9 (11)	0.0 (0)
Poor library facilities	7	0.0 (0)	3.0 (4)	2.5 (3)	0.0 (0)	0.0 (0)
To escape from reality, e.g., failing	66	6.4 (2)	16.9 (21)	20.3 (24)	14.5 (18)	6.0 (1)
LNC 1: Sekhukhune, LNC 2: Thohoyandou, LNC 3: Giyani, LNC 4: Sovenga, LNC 5: Waterberg						

Waterberg campus had the highest percentages in reporting experimentation and curiosity as well as family history of substance use (40.0%, n=13) as a reason for substance use among students. Less than a quarter of the students in each campus attributed substance use to imitating of celebrity or role models. Giyani campus had more students stating poor support from the college staff as responsible for the use of the substance.

Poor library facilities as a contributing factor to substance use were mentioned in Thohoyandou and Giyani campuses. In addition, more students in Thohoyandou and Giyani campuses stated that the use of substances was a way of escape from the realities such as poor academic performance and relationship problems.

4.2.6 The Rate of Alcohol Beverage Consumption Among Student Nurses

Figure 4.3 shows the rate of alcohol consumption among student nurses at the LCN. The student nurses were examined on the rate in which they consume alcohol and other stimulant substances. The results show that 71.5% (n=318) of the student nurses had consumed alcoholic beverages. However, most of those who had consumed alcoholic beverages (69.2%, n=280) also experienced at least one or more incidents of drunkenness.

Figure 4.4 shows that 64.6% (n=173) consumed at least 4 bottles or glasses of alcoholic beverages in a setting. The implication of this evidence suggests that the majority of student nurses who have ever consumed alcohol beverages have been involved in the misuse and abuse of alcohol beverages.

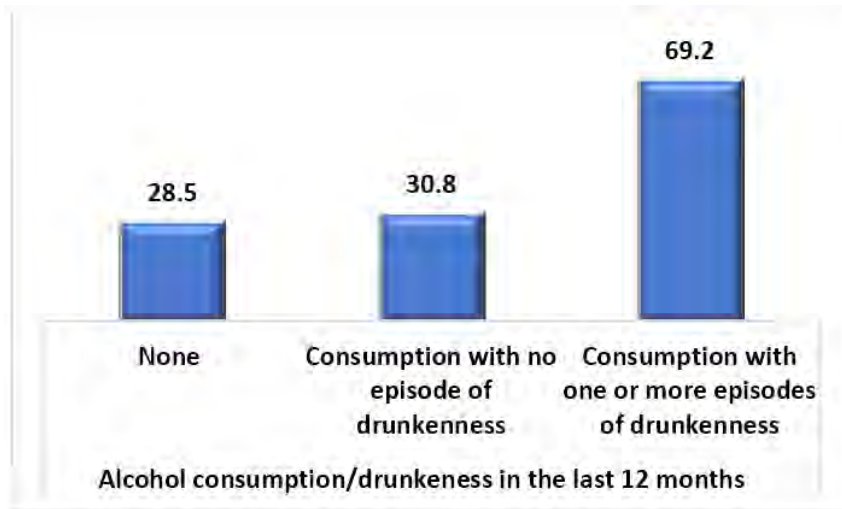


Figure 4.3: Alcohol consumption episodes among student nurses

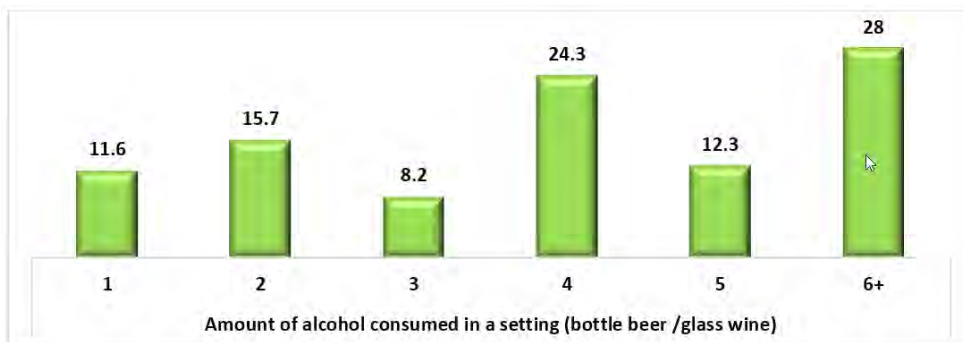


Figure 4.4: Amount of alcohol consumed in a setting

This emerged finding is an indication that the substance use/abuse is perpetuated by those student nurses who perceived alcohol drinking as a way of relaxing as it makes them feel pleasant through the repeated consumption. The studies by Chidi & Baloyi (2013) and Chesang (2013) explained that despite the relaxation motif used for consuming alcohol beverages by some people, others drink alcohol because they are convinced that moderate alcohol intake is good for the heart and it stimulates the production of HDL-the “good” cholesterol.

With those motives in mind, they end up addicted which may lead to binge drinking and misuse/abuse.

The evidence of this present study findings further indicates that the high rate of alcohol beverages consumption among student nurses is an aim to prolong relaxation motives and it constitutes mostly their weekend's social activities. This behaviour makes them accept each other in a friend's group, it is like a ritual to join the group as the main point is to have fun with friends. Mogotsi, Nel, Basson & Tebele (2014) predicted that higher rates of drinking can be predicted, to a degree, by the composition of friendship mostly among adolescents and young students.

4.2.7 Stimulant/Substance Use Among Student Nurses

This presents information on the stimulant/substance use among the student nurses at the LCN. The clustered bar chart below presents the percentages of the student nurses with the stimulant substances they consume. The results in Figure 4.5 indicate that in the last 12 months, the substance use among the student nurses was mainly on cigarettes use (33.4%, n=136), Marijuana (28.7%, n=117), energy drink (9.3%, n=38) and cough mixture (6.4%, n=22), thus the projection of use in decreasing order.

The evidence that emerges in the field suggests that there is a misconception on some of the substances not to be considered drugs substance such as coffee and energy drinks in the LCN. That is because the profiling of what constitutes a "drug" is debatable in most spheres. Some literature indicates that GHB, a naturally occurring substance in the central nervous system is considered a drug, and is illegal in several countries, while nicotine is not officially labelled a drug in most countries.

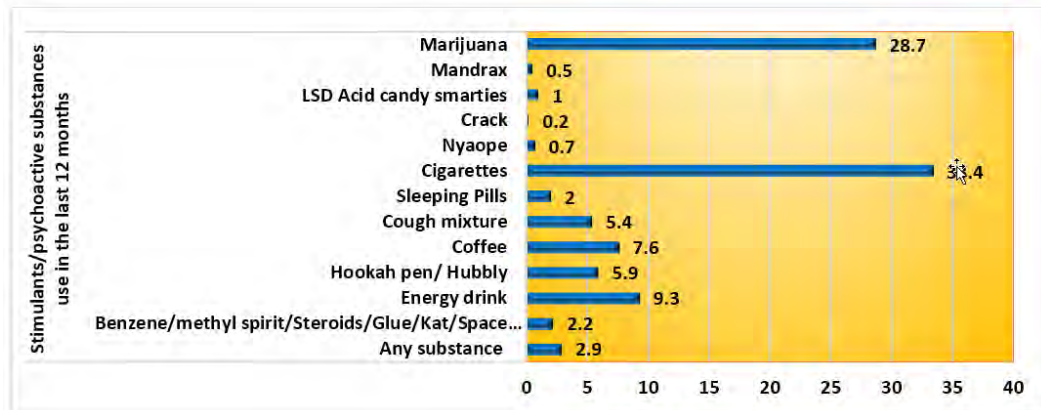
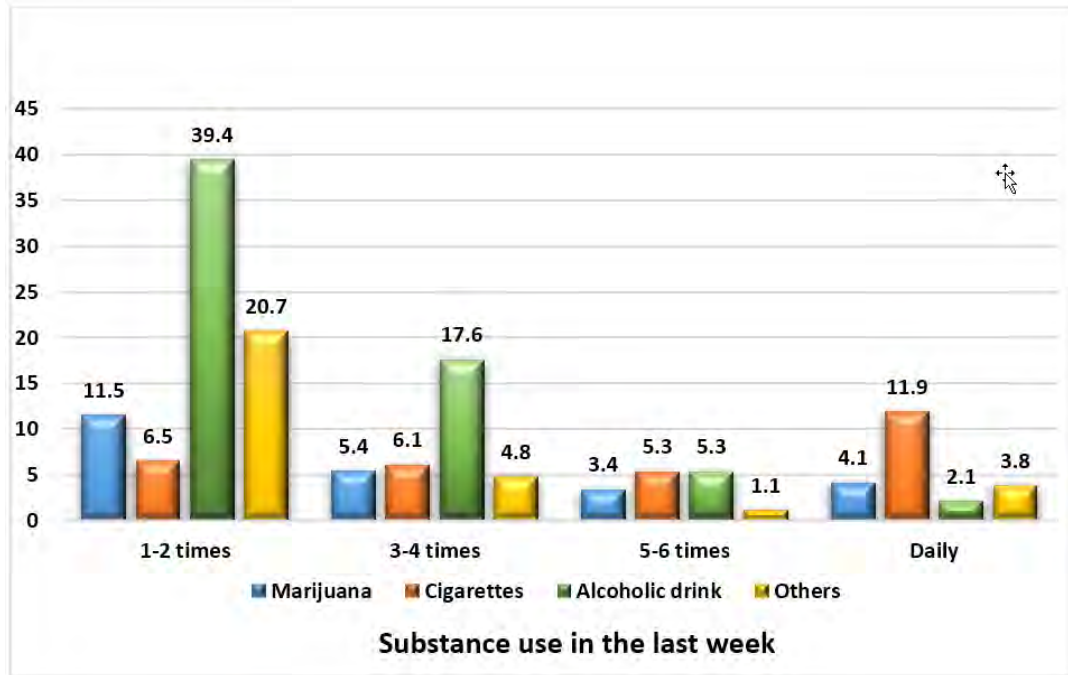


Figure 4.5: Stimulant/substance use among student nurses

Second, the word “abuse” hint at a recognized standard of use for any substance. In other instances, drinking an occasional glass of wine is considered acceptable in several countries, while drinking several bottles is seen as an abuse (Nutt et al., 2010). Strict abstinence advocates, who may or may not be religiously motivated, would see drinking even one glass as an abuse. Most people even condemn caffeine use in any quantity and consider it as drug abuse. However, the results of the present study finding suggest that among other drugs substances abuse, cigarettes and marijuana emerged to be the most used, abuse, and misuse drugs substances in LCN.

4.2.8 The Ratio of Stimulants/Substances Used in the Last Week

Figure 4.6 presents information on the most common stimulant/substance use among the student nurses in a week at the LCN. Here, the student nurses were examined on the different stimulant/substances they used in a week period. The clustered column chart presents the percentages of stimulant substances consumed by student nurses.



“Others” include coffee, sleeping pills, hookah pen, nyaope, energy drinks.

Figure 4.6: Prevalence of substances used in a week

Figure 4.6 show the prevalence of substances used in the last week before the survey. Among a group of 445 students, the statistics revealed that the substance that has been mostly used by the student nurses either once or twice according to the order of percentage as follows: alcohol at (39.4%; n=175) and other substances such as coffee etc. at (20.7; n=92), marijuana (11.5%; n=51), and cigarette (6.5%, n=29).

Students who indicated that they have engage in substances for three to four times amounted to (17.6 %; n=78) alcohol, cigarette at (6, 1 %; n=27), marijuana at (5.4 %; n=24) and others at (4.8 %; n=21). The following statistics shows that some students were involved to substances for five to six times, alcohol and cigarette at (5.3 %; n=24), marijuana accounted for (3.4%; n=15) while other substances such as coffee, hookay pen, energy drinks etc. at (1.1 %; n=5)

As indicated in the results, the cigarette was the most used substance on a daily basis at (11.9 %; n=53), followed by marijuana (4.1 %; n=18) and other substances such as coffee, cough mixtures (3.8%; n=17) that was consumed on daily basis. Alcohol beverages emerged from the results as the most used substance in the week at (2.1%; n=9). The evidence of these findings proves that alcohol beverages were used at least one time or more than one time in every day of the week.

Despite the poor academic performance associated with the effects of substances abuse as previously demonstrated above, the health consequences of substance use/abuse are often depending on the actual compound on the students. Substance use/abuse including alcohol beverages may lead to health complications and other social problems (Lancaster, Go, Thandie, Lungu et al., 2016), capable of distracting the academic focus and accomplishment of students.

There is a high rate of suicide among alcoholics and other drug abusers (UN, 2012), which hinders the academic achievements of students. The reasons believed to cause the increased risk of suicide include the continuing abuse of alcohol and other drugs causing physiological distortion of brain chemistry as well as the social isolation (Lancaster et al., 2016). Another factor of the daily substance use is the possible acute intoxicating effects of the drugs may cause a lack of academic focus more likely to occur among the student nurses. There is an easy estimation of the consequences that can develop out of daily substance use and abuse among student nurses as indicated in the results.

A study noted that constant substance use and abuse is associated with increased risks of social deviance that there not in conformity with appropriate or focus behaviour (Lancaster et al., 2016). For instance, substance use/abuse, including prescription drugs, can induce symptomatology which resembles mental illness that dawdles academic achievement. This can occur both in the intoxicated state and also during the withdrawal state (Van Der Vorst, Vermulst, Meeus, Deković & Engels, 2009).

In some cases, these substance-induced psychiatric disorders can persist long after detoxification, such as prolonged psychosis or depression after amphetamine abuse (GBD, 2015). Thus, the abuse of hallucinogens can trigger delusional and other psychotic phenomena long after cessation of use. Therefore, the student nurses who involved in substance use/abuse and addiction sooner or later would likely experience delusional cessation, which effectively affects proper academic and professional functioning.

4.2.9 Frequency and percentage distribution of Substance Use by Student Nurses by Campus

Table 4.7 summarizes information on frequency and percentage distribution of substance use among the student nurses from each campus of the LCN. The incidence of substance use among the student nurses from the campuses was examined on the substance compound consumption. The table presents the percentage distribution of substance use from the five college campuses. The results presented in Table 4.7 shows that within the college, alcohol consumption is most prevalent among students with Thohoyandou (97.7%, n=86) and least prevalent in Sovenga (86.1%, n=97).

Furthermore, the use of marijuana was most common among Thohoyandou students (40.9%, n=36) as compared to other campuses.

Table 4.7: Frequency and percentage distribution of substance use by campus

Substance	n	LNC 1 % (n=35)	LNC 2 % (n=88)	LNC 3 % (n=96)	LNC 4 % (n=114)	LNC 5 % (n=21)
Marijuana	117	26.7 (9)	40.9 (36)	28.1 (27)	32.5 (37)	38.1 (8)
Mandrax	2	0.0 (0)	1.1 (1)	0.0 (0)	0.0 (0)	4.8 (1)
LSD Acid candy smarties	4	0.0 (0)	2.3 (2)	1.0 (1)	0.9 (1)	0.0 (0)
Crack	1	0.0 (0)	1.1 (1)	0.0 (0)	0.0 (0)	0.0 (0)
Nyaope	3	0.0 (0)	3.4 (3)	0.0 (0)	0.0 (0)	0.0 (0)
Cigarettes	136	34.3 (12)	39.8 (35)	36.5 (35)	37.7 (43)	52.4 (11)
Alcohol	318	91.4 (32)	97.7 (86)	86.5 (83)	86.1 (97)	96.2 (20)
Sleeping pills	8	0.0 (0)	2.3 (2)	3.1 (3)	1.8 (2)	4.8 (1)
Cough mixture	22	2.9 (1)	3.4 (3)	9.4 (9)	6.3 (6)	14.3 (3)
Coffee	31	11.4 (4)	2.3 (2)	9.4 (9)	13.2 (15)	4.8 (1)
Hookah pen/Hubbly	24	0.0 (0)	4.5 (4)	10.4 (10)	4.4 (5)	23.8 (5)
Energy drink	38	11.4 (4)	3.4 (3)	11.5 (11)	16.8 (18)	9.5 (2)
Benzene/methyl spirit/Steroid/Glue/Kat/Space cookies/Pot	9	6.7 (2)	4.5 (4)	2.1 (2)	0.9 (1)	0.0 (0)
Any substance	12	2.9 (1)	2.3 (2)	1.0 (1)	6.1 (7)	4.8 (1)

LNC 1: Sekhukhune, LNC 2: Thohoyandou, LNC 3: Giyani, LNC 4: Sovenga, LNC 5: Waterberg

The number of students using cigarette was lowest in Waterberg compared to other campuses, but evident also revealed that the usage is most common in the campus. Furthermore, highest proportions using sleeping pills (4.8%, n=22), cough mixture (14.3%, n=16) and Hookah pen (23.8%, n=24) were observed in Waterberg campus.

The implication of these findings that hinge on the high prevalence of substance use and abuse from the different campuses collaborate the studies that profiled environmental factors on the incidence of substance use/abuse.

Literature noted that the most prominent environmental factor on student's substance use/abuse is the physical availability of illegal drugs and alcohol as well as cultural norms around the use (Adeoti, 2010; WHO, 2010). The evidence which revealed that Thohoyandou campus has the consumption ratio of alcohol is as the result of the physical availability of taverns and alcohol retail joints located around the campus (see chapter three, study site).

Student nurses who are involved in substance use may have a problem to ignore or cope with the refusal of substance availability around the campus. The study by Ebersohn et al. (2015) confirms that the social environmental factor is a powerful influence on the prevalence of substance use and abuse. In this context, therefore, the availability factor influences the manner that contributes on the substance use.

4.2.10 The Impact of Substance Use on the Inappropriate Behavioural Development of Student Nurses

Table 4.8 presents the impact of substance use on the inappropriate behavioural development of the student nurses. The incidence of substance use among the student nurses was examined based on their socio-demographic characteristics. Despite the very poor academic performance from the impact of substance use and abuse, they are other association between substance uses on inappropriate behavioural development among the student nurses. Most of the students (78.7%, n=85) who reported inappropriate behavioural problems from substance use were

among students who were teenagers or 20 years old. Compared to female, a higher proportion of male students (83.1%, n=157) indicated inappropriate behavioural problems resulting from substance use exists on campuses.

Table 4.8: Cross-tabulation of substance use and inappropriate behavioural development

Characteristics	n	No % (n=106)	Yes % (n=331)	P Value
Age				0.050
≤20	108	21.3 (23)	78.7 (85)	
21-24	292	23.3 (68)	76.7 (224)	
25+	37	40.5 (15)	59.5 (22)	
Sex				0.002
Male	189	16.9 (32)	83.1 (157)	
Female	248	29.8 (74)	70.2 (174)	
Ethnicity				0.001
Tshivenda	107	26.2 (28)	73.8 (79)	
Tsonga	105	13.3 (14)	86.7 (91)	
Sesotho	41	14.6 (6)	86.4 (35)	
Setswana	6	0.0 (0)	100 (6)	
Ndebele	7	57.1 (4)	42.9 (3)	
Sepedi	171	31.6 (54)	68.4 (117)	
Campus				0.000
Sekhukhune	38	7.9 (3)	92.1 (35)	
Thohoyandou	134	51.5 (69)	48.5 (65)	
Giyani	117	16.4 (18)	84.6 (99)	
Sovenga	127	12.6 (16)	87.4 (111)	
Waterberg	21	0.0 (0)	100.0 (21)	
Study Level				0.000
Level 1	56	0.0 (0)	100.0 (56)	
Level 2	126	16.1 (19)	84.9 (107)	
Level 3	128	36.2 (45)	64.8 (83)	
Level 4	127	33.1 (42)	66.9 (85)	
Academic Performance				0.082
Excellent	51	37.3 (19)	62.7 (32)	
Good	275	24.0 (66)	76.0 (209)	
Not too Good	99	18.2 (18)	81.8 (81)	
Poor	12	25 (3)	76.0 (9)	
Place of Residence				0.000
Rural	100	43.0 (43)	57.0 (57)	
Urban	34	2.9 (1)	97.1 (33)	
Campus	303	20.5 (62)	79.5 (241)	
Family Wealth Status				0.001
Very Poor	33	12.1 (4)	87.9 (29)	
Poor	267	30.7 (82)	69.3 (185)	
Rich	132	14.4 (19)	86.6 (113)	
Very Rich	5	20.0 (1)	80.0 (4)	

Religious Affiliation				0.000
None	92	38.0 (35)	62.0 (57)	
Catholic	64	12.5 (8)	87.5 (56)	
Methodist	30	20.0 (6)	80.0 (24)	
Anglican	48	8.3 (4)	91.7 (44)	
Adventist	17	17.6 (3)	82.4 (14)	
Pentecostal & Apostolic	97	20.6 (20)	79.4 (77)	
ZCC	89	33.7 (30)	66.3 (59)	

Compared to female, a higher proportion of male students (83.1%, n=157) indicated inappropriate behavioural problems resulting from substance use exists on campuses. All the Setswana speaking students indicated that inappropriate behaviours develop from substance use, followed by Tsonga speaking students (86.7%, n=91)). All the students in Waterberg campus and those in level 1 were affirmative of substance use behavioural problems.

Most of the students (97.1%, n=33) residing in urban areas also indicated that inappropriate behaviours develop from substance use than their rural counterparts (57.0%=57) with a lesser ratio. Most of the students (87.9%, n=29) who stated their family socio-economic status to be very poor reported the same effects of substance use.

These findings imply that regardless of student nurses' indulgence on substance use/abuse, they were obviously aware of the negative effect on inappropriate behavioural development. Notably, young adult students were the most reported vulnerable victims that encounter inappropriate behaviour from substance use. This finding buttressed the studies that often highlights and profile young adult's vulnerabilities on the incidence of substance use/abuse.

The impact of the substance use/abuse among adolescent student have a long history of association with quite a lot of social and emotional harm, such as fighting, stealing, driving under the influence of alcohol, including factors such as depression, nonattendance/absence in classes (bunking school classes), poor academic performance, bullying, violence acts and suicide, to mention a few (DOH, 2013; Lewis & Theron, 2015). The preceding inappropriate behavioural problems associated with substance use/abuse, further have poor and precarious health consequences later in life, considering the predominant young ages of the students involved (Bezuidenhout, 2013). The comprehensive effects of substance use/abuse among young adults essentially put them on a continuous health risk.

The study by Dodds (2009) identified that the people who are most often deemed as being 'at risk' are described as suffering from 'learned helplessness' and this assumes that those 'at risk' are, on at least some occasions, unable to act in their own best interests, despite the aware harms. Some studies noted that alcohol and marijuana are commonly used substances by young students in tertiary/college institutions (DOH, 2013; Thompson, 2015). Therefore, it is perhaps without a doubt that most tertiary/college campuses are deemed to struggle with the prevention and/or control of substance use with their students.

4.2.11 The Impact of Substance Use Among Students by Campus

Table 4.9 presents information on the impact of substance use among the student nurses by campus. The impact of substance use among the student nurses by campuses was examined on the behavioural outcome.

The results in Table 4.9 shows the patterns of behavioural effects from the substances used by the students in the different campuses.

The students stated that inappropriate behaviour they deem emanate from substance use as it affects the different campuses. The reported effects of substance use on the campuses were similar although the magnitude differs.

Table 4.9: Effects of substance use among students by campus

Effect	n	LNC 1	LNC 2)	LNC 3	LNC 4	LNC 5
None	84	6.4 (2)	42.2 (57)	9.4 (11)	10.9 (14)	0.0 (0)
Returning late at night with a hell of noise due to drunkenness	57	18.9 (7)	11.1 (15)	16.2 (19)	10.1 (13)	14.3 (3)
Fight, aggressive to other people and having unstable temper	208	51.4 (19)	29.6 (40)	56.6 (65)	53.5 (69)	71.4 (15)
Poor academic performance and failing to meet deadlines	116	40.5 (15)	13.3 (18)	24.8 (29)	34.9 (45)	42.9 (9)
Absenteeism, poor clinical and class attendance	182	51.4 (19)	21.5 (29)	54.7 (64)	46.0 (58)	57. 1 (12)
Risky sexual behaviour-multiple sexual partners	81	13.5 (5)	10.4 (14)	16.4 (18)	27.9 (36)	38.1 (8)
Disrespecting of lecturers and security guards	41	10.8 (4)	8.1 (11)	11.1 (13)	8.5 (11)	9.5 (2)
Poor time management-lateness to classes and missing of practical	215	70.3 (26)	24.4 (33)	52.1 (61)	64.3 (83)	57.1 (12)
Theft and financial problems due to being broke always	183	56.8 (21)	20.0 (27)	42.7 (50)	54.3 (70)	71.4 (15)
LNC 1: Sekhukhune, LNC 2: Thohoyandou, LNC 3: Giyani, LNC 4: Sovenga, LNC 5: Waterberg						

A vast difference was observed in reporting that substance use has no effect in the college; (42.2% \approx 5) students in Thohoyandou campus compared to Sekhukhune (6.4%, $n=2$), Giyani (9.4%, $n=11$) and Sovenga (10.9%, $n=14$) students respectively.

Returning late and making a noise at night were reported by less than a quarter in all the campuses. Fighting and aggression were common in Waterberg campus compared to other campuses. Poor academic performance and failing to meet up with the submission of term assessments on deadlines dates were the least reported effect of substance use in Thohoyandou campus. Furthermore, a large variation in reporting absenteeism, poor clinical and class attendance as the impact of substance use was observed in Thohoyandou campus compared to other campuses.

Substance use influenced risky sexual behaviour were common in Sovenga and Waterberg campus. Disrespecting of college staff was the least reported effect of substance use in all the campuses. Poor time management as a consequence of substance use was more common in Sekhukhune campus compared to Thohoyandou campus. Theft was more common in Waterberg campus compared to Thohoyandou Campus College. The evidence of these findings suggests that the impact of substance use among the student nurses various in accordance to their college campuses.

This finding thus, leads to the supposition that the prevalence of substance use/abuse by the student nurses was influenced by location and the environment of use. The present study finding is strongly supported by the theoretical framework of ecosystem theory guiding this study.

The models that guided ecosystem theory has a history of development that is based on the individual human-in-environment they live and operate. Bronfenbrenner (1977) posited that an individual behavioural development is affected through the series transitions, all of which necessitate environmental support and coping skills. The ecosystem theory application traces the prevalence of substance use and abuse to the location/environmental background. Ecosystem theory offers and explained the holistic understanding of the role of the environment from the perspective of survival experience.

4.2.12 Unadjusted and Adjusted Multivariate Analysis Predicting Substance Use

Table 4.10 summarizes the unadjusted and adjusted prediction of substance use by the student nurses. The predictors of substance use among student nurses were examined based on their selective characteristics. The table below presents the predictive distribution of substance use among the student nurses.

The results in Table 4.10 show the unadjusted multivariate association revealed substance use was significantly predicted by gender, level of study, academic performance, religious affiliation, campus, and place of residence.

Females were less likely to use substances compared to male students. Examination by the level of study levels 3 and 4 students had 75% and 66% decreased odds respectively to substance use compared to level 1 students. Students who reported poor academic performance were two times more likely than those stating good academic excellence to use substances.

Table 4.10: Unadjusted and adjusted predictors of substance use prevalence by selected characteristics of student nurses

Demographic	Unadjusted		Adjusted	
	Odds Ratio	95% C.I.	Odds Ratio	95% C.I.
Age	0.966	0.857-1.089	0.982	0.845-1.141
Sex				
Male (Ref)	1.000		1.000	
Female	0.311***	0.188-0.515	0.337***	0.193-0.589
Level of Study				
Level 1 (Ref)	1.000		1.000	
Level 2	0.505	0.194-1.311	0.518	0.174-1.539
Level 3	0.254**	0.101-0.640	0.351	0.119-1.035
Level 4	0.339*	0.133-0.862	0.442	0.147-1.327
Ethnicity				
Tshivenda (Ref)	1.000		1.000	
Tsonga	0.890	0.473-1.676	0.781	0.508-3.015
Sepedi	0.902	0.509-1.600	1.178	0.325-1.874
Others	1.035	0.473-2.265	2.316	0.519-2.674
Academic Performance				
Good (Ref)	1.000		1.000	
Bad	2.390***	1.318-4.335	2.316*	1.203-4.459
Religious Affiliation				
None	1.944*		1.891	
Catholic	2.425***	1.007-3.754	2.229	0.901-3.970
Pentecostal	1.799	1.321-4.451	1.520	1.129-4.402
ZCC (Ref)	1.000	0.971-3.331	1.000	0.754-3.062
Campus				
Thohoyandou (Ref)	1.000		1.000	
Giyani	2.400***	1.362-4.228	2.522***	1.326-4.797
Sovenga	3.114***	1.740-6.573	2.874***	1.490-6.541
Sekhukhune/Waterberg	4.457***	1.882-10.555	2.755*	1.001-7.582
Socioeconomic Status				
Poor (Ref)	1.000		1.000	
Rich	1.423	0.864-2.344	1.068	0.603-1.892
Place Residence				
Off-Campus (Ref)	1.000		1.000	
On Campus	1.745*	1.101-2.276	1.420	0.838-2.408

*p<0.05; **p<0.01; ***p<0.001; Ref: (1.000=Reference Group); CI=95% Confidence Interval

The evidence of this results indicates that the incidence of substance use/abuse is more heavily influenced by gender in the LCN. This finding collaborates with the study by CALS (2012) that reported that 57% of male students involved in constant substance use/abuse compared to 5 per cent female students.

With respect to the findings on decreased odds of substance use/abuse associated with Levels 3 and 4 students, it is true of a fact from existing studies that level 1 students or new students as the case may be, are more vulnerable to the prevalence of substance use/abuse because of the social vulnerabilities or other factors around the use of substances (Oliha, 2014). Nonetheless, poor academic performance is highly associated with student nurses involved in psychoactive abuse.

The students who were not affiliated to any religious group and those who were Catholics had 1.9-and 2.4-times the odds using substances, respectively. Compared to Thohoyandou College, students in Giyani, Sovenga, Sekhukhune as well as Waterberg colleges were 2.4-, 3.1-and 4.5-times, respectively, more likely to state using substances. Students currently living on campus were more likely to report substance use compared to those living off campus. However, there were no statistically significant differences between age, ethnicity, socio-economic status and substance use.

The evidence further showed the adjusted multivariate logistic regression to assess the effect of each independent determinants of substance use. The effects of gender, academic excellence and college remained robust whereas the effects of study level, religious affiliation and place of residence were weakened.

Females had 67% reduced odds of substance use compared to male students. Poorly academically performing students had high odds of substance use relative to students who reported good academic excellence. Furthermore, students in Giyani, Sovenga, Sekhukhune and Waterberg campuses had significantly higher odds of substance use than Thohoyandou campus students. Both qualitative and quantitative approaches showed that there is prevalence of substance use/abuse by student nurses at LCN. The contributory factors, types of substances used and the outcomes are listed in Figure 4.7.

4.2.13 Summary

This chapter addressed the impact of substance use/abuse on the academic performance of the student nurses in the LCN. It is evident that the various substance use/abuse among student nurses played a role in the poor academic performance of the students. There were good signs of academic performance from student nurses who are not involved in substance use and abuse. However, the location of the college campuses and the environment all together influence the prevalence of substance use/abuse among the student nurses. There was confirmatory evidence of inappropriate sexual attitude and behaviour among the student nurses because of substance use/abuse, which also substantially contributed to the students' poor academic performance. However, the most disturbing is the fact that Level 1 students were more into the prevalence of substance use/abuse than Level 2 and 4 students

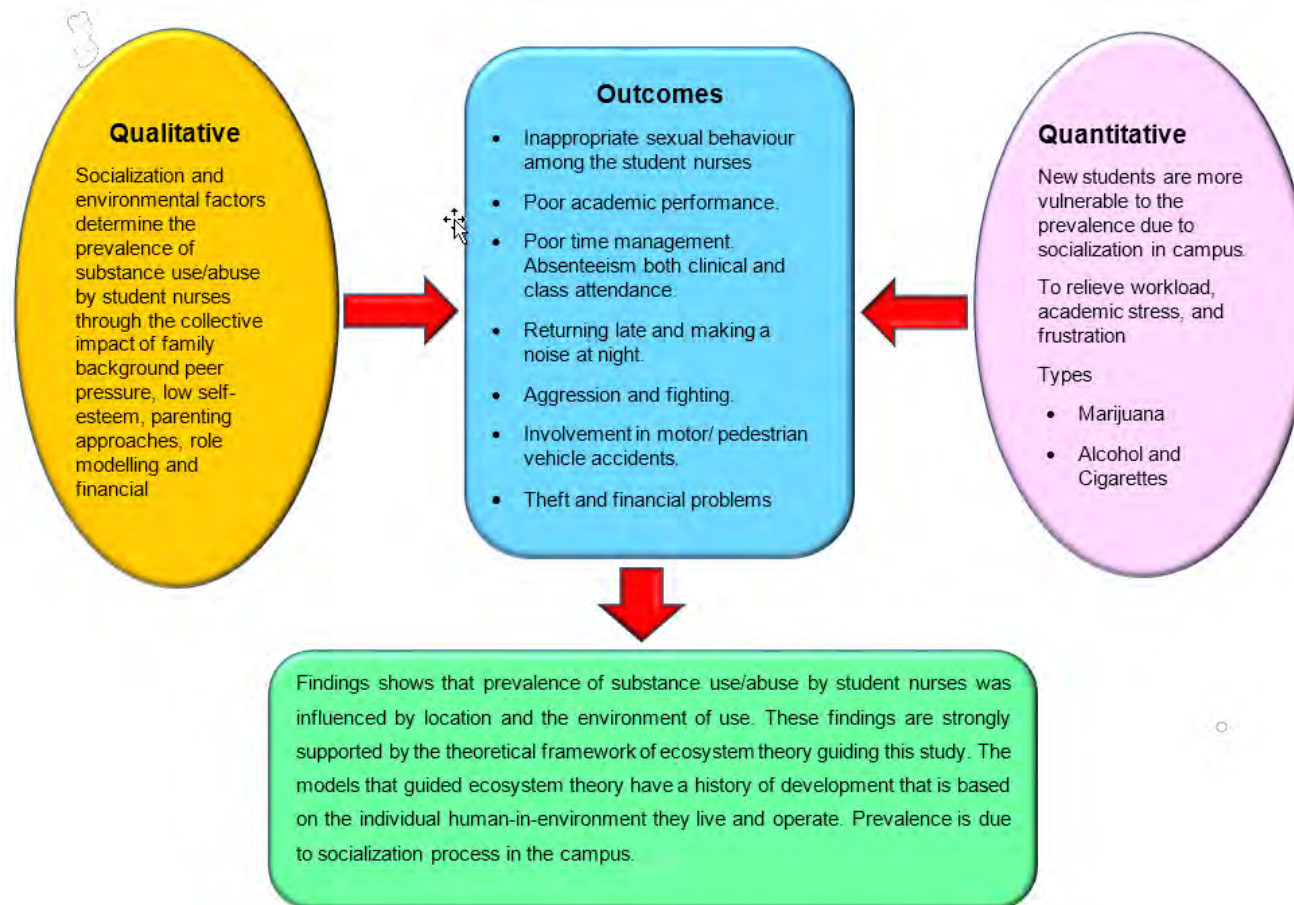


Figure 4.7: Contributory factors, types of substances used and outcomes of qualitative and quantitative approaches

CHAPTER 5

CONCEPT ANALYSIS

5.1 Introduction

In Chapter 4, data analysis of both qualitative and quantitative designs was presented, including discussion of the findings. The responses expressed were grouped into five themes, and sub-themes in the qualitative design. Frequency tables, clustered column charts, stacked column chart, and clustered bar charts as well as multi-variant tables were in quantitative design. Walker & Avant (2013) defined concept analysis as a process of operationalizing a phenomenon so that it can be used for theory development or research measurement that evolve over time, never fixed, but create a useful understanding of the shared meaning of a concept within a specific context.

Chinn & Kramer (2008) defined concept as a complex mental formulation of experience that are extracted from life experiences, clinical practice or research, and the aim of analysis is to clarify, refine or sharpen the concepts, statements or theories. Concept analysis is used to examine and describe a concept and its application. The concept should be clear and distinct, unambiguously defined and well differentiated from other concepts, and should be applicable to the world as well as appropriate to the context (Chabeli & Muller, 2004). Walker & Avant (2013) asserted that concept analysis and development are fundamental processes required by researchers who are attempting to measure the metaphysical phenomena.

Concepts are viewed as the building blocks with which theory can be constructed, and their analysis is considered essential if the concepts are to be actively and correctly operationalized (Eustace & Ilagan, 2015; Mikkelsen & Frederiksen, 2015). Concept analysis steps suggested by Walker & Avant (2013) were used to describe the meaning of developing a model to “prevent” substance use/abuse by student nurses in LCN. The researcher outlined the process that will be followed during concept analysis, followed by detailed outline of the steps of concept analysis by Walker & Avant (2013). In this chapter the concept “prevention” of substance use/abuse was analyzed. The theoretical meaning of the concept will be analyzed following the process of concept analysis by Walker & Avant (2013).

5.2 Concept Analysis Process

According to Walker & Avant (2013), concept analysis is “the process of examining the basic elements, structure and functions of a concept”, whilst for Beckwith, Dickinson & Kendal (2008) identifies it is “a branch of empirical linguistics, as it contains the assumption that a definition of a term may be found which pertains to its representation in a natural language”. Lastly, concept analysis has been useful in model development and nursing language development (Walker & Avant, 2013). The reason for choosing concept analysis during model development was that it gives very precise theoretical as well as operational definitions for use in model development and research (Walker & Avant, 2013). Concept analysis steps suggested by Walker & Avant is as follows:

- ❖ Identifying the concepts of interest;
- ❖ Determining the purpose of the analysis;
- ❖ Identifying all uses of the concept(s);
- ❖ Determining the defining attributes or characteristics of the concept(s);
- ❖ Identifying or constructing a model case;
- ❖ Identifying additional cases: related cases;
- ❖ Identifying antecedents and consequences; and
- ❖ Defining the empirical referents.

5.2.1 Identification of Concepts Of Interest

Walker & Avant (2013) described identification of the concept as a way choosing the concept that accurately describe the participants' experiences from the findings. The concept "prevention" is identified as essential to this study as it was identified from the data that, there are no strict measures to reduce substance use/abuse by the student nurses at LCN. During data collection the following quotations were echoed:

One participant mentioned that:

"... family background also has a big role to play in prevention of substance use/abuse, mam you may find that some parents care less about their children's' where about ... some allow them to do as they wish".

Another participant revealed that:

“... you know what, I started my first level in our sister campus but I don’t remember any lecturer telling us anything regarding prevention of substance use/abuse throughout orientation, so I think prevention should start during orientation so that we know”.

The researcher found the concept prevention was mentioned several times by the participants. “Prevention” was identified as a concept of interest from the title of the study and from analysis of data obtained from the perspectives of student nurses, lecturers and student affairs officers. “Prevention” of substance use/abuse was found to be scarce to the student nurses in LCN. Centralized disciplinary procedures and preventive measures are not followed as stipulated in the LCN disciplinary code for students in case a student can be identified to be using substances in the campus premises. It was revealed that each campus uses different strategies to curb substance use/abuse. This was evident from the following quotation:

“...Mam the fact that there are no preventive measures in place or we do not know them, in our campus is another factor...”

Another participant added that:

“... It seems as if we are treated differently, all campuses should have the same and clear policies regarding prevention of substance use/abuse reinforced by supportive orientation...”

Limited preventive measures on substance use/abuse from participants and assessment of existing approaches and strategies to prevent substance use/abuse by student in LCN assisted the researcher in identifying gaps to develop a model.

Unsworth (2017) contended that dictionary definitions are authentic and therefore valuable because they convey established ways in which words are used. This paradigm can be used to define the scope of any subsequent analysis of the literature.

5.2.2 Determining the Purpose of the Analysis

The purpose of concept analysis is the second step of the eight steps (Walker & Avant, 2013). The purposes of concept analysis were determined by the researcher as follows: To clarify, describe the meaning of, similarity and identify multiple considerations for measuring the concept “prevention” of substance use/abuse by student nurses in LCN (Falan, 2010). The objective is to understand what the concept is about (Walker & Avant 2016).

For the purpose of the current study, concept analysis was done to achieve the following:

- ❁ To analyze the concept “prevention” of substance use/abuse by student nurses at LCN following (Walker & Avant, 2013);
- ❁ To clarify the characteristics, attributes and uses of the concept “prevention” of substance use/abuse; and
- ❁ To develop theoretical definitions that helped in the development of model to prevent substance use/abuse by student nurses at LCN.

The concept to be analyzed in this study is “Prevention” of substance use/abuse by student nurses in the LCN.

The Australian National Public Health Partnership (2001) designated prevention as “action to reduce or eliminate or reduce the onset, causes, complications, or recurrence of disease”.

Prevention can also be defined from thesaurus, dictionaries as to stop, avoid, inhibit, deter, hinder. Several levels were defined: primordial prevention (“preventing” the emergence of predisposing social and environmental conditions that can lead to causation of the dilemma; primary prevention; secondary prevention and tertiary prevention to improve function, minimize impact, and delay of complications”).

5.2.3 Identifying All the Uses of the Concepts

Identifying the uses of the concept is the third step of Walker & Avant’s (2016) concept analysis model. The researcher reviewed literature through library search to identify as many uses of the concept “prevention”. The search was combined with additional search of terms used for the purpose of directing the searches towards the context of prevention of substance use/abuse by student nurses. Sources like dictionaries, encyclopaedias, the internet, journal articles and books were reviewed in order to clarify the meaning of prevention of substance use/abuse.

Prevention is a strategy designed to reduce or eliminate the incidence of undesirable behaviour, which could be focusing on an individual or a population (Pam, 2013).

Prevention is best defined in three levels namely primary, secondary and tertiary. At primary level the aim is to halt the initiation of use of substances which can lead to abuse at a later stage.

This level of “prevention” should be launched to students while they are still at the basic education system. This should be further emphasized during the orientation period of students when they are first accepted at the college.

The secondary level targets those students that are already using substances with the aim withdrawing the behaviour and activating good behaviour. This level can be implemented through counselling and instituting disciplinary measures such as writing of a statement, involve the student parents and give a written warning if the student’s behaviour continues. The tertiary level of prevention is implemented where the secondary level of prevention was not successful. At this level the student can be referred for rehabilitation.

The term “prevention” was directed towards substance use/abuse by student nurses at LCN. According to Romano & Hage (2000), primary, secondary and tertiary prevention refers to efforts that attempt to reduce the number of new incidences of a disorder. Lower rate of prevalence of a disorder by targeting those at risk or those at early stage of the disorder or decrease devastating effects of the disorder, distinctly. Baker & Shaw (1987, cited by Romano & Hage, 2000) argue that secondary and tertiary are not “prevention but remediation”.

Other author refers tertiary prevention as treatment. Maithya et al. (2015) stated that tertiary prevention efforts are prevention if they prevent recurrence or significant effects of the disorder. Identify the use of concepts from other disciplines-sociology, education, law, organizations e.g. the concepts are used in medicine/health such as prevention of diseases.

“Prevention” in business aims at developing intelligence, techniques and tools for process and reporting. This aims to improve productivity and increase profitability.

The techniques also assist in prevention of risks and loss of profit (Grigori, Casati, Dyal & Shan, 2001). “Prevention” in medicine is to protect, promote, and maintain health and well-being. The main aim is avoiding disease, disability and death (Medina-Mora 2005).

Prevention also focus on the health of individuals, communities and distinct population. In nursing “prevention” refers to measures taken to for disease deterrence ... other means for averting sexual transmitted infection is how to use a condom. Individual should be motivated to practice his/her own prevention (WHO, 2012). Furthermore, in psychology “prevention” refers to strategies designed to reduce or eliminate the occurrence of disease, it includes risks or threats to individuals’ health (SAMHSA, 2017; Peltzer, 2018).

Prevention is further described as “intervention designed to reduce the incidence, prevalence and impact of problem behaviour including personal well-being social and political change to improve environment where people learn, live and work” (Romano & Hage, 2000). In sport prevention focuses on exclusion of musculoskeletal injuries such as sprains, muscle strains and bone fractures through proper use of protective clothing and correct exercises while promoting mental wellness (Mahler, Gojanovic, Fouchert & Mahler, 2015).

In education, prevention aims at promoting those actions which will improve academic performance and prevent failure. Strategies used to prevent failure are remedial teaching, outselling, extra classes, coaching and mentoring. This also assist students to remain on track for attaining an educational qualification. It aims at moulding the learner to be a responsible member of the society (Nouwen, Van Praag, Van Coudenberg, Clycge & Timmerman, 2016). In the social context prevention is defined in three levels namely primary secondary and tertiary. At primary level it focuses on reducing probability of downside risk or onset of undesirable state. The secondary level aims to reduce the potential impact of a future downside risk.

At tertiary level the focus is on relieving impact of the risk once it has occurred (Gough, 2013). Saturation point was reached after the defined concepts from medicine, nursing, psychology, education and business were exhausted and shown to be overlapping. The review of literature helped in supporting and validating the defining attributes (Walker & Avant, 2016). Related words to the concept “prevention” may aid in understanding and facilitate an effective model to prevent substance use/abuse by student nurses at LCN. In this study the following concepts: policing, monitoring, law enforcement, punitive measures appear to be significant to prevention of substance use/abuse.

The concept “law enforcement” refers to any system by which some members of the society act in an organised manner to enforce the law by discovering, deterring, rehabilitating or punishing individuals who violates the rules and regulations leading that society (Roufa,2019). Law enforcement entails and firm obedience to rules and procedures. It is an emphasis on the document of the law.

This is where citations are issued, arrests are made and force is employed regarding a specific law or policy. Roufa (2019) stated that law enforcement can be an effective way to maintain public order and punish crime in as much as it is focused on requiring members of the society to comply with the law or face the consequences. In this study law enforcement is of greater importance in case where students may violate the rules due to substance use/abuse, therefore it can be applied.

The concept “policing” refers to an approach to crime prevention through community service and problem-solving (Roufa, 2018). Policing requires a holistic approach to community service, considering the dilemmas that affect a community and working with people within that community to resolve them. Policing needs residents’ cooperation, business owners, and leaders who participates in the process of reducing violation of the law and improving quality of life. In this study policing is significant because all campuses are situated next to the beer halls. The main goal of policing is to protect life and government property while upholding the country laws and respecting individual rights. Police should be considered as guardians on the students.

Policing can be effective in prevention of substance use/abuse by student nurses at LCN. College management should team with the police as a preventive measure. A partnership between police, college management, security guards and community representatives may create a safe environment and a less tarnished reputation for the college a supported by Stockwell (2001). Training of security personnel to handle conflict by non-violent means should also be introduced in order to discourage intoxication and unacceptable behaviour in the college premises.

The concept “punitive” measure is defined as unpleasant result of an action on a large scale such as higher taxes, fine, suspension or suspension (Feinberg, 1965). It is the infliction of hard treatment by authority on an individual for his prior failing to obey the laws. Punitive measures are applied to enforce obedience on individuals who violates the rules and regulations, such as student nurses. In nursing, students can be punished by replacing missed hours they were supposed to be on duty. Those who come back after 22h00 should be evicted from residents. The above example is referred to as penalty. Punishment should be proportional to the gravity of the offense (Holth, 2005).

In the sense when authorities become aware of individuals use of substances, they may punish the user with social disapproval. The willingness to use may be lowered when users are strongly disapproved. This may also be understood as social control effect. Punitive measures may also be effective in the prevention of substance use/abuse by student nurses at LCN. “Prevention” is related with terms such as: reductions, restriction, restrain curbing, control as well as constraint. These concepts have different meanings when used in other contexts; hence they are termed surrogate concepts.

The uses of these concepts will be discussed differently. The researcher selected the word “reduction” as it appeared first on the list of synonyms of “prevention”. The concept “reduction” refers to the action or fact of making something smaller or less in amount, degree, or size (Oxford South African Pocket Dictionary, 2015).

The word “**reduction**” from Explore Dictionary.com is used as follows:

- ❄ A limiting condition that measures especially a legal one.
- ❄ Lessening
- ❄ Limiting
- ❄ Decreasing
- ❄ Deduction
- ❄ Cut down

In this study “reduction” is a process that attempts to prevent the onset of substance use or limit the development of problems associated with using psychoactive substances.

Curbing: is the act of restraining power or action or limiting excess. This means a restrain to something (Merriam-Webster Online Dictionary, 2015).

❖ **Synonyms are:**

- ❄ Keep in check
- ❄ Control
- ❄ Obstruction
- ❄ Lowering
- ❄ Limiting

In this study “curbing” means avoidance, limiting or reducing substance use/abuse by student nurses at LCN.

Restraining: Means control of someone or a state of being restricted (Merriam-Webster Online Dictionary, 2016). This is an official command issued by a court to refrain from certain activity or to keep someone under control or prevent someone from doing something.

❖ **Synonyms are:**

- ❖ Discipline
- ❖ Govern
- ❖ Keep a tight rein on
- ❖ Hold back
- ❖ Keep under control

In this study “restraining” refers to a model to “prevent” of substance use/abuse by the student nurses at LCN

Restriction: Refers to any limitation on activity, by statute, regulation or contract provision (Oxford Dictionary and Thesaurus, 2014).

❖ **Synonyms are:**

- ❖ Limitation which cannot be exceeded or rules which cannot be broken.
- ❖ Reduction
- ❖ Regulation
- ❖ Stopping
- ❖ Impediment
- ❖ Discipline

In this study “restriction” refers to the rules, regulations, lease agreement and policies set to prevent substance use/abuse by student nurses at LCN.

Constraint: Refers to stopping someone from doing something (Oxford Dictionary, 2015).

❖ **Synonyms are:**

- ❖ Limitation
- ❖ Restriction
- ❖ Hampering
- ❖ Curbing
- ❖ Discipline
- ❖

In this study “constraint” means the act of threat or use of force to control the risky behaviour of the student nurses at LCN.

5.2.4 Determining the Defining Attributes or Characteristics

Walker & Avant (2016) cited that defining the characteristics of a concept make up the core of concept analysis. Attributes of the concept refer to collection of features that are frequently associated with the analyzed concept and it allows the researcher broader insight into this concept. To define the attributes, the researcher made notes of characteristics of the concept that appear time and again. This assisted the researcher to clarify and differentiate the concept prevention from other related concepts (Walker & Avant, 2016). The concept “prevention” is widely used every day and remains a complex concept, however its meaning vary depending on the discipline. The characteristics of the concept “prevention” are described below:

“Prevention”, according to Schwartz (2008) is to keep something from happening or continuing. The concept is further used to represent activities to stop action or behaviour. The behaviours or actions that may be stopped could be actions which are not acceptable in the society or a particular setting e. g criminal or violent behaviour Schwartz (2008). In this study, the prevention means the activities undertaken to prevent substance use and abuse by student nurses in LCN. Peltzer (2018) described “prevention” as an integrated approach to promoting positive social and emotional well-being. Regardless of the problem area, prevention applies be it disease, substance use/abuse, academic failure, or work-related stress. In daily activities, people regularly take preventive measures.

Drivers fasten their seat belts, most people eat healthy diet, pregnant women attend antenatal clinic, secure their homes, maintain their vehicles and do exercise to lead a healthy lifestyle.

In this study it means the use of integrated tactic to promoting positive social, physical, emotional well-being, and academic achievements for students. These tactics aims at improving attributes such as positive attitude and self-confidence which are essential in the prevention of commencement of substance use/abuse. This could be achieved through counselling of students identified to be using substances. Counselling refers to the provision of assistance the provision and guidance in resolving personal, social, and psychological difficulties (Oxford South African Dictionary, 2015; Kyei & Ramagoma, 2013).

Schwartz (2008) emphasized that prevention entails a careful thought of cultural significance and social justice, which requires a link with the population. “Prevention” is effective when it is directed by a known individual with a universal understanding of the community in which they interact. Prevention may be shaped by approaches based on the problem being addressed and the population being targeted. True exposure to the participants, open mindedness to overcome cultural encapsulation and true egalitarian connectedness with the target community is needed.

In education, “prevention” is defined as integrated approach to promoting social and emotional well-being for students. Prevention consist of methods or activities that seek to reduce or deter specific or predictable problems such as failing tests/examination or promote a desirable behaviour such as achieving academically.

“Prevention” in education comprise positive remarks to achievers. Counselling, remedial teaching, facilitating extra classes, attending winter classes etc. to those with difficulties as supported by Quinn (2014).

College counsellors play an important role in assisting ensures that student nurses stay on the right track. LCN does not have professional counsellors, but lecturers from Social Sciences, Psychiatric Nursing Sciences and Community Nursing Sciences playing the role of counsellors to students in need. It may not be possible to have two separate lecturers to provide counselling and discipline. Where possible, however, those roles should be separated in order to increase the effectiveness of intervention in both areas.

Many students depend on their counsellors to provide positive direction. One of the major problems for students is substance use/abuse. It is vital that counsellors are able to identify possible substance use/abuse. Academically, a counsellor can detect issues relating to drug or alcohol use if there is a drop-in grade, overall performance and participation in academics. Findings from data collected indicated that lecturers who participated in this study said that lecturers should provide counselling to students with risky behaviour. Taking note of unusual or excessive absences without proper explanations, aggression as well as violence can indicate that the student is involved in substance use/abuse. (Maithya & Marais, 2015).

Counsellors from different disciplines are ensuring the smooth running of the college, this is evidenced by the following statement:

“Mmh ... As a social science lecturer, I have counselled a lot of students with substance use/abuse related problems, most of them are still around here but they have changed their behaviour. In some instance we are forced to call the parents so we help each other in modifying the student’s behaviour. There was this boy whose mother is a staff nurse, oho he used marijuana, and he was troublesome as well as destructive.

He also sold his clothes in order to boost his lifestyle tzhoh, tzhoh.... but to cut the story short I have helped him to change the behaviour. He completed the course through continuous counselling. His mother was so happy. It is vital that college lecturers who acts as counsellors make themselves an important part of the efforts to help students at risk for substance use/abuse. Lecturers who do counselling should be given adequate time to do continuous counselling. There have been some impressive success stories for counsellors who have made changes in some campuses at LCN. (Participant 4; female; 53 years; honours degree holder; 30 August 2018)

Espelage, Bub, Van Ruzin & Holt (2018) states that “prevention” consists of methods or activities that seek to reduce or deter specific or predictable problems. This means the methods or activities that seek to reduce the factors contributing to substance use/abuse among student nurses in LCN. These methods include instilling good behaviour during orientation, awareness campaigns, counselling, policies that seeks to promote a substance free environment.

These activities include education. According to Nouwen, Van Praag, Van Coudenberg et al. (2016) education refers to the process of facilitating learning, or acquisition of knowledge, skills, values, beliefs and habits. In this study education refers to imparting knowledge regarding “prevention” of substance use/abuse by the student nurses at LCN.

This can be teaching, training, discussion, storytelling and directed research. The aim of the education is to help students in LCN to develop knowledge, skills, and positive values and to change habits that exposes them to risk of using/abusing substances. Education regarding substance use/abuse prevention is more effective when lecturers and students receive formal training and ongoing advice and support.

The findings show that message passed to the students aimed at awareness on the dangers of substance use/abuse among all students in LCN. The emphasis is put on a universal approach which users and non-users, some of whom may not be subjected to individual risk factors which encourage them to abuse substances. Education should aim not only at increasing knowledge and awareness about effects of substance use/abuse, but should also aim at changing values, attitudes and beliefs which are assumed to ultimately influence behaviour, as well as building social and personal expertise (Tuwei, 2013; Espelage et al., 2018).

With an information component on the consequences of substance use/abuse, the plan should also seek to teach how to counter pressures leading to drug abuse, and more importantly, attempt to motivate students to resist them. This can be done through norm education which seeks to undermine popular beliefs that substance use is acceptable in some societies. There should be emphasis on anti-substance use/abuse social norms and attempts to form non-use norms by involving students in looking for alternative ways to achieve the perceived benefits of substance use/abuse. Discussion with students can involve interactive sessions where methods such as brainstorming, role plays, peer discussion and cooperative learning are used.

The current college curriculum should therefore be reviewed to include substance use/abuse as a module in all levels. Medina-Mora (2005) define “prevention” in healthcare as measures taken for disease prevention related to environmental factors. In this study it means the measures that seeks to prevent environmental factors that contribute to the use or abuse of substances by students in LCN both the family and campus environments as well as the immediate environment outside the family and campus.

In the business field prevention means the amount by which something is made less or lower in price (Thesaurus Dictionary, 2014). In this study, it means that the amount by which substances are used by students at LCN is lessened through awareness campaigns, education and counselling. Signs that indicates that substances are not allowed in the campuses may also limit the behaviour.

According to Hage, Romano, Conyne, Kenny, Mathews, Schwartz & Waldo (2007), and Mosby's Dental Dictionary (2008) “preventive” care is an approach that is taken to avert certain diseases, in the field of health. In this study it is referred to the tactic that is taken to stop or discontinue the use/abuse of substances by the student nurses in LCN. This tactic may be achieved by imparting knowledge of the contributory factors as well as the consequences of substance use/abuse to newly employed student nurses as stated by Moodley (2012). This can also be done during school health by integrating with the primary health care nurses. Thesaurus Dictionary (2014) in agriculture “prevention” means the amount by which something is made smaller or the simplification of a problem: pruning/trimming and cutting/uprooting a plant.

Pruning means cutting off of unwanted or excess branches in a plant/flower/vegetable that makes it to be ugly or less productive. The aim of pruning is to make a plant more beautiful and to bear more fruits. In this study pruning refers to disciplinary actions that are taken against students who use/abuse substances. The aim is to ensure that students are developed to be responsible professional nurses.

This is implemented through counselling of identified students, making them write statements/incidence reports, give verbal warning and if the behaviour persist, a written warning may be given as supported by Puljevic (2014). Cutting/uprooting is a process which is used in case a plant fails to produce the desired outcome despite pruning, in this study student nurses who have been exposed to the above-mentioned disciplinary measures, the last resort will be expulsion from the residence so that he/she may not influence other students. This is where the college should stipulate or develop policies that may be followed to prevent substance use/abuse at LCN.

In mental health promotion interventions: “prevention” usually targeted to the general public or a whole population. Interventions aim to enhance individuals’ ability to achieve competence and a positive sense of self-esteem, mastery, well-being, and social inclusion, and strengthen their ability to cope with adversity as listed by O’Connell, Boat & Warner (2009).

It includes programmes based in schools, community centres, or other community-based settings that promote emotional and social competence through activities highlighting self-control and problem solving.

In psychology, “prevention” refers to interventions that transpire before to the commencement of a disorder that are intended to stop or reduce risk for the disorder (Ebersohn et al., 2015). Prevention includes a wide range of activities known as “interventions”, aimed at reducing risks or threats to individuals’ health (Hage et al., 2007). In this study intervention means tightening laws, policies that are being used to prevent substance use/abuse at LCN currently. Clause 10.1 of the LCN lease agreement reads as follows “lessees are prohibited from having liquor, illegal drugs and dangerous weapons (fire-arms Hunting knives, etc.) in the rooms.

The LCN disciplinary code for students also emphasizes that bringing, selling or using intoxicating liquor, drugs or any habit-forming agent on college premises is misconduct. Thus, other rules and regulations are necessary to address a model to prevent substance use/abuse by students at LCN. Tightening college rules and regulations as well as lease agreement to avoid loopholes was cited by most lecturers. The study found that the LCN had rules which must be signed by students on admission.

However, copies available to the researcher showed that these rules do not clearly specify the consequences of violation of the rules in detail. LCN policies should be comprehensive enough to reflect community norms and expectations about substance use; and explicitly specify the punishment for norm violation as attested by Khumalo (2017). In this case condemnation should be considered. According to Oxford South African Dictionary (2015), “condemnation” refers to express complete disapproval of unacceptable behaviour.

In this study to “condemn” is to declare that substance use or abuse by the student nurses in LCN is unlawful, unacceptable and punishable. The study findings revealed that substance use/abuse is common among the student nurses at LCN, and that there is no legal policy on how to handle students who abuse substances on college property.

Lack of a policy makes it difficult for college administrators and lecturers to address the problem effectively. In this regard, a uniform policy for all campuses is not only necessary but also urgent to guard against disparities in addressing substances abuse in campuses, and to apprehend increasing cases of substance use/abuse student nurses.

It is therefore recommended that a comprehensive and uniform policy for handling students who abuse drugs be put in place by the nursing education directorate as a measure to guard against substance use/abuse by students in LCN. This policy would be an important component of a model to prevent substance use/abuse by student nurses in LCN.

Presently, students’ nurses are writing statements after counselling, leave without pay in case the student did not report for duty, summoning of parents or guardians to college in case a student is found to be using substance are the methods used, most lecturers felt that the method were moderately effective as evidenced by behavioural change observed on some students Maithya & Marais (2017).

Other methods cited by the vice-principals, are emphasis on LCN disciplinary code for students, lease agreement signed on admission by all students, unprepared inspections especially in student nurse's residence, and thorough inspections at entry points on opening days and close monitoring and vetting of students' visitors. According to participants, no formal programme had been incorporated into the school curriculum except guidance and counselling which is provided by teachers during their spare time.

Table 5.1: Illustration of literature review related to the uses of the concept “prevention”

Source	Year	Field	Uses of the Concept
Oxford Dictionary	2014	General	Keep something from happening or continuing. To stop or keep someone from doing something.
Espelage et al.	2018		To keep from happening. Make impossible by prior action, hinder. Used to represent activities to stop action or behaviour. To promote a positive action or behaviour.
Oxford Dictionary	2014	Education	An integrated approach to promoting social and emotional well-being for students. Prevention consists of methods or activities that seek to reduce or deter specific or predictable problems or promote a desirable behaviour.
Quinn	2013		
Mosby's Dental Dictionary	2008	Medicine	Preventive healthcare consists of measures taken for disease prevention related to environmental factors, genetic predisposition, disease agents, and lifestyle choices.
Moodley	2012		Other synonyms of prevention: prophylaxis, safeguarding, precautionary measures, protective measures, suppression.
Thesaurus	2014	Business	In the business field prevention means the amount by which something is made less or lower in price: discount, price cut, and markdown, deduction, limiting or decreasing.
Grigori	2001		
Mosby's Dental Dictionary	2008	Health	In the field of health, preventive care is an approach that is taken to avert certain diseases.
Romano & Hage	2000		Preventive care also refers to precautionary measures to be taken against infectious disease
Medina-Mora	2005		
Mosby's Dental Dictionary	2008	Psychology	Psychologists define prevention the action of belittling someone. It embraces downgrading, and humiliation.
Ebersohn et. al.	2015		
Peltzer	2018		
Thesaurus	2014	Agriculture	According to Agriculture, prevention means the amount by which something is made smaller or the simplification of a problem: pruning, trimming, cutting slimming down and axing.
Puljevic	2014		
MacMillan Dictionary	2012	English Grammar	Prevention includes a wide range of activities known as “interventions”, aimed at reducing risks or threats to health.
Schwartz	2008		Reduction, restriction, curbing, constraint, limitation and restraining.

5.2.5 Identifying or Constructing a Model Case

Walker & Avant (2016) described a “model case” as an example of the use of the concept that demonstrates all the defining characteristics or attributes of the concept. The researcher had to develop model cases that represented and described a true example of the uses of the concept that included all the critical attributes of that concept “prevention” (Nuopponen, 2010). On the basis of the identified uses and the defining attributes of the concept, the theoretical definition of the concept “prevention” were found to be reduction, restriction, restrain, curbing and constraint which refer to prevention of substance that includes all the elements in as recommended by the (WHO, 2012; Dumbili, & Williams, 2017). Model cases can be drawn from literature, art or film or any other context in which the concept is symbolized. The model was constructed in such a way that it contained all the defining characteristics of the concept “prevention”.

5.2.5 Identifying the Model Case Concept

Nkentese, a 20-year-old female student nurse who was raised in a family with Christian background was found to be a member of campus student’s Christian movement. She also had well adjusted, affectionate, traditional oriented and warm-hearted parents. Her parents are supportive and always there for her. Attachment/contact and communication between her and her parents was displayed. She was also a good performer at school. Due to her family background, she did not use any substance. She displayed a good behaviour and associated herself to people with good morals and values, hence positive peer group influence.

Children from families in which substance use/abuse does not occur are more likely not to use substances in future. They accept and follow community values engage in activities that contributes to healthy personal development. This is because the parent-child relationship is characterised by affection and favourable intergenerational interaction. Nkentesse display the ability to stand up for her belief and values.

Parental monitoring of children's behaviour and strong parent-child relationships are positively correlated with decreased substance use/abuse among students (Bezuidenhout, 2013). Nketese's parents clarified and explained positive values to their children, modelling healthy behaviour which made her to be able to resist peer pressure. The above case displays ideal family responsibility regarding "prevention" of substance use/abuse at LCN.

5.2.6 Construction of Borderline Related and Contrary Cases

Borderline cases are those that reflect some but not all the attributes of the concept. They are somewhat inconsistent. They help clarify thought about the defining attributes of the concept under study (Walker & Avant 2013). For the purpose study borderline and contrary cases reflect attributes that are not an instance of the concept explication of investigation. A contrary case ultimately leads to the identification of critical attributes through the contrary ones (Walker & Avant, 2016). The researcher had to develop a model case that represent and clearly described the true uses and attributes of the concept "prevention" of substance use/abuse.

The theoretical definition of the concept “prevention” was found to be reduction, restriction, restrain, curbing, stopping and constraint, which include all elements as recommended by UNODC. The researcher identified an example of a model case of the concept “prevention” based on the uses, attributes and characteristics of the concept (Walker & Avant, 2013). The model case was constructed in such a way that it contained all the defining characteristics of the concept “prevention”.

Nntike, a student who was 19 years at the time was identified as using some substances while in his first level of training, the staff member who identified that briefly talked to him and informed some of the lecturers about the student’s use of substance. Counselling was done, nonetheless it was ineffective. However, since the college does not have a preventive programme in place very little was done. Four years later the student manifested with lack of concentration, low energy levels, increased absenteeism rate and the student failed the level and had to repeat.

The case indicates the negative impact of lack of preventive measures or strict implementation of rules against use of substances and lack of professional student counsellor in LCN. The student continued with his unacceptable behaviour. It was also stated he was from a family where both his parents abuse substances and lack support, which contributed his risky lifestyle. He even bragged that nobody can make him stop his unacceptable behaviour because he is stepping on his father’s pathway.

The case indicated that the lecturers did not identify and counsel the student as expected hence he continued with her risky behaviour.

Had his been given adequate information regarding substance use/abuse she would not have continued with her unacceptable behaviour. The current study attempted to find out measures that respondents wished to see instituted to prevent substance use/abuse at LCN. The most effective methods as perceived by students was counselling and teaching about consequences of substance use/abuse on the students at LCN. Related cases are related to the concept under study but do not contain critical attributes, though they may resemble or be connected to the concept. They help add insight into why the concept being studied fits into the network of concepts surrounding it (Walker & Avant 2013).

5.2.7 Identification of Antecedents and Consequences

Antecedents are defined as aspects or events that precede the occurrence of the studied concept (Walker & Avant, 2013). The Cambridge English Dictionary defines antecedent as someone or something existing or happening before, especially as the cause or origin of something existing or happening later. Chinn & Kramer (2008) stated that antecedent's concepts are experiences identified before other concepts. The antecedents and consequences were identified from the literature search about the concept "prevention".

5.2.7.1 Antecedents of "Prevention"

The antecedents for "prevention", when developing a model to prevent substance use/abuse at LCN, referred to those aspects that preceded the process of developing a model. Antecedents are defined as the events or attributes that must arise prior to a concept's occurrence" Walker & Avant (2013). Antecedents are experiences identified before other concepts (Chinn & Kramer, 2008).

Antecedents can be classified as those factors that facilitate the occurrence of “prevention”. Developing a model requires a multisectoral and inclusive approach. The following antecedents were found to be important for developing a model to prevent substance use/abuse at LCN:

- ❄ Lifestyle
- ❄ Self-concept
- ❄ Social environment
- ❄ Role models
- ❄ Orientation programme
- ❄ Academic achievement

5.2.7.2 Deeper Discussion of the Antecedents

The antecedents that relate to the concept of prevention of substance use/abuse among student nurses at LCN are discussed below:

❖ Lifestyle

Lifestyle is a way individuals, families and societies live, which they manifest in coping with their psychological, physical, social and economic environment on daily basis. Lifestyle reflects people’s self-concepts. It is expressed in choices, activities, attitudes, interest, opinions, income as well as values. Lifestyle is influenced by factors such as motivation, family, groups and social class. The example is a healthy lifestyle.

According to WHO (2015) and Harvard (2018), a healthy lifestyle is a way of living that lowers the risk of developing ill health especially non-communicable diseases including mental illnesses. Health is the responsibility of each individual. Thus, each person is responsible to lead a healthy lifestyle. The students are aware of healthy lifestyle since it is one of the aspects done at high school. They know which behaviours that should be promoted and those that should be avoided to be healthy and perform at their best physically and mentally which include eating a well-balanced diet, exercises, a balance between activities and relaxation periods and avoidance of alcohol and other substances.

According to WHO, 2012 (1948, as cited by Gebremichael, 2016) Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. Health is an ongoing process, as well as a way of life. Health can also be predisposed by lifestyle such as alcohol consumption, medications and academic/working environment which has to be modified in a way that support better life. Economic, social, environmental, etc., largely influence the individuals 'health status. These conditions outline the situations in which people live, nurture, educate and get educated.

Finally, developing health needs involves an integrative, collective and socially sensitive strategy implementation where individuals and communities take responsibilities for their own action. Most students are enrolled at the LCN leading a healthy lifestyle, which is prior to engaging to any substances because the information on healthy life style is still inculcated in their minds.

Students are exposed to stressors which lead them to depart from healthy lifestyle and start to engage in unhealthy behaviours such as abusing substances as a way of dealing with stressors. The fact that there are inadequate or no sporting facilities at all the campuses of LCN worsens the situation. In order to address the above concerns, there should be some obligations to design a carefully devised plan of action to achieve a specific goal. In this study, tactics to be explored include reduction of substance use/abuse by student nurses in order to promote a healthy and positive behaviour that supports academic and social achievement.

❖ **Self-Concept**

Self-concept is an idea self-constructed from the belief one holds about oneself and the response of others, it embodies the answer to who one is. It also holds what a person believes about oneself, behaviour and unique characteristics (McLeod, 2008). Self-concept leads to self-confidence. Self-confidence is defined as an intra-psychological variable that increases a person's general well-being. According to Bandura (1977), self-confidence is belief of one's ability to succeed or accomplish a task and is related to self-efficacy.

The students, at the commencement of training demonstrate self-confidence regarding their abilities to perform at their best academically. This self-confidence stems from their ability to pass Grade 12 which is regarded as a gateway to tertiary education and somehow believed as a yard stick to achieve even in tertiary education. The students on enrolment usually see themselves as capable to pass the nursing program they are enrolled for at record time.

However, the challenges that students may encounter during training leave them stripped off of their self-confidence and self-concept that they had before. This situation leaves students being at risk to be initiated to substance use. These students are target for primary prevention through continuous support and counselling.

❖ **Social Environment**

Social environment refers to the setting that individual find themselves in such as the campus, students' residence as well as the community. The peer and family influence also play a significant role in the social environment. Social context also affects the decision and the willingness to use/abuse or not to use substances in several ways. Peer pressure may motivate students to use/abuse substances resulting in infectious effect. The social environment in which students are exposed is different from the home environment. In a home environment whenever a child misbehaves or act in an unacceptable manner, the parents reprimand and guide accordingly. In the residence where students stay, there are no housemothers or adult people to reprimand and guide them when misbehaving especially after hours.

The environment thus leaves students at the hands of senior students or their own peers to socialize them. This socialization from peers is likely to influence the students to engage in an unacceptable manner and a totally new culture which is different from the one learnt at home as supported by Kyei & Ramagoma (2013). To improve the social environment, it is important that the LCN ensures that there are house mothers in the students' residents who act as parent figures. This will help to create an environment that is close to a home environment.

A replica of a home environment would assist students to modify their behaviour and probably prevent students from using substances. The social environment should also be improved so that there are recreational facilities and common rooms (lounge) where students can relax and relieve stress.

❖ **Role Models**

Role model refers to a person who serves as an example of the values, attitudes, and behaviours associated with a role. For example, a father is a role model for his sons. Role models can also be persons who distinguish themselves in such a way that others admire and want to emulate them (Atwoli, 2014). Student nurses are still young and need a positive role model to learn from and admire. Student roles models may have an unexpected negative effect on other students' perceptions of peer norms. Most high-profile students such as resident officer, student representative council executives, may exhibit less substance use/abuse than other students and therefore function as models of good behaviour.

Ironically, with their unpredictable influence on socialization, these role models may be counterproductive, conveying misperceptions about the normative culture of substance use/abuse. For example, if a resident officer talks carelessly about how most student abuse substances that may transmit false perceptions that substance use/abuse is a norm for students. This may lead to other students starting to use/abuse substances. Thus, it is essential for any program that addresses misperceptions to target students who serve as role models, just as it is for that program to target problem-prone groups. Lecturers work hard to be positive role models for the students.

However, students view their peers and celebrities as their role models and those people may model unacceptable behaviours which may include substance use/abuse. The students thus follow what their 'role models' are doing. It is therefore important to make students aware that not everything that is modelled to them is good so that they develop ways to stay away from substance use/abuse. It is also the business of lecturers to model good behaviour for the students. Lecturers and support staff can display drug-free habits, and help the students learn the importance of a healthy lifestyle. Students should also be encouraged to participate in youth programmes that will assist them avoid substance use/abuse.

❖ **Orientation Programmes**

Orientation programmes refers to a plan instituted for incoming students to ease the transition into college (SAMHSA, 2014). In this study it is a period before the commencement of an academic year at a tertiary institution, namely, LCN. Various events are held to familiarize and welcome the students during this period. Since approximately a part of the student body changes every year at all campuses, correcting perceived norms on campus might appear to be easier than doing so in a more stable community with embedded views. New students, however, do not come to campus with accurate views.

Some arrive with images that match the immediate campus misconception: labels of partying lifestyle and drunken students gathered from films and popular beliefs. Other newcomers may have no strong impression upon arrival. The former group may seek authorization of their typecast from other students.

For the latter group, socialization into campus life begins quickly, these students look immediately to older peers to communicate expectations about social life. So, the viewed norms are passed along quickly to new students early in their college career. Therefore, programmes to address misconceptions may be crucial for new students, especially during their first few weeks on campus, a period when misconceptions are rapidly taking shape.

The program is designed to support students as they begin their academic journey and introduced to life at the college from academic issues, community norms, resources and support services. Students at LCN are exposed to a two-week orientation where students are orientated to the Rules and Regulations of LCN. The LCN disciplinary code for students, the academic programme, lease agreement, financial management which is usually presented by people from financial institutions, and strategies for studying. The students usually comply with the College Rules and Regulations at the beginning of the training program and are also well behaved.

However, as time goes on the behaviour of student's changes and some overlook what is stipulated in the College Rules and Regulations whereby they misbehave and even begin to use/abuse substances. The orientation should be done as on-going basis, particularly focusing on good behaviour as a preventive measure.

❖ **Intrinsic Motivation to Achieve (Academically)**

Intrinsic motivation to achieve can affect the student positively or negatively. At the beginning of training each student has desire to be successful.

As a result, he/she will increase all his/her energy and efforts in order to achieve academically. This is the behaviour that is driven by internal rewards because the behaviour arises from within the individual (Tokan, 2016). Students with positive intrinsic motivation may show positive concepts, better academic results, and higher level of satisfaction.

According to Smolarchuk (2015) a student with intrinsic motivation strives towards achieving a goal for personal accomplishment. Intrinsic motivation influences the following: interests and inspirations to learn, increased attendance in class and clinical facilities, readiness to examinations, internet searches which result to high academic achievement as well as. Intrinsic motivation is the driving force that arises from the students in the form of desire, aspiration and ability to become a professional nurse (Tokan, 2016). It is the encouragement that comes from the individual that stimulates and regulates his/her actions and performance. The above stated statements can encourage students to delay initiation to substance use/abuse or responsible use.

However, due to different challenges, students do not accomplish simultaneously and those who do not achieve are left unfulfilled and frustrated. Due to this unfulfilled need to succeed students may resort to substance use/abuse in order to get comfort and to ease the disappointment. Therefore, students should be counselled with regard to study strategies. Remedial teaching should be done where necessary so that they achieve or perform well academically thus not end up using substances. Continuous counselling and support should be done to those students in need.

In case of student nurses, family support, lecturer’s competence, environment and social communication can influence academic achievement. Where college counsellors design and deliver tactical interventions that are aimed at increasing students’ academic achievement, the probability that they will produce the result is considerable (Sharma, Manika & Khatoon, 2011). Bryan (2005) attested that college counsellors can assist with students’ level of academic achievement by collaborating with local universities, schools and extracurricular enhancement partnership programmes to engage students in academic support via peer tutoring. Partnership programmes that enhance academic achievement incorporate high expectations regarding student performance as well as students’ sense of self-esteem and self-efficacy. Education appears to be an effective measure of preventing substance use/abuse (Bryan, 2005).

5.2.7.3 Consequences of “Prevention”

The effects of alcohol cause health effects also, so prevention will also cater for health benefits-healthy lifestyles (reduction of harm-physical, social, psychological). Consequences are those events or incidents that can occur as a result of the occurrence of a concept and that can often stimulate new ideas or avenues for research pertaining to certain concepts, generally called “outcomes of the concept” end result (Walker & Avant, 2013). Both antecedents and consequences help enrich an understanding of the context in which the concept is generally used, thus helping to refine critical attributes (Walker & Avant, 2013).

When linked to practice one should consider the consequences/outcome of “prevention”.

In this study consequences of prevention of substance use/abuse by student nurses are as follows: Management of the condition/situation, when applied in this situation it will mean:

- ❄ Student nurses will be encouraged, which will result in improved academic performance and pass in record time.
- ❄ Student nurses will be accountable and experience financial stability.
- ❄ Reduction in absenteeism and dropping out from the program.
- ❄ Students will be able provide total quality care.
- ❄ Student nurses will tend to be responsible professional nurses who are well behaved focused in the workplace.
- ❄ Student nurses will be more likely to advance their careers and keep their jobs.
- ❄ Other benefits will include lower misconduct rate as well as motor vehicle accident rates.
- ❄ Improved self-esteem, better interaction and reduced physical pain may be results of prevention of substance use by student nurses in LCN.
- ❄ Student nurses might delay to be initiated to substance use/abuse hence the patients will be safe from medico legal hazard.
- ❄ Student nurses will abstain from substance use/abuse.
- ❄ Students will be able to meet 80% attendance in both theory and practical.

5.2.7.4 Definition of Empirical Referents

The final step of Walker & Avant's method of concept analysis is empirical references. Empirical references present how the concept is to be measured. It is the event that demonstrates the existence of the concept. The concept "prevention" has been used throughout the study since the study focus is on prevention of substance use/abuse by students in LCN. For example, the concept was used during the in-depth interview, in the focus group discussions where the need for prevention was repeated by participants repeatedly. Determining is the final step in concept analysis.

Empirical referents are classes or categories of actual variables that, by their existence, demonstrate the presence of the concept "prevention". Empirical referents are significant in clarifying abstract concepts and their critical attributes. Most prevention policies related to substance use/abuse focus on tobacco and alcohol use. The following international and national policies guide the development of a model to prevent substance use/abuse:

❖ **The Prevention and Treatment of Alcohol Abuse Act (Act No. 70 of 2008)**

This policy provides norms and standards for alcohol abuse prevention. The South African government has introduced legislation to deal with alcohol abuse to reduce its harm, demand and supply through the NDMP the Prevention and Treatment of Drug Dependency Act (Act No. 20 of 1992), as amended, as well as the Prevention of and Treatment for Alcohol Abuse Act (Act No. 70 of 2008).

❖ **Prevention of and Treatment for Substance use/abuse Act (No. 70 of 2008)**

The purpose of the above Act is to afford an integrative to provide to curb substance use/abuse in South Africa by focusing on mechanisms directed at demand and harm reduction through prevention, early intervention, treatment as well as re-integration programmes.

❖ **Drugs and Drug Trafficking Act (No. 140 of 1992)**

The Act also seeks as its primary goal to address the dilemma of drug use, abuse, and trafficking in South African society. The permitted framework in which it offers, defines it as illegal to use, be in possession of, or to deal in, drugs and production or supply substances related to the drug profession. In certain cases, to production or supply substances related to the drug profession. It also expresses the duty to report certain evidence to the police, and how the police may use its powers to handle drug offences.

❖ **Tobacco Products Control Amendment Act (No. 63 of 2008)**

The (TPCAACT0) forbids the publicity and promotion of tobacco products, the free circulation of tobacco products, the sale of tobacco products, to and by persons under the age of 18 years and allows for an intensification of fines for non-compliance. It also bans the sale of tobacco products in any place where a person under the age of 18 years obtain s education or training. Together with sustained increases in excise taxes, the original Tobacco Products Control Amendment Act No. 12 of 1999 had been credited with declines in adolescent and adult rates.

❖ **Liquor Act, 2003 (No. 59 of 2003)**

The Act controls the manufacturing, distribution and advertising of liquor. It permits for the formation of National Liquor Policy Council, which refers to national norms, standards, and policy for the liquor industry. The Act prohibit the sale of alcohol to individuals under the age of 18 years and prevents alcohol advertising which targets minors. In this case, a person under the age of 16 years is not allowed to be involved in any activity relating to the manufacture or distribution of alcohol, unless the person is undergoing training or learner ship.

❖ **Policy Framework for the Management of Drug Abuse by Learners in Schools and in Public Further Education and Training Institutions**

The above policy intends to support learners who abuse substances, as well as staff and learners who are affected by substance use/abuse and contribute to the effective prevention, management and treatment of substance use/abuse. The policy also states that all South African schools should become tobacco, alcohol and drug free zones. It further states that random drug testing is prohibited, and that drug testing should only be used where there is reasonable suspicion that a child is using drugs. This policy makes provision for preventive education via Life Orientation (DOE, 2002).

❖ **Enhanced Enforcement of Laws Prohibiting Alcohol Sales to Minors (LPSM**

Increasing efforts to monitor sales to minors is an evidence-based approach that limits underage alcohol purchases and drinking. Local law enforcement or alcohol beverage control (ABC) agencies work with retails on regular checks to ensure their compliance with the of underage alcohol sales. Regular compliance checks help to ensure sales are not ongoing to minors at the targeted establishment.

Frequently, retailers are targeted, and letters are sent to warn them of the penalties related to underage sales. This intervention is effective for limiting underage alcohol purchases as cited in in the Community Guides—Alcohol-Excessive Consumption: Enhanced Enforcement of this intervention is effective for limiting underage alcohol purchases and cited in The Community Guide's Alcohol-Excessive Consumption.

The Washington State Institute Public Policy found that Community coalition prevention models may focus on developing new policies, changing social norms and beliefs in the community about substance use/abuse, supporting schools and other organizations in addressing substance use/abuse. Life skill training (LST) is a universal, classroom-based prevention program implemented among middle school students. The programme teaches substance resistance skills along with general social skills. LST booster program can be offered after students enter high school LST has been shown to reduce the prevalence of substance use/abuse as recommended by NIDA (2014).

Empirical referents are linked to the theoretical base of the concept and contribute to both content and construct validity. These would also be categories that emerged from literature (Walker & Avant 2014). In this study, empirical referents refer to the outcomes of critical thinking, which should be specifically contextualized. After identifying antecedents and consequences, the researcher defined empirical referents. Walker & Avant regard defining of empirical referents as the final step in concept analysis.

Empirical referents were defined by Chinn & Kramer (2008) and Walker & Avant (2013) as classes or categories of actual phenomena that by their existence demonstrate the occurrence of the concept itself; furthermore, the empirical referents are the elements that are observable.

In this study the empirical referents have been identified from the prevalence, contributory factors and effects substance use by the student nurses at the LCN. Identification and defining of empirical referents helped the researcher to develop a new model because they have been linked to the theoretical base of the concept. As a result, it contributed to both content and construct validity of the model to prevent substance use by the student nurses at LCN (Walker & Avant 2013). Based on the formulated theoretical definition and the identified empirical indicators of the concept, the following might be the operational definition of the concept “prevention”

In order to prevent substance use/abuse by student nurses at the LCN successfully, one need to observe and identify the basic things that should occur prior the occurrence of the concept, for an example, awareness campaigns by motivational speakers and financial advisors. Revised rules and regulations. Establishment of recreational facilities in all the campuses and effective security systems. Training of peer educators such as SRC members, use of anti-substance use/abuse posters, signs as well as use of reprimand. Consequences for laws and policies were direction and consistency in the prevention of substance use/abuse by the student nurses at LCN. Well trained peer educators will provide accurate substance use/abuse prevention information, identify student nurses who abuse substances and make early referral for counselling.

Finance should provide funds for running the awareness campaigns. “Prevention” is delivered prior to the onset of the disorder, these interventions are intended to reduce the risk of developing a behavioural health problem such as substance use/abuse (SAMHSA,2014).

This is best understood when explained in its totality which includes three levels of prevention: primary, secondary and tertiary. Primary prevention involves preventing the initiation of substance use or delaying the age at which use begins (UNICEF & WHO, 2015). Secondary prevention is intervention aimed at individuals in the early stages of substance use. The goal here is to prevent substance use/abuse from becoming a problem thereby limiting the degree of damage to the student nurses at LCN.

Tertiary prevention aims to end dependence and minimize problems resulting from substance use/abuse. This type of prevention strives to enable the individual to achieve and maintain improved levels of functioning and health. Tertiary prevention is sometimes called rehabilitation or relapse prevention (UNICEF & WHO, 2015). For the purposes of this study, prevention will refer to educational activities, programmes or policies aimed at enabling student nurses to stay healthy and productive and inhabit an environment free from substance use/abuse (primary prevention).

It also refers to the education of student nurses about the effects of substance use/abuse with the intention of preventing their abuse and enabling them to make informed decisions when faced with offers of illegal substances Ekpenyong (2012). In this study prevention is defined as:

“Actions taken by the LCN and the Department of Health to reduce or eliminate substance use/abuse and those social, psychological, or other conditions known to contribute to physical or emotional illnesses. Prevention of substance use/abuse includes establishing circumstances in society that enhance the opportunities for individuals, families and communities to achieve positive fulfilment.

"Anti-Substance use/abuse Programme of Abuse (2011-2016)" Coordinated actions seeking to prevent predictable problems, to protect existing states of substance use/abuse and healthy functioning and to promote desired potentialities on student nurses in their physical, academic and socio-cultural settings over time. Ekpenyong (2012) proposed a preventive intervention classification system based on the population groups to whom prevention intervention is directed and for whom they are most optimal. Prevention is the most effective way of deterring substance use/abuse by student nurses.

5.3 Conclusion

Chapter 5 presented the theoretical and empirical analysis of the concept “prevention”. The concept was analyzed using Walker & Avant (2016) steps of concept analysis. The uses, attributes and characteristics, antecedents, consequences and empirical referents were determined. The practical perspective was based on developing a model to “prevent” substance use/abuse by the student nurse at Limpopo College of Nursing in South Africa. Chapter 6 will discuss the development of model to prevent substance use/abuse by the student nurse at LCN.

CHAPTER 6

MODEL DEVELOPMENT

Theoretical Framework of a Model to Prevent Substance Use/Abuse by Student Nurses at Limpopo College Of Nursing

6.1 Purpose of Model Development

The purpose of this chapter is to describe a model to prevent substance use/abuse by student nurses at Limpopo College of Nursing (LCN) using Dickoff, James & Wiedenbach (1968).

6.2 Elements of Practice Theory

Table 6.1 lists the elements of practice theory.

Table 6.1: The elements of practice theory

Context	In what context is the activity performed?
Agent	Who or what performs the activity?
Process	What is the guiding procedure, technique or protocol of the activity?
Recipients	Who or what is the recipient of the activity?
Dynamics	What is the energy source for the activity?
Terminus/End Points	What is the endpoint of the activity?

6.2.1 The Context

The activity takes place within a context.

In this study, prevention of substance use/abuse by student nurses at LCN may be performed in different contexts, namely: The Department of Health, LCN, Higher Education Act 101 of 1997, and Legislative framework pertaining to substance use/abuse, and LCN policy guidelines as well as lease agreement (Figure 6.1).



Figure 6.1: Context of prevention of substance use/abuse

6.2.2 Agents

The first aspect, Agency; an agent, is described by Dickoff et al. (1968) as a person who performs an activity towards realization of a goal. In this study, the agents are lecturers, student affairs officers, family members, college management and the professional nurses in clinical facilities where students are placed for clinical practice, because they were identified as role models who can identify and guide student nurses with risky behaviours, counsel and support those who are using substances, refer those that are in need and motivate those who are on treatment to prevent substance use/abuse by student nurses at LCN (Figure 6.2).

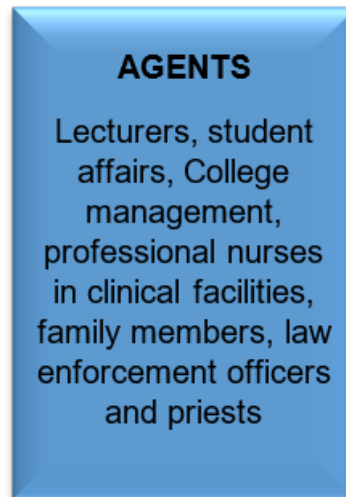


Figure 6.2: Agents of prevention of substance use/abuse

6.2.3 Procedure/Process

The guiding procedure/process of the activity involves three steps, namely: primary, secondary and tertiary level of prevention (Figure 6.3).

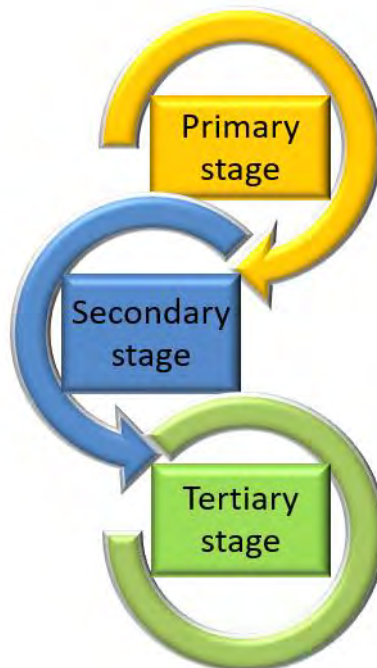


Figure 6.3: The three stages of substance use/abuse prevention

6.2.3.1 The Primary Stage of Prevention

At the primary stage, student nurses at risk and having a potential threat of substance use/abuse would be helped to avoid developing addictive behaviours, which would also curb the prevalence of new cases. The studies by Kane & Ballue (2013) and Ramsoomar (2015) noted that the primary level prevention of substance use/abuse makes efforts to prevent further similar incidence. This is the stage which deals with perceived risk and then intervenes to stop the thread of the substance use/abuse from occurring in its initial instance. The agencies identified in above will be encouraged to reinforce this stage of prevention efforts on newly accepted applicants at-risk.

The student nurses may be encouraged to seek out and/or participate in counselling and informational opportunities that address the consequences of substance use/abuse. In addition to regular awareness campaigns, programmes such as Students Taught Awareness and Resistance (STAR) are operating in the campus, substance users might be encouraged to participate. These programmes are meant to teach student nurses skills that help them avoid high-risk activities.

Nursing college based multi-component programmes that involve students' supports such as peers, would raise the level of effectiveness. The primary stage of prevention also involves appropriate screening of the student nurses. Some studies have recommended the use of Problem Oriented Screening Instrument for Teenagers (POSIT) to screen for substance use and development risk factors in youth (NIDA, 2008). The screening instrument can be administered to youth 12 to 19 years of age. Screening assist with the identification of risk factors, which can be prevented at primary level (Kane & Ballue, 2013).

Due to the potential impact of this level of prevention, it is expedient for its priority to be raised.

6.2.3.2 The Secondary Stage of Prevention

This stage requires the recognition of substance use that leads to poor academic performance of the student nurses and negative consequences to quality of life. This is the stage where new cases can be identified very early and typically before the affected individual notices that there may be a problem (Parry et al., 2010). At this stage, the clinician screens the affected student nurses, seek out appropriate resources. This is where counselling is significant for student nurses using substances. Counsellors should try to prevent addiction and undesired consequences in this stage. This is the phase where early psychological treatment would be recommended for the identified student nurse.

6.2.3.3 The Tertiary Stage of Prevention

This stage aims at medical treatment of students who abuse substances and facilitation of enrollment into treatment facilities to minimize further negative consequences (Da Rocha Silva, 2013). This would be the treatment or rehabilitation stage, which is done to prevent relapse.

6.2.4 Recipients

This aspect relates to those who receive from the activity of an agent (Figure 6.4). In this study the recipients are the student nurses as they are the ones that are targeted by the preventive measures for substance use/abuse through compliance to the set rules and regulations of the college. Student nurses should be law abiding citizens

who follow the prescribed institutional protocols of the college.



Figure 6.4: The recipients of substance use/abuse prevention

6.2.5 Dynamics

Dynamics is described as chemical, physical, biological or psychological power, sources that can drive the activity towards the attainment of a goal. Dickoff, James & Wiedenbach (1968). When the dynamics are, positive there is harmony amongst the people who are interacting whereas when the dynamics are not interacting positively in the workplace, there is disharmony and work-related stress. The dynamics for this study are depicted in Figure 6.5.



Figure 6.5: The dynamics of substance use/abuse prevention

6.2.6 Terminus/Outcome

The outcome/terminus refers to the endpoint or purpose of the activity. The final aspect of Dickoff, James & Wiedenbach (1968). In this study, the activity is prevention of substance use/abuse by student nurses at LCN, and involves teamwork between the lecturers, student nurses, student affairs officers, family members, risk management officers, priest, and the community. This also enhance empowerment of family members, give confidence, revive self-esteem on the student nurses, job satisfaction on the lecturers and the student affairs officers, reduce negative consequences of substance use/abuse on the student nurses.

The expected outcomes are as follows: Non-substance use/abuse premises, low absenteeism, increased academic performance, delayed initiation to substances as well as reduced intake of substances (Figure 6.6).

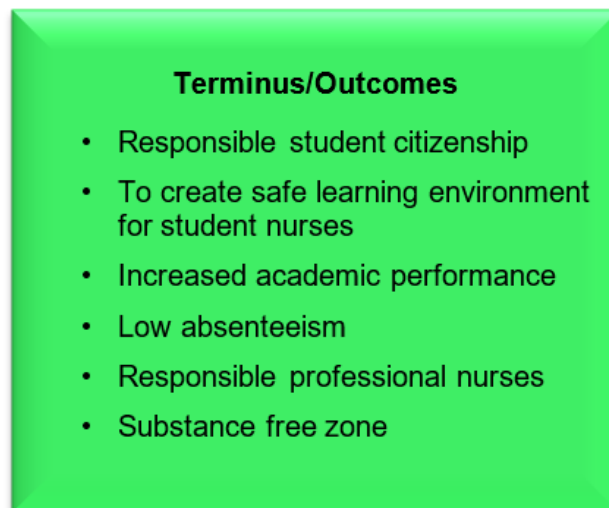


Figure 6.6: The outcomes of substance use/abuse prevention

Minimize unacceptable behaviours and medical risks/errors which can result from a student nurse who may be working under the influence of substances or even take medication which is meant for patients in the clinical areas where they are placed for clinical exposure and competent professional nurses.

6.3 Model Development

The purpose of this model is to prevent substance use/abuse by student nurses at Limpopo College of Nursing, South Africa. Model development is based on the themes identified during concept analysis. The components of the model are as follows:

- ❄ The context in which the activity is taking place;
- ❄ The agents responsible for performing the activity;
- ❄ The procedure to be followed during the “prevention” of substance use/abuse by the student nurses at LCN;
- ❄ The recipients of preventive measures;
- ❄ Dynamics of substance use/abuse prevention; and
- ❄ The terminus/outcomes of prevention.

6.3.1 Structure of a Model

Various contexts constitute the structure of a model to prevention of substance use/abuse by student nurses at LCN.

6.3.1.1 Context

❖ The Socio-Environmental Context

Socio-environmental refers to the immediate physical and social setting in which people live or in which something develops. It includes the culture that the individual was educated, or lives in, the people as well as the institutions with whom they interact (WHO, 2016). In this study, it refers to the five campuses of the LCN and the student's residence as well as the clinical facilities accredited for training of student nurses. The social context in which preventive measures are envisioned and applied is critical for successful prevention. According to Nelson (2016) counsellors should be familiar with patterns of conduct, norms sources of power, and political realities in the environment which they operate. Failure to challenge the social context problems limits the effectiveness of the specific preventative measures.

The exosystem consists of the college and communities where the students are living. This tactic therefore focuses on the root of substance use/abuse in the college, not on the student nurses. This approach provide solution to changing college environment or tightening the availability of substances, not on changing the student nurses. College environment that is loose on the prohibition enforcement of substances should not expect to escape substance use/abuse. This tactic is based on the premise that nursing colleges that lacks the recognition of substance use/abuse will not be able to prevent substance use/abuse. Thus, the study by Pinehas, Mulenga & Amadhila (2017) and Nsimba & Masele (2012) have shown poor social environment as a breeding ground for substance use/abuse.

The aim of this tactic is to ensure that campuses are substance free zones. Effective security system is of a greater importance. This involves arrangements that allows security or accommodation committee members to search student nurse's rooms and at the entrance gate of the residence for substances or to allow strip search of campus lockers when there is adequate suspicion (WHO, 2016). The Office of National Drug Control Policy (ONDCP, 2015) equally recognizes the value of prevention measures in order to curb substance use/abuse by the student nurses at LCN.

❖ **Community Context**

According to the Oxford South African School Dictionary (2010), a community is a group of people living together in the same geographical area, sharing the same interest such as religion, culture etc. community members are characterized by trusting and mutual relationship, group cohesion, sharing of common interests and challenges and mutual supporting in a crisis. This is an important and reliable context within which prevention can be effective. In the community, prevention should ideally focus on reducing student nurses' access to substances, and modifying social norms that promote tolerance in these stuff (Dumbili, 2014; Patestos, Patterson & Fitzsimons, 2014).

In the community context, the family is the first agent to instill moral values among the adolescence to assist them become responsible members of the society. This is based on the traditional society, 'it takes the village to raise a child' that is rearing children is a communal role and not that of the immediate family members. The community and the campuses should work together to help youth acquire acceptable moral values.

This can be done by engaging community leaders as guest speakers to address student nurses in the campuses. Effective teamwork between the community, students and the multidisciplinary collaboration may lead to effective preventive measures. In a study conducted by Volkow (2014) and Romano & Hage (2015), the findings indicated low substance use among intervention communities, is the result of ethical codes of disciplines such as social work, public health, health education as well as nursing.

The importance of prioritizing community level intervention which would have substantial influence in the response determination to tackle substance use/abuse related complications (Miller et al., 2015). Volkow (2014) also mentioned that the community has been identified as an important purview in substance use/abuse prevention package. The study further outlined that availability of substances nearby schools were a risk factor therefore, recommended community awareness on anti-substance policy as an imperative therapy.

It is important to consider a comprehensive intervention that also involve community engagements. Possible partners needed for coordination, integration and forming a committee should be identified in order to form a committee. Outlets near the campus should be regulated, so that they only sell what they are licensed for. The media such as radio slots may also play a significant role in discouraging and limiting the use of substances.

Communication advocacy for raising awareness should be supported because it is essential to improve effective collaboration. Collaboration refer to a group of individuals representing various institutions which agree to work together to achieve a common goal (Ebersohn et al 2015). Describing the negative consequences versus positive impact of substance use through the media may be an effective preventive measure. Finally, evidence-based findings from the research should be presented in the campuses. Prevention experts should understand the cultural context of the community and have the skills and willingness to work within the context to produce effective preventive measures. According to Ebersohn et al (2015) culture should be considers when developing a model or a program to prevent substance use/abuse.

❖ **Clinical Context**

Students spend time in the clinical settings caring for patients. At times students find the clinical setting overwhelming and thus stressful. This is an area which can contribute to the use/abuse of substances by students at LCN. The clinical setting can be a tempting environment to students who are vulnerable, since they are exposed to medication which may lead them to feel high and additive.

The clinical context should be conducive for learning for students and thus prevent the use/abuse of substances. Students should work under supervision from professional nurses, who will be able to observe the vulnerability of students and intervene accordingly or even refer them for counselling if need arises. Furthermore, it is important that the other nurses in the clinical setting, model good practices, so that students do not mimic bad behaviour of self-medication which in turn can lead to addiction and substance use/abuse by student nurses.

6.3.1.2 Agents

Several agents are involved in performing the activity. The LCN appear to have a problem regarding substance use/abuse which they cannot resolve alone. The reason is the college cannot play the roles of the parents, law-enforcement, priests or the psychologist to mention a few. The current study revealed that most lecturers who counsel students in need, feel ill-equipped to address substance use/abuse issues due to lack of training. Additionally, lecturers allocated for counselling students complained of work overload, they also indicated that they cannot perform the work effectively. In the light of this problem, intensive training for all those involved in counselling student nurses to offer them self-confidence in service delivery. Apart from training, all stakeholders should co-operate with lecturers in the prevention of substance use/abuse by student nurses at LCN.

❖ Lecturers

Lecturers were identified as significant agents in the prevention of substance use/abuse by students at LCN as people who interact with the students on daily basis when at the college. The interaction was seen as an opportunity to observe behaviours which suggest use/abuse of substances. This role is important in early detection of substance use/abuse by students and thus early intervention can be implemented to avoid consequences.

Furthermore, lecturers as custodians of the policies and Rules and Regulations that deal with substance use at the College are in a better position to orientate students on them.

Lecturers are the first people who can intervene through counselling and support of students who may be at risk of using substances so that they do not succumb to whatever pressures which may lead to initiation to substance use.

Lecturers also have a pivotal role to play even when a student has been identified to be using substances to reverse the action by counselling the student and where necessary refer such a student to other multidisciplinary team members. Lecturers are at the centre of prevention of substance use/abuse by students as they have contact with all the agents like family of the students and other professionals, thus are the ones who can activate the action of prevention and remain as a contact point. They have a vital role of monitoring the progress of students who might be undergoing prevention at any level to ensure that it is successful.

Lecturers also have a task to provide affective education. Affective education involves implementation of activities that help to improve self-esteem, inter-personal growth and an informed decision making for a specific target group. The approach relies on introducing increased activities which could help to improve self-confidence rather than factual information on alcohol and substance use and its associated consequences. The approach further considers teaming and research as a strategy of involving groups to take away from a specific behaviour which they were engaged in.

❖ **Professional Nurses in the Clinical Health Facilities**

Student nurses spent time at both the college and the clinical facilities where they are allocated for clinical practice under the supervision of professional nurses.

The professional nurses in the clinical facilities were identified as important agents in prevention of substance use/abuse by students at LCN due to the on-going interaction they have. They are in a strategic position, to identify students who might be having problems. Early identification can assist with early intervention, thus prevent students from using/abusing substances (Tuwei, 2014).

The professional nurses are also able to act as counsellors to students are having problems in the clinical setting. They should also report and reprimand student nurses for unacceptable behaviours such as unauthorized absenteeism. The professional nurses serve as a link between the students and the lecturers at LCN, thus may be able to inform the lecturers of any untoward behaviour noticed from a student so that intervention strategies can be implemented.

The on-going communication between lecturers of LCN and the professional nurses should therefore be nurtured for the benefit of students. Furthermore, students who are identified at the college as troubled can be referred to the professional nurses for continuity of care when allocated in the clinical facilities. They are also acknowledged as positive role model on the student nurses and are also authorized (mandated) by the college to discipline students in case of misbehaviour.

❖ **Family Members**

The family is the first institution that a child is exposed to, and that is where primary socialization takes place. The family is responsible for instilling acceptable and unacceptable behaviour on the student at a younger age.

Families are the first models of behaviour that the students come into contact with, thus have to model a behaviour that shuns the use of substances, so that the student learns from home that the behaviour is not acceptable. The interaction between family members assist in building self-worth, positive image and confidence in their members which are important characters when one should decide whether to engage or not in the use of substances. The family is the support system throughout the life of a person.

This support is more important to the students at the college who might be overwhelmed by the workload that they have to deal with. The support from the family is important in the prevention of substance use/abuse at the different levels of prevention. At primary level the parents/family can support the student in his/her study through constant reassuring him/her about their capabilities to achieve so that the student believes in him/herself thus boosting his/her self-worth. The family is the first point of contact for lecturers when problems which can lead to substance use/abuse are identified in a student.

The family is expected to come through for the student and assist resolving the problem. The model therefore recognized the importance of empowering the family so that it can be able to fulfil this role. The importance of an on-going interaction between the college lecturers and the family thus came to light during this model development and a need to strengthen this relationship. It has been revealed that most family members have limited time to spend with their children because they stay far away from the campuses.

In addition, the research findings also displayed that some parents are not supportive when lecturers are disciplining students. Parent-child relationship and monitoring of behaviour are positively related with decreased substance use/abuse by the students (Changalwa, Ndurumo & Barass, 2012). It is therefore the responsibility of parents to work with the college in the prevention of substance use/abuse by student nurses. At the secondary level of prevention of substance use/abuse by students at LCN, the family together with other agents work together to reverse the use of substances by the student.

They again re-educate the student, counsel him/her and boost his/her confidence so that the student can see him/herself as being more worth than the substances which are destructive to his life goals. The family is the one that reminds the student the goals that he/she has set for him/herself and encourages him to focus on achieving the goals. They have a role to support him as he undergoes the treatment course. At the tertiary level of prevention, the family again walks next to the user holding his hand all the steps of the road to recovery because they are always caring. During the model development it was clear that the family is the corner stone of prevention of substance use/abuse by students at LCN and without them very little can be achieved.

Parents, guardians and other close family members have significant influence in providing social identity, role definition and support. Family members should be involved in preventive efforts; they have a crucial part to play in preventing substance use/abuse by student nurses through their role as parents or guardians. It has been observed in this study that most students have limited time to spend with their visitors, especially family members.

This is due to the reason that in other campuses there are no visitor's lounge where they can stay and discuss family issues in the campus. It was also revealed that some family members are not good role models for their children, this makes them not to be supportive enough when lecturers disciplines students.

Strong parent relationship and parental monitoring of children's behaviour are positively related decreased substance use/abuse by the students (NIDA, 2016). The researcher suggests that involving family members in addressing substance use/abuse dilemma affecting their children. Parents/guardians can support the college by re-enforcing, clarifying and explaining positive values to their children, acceptable behaviour should be modelled, effective communication with their children, developing self-confidence and problem-solving skills by providing appropriate support and fostering a democratic environment in the family so that children feel free to express themselves and their problems.

It is essential for family members to acquire accurate knowledge on various substances and their effects so that they can share the information with their children. Additionally, for students who are identified to be using/abusing substances intensive counselling is important. Prevention measures in the college may include family members by organizing meetings and counselling sessions on issues related to interpersonal skills. Family counselling can also help to improve and strengthen family bonds and thus decrease the risk of substance use/abuse.

❖ Peers

The study results have shown that friends and family can be contributory factors to student nurse's substance use/abuse as observed by (Testafaye, 2017). Therefore, to prevent substance use/abuse by student nurses one has to work very closely with these people who have immediate contact with the student nurse. Prevention should focus on teaching parents the dangers of using substances in front of their children, as this may end up being a motivating factor for student nurse's substance use/abuse. This should be done through awareness campaigns.

Peer influence was also identified as the main domain for substance use/abuse and it recommended competitive academic performance as protective factor. For peers to participate in prevention measures training is more important (Lee, Brook, Finch & Brook, 2016; Okpataku (2015). Using executive members of the student's representative council in the prevention of substance use/abuse may be more effective as they say peer group teaching is the best.

Arrangements like Peer-to-peer education can be employed to provide information as a target to achieve rational and logical decision of not using or reducing the use of substances. The programme can be delivered through guest speakers, regularly scheduled classroom curricula education and film show that could apply fear-arousal techniques concerning alcohol and substance use negative outcomes. This also increase knowledge and confidence amongst students so that they are less likely to engage in substance use/abuse (Reddy et al. 2015). This can be done through encouraging students to participate in youth training programmes during orientation of level one (1st year) nursing students.

Study methods should also be introduced to prevent work overload which may also leads to substance use/abuse.

❖ **Psychologists**

The psychologists were identified in this model as important agents in the prevention of substance use/abuse as they are the ones to whom students are referred to, when a need arise. The psychologists have an in-depth knowledge on how to assist people to resolve their problems. The psychologists are the ones who counsel the students who might have been identified as having some problems. The interaction of the referred students with the psychologist can assist at the primary level to empower students to deal positively with their problem so that they do not tend to use/abuse substances. Students, who might be referred to psychologists at the secondary level, may also benefit in the sense that the counselling may assist to discontinue/reduce the use of substances (NIDA, 2015). At tertiary level, the students may be assisted to deal with the abuse and to reverse the consequences of abusing substances.

❖ **Religious Leaders/Priests**

The priests were also recognized in this model as important agents in the prevention of substance use/abuse because they are the ones to whom students are referred to, when a need arise. Throughout interviews few student nurses specified that they have spiritual problems. They further stated that they think for them to be free from substance use/abuse they need a priest. The interaction of the referred students with the priests can assist at the primary level to empower students to deal positively with their problems so that they do not tend to use/abuse substances.

During the model development, the fact that man is a spiritual being, brought to light the vital role of the priest/pastors in prevention of substance use/abuse by students at LCN. The need of a person to connect to God is very important, and failure to do so can bring about an internal conflict which can also lead to identity crisis. The internal conflict when the spiritual needs are not met can contribute to the use/abuse of substances by student nurses at LCN. The priest is one of the agents that have an important role to play in this model in the prevention of substance use/abuse.

The priest takes care of the spiritual needs of the person. The priests were therefore identified in this model as people who can work hand in hand with the college to assist students not to be initiated to substance use. The priests can also be used as spiritual counsellors for students identified as needing such a service. It is therefore important for the college to start forming partnerships or strengthen existing partnerships with priests of various churches that can assist in prevention of substance use/abuse by students at LCN.

The priests can on regular basis, have services with students to keep them connected to God and students can also be referred to them. The priests should embrace student nurses including those who are using/abusing substances and respond to their problems in a caring, loving and supportive manner. Even though some priests may not be trained to deal with counselling of students who use/abuse substances, they can be most effective and act as referral agents (Nelson, 2016).

The priests should also train and equipped counselling skills in dealing with substance use/abuse related problems. They can establish anti-substance use/abuse programmes and make a situation of hope among students at risk. The main purpose for the programmes should be to encourage students to develop enhanced problem-solving skills, communication, goal setting as well as decision-making. Gebremichael (2015) stated that the priest should emphasize on spiritual issues and promote chances of thoughtful self-reflection on the students.

❖ **Social Workers**

The social workers were recognized in this model as an important agent in the prevention of substance use/abuse as they are the ones to whom students are referred to, when a need arise. Some students alleged that they are using/abusing substances because they are failing to cope with social problems. Some indicated that they are coming from child-headed household and they are expected to take care of their siblings at home which is stressful to them, which lead them to using/abusing substances.

Social workers can be able to counsel, empower students with skills to cope with their problems including financial management skills. The social also link students with institutions that can assist them e.g. social grants, food parcels for their siblings. The interaction between referred students and social can assist in the prevention of substance use/abuse in LCN.

❖ Risk Management and Policing (Security) Officers

The risk management and policing officers are the ones who control the main entrance as to what gets into the college premises. The policing officers have a duty to search the students so as to ensure that students do not bring in substances into the college campuses. They are the people who can identify the students who are not adhering to the lease agreement and/or college rules and regulations of not bringing in substances to the college premises and report to the campus management so that early intervention measures can be instituted. They also ensure that student nurses adhere to the prescribed of coming back to residence before 22 hours.

6.3.1.3 Process

The following process was suggested to serve as a guide for prevention of substance use/abuse by student nurses at LCN.

❖ Meetings

During the discussions with lecturers and management, a need for meetings with the identified stakeholders was important. Stakeholders constitute a very important infrastructure, to be consulted during prevention of substance use/abuse at LCN. Relevant stakeholders involve the Department of Health, education institutions, students, health care professionals, priests, families and community members (NIDA, 2016).

The study findings confirmed that active participation and involvement of relevant stakeholders can be an important strategy in the prevention of substance use/abuse at LCN.

Involvement of family members was identified as important strategy for successful prevention of substance use/abuse at LCN, as evident in the following quotes:

“...At times we miss our families and wish they were around to help us solve some of problems that we are facing as students...”

The family speaks with a ‘voice’ which student identifies as an authority; thus their involvement can assist students not to initiate substance use (Selemogwe, Mphele & Manyanda, 2014). Therefore, family involvement cannot be overemphasized in prevention of substance use/abuse at LCN. The management of LCN should be made aware of the problem so that they engage in meetings with other stakeholders to discuss effective preventive strategies for substance use/abuse by students.

The role of community members in ensuring that young people are groomed to be responsible citizens should be emphasized in these meetings so that model positive behaviours to the young people.

❖ Training

Training, of family members, youth and community was recognized as an important tool in the prevention of substance use/abuse at LCN. The training should focus on giving parents, youth and the community at large information on situations that can contribute to substance use/abuse, signs and symptoms of a person who is using substances and how to assist such a person.

The aim of this training is to equip them with knowledge that will help to curb the usage of substances at an early age through changing their own behaviours that can influence usage, since it was evident during interviews that most students were initiated while still at high school. The study revealed that most of the participants, though they were seen abusing substances at the college, they started using substances when sent by their parents to buy as attested by Okpataku (2015).

❖ Review Policies and Controlling

The LCN does have policies which do not allow students to use substances within the college premises. However, these policies need to be reviewed from time to time to ensure that they remain relevant and effective in prevention of substance use/abuse by students at LCN. The review of these policies should be done with the participation of student representative bodies, so that students can perceive the policies as their own. Furthermore, the policies should be part of the orientation that students receive during registration at first year (Osuafor, Maputle & Ayiga, 2016).

It is also important that the policies are communicated to students on an on-going basis throughout their training for them to be effective. It is suggested that an inclusive and identical policy for controlling students who use/abuse substances be put on place as a preventive measure. The researcher further suggested that vice-principals of the campuses at the LCN should actively involve students in the process of formulation of college rules and regulations, so as to enhance student nurses' discipline as stated by Maingi, D, Maithya, R., Mulwa, D & Migosi J. (2017). This policy review would be a vital influence of a model to prevent substance use/abuse by student nurses at LCN.

❖ Monitoring and Evaluation

This is an important part of the model on prevention of substance use/abuse by students at LCN. No matter how good the model could be, but if not put in to practice the envisaged outcomes may not materialize. It is therefore significant that on an ongoing basis the implementation of the model be monitored as well as whether it is being correctly applied. Monitoring and evaluation is an ongoing effort of tracing the prevention status of the model to ensure that implementation was continuing as intended. Numerous divisions may be involved in monitoring and evaluation to ensure that substance use/abuse preventive measures were properly employed (Gebremichael, 2016).

6.3.1.4 Recipients

Student nurses are the recipients of prevention from the lecturers, psychologists, priests, nurses in the clinical health facilities, family members as well as the social workers. The lecturers and professional nurses need to play the role of parents to students. In the parental role they have to guide and at times reprimand the students when they are misbehaving. The participants in the study, indicated that at times the relationship with the lecturers and the professional nurses in the clinical facilities contribute to their stress levels which in turn lead them to using substances. The relationship between students with lecturers and professional nurses in clinical facilities need to be developed, so that students do not distance themselves from them instead look up to them for assistance and guidance.

The psychologist, social workers and priests' role is mostly on counselling and assisting the students to deal with whatever problems which they may be facing, and also help to them with necessary life skills. On the other hand, the family and the communities where students come from or in which they may be temporarily staying have a role to mould the students in a positive manner, which will help them to be responsible citizens. It is essential for these all these agents to work together in the prevention of substance use/abuse by students at LCN. Student nurses revealed that they were using substances due to boredom, academic stress, peer pressure, experimentation, lack of confidence, affordability as well as accessibility of substances.

Student nurses are considered as individuals so as to follow Bronfenbrenner's ecological model of prevention. At the individual level, literature proposes several tactics for dealing with substance use/abuse. Brook (2012), Harker (2008) and Thwala (2005) observed that effective tactics at this level target the student directly. Harker also suggest that preventing substance use/abuse by student nurses should attempt to engage their minds to avoid boredom by activities such as sports and recreation. Brook (2012) recommended that prevention program should improve social skills such as low self-esteem, peer pressure and poor coping strategies among others. Student nurses need to be trained on how to resist peer pressure because it is the greatest contributory factor of substance use/abuse (Maithya, Okinda & Mung'atu, 2015).

To those student nurses who are already affected, harm reduction should be the main focus. Student nurses will be taught how to resist social influences to smoke cigarettes, drink alcohol, or use drugs.

These resistance or peer refusal skills will be taught within the context of a broader program designed to enhance general personal and social skills. The focus will be on knowledge and skills needed by youth to cope with the developmental influences during adolescence, including such issues as problem solving, decision-making, self-awareness, effective communication, assertiveness, and stress reduction.

Significant prevention of effects of cigarette smoking, marijuana use, and alcohol use will also be considered. Prevention effects are supposed to be normative expectations and information concerning substance use, interpersonal skills, and communication skills. The conceptualization and structure of the program relied on the prevention research literature, and also on information gathered through focus groups with the student nurses in LCN. This study used the following literature-based approaches: enhancing self-esteem, teaching a structured way for making good decisions, learning and practicing skills to resist peer pressure; and making a personal commitment to not use substances. In other words, it utilized a life skills approach.

Staff guidance, local events and awareness campaigns can generate community support for prevention projects Mceachran (2013). College management and lecturers should identify the risk factors within the area and cooperatively look for ways of reducing these factors. The risk factors may include lack of recreational facilities, poor communication channels and poor student lecturer relationships. Risk factors beyond the lecturers' such as poor background and lack of basic needs should be referred to relevant stakeholders such as family members, social workers and psychologists who will help students need. Lecturers need to offer individualized counselling to students at risk of substance use/abuse.

6.3.1.5 Dynamics

Consideration of several dynamics and power basis is important for the model of prevention of substance use/abuse by student nurses at LCN.

❖ **Counselling**

Counselling refers to giving a professional help and advice to someone to resolve personal or psychological problems (Blount, 2012; Bryan, 2005). In this study counselling refers to the tactic that is suggested to help reduce substance use/abuse by the student nurses at LCN. A Counselling office should be established in each campus under the LCN. This tactic recommends for counselling of accepted applicants with the threat or potentials of substance use/abuse (Tuwei, 2014). This initiative is to also tackle first hand threat of substance use/abuse by the student nurses. It relies on early identification and isolation of people who abuse substances before they can pollute others. College counsellors play an important role in assisting ensures that student nurses stay on the right track.

LCN does not have professional counsellors, but lecturers in Social Sciences, Psychiatric Nursing Sciences and Community Nursing Sciences are playing the role of counsellors to students in need. Many students depend on their counsellors to provide positive direction. According to Jai, Das, Rehana & Salam (2016); one of the major problems that need counselling for students is substance use/abuse. It is vital that counsellors are able to identify possible substance use/abuse. Academically, a counsellor can detect issues relating to drug or alcohol use if there is a drop in grades, overall performance and participation in academics. The tactic incorporates charts and leaflets that tell counsellors how to identify substance-using/abusing student nurses.

Counselling should be done continuously to the students who are at risk.

Taking note of unusual or excessive absences without proper explanations, aggression as well as violence can indicate that the student is involved in substance use/abuse. (Morutwa, 2014; Maithya & Marais, 2015; Hlomani, 2016). Counsellors from different disciplines are ensuring the smooth running of the college, this is evidenced by the following statement: 'It is vital that college counsellors make themselves dynamic part of the efforts to help students at risk for substance use/abuse'. Information relating to substance use/abuse by a student should be treated as confidential. In case of disclosure, lecturers and students should be given support to handle confidentiality issues (Agadoni 2014).

❖ **Awareness Campaigns**

Awareness campaign is defined as a sustained effort to educate individuals and boost public awareness about the issues (Letamo, Bowelo, & Majelantle, 2016). In this study, it means dissemination of information on prevention of substance use by the student nurses at LCN. The focus is on education, support and collaboration among the lecturers, school health nurses as well as professional nurses in clinical facilities.

Collaboration also recognizes that substance use/abuse is based on results such as academic success and crime prevention. This tactic despite been built on the evidence of the study findings also corroborated the studies by Kane & Ballue (2013) and Testafaye (2014) on the assumption that substance use/abuse results from poor choices made due to lack of knowledge, ignorance of the dangers and effects of substances.

It is expected that awareness campaign among the student nurses will assist them in making the right decisions and prevent substance use/abuse. It is the hope of this approach that the campaign would involve the student nurses have the potential to reduce and intervene on the prevalence of substance use/abuse, which result from peer pressure and other forms of socialization. Student nurses should also be empowered to run the campaigns.

According to Letamo, Bowelo and Majelantle (2016) awareness campaigns influence community norms as well as increase public awareness about specific issues and problems related to substance use/abuse, attract community support for other program efforts, reinforce other programme components, and keep the public informed about program progress. Awareness campaigns include: public education, social marketing campaigns that apply marketing principles to the design and implementation of communication campaigns, media approaches that encourage various media outlets to change the way they portray substance use issues in order to ultimately influence policy changes; and media literacy programmes that educate people to be critical of what they see and read in the media.

Collaboration of school health nurses with local mobile clinics during awareness campaigns, may produce positive results in prevention of substance use/abuse. Awareness campaigns should also involve the society that is being served by the college. An example of a programme which can be done by both the college and the community is to have a combined awareness campaign where they will counter the sale of substances around the campuses as suggested by Karam, Kypril & Salamoun (2007).

The society should also strengthen reduction of supply activities. At the level of society, prevention should ideally focus on reducing students' access to substances, and modifying societal norms that promote tolerance to these substances.

Regardless of the prevalence of substance use/abuse in LCNs, there have not been enough campaigns aimed at reducing substance use/abuse and the related consequences. The researcher strongly recommends that the LCN come up with a programme of substance use/abuse prevention which will be run repeatedly throughout training from Level I to Level IV. This form of education must include presentations by the student nurses where they do role plays on the effects of substance use/abuse as well as the advantages of not using substances.

Student nurses may be tired of being told by professionals about what they must and must not do. Therefore, it would be best if student nurses are fully participative in trying to fight against the abuse of substances themselves. Deliberating with student nurses and get ideas on what should be done to prevent substance use/abuse can also be a very influential initiative. Positive reinforcement of student nurses who have been using substances through awareness campaigns, counselling and rewarding for good behaviour can also be effective.

❖ **Recreation**

Recreation refers to an activity done for enjoyment when one is not working or refreshment of the mind, body and spirit through play and relaxation (Stevanovic, Atilola & Balhara, 2015) this tactic is anticipated to work hand in hand with the college social recreational facilities and functions.

It was generally shared that in situations of academic stress, students may look for a way out whether the consequence has short or long or long time as confirmed by Tuwei (2014).

The LCN have limited recreational facilities; some campuses do not have at all. This approach is anticipated to work hand in hand with the college social recreational facilities and functions. Substances among the student nurses are mostly used as a means of coping with the academic stresses/frustrations and problems (Scott-Sheldon, Carey & Elliott, 2014). Some students use substances in order to relax as stated by (Chie, Tam, Bonn, Wong et al., 2015).

Prevention, therefore, needs to provide social recreational opportunities to deal with the encounter frustrations. Activities such as adventure and self-expression are also good alternatives to using substances based on this tactic (Duncan & Gold, 1982, cited by Substance Use Best Practice Tool Guide, 2016). Where possible, it is important to try to prevent substance use/abuse by creating healthy and attractive alternatives which combine and inspire individual life skills development and positive sporting attitudes. Recreation facilities such as play grounds should be maintained where they are available and established where possible (Simatwa et al., 2014).

The measures for preventing substance use might include sporting activities such as soccer and netball, peer competitions such as debates, crisis hotlines, singing and dancing competitions and many more of that likes. This tactic may be effective in prevention of substance use/abuse by the student nurses at LCN.

6.3.1.6 Terminus or Outcomes of Prevention

There are several factors related to end of the process of prevention. The model for prevention of substance use/abuse will yield the following outcomes:

❖ **Teamwork**

Teamwork was identified as a consequence of prevention, because it is evident that currently at LCN there is none between the lecturers, student nurses, student affairs officers, family members, police officers, priest, and the community hence there are incidences of substance use/abuse. This also will enhance multidisciplinary collaboration which may be effective in the prevention of substances.

❖ **Empowerment of Family Members**

Empowerment of family members was identified as a consequence of prevention substance use/abuse during interviews where it was stated that if family bonds are strong between parents and their children it gives confidence and revives self-esteem on the student nurses.

❖ **Improved Job Satisfaction Among Lecturers**

Improved job satisfaction was identified as a consequence of prevention substance use/abuse during concept analysis (Walker & Avant, 2013), during data analysis and as a terminus or endpoint in the six aspects of activity by Dickoff et al. (1968). Job satisfaction on the lecturers and the professional nurses at the clinical setting because when students are free from substances will be safe and responsible practitioners.

❖ **Low Absenteeism**

Low absenteeism was identified as a consequence of prevention substance use/abuse. The study revealed that there is high absenteeism rate by students who uses/abuse substances both in class and the clinical settings. The model of prevention will assist in lowering the absenteeism rate of students and thus improve the quality of care given to patients.

❖ **Increased Academic Performance**

Increased academic performance was recognized as a consequence of prevention substance use/abuse. The increased academic performance has a direct link to low absenteeism and reduced substance use/abuse. When students are not using substances, they will be focused and committed to their academic work and have more time to study. This will assist to improve their academic performance both theoretically and clinically. A student who is more focus is able to correlate theory in to practice and thus can be a safe and competent practitioner.

❖ **Delayed Initiation to Substances/Reduced Intake of Substances**

Delayed initiation to substances/reduced intake of substances was identified because of prevention substance use/abuse. The model for prevention of substance use/abuse will reduce the number of students using substances, through the enforcing of the policies aimed at preventing substance use at the college. This will help to reduce the number of student nurses who are initiated to substance use/abuse at LCN. An effective model may also result to non-substance use/abuse premises was identified as a consequence of prevention substance use/abuse.

❖ **Responsible Professional Nurses Who Are Not Using/Abusing Substances**

The students are trained to become competent professional nurses. With reduction of use/abuse of substances at LCN, the future professional nurses will be free from substances but be responsible nurses who can render total quality care for the patients. Therefore, they will have job satisfaction.

6.3.2 Assumption of a Model

Assumptions are testimonials or opinions that are extensively acknowledged and dominants of a model (Chin & Kramer, 2008; George, 2011). In this study the assumptions which the model was based on are the following:

- ❖ This model assumes that the various agents as well as the recipients have an important role in the prevention of substance use/abuse.
- ❖ The Department of Health, the LCN can contribute significantly to the prevention of substance use/abuse through policy framework.
- ❖ This study further assumes that the family and plays a substantial role in primary prevention of substance use/abuse by student nurses in LCN.
- ❖ The model also assumes that prevention of substance use/abuse by students at LCN can result in responsible future professional nurses with less medico-legal hazards and total quality patient care.

6.3.3 Relational Statements

Relational statements refer to an explanation, description, or prediction for the nature of interaction between the concepts of a model. Additionally, they clarify how concepts are linked together and how they give structures to the model (Walker & Avant, 2013). The relationship statements in this model are based on the theoretical definitions already discussed in concept analysis:

- ❖ The lecturers, professional nurses in clinical facilities and the college management at various campuses are the ones who initiates the process of prevention of substance use/abuse through counselling, support and referral to other agencies accordingly.
- ❖ The lecturers and professional nurses at the clinical facilities, are also responsible for creating a healthy relationship with the students and a conducive teaching and learning environment, which will not increase students' stress levels.
- ❖ There should be an on-going interaction between the various health professionals, the law enforcement officers, family and communities to assist each other in the prevention of substance use/abuse by student nurses at LCN.

6.3.4 Summary

Chapter 6 focused on development and description of a model to prevent substance use/abuse by student nurses at LCN.

This model development was based on the findings from concept analysis (Walker & Avant, 2013), empirical perspective and quantitative as well as the conceptual framework (Dickoff et al., 1968). The nature of the model structure is depicted in Figure 6.7. The model was explained under the following aspects:

❖ Context

Various contexts constitute the structure of a model to prevention of substance use/abuse by student nurses at LCN are as follows: the socio-environmental, community, clinical context. The model was developed based on the Constitution of RSA, Institutional Policy on substance use/abuse, Higher education Act 101 of 1997, the South African National Liquor Act 70 of 2008 as well as the National Drug Master Plan (3003-2017).

❖ Agents

Several agents are involved in performing the activity because the LCN could not resolve this dilemma alone. The following agents played a major role in the prevention of substance use/abuse: family members, law-enforcement officers, priests, psychologists, lecturers, student affairs officers as well as social workers.

❖ **Recipients**

Student nurses are the recipients of prevention from the lecturers, psychologists, priests, nurses in the clinical health facilities, family members as well as the social workers.

❖ **Process**

The guiding procedure/process of the activity involves several steps namely: Primary, secondary and tertiary levels of prevention.

❖ **Dynamics**

The dynamics for the prevention of substance use/abuse are as follows: communication orientation/induction, mutual respect, interpersonal relations, team effort or collaboration.

❖ **Terminus/Outcomes**

The expected out comes are as follows: Non-substance use/abuse premises, low absenteeism, increased academic performance, delayed initiation to substances as well as reduced intake of substances. Responsible student citizenship creates safe learning environment for student nurses, Responsible professional nurses as well as improved academic performance. Chapter 7 will focus on model validation and justification of the original contribution to the body of knowledge.

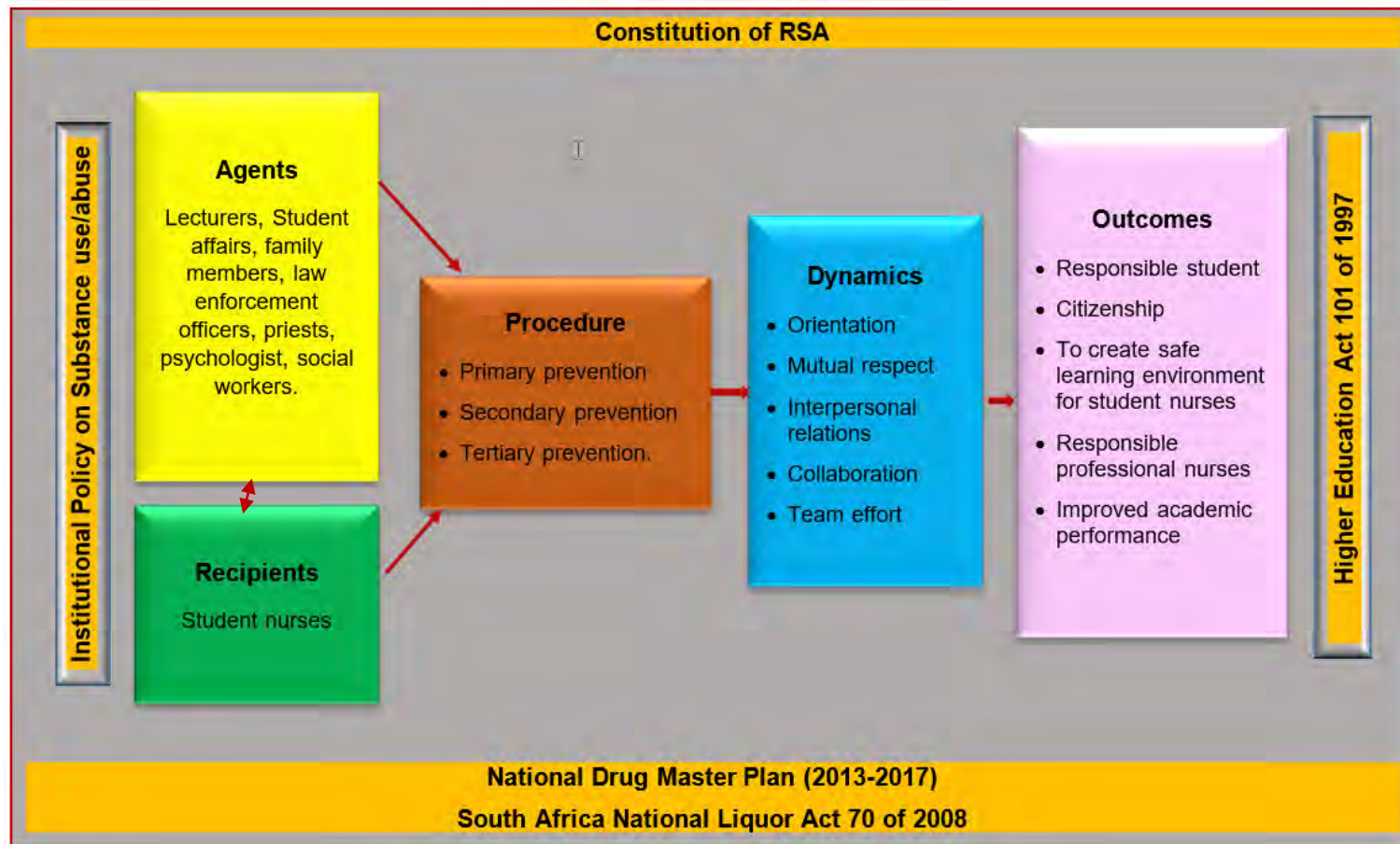


Figure 6.7: The nature of the model structure

CHAPTER 7

MODEL VALIDATION AND JUSTIFICATION OF THE ORIGINAL CONTRIBUTION TO THE BODY OF KNOWLEDGE

7.1 Introduction

The previous chapter outlined model development using the six areas as described by Dickoff et al. (1968), the description of the model and its structures as well as how the model is going to be operationalized. This chapter discusses validation and justification of the model. This chapter discusses the model evaluation in order to achieve objectives of the study as defined in chapter one. Justification of the study was also discussed in order to outline how to prevent substance use/abuse by the student nurses at LCN and the model contribute to the body of knowledge.

7.2 Objectives of this Chapter

The objectives of this chapter were as follows:

- ❄ To validate the model against its rationale and purpose as outlined in chapter one.

- ❄ To outline prevention of substance use/abuse by the student nurses at LCN.

To describe a model to prevent substance use/abuse by the student nurses in LCN. The central argument here was that for student nurses to stop, reduce and delay substance use, they should have first-hand knowledge on the quality of the applicant's

- ❖ Family background to enable awareness of service appliances. Counselling of accepted applicants with the threat or potentials of substance use and/or abuse should be done.
- ❖ Lastly, awareness campaign about the dangers of substance use/abuse will assist them in making the right decisions and prevent substance use/abuse.

According to Vemer, Ramos, Van Voorn & Feenstra (2016) validation refers to the act of evaluating of the appropriateness in accordance with what is known about the system of a model and sufficient results that can serve as a solid basis for decision making. After the model is described, the researcher should pose a critical to provide information on how the model might serve certain purposes.

Additionally, the researcher should have insight on how the model will be used and how it might be improved further. Chinn & Kramer (2014 as cited in Aluko, 2016) argued that realistic knowledge can be legitimated through validation. However, theory validating research has a very precise sense and would involve certain methods to be used. Approaches are designed to determine how perfectly the theory represents practical phenomena and their relationships. In addition, theoretic statements can be interpreted into questions and/or hypothesis, hence no one study can investigate the completeness of a theory as supported by Chinn & Kramer (2014 as cited in Aluko, 2016).

In this study, the researcher adopted Chinn & Kramer (2008) to validate the model by posing the following questions:

- ❄ How clear is the model?
- ❄ How simple is the model?
- ❄ How general is the model?
- ❄ How accessible is the model?
- ❄ How important is the model?

The researcher also responded to questions by describing the critical reflection of the process that contributes to critical insight and gives direction for development of a model (Chinn & Kramer, 2008).

7.2.1 How Clear is the Model?

Clarity refers to how well the theory can be understood and how consistently ideas are conceptualised (Chinn & Kramer, 2008). However, authors refer semantic clarity and consistency to the understanding of theoretical meaning of the concepts.

Structural clarity and consistency reflect the understandable collaboration of concepts within the whole model. In this study, the researcher considered semantic clarity, semantic consistency, structural clarity and consistency to determine how the model is (Chinn & Kramer, 2008).

❖ Semantic Clarity

The researcher defined concepts using terms that have common meaning within the health profession (Chinn & Kramer, 2008).

❖ Sematic Consistency

The researcher used concepts in way that is consistent with the definition of concepts furthermore, the researcher used basic assumptions to clarify the meaning of other components of the model (Chinn & Kramer, 2008).

❖ Structural Clarity

The researcher consistently used different structures in the model to guide discussion of issues. The structure also served as a conceptual map that enhances clarity of the model as indicated in (Chinn & Kramer, 2008).

7.2.2 How Simple is the Model?

Simplicity is defined as the minimal number of elements within the descriptive category, particular concepts, as well as their relationship (Chinn & Kramer, 2008). In this study, major concepts such as college of nursing, student nurses, lecturers as well as student affairs officers, together with their interrelationships were used as a general guide to practice (Chinn & Kramer, 2008).

7.2.3 How General is the Model?

Chinn & Kramer (2008) defined generality as the breadth of the scope of concepts and purpose within the model. In this study prevention of substance use/abuse by the student nurses was addressed.

7.2.4 How Accessible is the Model?

Accessibility addresses the extent to which concepts within the theory can be identified and the way the expected outcome can be achieved (Chinn & Kramer, 2008).

In this study, the definition of concepts was the clues to the accessibility of the model, and refers to the definition of the concepts.

7.2.5 How Important is the Model?

According to Chinn & Kramer (2008), the importance of the model depends on the professional and personal values in nursing practice, education and research. This study addresses the extent to which substance use/abuse by the student nurses can be prevented.

7.3 Methodology For Validation Process

7.3.1 Model Presentation to the LCN

A developed model was presented in a meeting in one selected campus for validation purpose. After presentation data were collected. The model was presented at the selected campus's board room so that the researcher should have insight on how the model will be used and how it might improve further. Attendance was satisfactory and active participation was also observed see attendance register.

7.3.2 Study Population

In this study, the population were the LCN lecturers, management as well as the student affairs officers from all the five campuses.

❖ Accessible Population

In this study, the accessible population were the LCN lecturers, management and student affairs officers.

❖ Target Population

In this study, the accessible population were lecturers and the LCN management who experienced the prevalence, contributory factors as well as the consequences of substance use/abuse by the student nurses on the quality of life.

7.3.3 Sampling of Campuses

Akinsola (2005, cited in Nuq & Aubert, 2013), defined sampling as the process of selecting representative units of a population study in a research investigation. In this study probability random stratified sampling was used to select one nursing campus as each campus has similar characteristics of being selected.

❖ Sampling of Lecturers and Student Affairs

A quantitative non-probability stratified random sampling was used to select eighteen (18) participants from twenty-nine (29) lecturers and two (2) student affairs officers for validation of the developed model. The researcher wanted lecturers and the management to validate a developed model to prevent substance abuse by the student nurses in LCN. Lecturers who teach social sciences, community nursing sciences, psychiatric nursing sciences, Midwifery as well as General Nursing Sciences because they teach content on substance abuse, campus management, as well as student affairs offices were invited to attend the presentation.

❖ Sample Size

In this study, (18=90%) were drawn from lecturers, (2=10%) student affairs officers as well the LCN management.

7.3.4 Data Collection

Data were collected by means of self-administered questionnaire with eighteen (18=90%) the lecturers plus two (2=10%) student affairs officer which makes ten (20=100%) respondents. A checklist was employed in order to guide the respondents.

7.3.5 Data Analysis

Data were analyzed through a descriptive statistical analysis which involved frequencies and percentages. A table displaying frequency computations and percentages of the values of the lecturers and student affairs officer's variable was drawn. See a provided data distribution that follows below:

7.3.6 Data Distribution of Model Validation

Table 7.1 summarizes the data distribution of model validation. Table 7.1 shows responses of model validation. Of the twenty 20 (100%) respondents in this study, eighteen (18) 90% were lecturers and two (2) 10% were student affairs practitioners. Agreed that the model was clear and commented that the model and guidelines were well presented. All twenty (20) respondents agreed that the model was clear on the explanation/process on how to prevent substance use/abuse by student nurses at LCN. All respondents agreed that the model presented sufficient dynamics/underlying forces that affect the process of the prevention of substance use/abuse by student nurses at LCN.

On the other hand, all 20 (100%) respondents disagreed to add or remove anything presented. In addition, all 20 (100%) respondents agreed that the process in the model is consistent to the extent that it can be practically applied.

All 20 (100%) respondents agreed that the model clearly describe the role of lecturers in the prevention of substance use/abuse by the student nurses at LCN. All 20 (100%) respondents agreed that the model display a need for in-service training on prevention of substance use/abuse. They stated that the model was well presented and they need in-service training for the counsellors, that are lecturers and peer students.

Table 7.1: Data distribution of model validation

SECTION B: Data Distribution	Agree		Disagree		Comments
	F	%	F	%	
1. Is the model clear?	20	100			Well presented
2. Does the model provide a clear understanding of how the model is going to be implemented?	20	100			Well presented
3. Does the model give clear explanation/process on how to prevent substance use/abuse amongst student nurses in LCN?	20	100			Well presented
4. Does the model present sufficient dynamics/underlying forces that affect prevention of substance use/abuse by the student nurses in LCN?	20	100			Well presented
5. Is the process in the model consistent to the extent that it can be practically applied?	20	100			Well presented
6. Does the model clearly describe the role of LCN lecturers in prevention of substance use/abuse?	20	100			Well presented
7. Does the model display a need for in-service training?	20	100			Well presented
8. Is the model simple to understand?	20	100			Well presented
9. Does the model address the importance of prevention of substance use/abuse by student nurses in LCN?	20	100			Well presented
10. Is the model accessible?	20	100			Well presented
11. Do you think this model is important?	20	100			Well presented
12. Is there anything that you can add or remove?			20	100	Well presented
Data represent the responses of model validation of the twenty (20=100%) participants.					

Furthermore, 20 (100%) respondents agreed that the model was simple to understand.

All 20 (100%) respondents agreed that the model addressed the importance of prevention of substance use/abuse by the student nurses at LCN. Moreover, all 20 (100%) respondents agreed that the model is accessible because it does not involve finance. All 20 (100%) respondents agreed that the model is important. In addition, all 20 (100%) respondents agreed that the model addresses prevention of substance by the student nurses at LCN. Consequently, it can be concluded that all lecturers and student affairs practitioners contracted on the model developed and guidelines proposed to implement the model. Lecturers as well as student affairs personnel's response revealed that consensus was reached, which means a model to prevent substance use/abuse by the student nurses at LCN should be executed.

There is a clear need for prevention of substance use/abuse within the LCN in order to promote coping with psychosocial problems, poor academic performance and improving help-seeking for substance use/abuse related problems as supported by (Reavly, Jorn, McCann & Lubman, 2011). The model's objective for prevention of substance abuse at LCN is of paramount importance in nursing education. The need and experience of developing preventive model continues to be of College, provincial and national interest or concern.

Therefore, study assumptions are that this newly developed model may provide understanding that can be used to prevent substance use/abuse by student nurses at LCN. The proposed activities should equip and empower lecturers to learn and practice preventive measures as part of their responsibilities in nursing education, so that they can demonstrate facilitation of acceptable behaviour to their student nurses.

7.4 Justification of the Original Contribution of the Study to the Body of Knowledge

This is an original study that contribute to the body of knowledge hence the prevention of substance use/abuse will also be effective. The following provides that this study is an original contribution to the body of knowledge, however, the extent to which empirically participants/respondents' views regarding prevention of substance use/abuse by student nurses at LCN were described and explored.

This study also described and explored the contributory factors of substance use/abuse, types of substances used, consequences on the quality of life as well as the measures to prevent substance use by the student nurses at LCN. Focus group interviews and unstructured in-depth interview were done and analyzed using Tech's steps (Creswell, 2014), whereas the prevalence of substance use/abuse and types used were analyzed using SPSS version 24. Data analysis began concurrently and analyzed independently following procedures of both qualitative and quantitative approach in order to merge the results. However, the researcher used parallel convergent approach to merge the two data sets. This study found that the qualitative findings are related to the quantitative findings to the extent that both answered the research questions.

In addition, prevalence of substance use/abuse, peer group, poor academic performance, low-self-esteem, family background as well as imitation were the reasons for modelling of substance use/abuse. The types of substances commonly used by students at LCN are alcohol, marijuana and cigarettes. Male student nurses are more likely to be exposed to substance use/abuse.

Furthermore, the discussion and interpretations of the findings were guided by Bronfenbrenner's (1994) ecological system as cited by Tuwei (2014). The concept "prevention of substance use/abuse by the student nurses" was analyzed using eight steps of Walker & Avant (2013) to clarify and distinguish the definition of the main concepts.

Results drawn from analysis of concept revealed that "prevention of substance use/abuse by the student nurses" at LCN is very imperative. It is therefore necessary for the LCN to reinforce legislations that addresses prevention of substance use/abuse in all campuses. To address substance use/abuse by the student nurses effectively, it is important to recognize that they are multifaceted and require multisectoral and collaborative approach (Morejele et al., 2014). Additionally, a model to "prevent substance use/abuse" by the student nurses at LCN is believed to tackle substance use/abuse depending on the nature and severity of the problem (Oliha, 2014). This consist of primary prevention, early detection, treatment, care and support Community Preventive Initiative (CPI, 2009).

Primary prevention is applicable to student nurses who have not yet started with substance use. Early detection targets those students that are using substances but not yet addicted. Care and support apply to students who are dependent and require further management such as referral (SAMHSA, 2016). In this study, promotion was also considered in order to create environment that support the student nurse's ability to resist social challenges. This study's results were presented in a meeting and refined. However, the model was developed and described as directed by the results from concept analysis.

The researcher adopted Bronfenbrenner's ecological theory to develop a model to prevent substance use/abuse by the student nurses at LCN. Various authors also applied Bronfenbrenner's (1994) ecological system to develop their approaches to reduce substance use/abuse such as Bogg & Finn (2009), An ecological based Model of Alcohol Consumption-Decision making: Evidence for the Discriminative and Predictive Role of Contextual and Punishment Information.

Testing a brief motivational-interviewing educational commitment module for at-risk college drinkers (Bogg, Marshbanks, Doherty & Vo, 2019). Environmental strategies for Substance use/abuse Prevention: Analysis of the Effectiveness of the Policies to Reduce, Alcohol, Tobacco and Illicit Drug Problems (Fisher, 1918). In general, this study offers a promising approach to the prevention of substance use/abuse problems.

Efforts to measure their effectiveness and disseminate research findings help ensure that the contributions of these important tactics for prevention are fully employed. In addition, a model to prevent substance use/abuse by student nurses was done in order to instill knowledge about the negative consequences of substance use, to boost student nurses' self-esteem, increase decision making ability and acceptable academic achievement.

7.5 Conclusion

This chapter provided the validation of a model through LCN lecturers and student affairs officers who responded to a self-administered questionnaire aimed at describing the critical reflection on the developed model. Justification of the original contribution of the study of knowledge was also discussed. Chapter 8 will focus on the summary of research findings, limitations, recommendations and conclusions of the study.

CHAPTER 8

SUMMARY OF RESEARCH FINDINGS, LIMITATIONS, RECOMMENDATIONS AND CONCLUSIONS

8.1 Introduction

The previous chapter showed how the study findings from the qualitative and quantitative studies were used to develop a model to “prevent” substance use/abuse by the student nurses at LCN.

The qualitative design explored the factors responsible for the incidence of substance use/abuse, the family background of the students who use/abuse substances, the role played by the LCN on the prevalence of substance use/abuse and the factors contributing to the prevalence of substance use/abuse by students.

The quantitative design was employed to examine the prevalence of substance use/abuse, the types of substances used, and the impact of substance use/abuse on the quality of life and academic performance of the student nurses in the LCN.

The description and knowledge collected in this study made it possible to develop an evidenced-based model to “prevent” substance use/abuse by the student nurses at LCN. The study was conducted in five (5) campuses between June 2017 and February 2018. The study was based on a convergent parallel mixed-method. Qualitative and quantitative approaches were done concurrently.

In the qualitative approach, purposive and was used. probability sampling to select a total number of twenty-three (23) student nurses, three (3) student affairs personnel, twenty-seven (27) lecturers. Six focus group discussions (FGDs) were carried amongst the student nurses. Data collection was done using unstructured and in-depth interview. Data were analyzed utilizing Tesch's eight steps of open-coding method for qualitative approach method for qualitative approach. Inductive and deductive approaches were used to generate themes and sub-themes.

For the quantitative approach, probability stratified random sampling was used since the information about student nurses was well-known prior to sampling for make the sampling method more efficient. Almost 445 (56.5%) student nurses were selected from 788 student nurses registered at LCN. Data were analyzed using IBM Statistical Package for Social Sciences (SPSS) version 24. The qualitative findings were supported by the quantitative results.

8.2 Summary of Chapters in this Thesis

8.2.1 Chapter 1-Orientation of the Study

The research problem, the statement of the problem, the rationale of the study, the significance of the study, the purpose of the study, the objectives of study, the study hypothesis, the research questions, the assumptions of the study, definition of terms, outline of chapters and summary constituted the chapter.

8.2.2 Chapter 2-Literature Review

Perceptions of substance use/abuse and health consequences, incidence of substance use/abuse in the developed nations, incidence of substance use/abuse in

Africa, and the incidence of substance use/abuse in South Africa, contributory factors of substance use/abuse, intervention and prevention measures of substance use/abuse as well as the theoretical framework in this chapter provided the overview of ecological system theory, as well as the application of the theory.

8.2.3 Chapter 3-Research Methodology

Then the research design and approach, the research site, the sampling procedure and recruitment, the study population, the data collection methods and procedures, close-ended questionnaire, the structured interviews method and procedures, reliability and validity, data analysis, ethical consideration and measures to ensure trustworthiness were deliberated in this chapter.

8.2.4 Chapter 4-Analysis and Interpretation of the Results

The findings of the study were analyzed, interpreted and controlled through the literature. Themes and sub-themes emerged during interviews conducted with the lecturers, student nurses and the student nurse officers. Response from the student nurses regarding prevalence and types of substance use/abuse was also analyzed through SPSS version 24. Data analysis conducted independently following procedures of both qualitative and quantitative design in order to merge the results. Convergent analytic approach was used to merge the two data sets. The study found that qualitative findings are related to quantitative findings to the extent that both answered the research questions.

8.2.5 Chapter 5-Concept Analysis

This chapter discussed the concept analysis of Phase 3 utilized in this study. Concept

analysis conducted adapting to eight steps of Walker & Avant (2014) to clarify and distinguish the definition of the main concepts.

8.2.6 Chapter 6-Model Development

This chapter discussed the model development and description of phase two used in this study. It also focused on justification and contribution to the body of knowledge.

A model to prevent substance abuse by the student nurses at LCN was conceptualised using the six areas as described by Dickoff et al. (1968).

8.2.7 Chapter 7-Model validation, Justification of the Original Contribution to the Body of Knowledge

This chapter discussed the model evaluation of phase three utilized in this study. This chapter also focuses on the justification and contribution to the body of knowledge.

Model validation was conducted adopting Chinn & Kramer (1999).

8.2.8 Chapter 8-Summary of Research Findings, Limitations, Recommendations and Conclusions

This chapter provides the conclusion, including strength and limitations of the research findings. There are also recommendations with reference to the presented research, guidelines to operationalize the model and future research.

8.3 Limitations

According to Polit & Beck (2012), limitations are those trades that remind the researcher what the study was and was not, how its boundaries may or may not, how the results may or may not contribute to understanding. The researcher took cognizance of the limitations in interpreting of the findings of the study. Hence, the findings discussed should be considered against the following limitations:

- ❄ The study was conducted in five campuses at the LCN are not transferable and generalized to other colleges of nursing at other provinces.
- ❄ Besides, the study was restricted to student nurses who were pursuing four-year course, i.e., R425, which is a Diploma in (General, Community, Psychiatry) and Midwifery Nursing Sciences.
- ❄ The study did not include student nurses in postgraduate programmes, bridging courses and those above the set age.

8.4 Summary of the study results

In this study, the findings revealed that several factors were responsible for the incidence of substance use/abuse among student nurse in LCN. The results evidence of the findings shows that the impact of student nurses' socialization, their development, and the environment in which they grow up determine the incidence of the substance use/abuse among them. Results evidence revealed that the social impacts played a role on substance use/abuse among student nurses through their family background experience of substance addiction.

Peer pressure and influence, household poverty experience, single-parenthood background, low self-esteem, parenting approaches of the students. Traditional practices and values, role modelling and imitation, and financial support. In addition to the social factors, environmental factors equally played a role on the incidence of substance use/abuse through the lack of recognition of substance use/abuse in the nursing college, and unavailability or recreational facilities for the student nurses.

Those collective factors of socialization and the environment effectively nurtured and influence the incidence of substance use/abuse in addition to the lack of recognition of the substance use/abuse. The findings also portray the fact that the lack of recognition of substance use/abuse further led to the absence of prevention and intervention measures that addresses substance use/abuse. The overwhelming evidence that emerged from the quantitative objective emphatically showed that the impact of substance use/abuse among the student nurses and poor academic performance.

The emerged findings revealed the correlation between substance use/abuse among student nurses and poor academic performance of the students. Other evidence of the findings shows that majority of the student nurses use substances and approximately twice or more per day. There were good signs of academic performance from student nurses who are not involved in substance use and abuse. However, the location of the college campuses and the environment all together influence the prevalence of substance use/abuse among the student nurses.

There was confirmatory evidence of inappropriate sexual attitude and behaviour among the student nurses because of the substance use and/or abuse, which also substantially contributed to the students' poor academic performance. However, the most disturbing is the fact that Level 1 students' or first year student nurses were more into the use and abuse of substances than Level II, III, and IV students. The preventive measures of substance considered for the student nurses is develop as an intervention from the findings that emerged from both qualitative and quantitative approaches. These interventions, as described above are also based on the people

they aim to reach. It should be noted that most preventive interventions are primary aimed at young people because the impacts of family socialization emerged from findings. So, earlier messages target earlier interventions for delaying or preventing the onset of substance use/abuse.

The incidence of substance use/abuse was purely an ecological and social behavioural problem among the student nurses in LCN. Though, the student nurses' substance use/abuse behaviour is bred through the experiences of parenting practices and inappropriate approaches. This present study establishes the fact that student nurse who grew up in an insensitive family background and lack predictability of their behaviour and healthy development, potentially stand the risk of using and/or abusing substances.

Despite the established claim that parenting practices and family background contributes to substance use/abuse, the main original contribution to knowledge is that any nursing college that primarily ignore the recognition of substance use/abuse in its recruitment practices contributes to the prevalence of substance use/abuse. Another original contribution to knowledge is that locations of nursing college campuses/residence with easy accessibility of substances collectively influence the prevalence of substance use/abuse among the student.

Considering the household poverty experience by most students, the cash transfer financial assistance from government to student nurses heighten the vulnerabilities they faced on the incidence of substance use/abuse. One more noteworthy contribution to knowledge is that student who are involved in substance use/abuse

develop risky sexual attitude, thus leading to fall pregnant and become young parents as students. These students perform poorly with their academic work and hardly complete their studies on record time.

8.5 Recommendations

The recommendations are based on the theory and policy. It is obvious that LCN student nurses is plagued with substance use and/or abuse problem of great degree. This calls for greater efforts and effective measures in dealing with the substance use/abuse problem. Therefore, the following recommendations are made for stages of the interventions. Most pertinent among the recommendations is the use of the ecological framework as a basis for designing measures and interventions to battle the substance use/abuse. The recommendations from key findings that should be implemented at different level to bring in the desired behaviour. Various stakeholders such as students, lecturers, families and the community are targeted:

- ❖ The researcher recommended as follows-
- ❖ Family: Parenting skills or reiterate parenting commitment on the recognition of substance use/abuse because the family is an agency of primary socialization in order to prevent initiation to substance use/abuse.
- ❖ Education: The study recommended that education on substance use/abuse should be done to new student nurses during induction and/or orientation to prevent initiation to substance use.

- ❄ The researcher recommended that the LCN should design curricula that builds social skills and/or appropriate life orientation in order to enhance resistance to substance use/abuse.
- ❄ Community: The researcher recommended that liquor joints and taverns should be miles away from the college. This should be an integral part of all substance use/abuse preventive measures.
- ❄ The community policing system in place may be used to control selling out alcohol and drugs which were prohibited by the law to the students to minimize the unacceptable behaviour.
- ❄ Law- enforcement agencies: The study recommended that substance use/abuse enforcement agents in the LCN should be empowered with adequate resources to be effective in carrying out their duties (training).
- ❄ The study recommended that security system should be strengthened so that substances should not be smuggled inside the campus or students' residence. Monitoring should be carried out regularly and persistently in campuses.
- ❄ Policy: Policies can prevent abuse of substances as stipulated in preventive model and measures among student nurses in two fundamental ways: firstly, they would reduce the risk factors for poor early parenting relations.
- ❄ The study recommended that college management should intervene early to address poor academic performance among student nurses so that they are motivated.

- ❄ A successful intervention programme across all stages of prevention cycle would require policies that encourage anti-substance use/abuse awareness approach. It would be pertinent to adhere to reducing risk factors policy measures.
- ❄ Counselling services: The study recommended that counselling, treatment and referral should be provided and privacy should be strictly maintained to improve the student's quality of life of the student nurses.
- ❄ The researcher recommended that maximum support should be provided for substance users to help them move through all stages of behaviour change.
- ❄ Peer counsellors may help in the period of behaviour change by not undermining, swearing and excluding of those using/abusing substances.
- ❄ The study recommended that students at risk should seek help regarding traumatic situations that lead to substance use/abuse to promote academic performance.
- ❄ Student nurses should be engaged in stress reduction activities such as participating in sports, dance activities to reduce substance use/abuse.
- ❄ Receptational facilities: The researcher recommended that students should attend recreational preparations such as talent search, educational excursions as arranged by the college so that they relax.
- ❄ Suggestion for further research, even though the claim is clear that the effect of environmental and social factors drive the incidence of substance

use/abuse. The next avenue of future research is how much each aspect of these factors contributes to the prevalence of substance use/abuse among student nurses in LCN. Some of the articles referenced in this study have emphasized parenting approach and practices as factors that contribute to the incidence of substance use/abuse, however, their samples are limited and not specific to which of the approaches among the four parenting approaches that contributes to the incidence of substance use/abuse. So, it's questionable how applicable the findings are to the context under study. As well, it is a possibility that the cultural norms and practices that contribute to parenting practices equally contributes to the incidence of substance use/abuse. However, if this is the case, future research should examine the effect of cultural practices on the prevalence of substance use/abuse among students in other colleges.

8.6 Concluding remarks

This study presents a brief exposition of the study introduction and background that helps to lay out the social context from a global perspective and provide the research problem and then the statements of the problem that provides the study focal point. The study further provides the study rationale and the significance of the study, which purported to fill in gaps in both academic literature and policies settings.

Then, the purpose of the study and the research hypothesis/questions, and objectives stipulating its critical adherence to the main research focus. Conceptual framework, definition of concepts and a brief discussion of research design, trustworthiness, ethical consideration as well as outline of chapters. The research reviewed the literature on the incidence of substance use/abuse and the consequences on the

individual well-being and health, as well as the people they socialized with. The review was carried out in a manner that coin out the gaps and identified critical gaps that the current study would address. The literature review vents the risk factors of substance use/abuse as well as the protective factors. That was done by addressing the contributory factors of substance use/abuse and what can be put in place to prevent the prevalence.

The study further addressed the prevalence of substance use/abuse in developed nations and the different social context of the incidence in the different developed nations. Though, there are peculiar as well as similar characteristic in developed and developing nations shared on the prevalence of substance use/abuse. However, the characters are heavily centred on the individual social and economic background. In Africa, issues that have to do with substance use/abuse (mostly within the context of family socialization) heighten the prediction of addiction due to the social settings contributing to the prevalence. The prevalence of substance use/abuse in South Africa commonly occurs to youths mostly in high schools and tertiary institutions.

The theoretical framework guided this study. The theories are the ecological system theory, the social 'self' theory and the social learning theory. The ecological system theory offered the comprehensive explanation of the entire developmental stages of an individual shaped the behaviour responsible for the prevalence of substance use/abuse. The fundamental ideas of ecosystem theory advocacy completely focus on the Individuals development through a chain of life transitions, all of which require environmental support and surviving skills.

The ecosystem theory application traces the prevalence of substance addiction to their parenting experience as well as the family background. Ecosystem theory offers and explained the holistic understanding of the role of the environment from the perspective of survival experience. This theory addresses the social-behavioural development of an individual from the perspective of beliefs, attitudes, genetic predisposition, gender, and age.

The current study presented the mixed research methodology. It is evident that the study used a combined approach. For that reason, the study design was deductive and inductive in approaches. The study used the quantitative description and qualitative exploratory methods of research and focused only on primary data. The study site and fieldwork took place in LCN, Limpopo Province, South Africa. The participants for the quantitative approach were mainly the student nurses. The participants for the qualitative approach were recruited through snowball and purposive sampling procedure.

The participants were the nursing college lecturers, student affairs officers and nursing students who are into substance use/abuse. For the qualitative method, the thematic content analysis was used to analyze the data and responses were grouped in accordance with their themes. The data obtained with the closed-ended questionnaires were analyzed with the use of the SPSS. The mixed-method research design phase one and two utilized with regard to population and sampling, data collection and analysis, trustworthiness, validity and reliability as well as ethical considerations were discussed.

The impact of substance use/abuse on the academic performance of the student nurses in the LCN was addressed. It is evident that the various substance use/abuse among student nurses played a role in the poor academic performance of the students. There were good signs of academic performance from student nurses who are not involved in substance use and abuse.

However, the location of the college campuses and the environment all together influence the prevalence of substance use/abuse among the student nurses. There was confirmatory evidence of inappropriate sexual attitude and behaviour among the student nurses because of substance use/abuse, which also substantially contributed to the students' poor academic performance. However, the most disturbing is the fact that level 1 students were more into the prevalence of substance use/abuse than level II, III and IV students.

The theoretical and empirical analysis of the concept "prevention" was also presented. The concept was analyzed using Walker & Avant (2016) steps of concept analysis. The uses, attributes and characteristics, antecedents, consequences and empirical referents were determined. The practical perspective was based on developing a model to "prevent" substance use/abuse by the student nurse at LCN in South Africa. Development and description of a model to prevent substance use/abuse by student nurses at LCN was the main focus.

This model development was based on the findings from concept analysis (Walker & Avant, 2014), empirical perspective and quantitative as well as the conceptual framework (Dickoff et al., 1968).

The model was explained under the following aspects: context, agents, recipients, dynamics, process, purpose and detailed description of the model. Validation of a model was done by responding to questions that describe critical reflection of the process for development of a model. Justification of the original contribution of the study of knowledge was also discussed.

The overwhelming findings of this study show a general lack of sensitive professional ethics in LCN. Something that the researcher found strange is the total blame in the lack of preventive measures of substance use/abuse for professional nurses. In light of the substance use and/or abuse related challenges faced by the student nurses, the need to design and implement healthy interventions to lessen the problems should have never been ignored or overlooked. Quite disturbing is the fact that the discipline is health profession.

This study was guided by Bronfenbrenner's ecological theory from the family to economic and political structures. The model was suitable to be used for analysis of the framework as it could be used both qualitative and quantitative designs. Bronfenbrenner believes that the influence of environmental systems starts with the individual perspective, moving outwards to the microsystem, the mesosystem and finally, the exosystem. The theory was also used on prevention model because the family, college, peers, as well as the society should be involved, thus collaboration.

The evidence of the emerged findings suggests a need for more structured and evidence-based prevention measures to advocate increased focus and resources to reducing substance use/abuse by the student nurses.

Botvin & Griffin (2016) indicated that prevention strategies include both primary, secondary and tertiary prevention targeting individuals who not yet involved, those who are already indulged and those who need rehabilitation.

Care and support should be applied to students who are dependent and require further management or referral as indicated in the model of this study (Botvin & Griffin, 2016; SAHMSA, 2016) Whatever efforts may be adopted first based on the recommendation using the model, it should be maintained throughout the course of the year, with measures renewals at peak high recreational periods. These measures need to adopt the framework outlined in the South African Drug/Substance Prevention Master Plan for them to be easily monitored against arbitration.

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ANNEXURE A

REQUEST TO UNIVERSITY OF VENDA RESEARCH ETHICS COMMITTEE (UVREC) TO CONDUCT THE STUDY

P.O. Box 563
Lwamondo
0985

University of Venda Ethics Committee
Thohoyandou
Private Bag
0945

Dear Sir/Madam

REQUEST FOR PERMISSION TO CONDUCT A RESEARCH STUDY

I, Netshiswinzhe Doris Matodzi, student no: 16023581, a PhD Degree Student at University of Venda, under the Department of Advanced Nursing Science, hereby request for permission to conduct a research study at Giyani Nursing Campus, Thohoyandou Nursing Campus, Sekhukhune Nursing Campus, Sovenga Nursing Campus and Waterberg Nursing Campus (LCN)

Research Topic: **Developing model to prevent substance use/abuse by student nurses at Limpopo College of Nursing**

My Supervisor is Prof Lebesse, Department of Advanced Nursing Science.

Co-Supervisor: Prof Ramathuba, Department of Advanced Nursing Science.

The purpose of study is to:

Develop a model to prevent substance use/abuse by student nurses at Limpopo College of Nursing

The questionnaire will be completed within 15-30 minutes.

The following ethical standards will be observed throughout the research process to preserve the name and dignity of the participants:

1. Informed consent will be signed voluntarily or under no pressure.
2. Voluntary participation and freedom to withdraw without penalty.
3. Data collected will only be assessed by my supervisor and independent coder.
4. Raw data will be kept under lock and key to ensure confidentiality.
5. Names of the participants will not be mentioned during discussions.
6. The research summary will be made available for the Head of Department of Health.
7. Granting the researcher permission to conduct the research study is important for the selected nursing campuses.

Yours faithfully

Netshiswinzhe M.D.

Signature of the Researcher:

Date:

Contact No: 082 425 4553

Supervisor: Prof Lebese

Signature of the Supervisor:

Date:

Co-Supervisor: Prof Ramathuba

Signature of the Co-Supervisor:

Date:

ANNEXURE B

UNIVERSITY OF VENDA RESEARCH ETHICS COMMITTEE (UVREC) CLEARANCE CERTIFICATE

RESEARCH AND INNOVATION OFFICE OF THE DIRECTOR			
NAME OF RESEARCHER/INVESTIGATOR: Mrs MD Netshiswinzhe			
Student No: 16023581			
PROJECT TITLE: <u>Developing a model to prevent substance abuse by student nurses at the Limpopo College of Nursing, Limpopo Province, South Africa.</u>			
PROJECT NO: SHS/17/PDC/11/0505			
SUPERVISORS/ CO-RESEARCHERS/ CO-INVESTIGATORS			
NAME	INSTITUTION & DEPARTMENT	ROLE	
Prof RT Lebeso	University of Venda	Promoter	
Prof DU Ramathuba	University of Venda	Co- Promoter	
Mrs MD Netshiswinzhe	University of Venda	Investigator – Student	
ISSUED BY: UNIVERSITY OF VENDA, RESEARCH ETHICS COMMITTEE			
Date Considered: May 2017			
Decision by Ethical Clearance Committee Granted			
Signature of Chairperson of the Committee: 			
Name of the Chairperson of the Committee: Prof. G.E. Ekosse			
 University of Venda PRIVATE BAG X5050, THOHYANDOU, 0950. LIMPOPO PROVINCE, SOUTH AFRICA TELEPHONE (015) 962 8504/8313 FAX (015) 962 9060 <i>"A quality driven financially sustainable, rural-based Comprehensive University"</i>		<table border="1"> <tr> <td>UNIVERSITY OF VENDA DIRECTOR RESEARCH AND INNOVATION 2017 -05- 10 Private Bag X5050 Thohoyandou 0950</td> </tr> </table>	UNIVERSITY OF VENDA DIRECTOR RESEARCH AND INNOVATION 2017 -05- 10 Private Bag X5050 Thohoyandou 0950
UNIVERSITY OF VENDA DIRECTOR RESEARCH AND INNOVATION 2017 -05- 10 Private Bag X5050 Thohoyandou 0950			

ANNEXURE C

APPROVAL OF THESIS RESEARCH PROPOSAL BY THE UNIVERSITY OF VENDA HIGHER DEGREES COMMITTEE

UNIVERSITY OF VENDA

OFFICE OF THE DEPUTY VICE-CHANCELLOR: ACADEMIC

TO : MR/MS D.M NETSHISWINZHE
SCHOOL OF HEALTH SCIENCES

FROM: PROF J.E. CRAFFORD
DEPUTY VICE-CHANCELLOR: ACADEMIC

DATE : 07 APRIL 2017

DECISIONS TAKEN BY UHDC OF 23RD MARCH 2017

Application for approval of Thesis research proposal in Health Sciences: D.M Netshiswinzhe (16023851)

Topic: "Developing a model to prevent substance abuse by student's nurses at Limpopo College of Nursing, Limpopo Province, South Africa."

Promoter
Co-promoter

UNIVEN
UNIVEN

Prof. T.R Lebese
Prof. D.U Ramathuba

UHDC approved Thesis proposal



PROF. J.E CRAFFORD
DEPUTY VICE-CHANCELLOR: ACADEMIC

ANNEXURE D

REQUEST TO LIMPOPO PROVINCE DEPARTMENT OF HEALTH TO CONDUCT THE STUDY

P.O. Box 563
Lwamondo
0985

The Head of Department (HOD)
Department of Health
Limpopo Province
Vhembe District

Dear Sir/Madam

REQUEST FOR PERMISSION TO CONDUCT A RESEARCH

I, Netshiswinzhe Doris Matodzi, student no: 16023581, a PhD Degree Student at University of Venda, under the Department of Advanced Nursing Science, hereby request for permission to conduct a study at Giyani Nursing Campus, Thohoyandou Nursing Campus, Sekhukhune Nursing Campus, Sovenga Nursing Campus and Waterberg Nursing Campus (LCN).

P.O. Box 563
Lwamondo
0985

University of Venda Ethics Committee
Thohoyandou
Private Bag
0945

Dear Sir/Madam

REQUEST FOR PERMISSION TO CONDUCT A RESEARCH STUDY

I, Netshiswinzhe Doris Matodzi, a PhD Degree Student at University of Venda, under the Department of Advanced Nursing Science, hereby request for permission to conduct a research study at Giyani Nursing Campus, Thohoyandou Nursing Campus, Sekhukhune Nursing Campus, Sovenga Nursing Campus and Waterberg Nursing Campus (LCN)

Research Topic: **Developing model to prevent substance use/abuse by student nurses at Limpopo College of Nursing**

My Supervisor is Prof Lebese, Department of Advanced Nursing Science.

Co-Supervisor: Prof Ramathuba, Department of Advanced Nursing Science.

The purpose of study is to:

Develop a model to prevent substance use/abuse by student nurses at Limpopo College of Nursing

The questionnaire will be completed within 15-30 minutes.

The following ethical standards will be observed throughout the research process to preserve the name and dignity of the participants:

1. Informed consent will be signed voluntarily or under no pressure.
2. Voluntary participation and freedom to withdraw without penalty.
3. Data collected will only be assessed by my supervisor and independent coder.
4. Raw data will be kept under lock and key to ensure confidentiality.
5. Names of the participants will not be mentioned during discussions.
6. The research summary will be made available for the Head of Department of Health.
7. Granting the researcher permission to conduct the research study is important for the selected nursing campuses.

Yours faithfully

Netshiswinzhe M.D.

Signature of the Researcher:

Date:

Contact No: 082 425 4553

Supervisor: Prof Lebese

Signature of the Supervisor:

Date:


Co-Supervisor: Prof Ramathuba

Signature of the Co-Supervisor:

Date:

ANNEXURE E

PERMISSION FROM THE LIMPOPO PROVINCE DEPARTMENT OF HEALTH TO CONDUCT THE STUDY



LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF HEALTH

Enquiries: Stols M.L (015 293 6169) Ref:4/2/2

Netshiswinzhe DM
University of Venda


Greetings,

RE: Developing a model to prevent Substance Abuse by student nurses at the Limpopo College of Nursing, Limpopo Province, South Africa

The above matter refers.

1. Permission to conduct the above mentioned study is hereby granted.
2. Kindly be informed that-
 - Research must be loaded on the NHRD site (<http://nhrd.hst.org.za>) by the researcher.
 - Further arrangement should be made with the targeted institutions, after consultation with the District Executive Manager.
 - In the course of your study there should be no action that disrupts the services.
 - After completion of the study, it is mandatory that the findings should be submitted to the Department to serve as a resource.
 - The researcher should be prepared to assist in the interpretation and implementation of the study recommendation where possible.
 - The above approval is valid for a 3 year period.
 - If the proposal has been amended, a new approval should be sought from the Department of Health.
 - Kindly note, that the Department can withdraw the approval at any time.

Your cooperation will be highly appreciated.


Head of Department Date 12/06/2017

18 College Street, Polokwane, 0700, Private Bag x9302, POLOLKWANE, 0700
T: (045) 293 6000 Fax: (045) 293 6944 Web: www.limpopo.gov.za

ANNEXURE F

REQUEST TO VICE-PRINCIPALS OF LIMPOPO NURSING CAMPUSES TO CONDUCT THE STUDY

P.O. Box 563
Lwamondo
0985

The Vice-Principals
Giyani/Sekhukhune/Sovenga/Thohoyandou and Waterberg Nursing Campuses

Dear Sir/Madam

**RE: REQUEST FOR A PERMISSION TO CONDUCT A STUDY UTILIZING STUDENT NURSES,
LECTURERS AND STUDENT AFFAIRS OFFICERS AS PARTICIPANTS**

I, Netshiswinzhe Doris Matodzi, student no: 16023581, a PhD Degree Student at University of Venda, under the Department of Advanced Nursing Science, hereby request for permission to conduct a research study at Giyani Nursing Campus, Thohoyandou Nursing Campus, Sekhukhune Nursing Campus, Sovenga Nursing Campus and Waterberg Nursing Campus (LCN)

Research Topic: Developing model to prevent substance use/abuse by student nurses at Limpopo College of Nursing

My Supervisor is Prof Lebese, Department of Advanced Nursing Science.

Co-Supervisor: Prof Ramathuba, Department of Advanced Nursing Science.

The purpose of study is to:

Develop a model to prevent substance use/abuse by student nurses at Limpopo College of Nursing

The questionnaire will be completed within 15-30 minutes.

The following ethical standards will be observed throughout the research process to preserve the name and dignity of the participants:

1. Informed consent will be signed voluntarily or under no pressure.
2. Voluntary participation and freedom to withdraw without penalty.
3. Data collected will only be assessed by my supervisor and independent coder.
4. Raw data will be kept under lock and key to ensure confidentiality.
5. Names of the participants will not be mentioned during discussions.
6. The research summary will be made available for the Head of Department of Health.

7. Granting the researcher permission to conduct the research study is important for the selected nursing campuses.

Yours faithfully

Netshiswinzhe M.D

Signature of the researcher: M. D. Stelle.....

Date: 2017/06/12

Contact No: 082 425 4553

Supervisor: Prof Lebese

Signature of Supervisor: R. T. Lebese.....

Date: 12/06/2017

Co-Supervisor: Prof Ramathuba

Signature of Co-Supervisor: D. U. Ramathuba.....

Date: 2017-06-12

ANNEXURE G1

PERMISSION FROM VICE-PRINCIPAL OF LIMPOPO COLLEGE OF NURSING: GIYANI CAMPUS TO CONDUCT THE STUDY



LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA



DEPARTMENT OF HEALTH
LIMPOPO COLLEGE OF NURSING: GIYANI CAMPUS

23-06-2017

MS. M.D NETSHISWINZHE
P.O BOX 563
LWAMONDO
0985

PERMISSION TO CONDUCT A RESEARCH STUDY

Your letter dated 12-06-2017 bears reference. Permission is hereby granted to conduct a research study titled "Developing a model to prevent substance use by student nurses at the Limpopo College of Nursing".

Make arrangements with the campus to ensure that you do not interrupt campus academic activities. Adhere to ethical standards as expected.

Yours Truly

Vice Principal



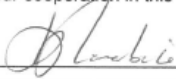
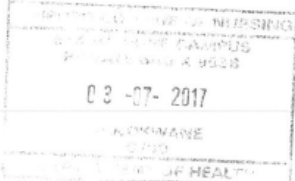

E.T Rikhotso

Private Bag X9658 GIYANI, 0826
Tel: (015) 812 0330/1/2 or (015) 812 0123/0213 Fax: (015) 812 0123
Website: <http://www.limpopo.gov.za>

The heartland of Southern Africa – Development is about people!


ANNEXURE G2


PERMISSION FROM VICE-PRINCIPAL OF LIMPOPO COLLEGE OF NURSING: SEKHUKHUNE CAMPUS TO CONDUCT THE STUDY

	LIMPOPO PROVINCIAL GOVERNMENT REPUBLIC OF SOUTH AFRICA	
DEPARTMENT OF HEALTH LIMPOPO COLLEGE OF NURSING: SEKHUKHUNE CAMPUS		
Enquiry	: Phashe ML (MS.) : Contact No. 072 5193803	
Date	: 03 July 2017	
To	: Netshiswinzhe MD	
SUBJECT	: PERMISSION TO CONDUCT A STUDY UTILIZING STUDENT NURSES, LECTURERS AND STUDENT AFFAIRS OFFICERS AS PARTICIPANTS	
The above matter refers.		
1. The Sekhukhune Campus management acknowledges receipt of your letter dated 12 June 2017 for request of permission to conduct a study utilizing student nurses, lecturers and student affairs officers as participants. Permission to conduct the study is granted as Limpopo Provincial Government Department of Health has already granted it.		
2. Arrangement are as follows: Date: 18 July 2017 Time: From 10h30 Venue: Sekhukhune Campus		
3. Kindly communicate if there any challenges regarding the date provided.		
Your cooperation in this regard is highly appreciated		
	03/07/2017	
ACTING- VICE PRINCIPAL: MS. MANABILE PA SEKHUKHUNE CAMPUS	DATE	
		

ANNEXURE G3

PERMISSION FROM VICE-PRINCIPAL OF LIMPOPO COLLEGE OF NURSING: SOVENGA CAMPUS TO CONDUCT THE STUDY

 **LIMPOPO**
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA




DEPARTMENT OF HEALTH
LIMPOPO COLLEGE OF NURSING
SOVENGA CAMPUS

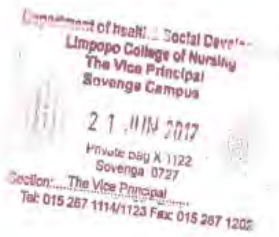
TO: Ms Netshiswinzhe DM
FROM: Acting Vice Principal: Sovenga Campus
DATE: 21 June 2017

RE: DEVELOPING A MODEL TO PREVENT SUBSTANCE USE BY STUDENT NURSES AT THE LIMPOPO COLLEGE OF NURSING

1. The above matter bears reference
2. Permission to conduct the above mentioned research study at Sovenga Campus is hereby granted
3. Research should be conducted in a manner that will not disrupt student learning
4. After completion of the study the findings should be submitted to Sovenga Campus management to serve as a resource

Your cooperation is highly appreciated

Regards,
 21/06/2017
Acting Vice Principal




Private Bag X1122, SOVENGA, 0727
Houthosdorp Road behind Mankweng Hospital, Sovenga, 0727 Tel: 015 267 1114 Fax: 015 267 9372
Website: <http://www.dhsd.limpopo.gov.za>

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ANNEXURE G4

PERMISSION FROM VICE-PRINCIPAL OF LIMPOPO COLLEGE OF NURSING: THOHoyANDOU CAMPUS TO CONDUCT THE STUDY



LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF HEALTH
LIMPOPO COLLEGE OF NURSING: THOHoyANDOU CAMPUS

21-06-2017

MS M.D NETSHISWINZHE
P.O.BOX 563
LWAMONDO
0985


PERMISSION TO CONDUCT A RESEARCH STUDY

Your letter dated 12-06-2017 bears reference. Permission is here by granted to conduct a research study title "Developing a model to prevent substance use by student nurses at the Limpopo College of Nursing".

Make arrangements with the Campus to ensure that you do not interrupt academic activities. Adhere to ethical standards as expected.

Yours Truly

Vice-Principal
M.I TSHISWAISE

Signature:  Date: 2017-06-21

LIMPOPO COLLEGE OF NURSING
THOHoyANDOU CAMPUS
2017-06-21
DEPARTMENT OF HEALTH

Private Bag X919, SHAYANDIMA, 0945, Vhembe District
Next to Tshilidzini Hospital along Punda Maria Road
Tel: (015) 964 1516/8 . Fax: (015) 964 1517
Website: <http://www.limpopo.gov.za>

The heartland of Southern Africa – Development is about people!

ANNEXURE H

PARTICIPANT INFORMATION LEAFLET

TITLE OF THE STUDY: A model to prevent substance use/abuse by student nurses at the Limpopo College of Nursing, South Africa.

My name is **Doris Matodzi Netshiswinzhe**, I am currently a student at the University of Venda undertaking a research study as a requirement to fulfil my PHD in nursing.

You are invited to take part in this study. This information leaflet is to help you to decide if you would like to participate. If you have any questions regarding the study do not hesitate to ask the researcher.

WHAT IS THE PURPOSE OF THE STUDY?

The purpose of the study is to investigate the contributory factors and the effects of substance use/abuse on the quality of life. To explore and describe knowledge of student nurses on the prevalence of substance use/abuse, contributory factors, consequences as well as the available preventive measures in place at LCN, to develop a model and policies to curb and reduce substance use/abuse by student nurses at LCN and to validate a developed model.

WHAT IS EXPECTED OF YOU DURING THE STUDY?

You will be expected to meet with the researcher for a focus group interview once or twice. Semi-structured and structured interviews will be conducted. You will be expected to complete the questionnaires for approximately 15-30 minutes. The information that you will provide is essential for this study.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

Ethical clearance will be obtained from the University of Venda Ethical Committee. Permission to carry out the study will be obtained from the School of Health Sciences Higher Degree Committee, Senate Committee of the University of Venda and Limpopo Provincial Department of Health and the Limpopo College of Nursing and the Vice-Principals of the selected campuses.

WHAT IS THE PARTICIPANTS' RIGHTS?

Your participation in this study is entirely voluntary and you can withdraw from the study at any time, and you will not be prejudiced for doing so. Your participation in the study is appreciated, therefore you have got a right to decline participating in the study.

WILL ANY OF THIS STUDY PROCEDURES RESULT IN DISCOMFORT OR CONVENIENCE?

Except for the focus group interviews which may last for about 45 minutes, there is no known discomfort or inconvenience related to the study.

WHAT ARE THE RISKS INVOLVED IN THIS STUDY?

There are no risks involved in participating in this study.

SOURCE OF ADDITIONAL INFORMATION

If you have any questions during the study do not hesitate to contact the following people:

Researcher: Mrs D.M. Netshiswinzhe 082 425 4553

Promoter: Prof R. Lebese 071 561 8263

Co-Promoter: Prof D.U Ramathuba 082 303 9656

CONFIDENTIALITY

All information obtained during the course of this study will strictly be confidential. Data that may be reported in scientific journals will not include any information that identifies you as a participant in this study.

INFORMED CONSENT

Any person who will sign the consent imply willingness to participate in the study

WHO ELSE WILL BE INTERVIEWED?

All student nurses between age 18-25 whether they use or do not use substances, males or females training under the Limpopo College of Nursing, student affairs officers, lecturers and some family members and will also be interviewed in this study.

RESULTS OF THE RESEARCH

The results will be available to participants at the end of the study on request by sending a cellular text to 082 425 4553

ANNEXURE I

CONSENT FORM

1. I understand that I am being asked to participate in the research study **Giyani, Thohoyandou, Sekhukhune, Sovenga and Waterberg** campus. I hereby volunteer to participate in the study titled **“A model to prevent substance use/abuse by student nurses at Limpopo College of Nursing, South Africa”**.
2. If I agree to participate in the study, I will complete the questionnaire which will take 15-30 minutes on prevention of substance use/abuse by student nurses in LCN.
3. The nature of the study has been fully explained to me by the researcher. I have been made aware of my right to withdraw from being a participant in the study without being prejudiced for choosing to do so.
4. No identifying information will be included in the questionnaires.
5. There are no risks associated with this study.
6. I realize that my participation in this study is entirely voluntary, and I may withdraw from the study at any time I wish. If I decide to continue my participation in this study, I will continue to be treated in the usual and customary fashion.
7. I understand that all study data will be kept confidential, however, this information may be used in nursing publications or presentations.
8. I understand that if I sustain injuries from my participation in this project, I will not be compensated by Giyani Nursing Campus, Thohoyandou Nursing Campus, Sekhukhune Nursing Campus, Sovenga Nursing Campus and Waterberg Nursing Campus which forms part of the LNC.
9. If necessary, I can contact Mrs Netshiswinzhe Doris Matodzi any time during the study.
10. The study has been explained to me. In addition, I have read and understand this consent form, all of my questions have been answered and I agree to participate. I understand that I will be given a copy of this signed consent form.

Name of Participant:

Signature of Participant:

Date:

Name of Witness:

Signature of Witness:

Date:

Name of Researcher:

Signature of Researcher:

Date:

ANNEXURE J1

SEMI-STRUCTURED INTERVIEWS: STUDENT AFFAIRS STAFF

<p>Campus name: Gender: Age:</p> <p>Marital status: Position in the college</p> <p>Others: Religion:</p> <p>Academic qualification: Date:</p>	
RESEARCH QUESTIONS	PROBING QUESTIONS/GUIDES
<p>➤ How can you explain your knowledge of substance use/abuse on this campus?</p>	<ol style="list-style-type: none"> 1. What is the type of substances do students in this campus use more often? 2. What are the consequences of the substance use/abuse on the students?
<p>➤ How can you describe the factors responsible for the substance use/abuse among students in this campus?</p>	<ol style="list-style-type: none"> 1. In your opinion, can you explain if the students' family background plays a role in the substance use/abuse? 2. What are other factors you can consider has been contributing to the substance use/abuse on this campus?
<p>➤ Are there measures that can be put in place to prevent the substance use/abuse on this campus?</p>	<ol style="list-style-type: none"> 1. What do you consider the suitable measures of preventing the substance use/abuse? 2. In what method do you think these measures can be achieved?

ANNEXURE J2

SEMI-STRUCTURED INTERVIEWS: LECTURERS

RESEARCH QUESTIONS	PROBING QUESTIONS/GUIDES
<p>➤ How can you explain your knowledge of substance use/abuse on this campus?</p>	<ol style="list-style-type: none"> 1. In your consideration, how can you rate the academic performance of substance who are involved in substance use/abuse? 2. What is the type of substances commonly used by students on this campus? 3. What are the other consequences of the substance use/abuse on the students?
<p>➤ What is your awareness of the factors responsible for the substance use/abuse among students in this campus?</p>	<ol style="list-style-type: none"> 3. In your opinion, can you explain if the students' family background plays a role in the substance use/abuse? 4. What are other factors you can consider has been contributing to the substance use/abuse on this campus?
<p>➤ Are there measures that can be put in place to prevent the substance use/abuse on this campus?</p>	<ol style="list-style-type: none"> 3. What do you consider the suitable measures of preventing the substance use/abuse? 4. In what method do you think these measures can be achieved?

ANNEXURE J3

UNSTRUCTURED INTERVIEWS: STUDENT NURSES

<p>Campus name: Gender: Age:</p> <p>Marital status: Position in the college</p> <p>Others: Religion:</p> <p>Academic qualification: Date:</p>	
RESEARCH QUESTIONS	PROBING QUESTIONS/GUIDES
<p>➤ In your opinion, what do you think are the effects of the substance you are using?</p>	<ol style="list-style-type: none"> 1. What is the type of substances do you use more often? 2. How can you describe your experience after using the substance? 3. How can you explain the effects of the substance in use in your academic performance?
<p>➤ What are the reasons that led to consuming substance regularly?</p>	<ol style="list-style-type: none"> 1. How can you describe your first experience under the influence of substance; and when was that? 2. Are there any members of your family background who also consume or substances regularly? 3. What are the factors you can consider were contributory reasons for the use of substances in your family?
<p>➤ Are there any reasons that can prevent you from continuing the substance use?</p>	<ol style="list-style-type: none"> 1. Are your considerable reasons suitable to prevent other people from consuming substances? 2. How do you think these reasons can prevent you from using substances?

ANNEXURE K1

TRANSCRIPT: KEY INFORMANT 1

SEMI-STRUCTURED INTERVIEWS: LECTURERS

<p>Campus name: Thohoyandou Gender: Female Age: 65</p> <p>Marital status: Widowed Position in the college: HOD Social Sciences</p> <p>Others: Religion: Christianity, Catholic</p> <p>Academic qualification: Master's Degree Date: 18th August 2018</p>	
RESEARCH QUESTIONS	PROBING QUESTIONS/GUIDES
<p>➤ How can you explain your knowledge of substance use/abuse on this campus?</p> <ul style="list-style-type: none"> • <i>I am aware that students use substances</i> 	<ol style="list-style-type: none"> 1. In your consideration, how can you rate the academic performance of substance who are involved in substance use/abuse? <ul style="list-style-type: none"> • <i>It differs according to individuals though most of the display poor performance in class as well as practical.</i> 2. What is the type of substances commonly used by students on this campus? <ul style="list-style-type: none"> • <i>Alcohol, marijuana and others.</i> 3. What are the other consequences of the substance use/abuse on the students? <ul style="list-style-type: none"> • <i>Poor performance</i> • <i>Unacceptable behaviour towards colleagues</i> • <i>Aggression</i> • <i>Poor personal hygiene and foul smelling</i> • <i>Repeating levels and termination of training</i> • <i>Mood swings and withdrawal</i> • <i>Absenteeism in class and clinical</i>

<p>➤ What is your awareness of the factors responsible for the substance use/abuse among students in this campus?</p> <ul style="list-style-type: none"> • Lack of recognition of substance use/abuse, despite its integration in the curriculum, it's only a module and • Lack of professionalism among the nurses • Family background • Lack of seriousness • Environment factors • Family challenges • Influence of alcohol 	<p>4. In your opinion, can you explain if the students' family background plays a role in the substance use/abuse?</p> <ul style="list-style-type: none"> • To me family play a big role in influencing substance use/abuse. • I would say in case a student is raised by family members who drink alcohol or smoke cigarettes he/she is at risk of doing the same. One of the students indicated that he started to smoke because his father used to send him to buy the stuff. • Very strict parents/lack of parental love and support may also lead to substance use due to need to belong. • Family disorganization or divorced parents <p>5. What are other factors you can consider has been contributing to the substance use/abuse on this campus?</p> <ul style="list-style-type: none"> • Individual-identity confusion • Peer pressure as some of our students are still adolescent stage • College environment • Role modeling • No authorities such as house mother/father in student residents hence lack of control
<p>➤ Are there measures that can be put in place to prevent the substance use/abuse on this campus?</p> <ul style="list-style-type: none"> • The rules and regulations are there: No substances allowed in nurses home, but the penalty on what should be done is not stipulated on the clause. 	<p>6. What do you consider the suitable measures of preventing the substance use/abuse?</p> <ul style="list-style-type: none"> • Recruitment of nurses should be revised. Sociocultural background of the students should be considered. • Policy on screening of the applicants should be introduced. • There should be counselling services in all campuses • Monitoring of students' packages in the main gate by security personnel

	<p>7. In which manner do you think these measures can be achieved?</p> <ul style="list-style-type: none">• <i>Application of strict measures such as dismissal in case a student found to be using substances as this behaviour is down grading this noble profession</i>
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ANNEXURE K2

TRANSCRIPT: KEY INFORMANT 2

SEMI-STRUCTURED INTERVIEWS: LECTURERS

<p>Campus name: Thohoyandou Gender: Female Age: 53</p> <p>Marital status: Married Position in the college: HOD Community Nursing</p> <p>Others: Religion: Christian</p> <p>Academic qualification: Masters Date: 18th August 2018</p>	
RESEARCH QUESTIONS	PROBING QUESTIONS/GUIDES
<p>➤ How can you explain your knowledge of substance use/abuse on this campus?</p> <ul style="list-style-type: none"> • Yes I know that students use substances 	<p>1. What is the type of substances do students in this campus use more often?</p> <ul style="list-style-type: none"> • Mostly alcohol <p>2. What are the consequences of the substance use/abuse on the students?</p> <ul style="list-style-type: none"> • Poor academic performance related to absenteeism • Violence • Theft from other students • Unplanned pregnancy
<p>➤ How can you describe the factors responsible for the substance use/abuse among students in this campus?</p> <ul style="list-style-type: none"> • Availability of alcohol next to campuses • Poor control by security at the gate 	<p>1. In your opinion, can you explain if the students' family background plays a role in the substance use/abuse?</p> <ul style="list-style-type: none"> • Yes to some it does, because they come from families who are using substances, but some of the students come to the college being good children and are influenced by the environment and peer pressure also play a significant role in substance use.

	<p>2. What are other factors you can consider has been contributing to the substance use/abuse on this campus?</p> <ul style="list-style-type: none"> • Earning stipend, some students are earning for the first time and they do not have responsibilities at home therefore they afford to buy substances. • Peer influence • Accessibility, taverns are a walking distance from the campus • Lack of control in student's residence
<p>➤ Are there measures that can be put in place to prevent the substance use/abuse on this campus?</p> <ul style="list-style-type: none"> • Student counselling services should be established in the campus • Strict security measures • Recreational facilities should be maintained and reconstructed • Substance prevention programmes • Activities such as poetry, debates and sports 	<p>1. What do you consider the suitable measures of preventing the substance use/abuse?</p> <ul style="list-style-type: none"> • Policies on reduction of substance use should be developed in the college at large. <p>2. In what method do you think these measures can be achieved?</p> <ul style="list-style-type: none"> • Education of students for counselling • Emphasizing the effects of substance use/abuse

ANNEXURE K3

TRANSCRIPT: KEY INFORMANT 3

SEMI-STRUCTURED INTERVIEWS: LECTURERS

Campus name: Sekhukhune Gender: Female Age: 52 Marital status: Divorced Position in the college: HOD BNS Others: Religion: Christianity Academic qualification: Masters Date: 29 th August 2018	
RESEARCH QUESTIONS	PROBING QUESTIONS/GUIDES
<p>➤ How can you explain your knowledge of substance use/abuse on this campus?</p> <ul style="list-style-type: none"> <i>All I know is the student in our campus drink alcohol on weekends.</i> <i>In the current group I have observed that there is a male student who is abusing almost all the substances.</i> 	<ol style="list-style-type: none"> In your consideration, how can you rate the academic performance of substance who are involved in substance use/abuse? <ul style="list-style-type: none"> <i>The specific student I have mentioned is performing poorly in all the subjects.</i> What is the type of substances commonly used by students on this campus? <ul style="list-style-type: none"> <i>Most students, both males and females, drink alcohol.</i> <i>The specific student is abusing Marijuana, Nyaope. Alcohol as well as any substance that makes him feel good.</i> What are the other consequences of the substance use/abuse on the students? <ul style="list-style-type: none"> <i>Withdrawal, if he did not use he looks weak and dull and he is energetic when high.</i> <i>Unexplained injuries</i> <i>Arguments for no reason</i> <i>Association with addicts</i> <i>Absenteeism</i>

	<ul style="list-style-type: none"> • Poor personal hygiene, bad smelling • Financial broke despite stipend. • Roaming around during the night • Spending nights in police custody
<p>➤ What is your awareness of the factors responsible for the substance use/abuse among students in this campus?</p> <ul style="list-style-type: none"> • Experimentation because most of them are on adolescence stage 	<p>1. In your opinion, can you explain if the students' family background plays a role in the substance use/abuse?</p> <ul style="list-style-type: none"> • Of course, the above student is an orphan who was raised his aunt. • I think loss of his parents at early age is also a factor • Separation anxiety <p>2. What are other factors you can consider has been contributing to the substance use/abuse on this campus?</p> <ul style="list-style-type: none"> • Peer pressure • To have fun
<p>➤ Are there measures that can be put in place to prevent the substance use/abuse on this campus?</p> <ul style="list-style-type: none"> • Involvement of psychologist and social workers • Code of conduct of South Africa 	<p>1. What do you consider the suitable measures of preventing the substance use/abuse?</p> <ul style="list-style-type: none"> • Emphasizing LCN rules that substances are not allowed in the institution • Involve the SAPS in the anti-substance use campaigns <p>2. In which manner do you think these measures can be achieved?</p> <ul style="list-style-type: none"> • There should be a counsellor for social problems • Reinforce the importance of abstinent

ANNEXURE K4

TRANSCRIPT: KEY INFORMANT 4

SEMI-STRUCTURED INTERVIEWS: LECTURERS

<p>Campus name: Thohoyandou Gender: Female Age: 63</p> <p>Marital status: Divorced Position in the college: Vice-Principal</p> <p>Others: Religion: Christianity, Catholic</p> <p>Academic qualification: Honours Nursing Education Date: 29th August 2018</p>	
RESEARCH QUESTIONS	PROBING QUESTIONS/GUIDES
<p>➤ How can you explain your knowledge of substance use/abuse on this campus?</p> <ul style="list-style-type: none"> • <i>Yes I know that students use Substances</i> • <i>Both boys and girls</i> 	<p>1. What is the type of substances do students in this campus use more often?</p> <ul style="list-style-type: none"> • <i>Alcohol</i> • <i>Marijuana</i> <p>3. What are the consequences of the substance use/abuse on the students?</p> <ul style="list-style-type: none"> • <i>Under achievement</i> • <i>Violence</i> • <i>Mental illness</i> • <i>Unplanned pregnancy</i> • <i>Bullying</i> • <i>Sleeping in class</i> • <i>STIs and HIV and AIDS due to unsafe sexual behaviour/engagement</i>
<p>➤ How can you describe the factors responsible for the substance use/abuse among students in this campus?</p> <ul style="list-style-type: none"> • <i>Previous initiation at other tertiary institutions</i> • <i>Peer group pressure</i> • <i>Fresher's ball/parties</i> 	<p>1. In your opinion, can you explain if the students' family background plays a role in the substance use/abuse?</p> <ul style="list-style-type: none"> • <i>It depends on intrinsic motivation though at times family background may play a role</i> <p>2. What are other factors you can consider has been</p>

	<ul style="list-style-type: none"> • Lack of financial management for the earned stipend • Peer group influence • Accessibility, taverns are a walking distance from the campus • Lack of control in student's residence
<p>➤ Are there measures that can be put in place to prevent the substance use/abuse on this campus?</p> <ul style="list-style-type: none"> • Student counselling services should be established in the campus • Strict control of access of alcohol at the gate • Recreational facilities should be renovated • Teach financial management during orientation of students 	<ol style="list-style-type: none"> 1. What do you consider the suitable measures of preventing the substance use/abuse? <ul style="list-style-type: none"> • Employ housemothers and fathers to control students' movements • Reduce numbers of entrance and exit doors to residents so that each door is guarded 2. In what method do you think these measures can be achieved? <ul style="list-style-type: none"> • Teach students more about substance use as well as the consequences • Establishment of students' open day where they will be taught about the dangers of substance use/abuse • Students' bags (packages) should be thoroughly checked • Awareness campaigns on Anti-Substance use/abuse • Invite religious leaders/spiritual leaders and SAPS to motivate students • Academic support must be employed continuously

ANNEXURE K5

TRANSCRIPT: KEY INFORMANT 5

SEMI-STRUCTURED INTERVIEWS: LECTURERS

<p>Campus name: Waterberg Gender: Male Age: 53</p> <p>Marital status: Married Position in the college: HOD SSC</p> <p>Others: Religion: Christianity, Terbernacle</p> <p>Academic qualification: BA in Sociology Date: 30th August 2018</p>	
RESEARCH QUESTIONS	PROBING QUESTIONS/GUIDES
<p>➤ How can you explain your knowledge of substance use/abuse on this campus?</p> <ul style="list-style-type: none"> • <i>Yes I know that students use Substances during weekends</i> 	<ol style="list-style-type: none"> 1. What is the type of substances do students in this campus use more often? <ul style="list-style-type: none"> • <i>Alcohol</i> 2. What are the consequences of the substance use/abuse on the students? <ul style="list-style-type: none"> • <i>There is no remarkable negative performance observed</i>
<p>➤ How can you describe the factors responsible for the substance use/abuse among students in this campus?</p> <ul style="list-style-type: none"> • <i>Peer group pressure</i> 	<ol style="list-style-type: none"> 1. In your opinion, can you explain if the students' family background plays a role in the substance use/abuse? <ul style="list-style-type: none"> • <i>It depends on individuals but some students are exposed prior to starting training in the nursing college</i> 2. What are other factors you can consider has been contributing to the substance use/abuse on this campus? <ul style="list-style-type: none"> • <i>Affordability due to stipend</i> • <i>Peer group influence</i> • <i>Environment, taverns are closer to campus</i>

➤ Are there measures that can be put in place to prevent the substance use/abuse on this campus?

- ***Student should be engaged on sports activities after class***
- ***Use of study group discussions***
- ***Debates on social issues***

1. What do you consider the suitable measures of preventing the substance use/abuse?

- ***Nothing in mind as there is no evidence to prove that substances are impacting negatively on their studies***

2. In what method do you think these measures can be achieved?

- ***Teach students more about substance use as well as the consequences***

ANNEXURE K6

TRANSCRIPT: KEY INFORMANT 6

SEMI-STRUCTURED INTERVIEWS: LECTURERS

Campus name: Giyani Gender: Female Age: 60-65 Marital status: Married Position in the college: Vice-Principal Others: Religion: Christianity Academic qualification: Honours Degree Date: 30 th August 2018	
RESEARCH QUESTIONS	PROBING QUESTIONS/GUIDES
<p>➤ How can you explain your knowledge of substance use/abuse on this campus?</p> <ul style="list-style-type: none"> • <i>It is not easy to identify, but I suspect that students may be abusing substance use/abuse</i> 	<ol style="list-style-type: none"> 1. What is the type of substances do students in this campus use more often? <ul style="list-style-type: none"> • <i>Alcohol</i> • <i>Marijuana</i> 2. What are the consequences of the substance use/abuse on the students? <ul style="list-style-type: none"> • <i>Misbehaviour such as fighting</i> • <i>Absenteeism</i> • <i>Poor academic performance</i> • <i>Termination of training</i> • <i>Vandalization of property such as windows, doors and damaging fire extinguishers in the campus</i>
<p>➤ How can you describe the factors responsible for the substance use/abuse among students in this campus?</p> <ul style="list-style-type: none"> • <i>Peer group pressure</i> • <i>Financial independence due to stipend</i> • <i>Alcohol drinking viewed as fashionable</i> 	<ol style="list-style-type: none"> 1. In your opinion, can you explain if the students' family background plays a role in the substance use/abuse? <ul style="list-style-type: none"> • <i>No, because parents need (wish) the best for their children</i> • <i>This is evidenced by some parents who may even cry when they are called to resolve their children's misbehaviour</i>

<ul style="list-style-type: none"> • Security not searching students' grocery bags • Lack of housemothers/fathers in students' residence 	<p>2. What are other factors you can consider has been contributing to the substance use/abuse on this campus?</p> <ul style="list-style-type: none"> • Affordability due to stipend • Peer group influence • Availability of beer halls closer to campus • To have fun • Role models
<p>➤ Are there measures that can be put in place to prevent the substance use/abuse on this campus?</p> <ul style="list-style-type: none"> • Regulations states that no alcohol within the campus • Enforcement of security control for access of substances • Counselling of identified students 	<p>1. What do you consider the suitable measures of preventing the substance use/abuse?</p> <ul style="list-style-type: none"> • Employment of housemothers/fathers is of greater importance (this is feasible as long as the government has will power to do so) <p>2. In what method do you think these measures can be achieved?</p> <ul style="list-style-type: none"> • Awareness campaigns • Establishment of policies against substance use/abuse in the college • Involvement of SAPs, DOE, DSD as well as DOH

<ul style="list-style-type: none"> • Freedom during weekends and after hours 	<ul style="list-style-type: none"> • Affordability due to stipend • Peer group influence • Availability of shebeens around the campus • Age factor as most of them are still at adolescent stage
<p>➤ Are there measures that can be put in place to prevent the substance use/abuse on this campus?</p> <ul style="list-style-type: none"> • Regulations states that no alcohol within the campus • Disciplinary measures should be applied to those abuse substances • Enforcement of security control for access of substances 	<ol style="list-style-type: none"> 1. What do you consider the suitable measures of preventing the substance use/abuse? <ul style="list-style-type: none"> • Counselling of identified students 2. In what method do you think these measures can be achieved? <ul style="list-style-type: none"> • Awareness campaigns • Counsellors and psychologists should be employed in the college • Ensure that students who disrupt others due to substance use/abuse should be removed from residents and stay outside for a period of six months

ANNEXURE K8

TRANSCRIPT: KEY INFORMANT 8

SEMI-STRUCTURED INTERVIEWS: LECTURERS

<p>Campus name: Giyani Gender: Female Age: 63</p> <p>Marital status: Widow Position in the college: Deputy Manager SSC</p> <p>Others: Religion: Christianity, Assemblies of God</p> <p>Academic qualification: BCur & Advanced University Diplomas Date: 31st August 2018</p>	
RESEARCH QUESTIONS	PROBING QUESTIONS/GUIDES
<p>➤ How can you explain your knowledge of substance use/abuse on this campus?</p> <ul style="list-style-type: none"> • <i>I am aware that a lot of students in our campus use substances, both boys and girls</i> 	<ol style="list-style-type: none"> 1. What is the type of substances do students in this campus use more often? <ul style="list-style-type: none"> • <i>Alcohol</i> • <i>Marijuana as well as some that we do know the names</i> 2. What are the consequences of the substance use/abuse on the students? <ul style="list-style-type: none"> • <i>Absenteeism in both theory and clinical exposure</i> • <i>Poor academic performance</i> • <i>Fighting with security personnel at night</i> • <i>Risk behaviour such unsafe sexual practice</i> • <i>Unplanned pregnancies due to promiscuity</i> • <i>Noise due to high music which disturbs students who wants to study</i> • <i>Loss of dignity for the campus as well as nursing as a profession</i> • <i>Vandalization of property, e.g., palisade walls, doors and windows</i>

<p>➤ How can you describe the factors responsible for the substance use/abuse among students in this campus?</p> <ul style="list-style-type: none"> • Peer group pressure • Stipend, lack of financial planning • Easy access to substances 	<ol style="list-style-type: none"> 1. In your opinion, can you explain if the students' family background plays a role in the substance use/abuse? <ul style="list-style-type: none"> • It does, some students are from disorganized families with parents who use substances • Some students' role modelling their relatives 2. What are other factors you can consider has been contributing to the substance use/abuse on this campus? <ul style="list-style-type: none"> • Lack of control in residences as there is no house mother/father like before • Financial independence • Availability of shebeens around the campus • Overrule security personnel
<p>➤ Are there measures that can be put in place to prevent the substance use/abuse on this campus?</p> <ul style="list-style-type: none"> • Regulations states that no alcohol within the campus • Disciplinary measures should be applied to those abuse substances 	<ol style="list-style-type: none"> 1. What do you consider the suitable measures of preventing the substance use/abuse? <ul style="list-style-type: none"> • Counselling of identified students • Employ house mother/father • Enforcement of security control for access of substances • Spiritual involvement 2. In what method do you think these measures can be achieved? <ul style="list-style-type: none"> • -Strict control measures • -Awareness campaigns • -Counsellors services in the college • -Ensure that students who vandalize property should repair it and pay the damage

	<ul style="list-style-type: none"> • Availability of beer halls around the campus a walking distance
<p>➤ Are there measures that can be put in place to prevent the substance use/abuse on this campus?</p> <ul style="list-style-type: none"> • Regulations states that no alcohol within the campus • In case is found to be using alcohol in the campus, he/she is suspended from staying in nurses home for six months. 	<ol style="list-style-type: none"> 1. What do you consider the suitable measures of preventing the substance use/abuse? <ul style="list-style-type: none"> • Counselling of identified students 2. In what method do you think these measures can be achieved? <ul style="list-style-type: none"> • Awareness campaigns • Counsellors and psychologists should be employed in the college • Ensure that students who abuse substances in the campus should be removed from residents and stay outside for a period of 12 months

<ul style="list-style-type: none"> • Financial independence • Security not searching students' grocery bags at times 	<ul style="list-style-type: none"> • Some students started to use substances in order to fit in the group <p>2. What are other factors you can consider has been contributing to the substance use/abuse on this campus?</p> <ul style="list-style-type: none"> • Affordability and accessibility • Peer pressure • Availability of taverns around the campus, there are three nearby
<p>➤ Are there measures that can be put in place to prevent the substance use/abuse on this campus?</p> <ul style="list-style-type: none"> • Rules and regulations states that no alcohol within the campus • Security personnel to search all the student as well as visitors' bags • Student nurses to be role models in the community • Ethos of nursing should be emphasized 	<p>1. What do you consider the suitable measures of preventing the substance use/abuse?</p> <ul style="list-style-type: none"> • Counselling of identified students • Counsellors and psychologists should be employed in the college • Patrol around the student residents <p>2. In what method do you think these measures can be achieved?</p> <ul style="list-style-type: none"> • Teaching students about the effects of substance use/abuse • Awareness campaigns on substance use/abuse • Employ residential managers • Each campus should EAP teams to counsel students

Qualitative data analysis

Doctor of Philosophy in Nursing Sciences

Netshiswinzhe Doris Matodzi

THIS IS TO CERTIFY THAT:

Prof Tebogo Maria Mothiba has co-coded the following qualitative data:

Focus group interviews data

For the study:

**DEVELOPMENT OF A MODEL TO PREVENT SUBSTANCE ABUSE
BY STUDENTS NURSES AT THE LIMPOPO COLLEGE OF NURSING,
LIMPOPO PROVINCE, SOUTH AFRICA**

I declare that the candidate and I have reached consensus on the major themes reflected by the data during a consensus discussion meeting. I further declare that adequate data saturation was achieved as evidenced by repeating themes.

Prof TM Mothiba



TM Mothiba (PhD)

ANNEXURE L

QUESTIONNAIRE

SUBSTANCE USE/ABUSE BY STUDENT NURSES AT LIMPOPOPO COLLEGE OF NURSING, SOUTH AFRICA

Greetings! My name is Netshiswinzhe Doris Matodzi. I am a PHD Student at the University of Venda. I am working with school of Health Sciences of University of Venda.

The purpose for this questionnaire is to develop a model to prevent substance use/abuse by student nurses at LCN.

Information gathered through this questionnaire will be made available to legitimate and interested stakeholders in order to establish partners for the development of problem solving strategies in relation to substance use. This questionnaire is not a test but merely an information exercise.

Please answer the questions as honestly as possible. Remember that there is no right or wrong answers. In order to help address the substance use/abuse problem at LCN, your contribution in this research is important.

Therefore, you are kindly requested to provide the researcher with accurate information. Your responses will be processed by computer and will be treated as confidential.

The questions usually take about 20 minutes. I do hope you will answer the questions as honestly as possible because your views are important.

Consent to participate in survey: please sign/thumb print below if you agree to participate in the study.

I have been given an opportunity to have any questions about the research answered to my satisfaction.

I agree to participate as a volunteer.

Respondent's Signature/Thumbprint:..... **Date:**.....

Interviewer Signature:..... **Date:**.....

DEMOGRAPHIC CHARACTERISTICS			
Please write your response which is a figure (e.g. 0, +1, 2, 3, etc. in the boxes at the right side.			
QUESTION		RESPONSE	SKIP
1.	How old were you at your last birthday?		
2.	Specify your sex: 1=Male 2=Female		
3.	You home language is? 1=Tshivenda 2=Tsonga 3=Sesotho 4=Setswana 6=Sepedi 7=Others		
4.	What is your current level? 1=Level 1 2=Level 2 3=Level 3 4=Level 4		
5.	How would you describe your academic performance? 1=Excellent 2=Good 3=Not too good 4=Poor		
6.	How would you describe your family background? 1=Very Poor 2=Poor 3=Rich 4=Very Rich		
7.	State your religious group? 0=None 1=Catholic 2=Methodist 4=Anglican 5=Adventist 6=Pentecostal & Apostolic 7=ZCC		
8.	State the name of your college.		
9.	What is your place of residence? 1=Rural area 2=Urban 3=Campus residence		
SUBSTANCE USE			
10.	a. Have you ever used any substance since you entered the college? 0=No 1=Yes		
	b. Have you ever used any of these substances?	0=No	1=Yes
	Marijuana		
	Mandrax		
	LSD (Acid, candy, smarties)		
	Crack		
	Nyaope		
	Cigarettes		
	Alcoholic drink		
	Others, specify		

11.	In the past 12 months, have you used any of these substances?	0=No	1=Yes			
	Marijuana					
	Mandrax					
	LSD (Acid, candy, smarties)					
	Crack					
	Nyaope					
	Cigarettes					
	Alcoholic drink					
	Others, specify					
12.	How often do you use any of these substances in a week	None	1-2 Times	3-4 Times	5-6 Times	Daily
	Marijuana					
	Mandrax					
	LSD (Acid, candy, smarties)					
	Crack					
	Nyaope					
	Cigarettes					
	Alcoholic drink					
	Others, specify					
13.	On average, how many bottles/cans/glasses of drink do you drink in a setting? 0 1 2 3 4 5 6 6+					
14.	Have you ever got drunk in the past 30 days? 0=No 1=Yes	0=No		1=Yes		
15.	Are there substance-use-related problems in your campus? 0=No 1=Yes					
16.	With reference to <i>Question 15</i>, can you state the problems as they affect your college?					
	<ul style="list-style-type: none"> • • • • 					

17.	<p>Do you know of any programme on substance abuse prevention on your campus?</p> <p>0=No 1=Yes</p>	0=No	1=Yes
18.	<p>Please state the programmes.</p> <ul style="list-style-type: none"> • • • • 		
19.	<p>Do you consider the programmes effective?</p> <p>0=No 1=Yes 2=Don't Know</p>		
20.	<p>Please state the reasons why the programmes on substance use prevention are not effective on your campus.</p> <ul style="list-style-type: none"> • • • • 		
21.	<p>What are the reasons for substance use among nursing college students on your campus.</p> <ul style="list-style-type: none"> • • • • 		
22.	<p>Is there anything you would like to tell us which was not asked in the interview? <i>Please put them here!</i></p> <ul style="list-style-type: none"> • • • • <p>THANK YOU FOR YOUR PARTICIPATION</p>		

ANNEXURE M

LANGUAGE EDITING AND TYPESETTING CERTIFICATE

Prof Donavon C. Hiss

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12 December 2019

To Whom It May Concern

This serves to confirm that I have edited the language, spelling, grammar and style of the **PhD** thesis by **Netshiswinzhe Doris Matodzi**, titled: **“A Model to Prevent Substance Use/Abuse by Student Nurses at the Limpopo College of Nursing, Limpopo Province, South Africa”** The manuscript was also professionally typeset by me.

Sincerely Yours



Cert. Freelance Journalism, Dip. Creative Writing, MSc (Medicine), PhD (Medicine)