

**AN ANALYSIS OF PSYCHOSOCIAL FACTORS OF
PSYCHOACTIVE ILLICIT SUBSTANCE USE IN A SELECT
SAMPLE IN CHATSWORTH**

ANIRA UMRA

211514243

SUPERVISOR

PROFESSOR NIRMALA GOPAL

University of Kwa Zulu-Natal, South Africa

Submitted in fulfilment of the requirements for the degree of

Master of Social Science

(Criminology and Forensic studies)

School of applied Human science

“All it takes is one bad day...”

Alan Moore

Never judge a person by their ability to be weak; encourage their ability to overcome it.

COLLEGE OF HUMANITIES

SCHOOL OF APPLIED HUMAN SCIENCES

DECLARATION – PLAGIARISM

I, ANIRA UMRA, declare that

1. The research reported in this dissertation, except where otherwise indicated, is my original research.
2. This dissertation has not been submitted for any degree or examination at any other university.
3. This dissertation does not contain other persons' data, pictures, graphs or other information, unless specifically acknowledged as being sourced from other persons.
4. This dissertation does not contain other persons' writing, unless specifically acknowledged as being sourced from other researchers. Where other written sources have been quoted, then:
 - a. Their words have been re-written but the general information attributed to them has been referenced
 - b. Where their exact words have been used, then their writing has been placed inside quotation marks, and referenced.
5. This dissertation does not contain text, graphics or tables copied and pasted from the Internet, unless specifically acknowledged, and the source being detailed in the dissertation and in the References section.

Signed

.....

ANIRA UMRA

.....

DATE

DEDICATION

I dedicate this dissertation to my phenomenal grandparents, Mr. & Mrs. P. Parbhoo. You both are the pillars of our family. I am forever grateful for all that you have done for me during the course of my life and still continue to do for me, my sister and our entire family. You both mean so much to us. Your unwavering support and undying encouragement have always motivated us to be the best we can be.

I also dedicate this dissertation to all those individuals and families fighting battles against illicit psychoactive substance addiction, I know it may seem dark now, but don't give up. For you I wish nothing but strength and comfort to get through this.

ACKNOWLEDGMENTS

You have to learn to dance in the rain. However, reality dictates that things hardly ever go as planned. In writing this dissertation I was subjected to many challenges; some good and of course some not so good. I can without a doubt say that I wouldn't have been able to complete this journey without the support and assistance of many amazing people who believed in me, helped me, encouraged me and exposed me to reality checks when I needed them most.

The first person who I wish to thank is my Supervisor, Professor. N. Gopal, I want to extend my deepest gratitude to you for helping me on this journey. Thank you for your time, effort and unstinting faith in me. You encouraged and motivated my thinking and you helped me understand what it means to be a researcher. For all of this and so much more, I thank you.

I also thank my parents, Reshina and Anil Umra, and my sister. Thank you for everything you have done for me. I am here today because of your support and encouragement. Mum, you have always walked the extra mile for me, and I especially want to thank you for being my pillar when I needed it most and for always being my enabler. I love you. Rika, you are my best friend. Thank you for being an amazing sister and always being there for me. Not forgetting, staying up with me all those late nights, listening to my thoughts and helping me make sense of them.

Leevashen Naicker, I want to thank you deeply for helping me, for being my sounding board and for encouraging me to cope when things got tough. I shall forever be grateful for the time you invested in helping me and encouraging me on my research journey. Your importance in my life is undeniable.

I also extend my deepest gratitude to everyone at the Anti-Drug Forum (ADF), especially Mr. Sam Pillay (founder) for allowing me to conduct my research using this organisation's facilities. This project was one of the most interesting experiences of my life.

I also wish to thank the respondents who participated so enthusiastically in this research. I am eternally grateful for your contribution.

Finally, I wish to thank Mrs. Linda Coertze for her willingness to do the language editing of this dissertation and Dr. Deepak Singh for his assistance and support with SPSS and analysis.

KEY TERMS AND DEFINITIONS

The terms drug, illicit substance, illegal substance and psychoactive substance will be used interchangeably throughout this dissertation.

Addiction/Dependence: A chronic, relapsing disease characterised by compulsive drug seeking and use and by long lasting changes in the brain.

Illicit illicit substances, illegal substances: Illicit substances that are deemed illegal by law.

Dopamine: A natural chemical that is present in the brain. It is classified as a neurotransmitter and is found in regions of the brain that regulate movement, emotion, motivation, and pleasure.

Comorbidity: The occurrence of two disorders or illnesses in the same person, either at the same time (co-occurring comorbid conditions) or with a time difference between the initial occurrence of one and the initial occurrence of the other (sequentially comorbid conditions).

Psychosocial: Of or relating to the interaction between social and psychological factors.

Intrapersonal factors: Referring to psychological factors

Interpersonal factors: Referring to social factors

Youth/s: The national Youth Policy defines youth as any persons between the ages of 14 and 35 years. This is a very broad definition of the youth as it embraces various categories of youths who have been exposed to different socio-political and historical experiences.

Adolescent: Refers to any person between the ages of 12 to 18 in this dissertation.

Young adult/adult: Refers to any person over the age of 21 in this dissertation.

Interpersonal: Agents or forces (such as other individuals or groups) within an individual's sphere of activity or life-space that exert conforming influences on him or her.

Intrapersonal: Existing or occurring within the self or within one's mind (psychological factors).

Psychoactive illicit substances: A chemical substance that acts primarily upon the central nervous system where it alters brain function, resulting in temporary changes in perception, mood, consciousness and behaviour.

Neurotransmitter: A chemical produced by neurons to carry messages from one nerve cell to another.

Agonist drug: A drug that activates certain receptors in the brain. Full agonist opioids activate the opioid receptors in the brain resulting in a full opioid effect. Examples of full agonists are heroin, oxycodone, methadone, hydrocodone, morphine, and opium.

Antagonist drug: A drug that blocks opioids by attaching to the opioid receptors without activating them. Antagonists cause no opioid effect and block full agonist opioids. Examples are naltrexone and naloxone. Naloxone is sometimes used to reverse the condition caused by a heroin overdose.

Depressants (downers): Illicit substances that temporarily diminish the normal function of the brain and central nervous system.

Stimulants (uppers): Substances that raise levels of physiological or nervous system activity in the body.

Hallucinogen: A psychoactive agent which can cause hallucinations, perceptual anomalies, and other substantial subjective changes in thoughts, emotions and consciousness.

Opioids: Illicit substances that act on the nervous system to relieve pain.

Polydrug use: The simultaneous use of different illicit substances, or a sequential use of different illicit substances.

“Speedballing”: The use of a combination of a depressant (downer) with a stimulant (upper).

Social bond theory: Posited by Travis Hirschi in 1969. This theory describes the social ties an individual has with his/her group. It states that people with strong social ties are less interested to indulge in any antisocial or deviant behaviour than those who do not have such ties.

Erikson’s life stages theory or the psychosocial theory: This theory considers the impact of external factors, parents and society on personality development from childhood to adulthood. It postulates that every person must pass through a series of eight interrelated stages over the entire life cycle.

Social disorganisation: A theoretical perspective that explains ecological differences in levels of antisocial or deviant behaviour based on structural and cultural factors that shape the nature of the social order across communities.

Mental disorder/Mental illness: is conceptualized as a clinically significant behavioural or psychological syndrome or pattern that occurs in an individual and that is associated with present distress (e.g., a painful symptom) or disability (i.e., impairment in one or more important areas of functioning) or with a significantly increased risk of suffering death, pain, disability, or an important loss of freedom.

ABBREVIATIONS

SUD/s-	Substance use disorder/s
SDI/s:	Substance dependent individual/s
ADF:	Anti-Drug Forum
DD:	Delay discounting
UNDCP:	United Nations Drug Control Programme
UN:	United Nations
NDMP:	National Drug Master Plan
SAPS:	South African Police Service
PCP:	Phencyclidine
LSD:	Lysergic acid diethylamide
MDMA:	3/4-methylenedioxy-methamphetamine
WHO:	World Health Organisation
SACEND:	South African Medical Research Council
Tik:	Methamphetamine
Cat:	Cathinone
INPUD:	International Network of People Who Use Illicit substances
CDA:	Central Drug Authority
NIDA:	National Institute of Drug Abuse
CNS:	Central nervous system
HIV:	Human immunodeficiency virus

ABSTRACT

“Drug addiction has reached epidemic levels across the globe with approximately 247 million drug users worldwide” (World Drug Report, 2016).

Recently, the World Health Organization (WHO) (2017) uncovered that approximately 15.3 million people have been diagnosed with drug use disorders caused by the use and abuse of psychoactive illicit substances. Psychoactive illicit substances directly affect pathways in the brain, thus causing changes in the moods, behaviour, consciousness and overall thought processes of individuals. The use of these illicit substances places substantial economic, mental and health-related burdens on societies all over the world (WHO, 2004:7-10). The South African Community Epidemiology Network on Drug Use report (Dada, Burnhams, Erasmus, Parry, Bhana, Timol, & Fourie, 2017:1-2) found that illicit psychoactive substance use is an ageless social phenomenon. Substance abuse problems have been found to affect the youth and people right into their eighties (South African Community Epidemiology Network on Drug Report, 2017). It was against this backdrop that the current research was constructed. With the aim of investigating psychological and social factors (psychosocial) related to illicit psychoactive substance use in Chatsworth near Durban, South Africa. Data were elicited from 62 respondents who were enrolled in addiction support and therapy programs at ADF. The research took cognizance of the location (i.e., the study area) when examining the psychosocial factors related to psychoactive substance use. Three main theories were used to inform the theoretical framework of this research and in the analysis of the results; Erikson’s stages of psychosocial development, the social bond theory and the social disorganisation theory. Erikson stages of psychosocial development were used to understand the psychological factors, social bond theory was used to understand the social factors and lastly the social disorganisation theory was used when trying to understand the role of the location in psychoactive illicit substance use. The combinations of theories were also used to understand different dimensions of psychoactive illicit substance use. Findings from the research showed that half of the respondents (50%) believed that members of the police were involved with local drug dealers. Key psychosocial findings included; the use of illicit substances in escapism, as a stress-related coping mechanism. In addition findings showed that there was a high percentage of awareness of local dealers. Respondents claimed knowledge of other users in the community as well as awareness of

common psychoactive substances in the community. Respondents indicated that they were influenced to use illicit substances by either family members' or friends' use of illicit substances. This research offers recommendations that speak to the possible use of the cognitive behavioural therapy (CBT), as a coping strategy that could reduce negative emotional responses associated with stress. A further recommendation is for Community organisations such as youth support groups, school counsellors, the community policing forums and community social workers to work collaboratively to provide awareness workshops and support programs.

CONTENTS PAGE

Declaration	i
Dedication	ii
Acknowledgement	iii
Key terms	iv
Abbreviations	vi
Abstract	vii
Contents.....	ix
List of tables, figured and appendices.....	xvii

CHAPTER ONE: INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 Introduction	1
1.2 Rationale for the Study	2
1.3 Chatsworth as the Study Site	5
1.3.1 The Anti-Drug Forum (ADF) as a gatekeeper	6
1.4 Problem Statement	6
1.5 Significance of the Study	9
1.6 Aim	9
1.7 Objectives	10
1.8 Research Hypotheses	11
1.9 Research Instrument	11
1.10 Conclusion.....	11

1.11 Summary of the Structure of the Dissertation	11
--	-----------

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction.....	13
2.2 The Relationship between Drug Addiction and Crime	13
2.3 Drug Categories	14
2.4 Current Context	16
2.5 Policy and its Context	19
2.6 Brief History of Illicit Substance Abuse.....	21
2.7 Recent Trends in Drug Use and Abuse.....	22
2.8 Conceptualizing Addiction	27
2.9 Understanding Addiction from a Behavioural Economics Perspective.....	29
2.10 Criminological View of Substance Abuse.....	31
2.11 The Psychosocial Context of Drug Use and Abuse	33
2.12 Illicit substances and the Brain.....	36
2.12.1 Biochemical and neurobiological processes and structures.....	36
2.12.2 Disorders and drug use.....	44
2.12.2.1 What are substance use disorders?.....	45
2.12.2.2 Substance use and disorders.....	46
2.13 Poly-drug Use	48

2.13.1 Common drug combinations.....	49
2.14 Life Stages and Drug Abuse	50
2.14.1 Adolescence and illicit substances.....	50
2.14.2 Young adults' and adults' use of illicit substances	51
2.15 Conclusion.....	52
 CHAPTER 3: THEORETICAL FRAMEWORK	
3.1 Introduction	54
3.2 Erikson's Stages of Psychosocial Development.....	54
3.2.1 Theory development	55
3.2.2 Erikson's psychosocial theory of development in context	57
3.2.3 A sense of self contributes to intimacy	60
3.2.4 Criticism of Erikson's theory	61
3.3 Hirschi's Social Bond Theory.....	61
3.3.1 Current context of Hirschi's social bond theory.....	62
3.4 Social Disorganisation Theory.....	66
3.4.1 The current context of social organisation versus social disorganisation	68
3.4.2 Partnering the social disorganisation and the social bond theories	73
3.5 Conclusion.....	74

CHAPTER FOUR: RESEARCH METHODOLOGY

4.1 Introduction	75
4.2 Aim, Objectives and Research Hypotheses	75
4.3 Conceptualising the Research and the Research Design	76
4.3.1 Characteristics of an exploratory descriptive research design.....	78
4.4 Sampling of Participants.....	79
4.4.1 Sampling characteristics.....	79
4.5 Research Instrument – Questionnaire.....	81
4.5.1 Characteristics of a questionnaire.....	83
4.5.2 Conceptualisation and operationalisation of measurable components.....	83
4.5.2.1 Conceptualisation.....	83
4.5.2.2 Operationalisation.....	84
4.5.3 Structure of the questionnaire	85
4.5.4 Reliability and validity of the questionnaire	86
4.5.4.1 Reliability.....	86
4.5.4.2 Validity	86
4.6 Research Procedures.....	88
4.6.1 Piloting the questionnaire	88
4.6.2 Data collection.....	89
4.7 Ethical Considerations.....	90
4.8 Conclusion.....	91

CHAPTER FIVE: PRESENTATION, INTERPRETATION AND DISCUSSION OF THE PRIMARY DATA

5.1 Introduction.....	92
5.1.1 Sample size and response.....	93
5.1.2 The research instrument	93
5.2 Section A: Biographical Data	94
5.3 Statistical Frequencies	95
5.3.1 Knowledge of Community Members' Use of Illicit Psychoactive Illicit substances	95
5.3.2 Availability of Illicit Psychoactive Substances in Chatsworth	96
5.3.3 Knowledge of Drug Dealers in the Community	97
5.3.4 Possible Reasons for the Increase in Illicit Substance Use	97
5.3.5 Attitude to the suggestion that Chatsworth is notorious for drug use	98
5.3.6 Use of illicit substances as a coping mechanism.....	99
5.3.7 Family bonding	100
5.3.8 Commonly used illicit substances in Chatsworth	101
5.3.9 Respondents' feelings of self-worth	102
5.3.10 Drug use by the respondents' partners	103
5.3.11 Respondents' friends who used illicit substances.....	104
5.3.12 Respondents' perceptions of visible patrolling police vehicles as deterrence.....	105
5.4 Section B: Analysis.....	105

5.4.1 Cross-tabulations.....	106
5.4.1.1 Cross-tabulation between experimentation with illicit substance use and the statement of Chatsworth being “Notoriously known for drug related problems”	106
5.4.1.2 Cross-tabulation between family communication and the perception of a drug-free community	108
5.4.1.3 Cross-tabulation between individual’s current situation and the knowledge of commonly used illicit substances.....	109
5.4.1.4 Cross-tabulation between illicit substance use as a stress coping mechanism and awareness of dealers in the community.....	111
5.4.1.5 Cross-tabulation between perceived life direction and external perceived confidence.....	113
5.4.1.6 Cross-tabulation between family bonding and opinions on a drug-free community	115
5.4.1.7 Cross-tabulation between where time is most spent and awareness of people using illicit substances in the community.....	116
5.4.1.8 Cross-tabulation between the commonly used drugs and the statement of Chatsworth being “Notoriously known for drug related problems" fairness of the statement	117
5.4.1.9 Cross-tabulation between use of illicit substances for non-medical reasons and commonly used illicit substances in Chatsworth	119
5.4.1.10 Cross-tabulation between family bond and perceived life direction....	120
5.4.1.11 Cross-tabulation between family bonding and family communication	122
5.4.1.12 Cross-tabulation between boredom and the use of illicit substances as a coping mechanism.....	123

5.4.1.13 Cross-tabulation between individuals current situation and awareness of commonly used illicit substances in the neighbourhood.....	125
5.4.1.14 Cross-tabulation between boredom and feelings of worthlessness.....	127
5.4.1.15 Cross-tabulation between escapism and rate of drug use.....	128
5.4.1.16 Cross-tabulation between Work satisfaction and awareness of other users.....	130
5.4.1.17 Cross-tabulation between knowledge of drug dealers in the community and other users	133
5.4.1.18 Cross-tabulation between Perceptions regarding the availability of illicit substances and knowledge of dealers in the community.....	134
5.4.1.19 Cross-tabulation between Drug experimentation and drug use as a means of escape.....	136
5.4.1.21 Overall drug awareness in the Chatsworth community.....	138
5.5 Logistic Regression.....	139
5.5.1 Interpretation of the logistic regression table.....	140
5.6 Synthesis of Analysis.....	145
5.6.1 Environmental and social factors that impact drug use in the Chatsworth area....	145
5.6.2 Psychological risk factors.....	148
5.6.3 Social risk factors.....	151
5.7 Conclusion.....	153
 CHAPTER SIX: LIMITATIONS, RECOMMENDATIONS AND CONCLUSION	
6.1 Introduction.....	153

6.2 Limitations of the Study.....	153
6.3 Recommendations Based on the Research Findings.....	154
6.4 Recommendations for Further Research	158
6.5 Conclusion.....	158
REFERENCES	160

LIST OF TABLES, IMAGES, FIGURES AND APPENDICES

Table 2.1: Common Illicit Substances that Are Available in South Africa

Table 2.2: Categories of Psychoactive Substances

Table 2.3: Neurotransmitters and the illicit substances that Affect Them

Table 3.1: Erikson's Key Stages of Psychosocial Development

Table 3.2: Adolescents' coping mechanisms with reference to Erikson's fifth stage

Table 3.3: Hirschi's Four Dimensions of the Social Bond

Table 4.1: Participant Demographics

Table 5.2: Drug experimentation and statement of Chatsworth, "Notoriously known for drug related problems"

Table 5.3: Family Communication and a Drug-Free Society

Table 5.4: Individuals Current Situation and Commonly Used Illicit substances

Table 5.5: Coping with Stress and Awareness of Drug Dealers in the Community

Table 5.6: Perceived life direction versus perceived confidence

Table 5.7: Family Bonding and a Drug-Free Society

Table 5.8: Where Time is most spent and Awareness of Drug Use in the Community

Table 5.9: Commonly used Drug and Respondents' Perception of the fairness of Chatsworth "Notoriously known for drug related problems"

Table 5.10: Illicit substances Used for Non-Medical Purposes and the Most Commonly Used Illicit substances

Table 5.11: Family bond and Perceived life direction

Table 5.12: Family Bonds and Communication within the Family

Table 5.13: Boredom and the Use of Illicit substances as a Coping Mechanism

Table 5.14: Individual's current situation and Commonly Used Illicit substances in Chatsworth

Table 5.15: Respondents' response to boredom and feelings of worthlessness

Table 5.16: Escapism and Rate of Drug Use

Table 5.17: Work Satisfaction and Awareness of Other Drug Users

Table 5.18: Knowledge of Drug Dealers and other users in the community

Table 5.19: Perceptions regarding the Availability of Illicit substances and Knowledge of Drug Dealers in the Community

Table 5.20: Drug Experimentation and Escapism

Table 5.21: Drug Awareness in Chatsworth

Table 5.22: Logistic Regression Table

Image 1: Brain scan of different addiction activities

Image 2: Brain scan of the difference in dopamine levels and addictions

Image 3: Healthy brain vs drug user brain

Figure 1.1: Map of Chatsworth within the Durban Area

Figure 3.2: Extended Causal model of the Social Disorganization Theory

Figure 3.3: The centric zone model

Figure 5.1: Awareness of Illicit Psychoactive Drug Use in the Community

Figure 5.2: Perceptions of the Availability of Illicit Psychoactive Substances in Chatsworth

Figure 5.3: Knowledge of Drug Dealers in the Community

Figure 5.4: Reasons for the Increase in Illicit Substance Use

Figure 5.5: Attitude towards the Suggestion that Chatsworth is Notorious for Drug Use

Figure 5.6: Use of Illicit Substances as a Coping Mechanism

Figure 5.7: Respondents' Ties with Their Families

Figure 5.8: Commonly Used Illicit Substances in Chatsworth

Figure 5.9: Respondents' Feelings of Self-worth

Figure 5.10: Drug Use by the Respondents' Partners

Figure 5.11: Respondents' Friends Who Used Illicit Substances

Figure 5.12: Respondents' perceptions of visible patrolling police vehicles as a deterrence method

Appendix 1: Ethical approval letter

Appendix 2: Gatekeeper's letter

Appendix 3: Informed consent documentation – Parents

Appendix 4: Informed consent documentation – Persons under 17 years of age and older than 18

Appendix 5: Questionnaire

Appendix 6: Classification table

CHAPTER ONE

INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 Introduction

Illicit psychoactive substance use and abuse have been identified as monumental social problems in South Africa. These problems directly affect adolescents due to their susceptibility and the high risk associated with their vulnerability (Mokoena, 2012:3). It is of importance to note that by legal definition, illicit means “illegal, having direct conflict with legislation” (Stevenson, 2010:871). Therefore, the use and abuse of illicit substances are in direct conflict with the law. Users and abusers thus engage in deviant and anti-social behaviours that digress from the activities of members of the larger, law-abiding society. From a legal perspective, the magnitude of the drug use situation is difficult to deal with effectively. With large numbers of increasing users falling into addiction, a whirlwind of different problems is created for societies and the nation as a whole. Addiction is characterized by “...an impaired ability to control drug use and a progressive course with repeated heavy drug use, leading to the development of tolerance to the effects of illicit substances [which in turn] lead[s] to withdrawal symptoms” (Carter, Hall, Capps & Daglish, 2009:13). This means that increasingly larger percentages of people need medical attention for the use and abuse of illicit substances. Moreover, not only does drug use affect the overall health of users, but it adds to the rates of criminal activity in most areas. It is a well-known fact that drug users and addicts engage in unlawful activities to maintain their addiction. The effects of psychoactive substances can be so damaging that everything else in an addict’s life begins to lose priority and they are willing to go to any length to obtain the substance, even if it includes putting their lives at risk. According to Casavant and Collin (2001:1), illicit substances and crime are viewed as a “complex relationship”. Logan (2000:12) added that illegal drug use is ‘almost automatically’ associated with criminal behaviour. However, they also note that sociodemographic, socioeconomic and geographical aspects are not always fully taken into consideration when the plight of drug users is examined.

According to Hoffman (2000:35), drug-related crimes can be split into three main categories, namely: “Drug-defined crimes such as the possession, use, or sale of controlled substances which

violate drug laws; crimes committed by drug users to get money to buy more illicit substances, or crimes committed by persons under the influence of illicit substances; [and] organized criminal activities such as money laundering and political corruption in support of the drug trade”.

It is important to understand that possession of any illegal substance, even the smoking of marijuana that does not directly belong to the smoker, is a criminal activity. (New marijuana legislation in South Africa will be addressed later in the chapter). These actions exacerbate overall drug-related criminal activities that occur in any particular area.

Dadge (2017) affirms that close to 190 000 deaths are caused by psychoactive illicit substances each year. However, the extent of the devastation caused by psychoactive substances does not end there, as illicit substances cause highly damaging health consequences, mainly in the form of the spread of HIV infection, hepatitis, and tuberculosis. Drug use directly affects the mental health of users and abusers. Illicit drug trafficking allows money laundering to flourish and corruption, the great enabler of organized crime, is rife throughout the drug supply chain (Dadge, 2017). Illicit substance abuse is undoubtedly a multifaceted phenomenon that affects many people both directly and indirectly, adding to the overall incursion of criminal activity into the South African society (UNODC, 2017). Singh and Bhoola (2017:59) corroborate this latter statement by arguing that the world “is replete with instances of official, police and community complicity in illicit substances and crime. Over the last five years instances of narcotics trafficking and its escalation globally serve as continuous reminders about the almost omnipresent reality of the drug scourge”.

1.2 Rationale for the Study

In South Africa, the illicit substance abuse problem has been escalating relatively unchecked with a current experimentation age of as low as 12 years of age (Community Epidemiology Network on Drug Use report, 2017). With signs of the age of drug users decreasing, there is great cause for concern and thus a need to understand current illicit psychoactive substance abuse patterns that are rife. According to SACENDU (2017), “the age of patients undergoing treatment in Gauteng ranged from 9 to 82, [and] the proportion of patients aged 10 to 19 increased to 29 per cent”. A matter of grave concern is that illicit substance use and trafficking are routes that

are often travelled by people who are socioeconomically disadvantaged. In this context, Singh and Bhoola (2017:50) state that drug use “does not only have the capacity to draw in large segments of the employed and unemployed members of society, but it has a direct impact upon the broader development goals of a country”. As far back as 2009, Maithya (2009:15) found that the control of the illegal supply and demand of illicit substances is a multi-billion rand industry, and therefore impedes the economic growth of the country. It also creates a less productive youth, which affects the productivity of the workforce directly. The Ministerial Council on Drug Strategy (2006) found that drug abuse, inclusive of tobacco smoking and alcohol consumption, inflicts considerable expenditure on various parties such as the user, the family of the user, taxpayers, the community, and the overall national economy.

In the quest to understand illicit substance abuse in a particular country, the link between politics, drug charges and prosecutions can be considered an anomaly in some countries, of which South Africa is one. For example, Dintwe (2017) refers to the fact that the wife of the South African Minister of Intelligence and State Security was tried and convicted for her role in drug smuggling and the use of “drug-mules” to import illicit substances into the country. This lady is currently serving a 12 year sentence. Given the evidence of the complicity of high ranking officials in drug trafficking, it is difficult to imagine that our country’s citizens share a common vision of eventually reaching a “drug-free Utopia”, as envisioned by the NDMP (2013-2017). Instead, the illicit substance pandemic continues to grow at an alarming rate, with an ever-changing market and the constant evolution of substances, each being more injurious than the last. Its wide prevalence has led a local politician to publically announce that up to forty per cent (40%) of learners in schools are either using or selling illicit substances (Singh & Bhoola, 2017). Consequently, the extent and seriousness of the drug scourge in Durban “is exemplified by a broad based call from politicians, educators, community leaders and learners” for its eradication (Singh & Bhoola, 2017:57).

Currently, what is most worrying about illegal substance abuse is the almost normalized context in which it exists and flourishes in some South African neighbourhoods and within certain social groups. The fact that it is illegal to be in possession of and use certain substances seems to evade the conscience of many who indulge in this practice, and accessibility plays a vital role in the progression of this phenomenon. Although people can face legal prosecution, the number of

users and dealers seems to be increasing steadily. Many scholars are under the impression that the decriminalisation of substances could lead to a decrease in substance related offenses. Countries such as Portugal are a case in point. For example, Aleem (2015) states that, after many years of waging war against illicit substances and using many measures, Portugal is doing far better than it was before decriminalisation. The most notable consequence is that drug use has declined overall among the 15- to 24-year-old population group, which is the group that is most at risk of initiating drug use. This is a huge step forward when it comes to understanding and combating adolescent drug use (Aleem, 2015:1). Other countries to join the decriminalisation approach include Australia, the Netherlands, and the Czech Republic. Not only has decriminalisation decreased drug use statistics in these countries, but it also brought with it a decrease in drug related criminality (The Influence, 2016:1). Recently, South Africa made its own attempt at a form of decriminalisation when the Western Cape High Court declared that it is an infringement to ban the use of dagga (i.e., marijuana) by adults in private homes. This implies that the possession, cultivation and use of dagga are permitted at home for private use. However, the application of this ruling is still in its infancy as it was passed only in March 2017. It is surmised that the effects of this ruling will only be fully understood once more time has passed (Powell, 2017; Writer, 2017).

It is, however, important to note that progression in the legal context of substance use does not decrease the detrimental effects of substance abuse at all. The effects of substance abuse spread far and wide, affecting societies, families, environments and, most importantly, the overall well-being and functioning of the user. It is in the context of the devastating effects of drug abuse that the present research was devised. The study focused on the psychological and social consequences that devastate communities, and hence the psychosocial risk factors that impact a specified community were analysed. Substance abuse undoubtedly affects everyone, but the overall impact is unevenly spread amongst different communities and social groups, leaving some areas more devastated by its consequences than others. One such area that was identified as being gravely affected by illicit drug trafficking and use, and therefore worth researching, was Chatsworth. The research focused on analysing the psychosocial risk factors of illicit drug use among a select group of drug users in Chatsworth, which is a former township and residential area near Durban in KwaZulu-Natal, South Africa.

1.3 Chatsworth as the Study Site



Figure 1.1: Map of Chatsworth within the Durban Area

Source: Google Earth

Chatsworth is a historically Indian residential area. It is located in Durban, some 14 km south-west of the city centre in the Umhlatuzana River Valley north of Umlazi. Initially, its residents comprised mainly poor, working class Indian people whose culture was central to Durban's identity. The establishment of Chatsworth was a direct result of the Group Areas Act of the apartheid era (SAHO, 2013).

Illicit substances have always been part of Chatsworth's history. The first visible effects of the drug problem in Chatsworth were found in the impoverished socio-economic landscape of the community and the fact that this community was prevented from reaching its full potential (Desai, 2000). More broadly speaking, a heavy burden is placed on society and the health care system, the costs impacting the criminal justice system, the costs associated with decreased productivity in the workplace, increased HIV/AIDS transmission, and domestic turmoil (Vahed, 2012). The SAPS Strategic Plan for 2010-2014 identified murder and drug-related crimes as the most significant crime challenges in Chatsworth. Illicit substances and related issues have been identified as major past and present problems in Chatsworth (SAPS, 2010; 2014).

It was against this backdrop that the current research was conducted. It explored the extent of drug use in units in Chatsworth by investigating the most commonly used illicit substances and the areas in which they were popular. Focus was also given to the type of user in the areas under investigation. The data were utilised to assist the researcher in understanding the prevalence and trends of drug use and abuse in certain parts of Chatsworth. The psychological impacts of drug abuse were also illuminated, which elicited information that may facilitate the formulation of drug specific treatments at rehabilitation facilities in Chatsworth.

1.3.1 The Anti-Drug Forum (ADF) as a gatekeeper

The Chatsworth Anti-Drug Forum (ADF) is a non-governmental organisation (NGO) run by volunteers and it offers counselling and medical treatment to drug users. It was established in April 2005 at the Chatsworth Youth Centre. The Forum works with a number of rehabilitation centres as it offers a day clinic only. However, it has also developed its own treatment model for rehabilitation, which it hopes can be replicated elsewhere. When asked about the addictive nature of “sugars”, the co-ordinator of the ADF, Sam Pillay, said that “the relapse rate for addicts who go into rehab is very high because of the nature and prevalence of the drug” (Gounden, 2006). Their main objective is to assist the Community in dealing with substance abuse awareness, prevention, and rehabilitation. According to the ADF (2016), “approximately eighty percent of the crime in Chatsworth, Shallcross and surrounding areas is substance related”.

1.4 Problem Statement

In 2015, it was estimated that approximately a quarter of a billion people worldwide used illicit substances habitually (World drug report, 2017). Of these, around 29.5 million people – or 0.6 per cent of the global adult population – were engaged in problematic use and suffered from drug use disorders, including dependence. Opioids were identified the most harmful drug type “and accounted for 70 per cent of the negative health impact associated with drug use disorders worldwide” (UNODC, 2015).

UNODC (2015) also found that there was a rapid increase in opium production and that the cocaine market was flourishing. It was highlighted that, in 2016, opium production had increased by one third when compared with the previous year. There was also a notable expansion of thirty percent in the cocaine market between 2013 and 2015. Both increases were attributed to the

increase in the cultivation of opioids in both Afghanistan and Columbia. It is interesting to note that heroin, an opioid drug that is made from the poppy plant, and heroin derivate illicit substances are among the most illicit substances that cause the most devastating effects in South Africa. These illicit substances reach South Africa via the southern heroin trafficking route originating in Afghanistan (Bruwer, 2017). Brownfield (2011:554) notes that South Africa is a major transit area for cocaine from South America and for heroin from East Asia and Afghanistan. He also notes that a considerable percentage of cocaine moves directly from Brazil to South Africa, and that the former country is one of the largest producers of cannabis. According to South Africa's Central Drug Authority (2016), an estimated nine percent of the population uses cannabis. South Africa may also be the world's largest consumer of mandrax, which is a variant of methaqualone, an amphetamine-type stimulant. Mandrax is a preferred drug of abuse in South Africa and is frequently used in combination with cannabis. It is smuggled into South Africa primarily from China and India. South Africa is also a significant transit country for forerunner chemicals (Brownfield, 2010:554). The magnitude of the South African drug problem is highlighted in a statement by Dr. David Bayever of South Africa's Central Drug Authority (CDA, 2011): "South Africa is among the top 10 narcotics and alcohol abusers in the world; this is twice that of the world norm". According to Dr. Bayever, at least 15 per cent of South Africans have a drug problem and this figure is expected to rise (Bhardwaj, 2016). According to the latter author, a member of the South African Medical Research Council proposed that 5.7 million (11%) of South Africa's population will experience some form of drug-related addiction or disorder in their lifetime. UNODC (2014) found that in South Africa, 1 out of every 14 people is a regular user of some drug or another. This fact partly demonstrates the dire need for understanding the dynamics of illicit substance addiction and use.

Further validation for the decision to conduct this study was found in the ever-changing nature of the abuse of psychoactive illicit substances, such as the dangerous new trend known as "blue-toothing" which has become popular amongst the economically challenged population in South Africa. This alarming new trend originated in Pretoria in 2017 and involves the dilution of certain illicit substances and injecting the concoction into the veins of the user (Mkhize, 2017). A few minutes later the injected person draws blood out of a vein using the same syringe, and injects the next person to share the drug in their blood stream (Mkhize, 2017). The reasoning behind this practice is mainly to save money while still getting "high". This method is mainly used by

“whoonga”/“nyaope” addicts. (The latter is a heroin derivate drug which will be described in more detail in Chapter two). This paints a grim picture of just how far an addict will go to get a “fix” and sheds light on just how overwhelming illicit substance abuse has become. The medical consequences of this new trend are most devastating and the growing number of people who engage in this practice directly brings into question the risk of transmitting other diseases such as HIV, Hepatitis B and Hepatitis C. Many experts thus caution that this could be the start of a greater pandemic that may be impossible to contain (Mbhele, 2017).

Drug addiction is a worldwide problem. Amongst a plethora of problems, drug addiction and how it should be dealt with “remains a big challenge for law enforcement agencies in South Africa and elsewhere” (Dintwe, 2017:150). The South African Police Service (SAPS) has made numerous attempts to create and implement intervention strategies that address drug dealing, use and addiction. However, even with the adoption of strategies to tackle the different faces of drug use, the overall inadequacies of intervention strategies by law enforcement, the public and private sectors, and civil society have rendered most efforts highly ineffective in a number of countries; South Africa included (Dintwe, 2017:150).

Illicit substance addiction affects different areas in varying magnitudes, confirming that this phenomenon needs to be investigated and researched against the backdrop of the society in which it thrives. The study area that was selected for this study was Chatsworth, Durban. Drug-related statistics for the Chatsworth area revealed that drug-related crimes escalated from 449 in April 2004 to 1 060 in March 2011. Drug-related criminal behaviour, according to local and national members of the SAPS, has a serious negative impact on school learners, the youth and communities at large (Gopal & Marimuthu, 2014:27). However, there is a paucity of updated and detailed statistics of the prevalence of drug use in South Africa. Dada (2013) and NDMP (2013-2017) affirm that accurate, comprehensive, up to date data that define the extent and the nature of drug abuse as well as the consequences of drug usage are not available or are extremely limited. However, there is an unmistakable escalation in drug related problems, which highlights the need for research that can give direction to the strategies that may be employed to curb this devastating problem in South Africa in general and Chatsworth in particular.

In the post-apartheid period of transformation in South Africa after 1994, there has been a marked increase in informal settlements. This proliferation of informal settlements is

accompanied by many societal dilemmas, such as poor infrastructure, a lack of education, minimal water and electricity supplies and a lack of sanitation (SAHO, 2016). The mushrooming of these informal settlements means that there are far more inhabitants in an area than what service providers can cater for in terms of basic amenities. In Durban, for instance, schools in predominately Indian and African residential areas effectively demonstrate a significant socioeconomic divide as they have to serve both shanty town and more formal residential dwellers. This raises many concerns about the safety of the youth and what they may or may not be exposed to. One of the main problems is the growing abuse of illicit psychoactive substances on school premises and the opportunities for peddlers and drug dealers to turn these particular sites into markets for existing and potential addicts, which in turn creates “a constant income pool” for drug traffickers (Pillay, 1990:11). Unfortunately, obtaining information directly from the peddlers or their distributors on these issues is virtually impossible, unless one is able to strategically engage in an exercise of undercover participant observation.

1.5 Significance of the Study

Since the advent of the democratic dispensation in South Africa in 1994, the SAPS has been expected to play a pivotal role in policing societal challenges such as illicit drug use among adolescents. Police officials, as gatekeepers of the Criminal Justice System (CJS) process, are also expected to play a crucial role in enforcing the law and mobilising local key role-players towards building capacity to tackle the scourge of illicit drug usage among the youth in South Africa, despite visible contradictions. This remains a demanding and conflicting responsibility that requires deep knowledge of and insight into the factors that sustain both drug peddling and abuse. Evidence continues to reveal that South Africa’s illicit substance abuse problem is on an upward spiral, which clearly demonstrates the need for research to gain in-depth understanding of the persistent psychoactive substance use and abuse phenomenon.

1.6 Aim

Thus the aim of this research was to investigate psychological (intrapersonal) and social (interpersonal) (psychosocial) factors related to psychoactive substance use in select sample in Chatsworth near Durban, South Africa. In achieving this aim, it is envisaged that the study will add to the existing body of knowledge pertaining to illicit psychoactive substance addiction in

Chatsworth. To this end, it focused mainly on psychological and social factors that influence and sustain drug use among Chatsworth residents. An overarching aim was to provide information of a psychosocial nature to the Anti-Drug Forum (ADF) which may help this organisation to design more effective rehabilitation, intervention and prevention programs.

1.7 Objectives

The National Drug Master Plan (NDMP) (2013; 2017) cautions that illicit psychoactive substance use and abuse is a growing problem in many areas in South Africa. Drug abuse leads to various societal, environmental and health issues that are becoming increasingly difficult to curb. The NDMP's ultimate vision of a drug free nation cannot be achieved if the drug problem is not scrutinized through various area-specific lenses to determine the reasons for drug use and abuse. Moreover, such scrutiny needs to illuminate the types of illicit substances being used in specific demographics. To this end, the following objectives were pursued by this study:

- To determine the psychological (intrapersonal) factors that increase vulnerability towards illicit psychoactive drug use
- To determine the social (interpersonal) factors that promote the psychoactive use of illicit substances;
- To identify individual (psychological), family and community structures that may be harnessed to prevent illicit psychoactive substance use.

1.8 Research Hypotheses

With reference to the Chatsworth community, the study hypothesized the following with regards to psychoactive drug use:

- Psychological (intrapersonal) factors that increase vulnerability towards illicit psychoactive drug use;
- Social (interpersonal) factors promote illicit psychoactive drug use;
- Individual (psychological), family and community structures that can be harnessed to prevent illicit psychoactive substance use.

1.9 Research Instrument

A survey questionnaire that was constructed to explore the research hypotheses was utilised to elicit the required data. The sample comprised 62 people living in Chatsworth. Indian and African respondents between the ages of 15 to 45 were purposively selected to participate in the study. A quantitative research design was used to record and evaluate the data.

1.10 Conclusion

The presentation of the research problem was the main objective in this chapter. The discussion elaborated on the psychoactive substance abuse problem that currently exists in South Africa, allowing for insight into the studied dynamic. The location of the research site and reasons for its selection were explained. The aim of the research, the objectives and the hypotheses that gave impetus to the study were also presented.

1.11 Summary of the Structure of the Dissertation

Chapter one: This chapter presents the background to the study by illuminating the research problem in some depth. It also presents the aim, objectives and hypotheses that underpinned the study.

Chapter two presents critical debates and earlier research findings that were accessed by means of scanning the literature landscape. It includes discussions on both international and national perspectives that highlighted the need for continued research in the field under study.

Chapter three elucidates the three main theories that framed this research. Each theory is explained in some depth and the overall relevance of the theories to the study is highlighted.

Chapter four explains the research methodology and the research design. Elements such as units of analysis, sampling size and selection, the research instruments, the data collection procedure and analysis, and the ethical considerations for the research are discussed. The procedures that were followed when collecting the data are also discussed in detail.

Chapter five concentrates on an analysis and interpretation of the data that were collected by means of a questionnaire during a specified data collection period. The data were analysed using SPSS 24.0 software, which is a statistical data processing facility.

Chapter six presents a discussion of the data and illuminates the most prominent findings. It also includes a brief discussion on the limitations that impacted the study. Recommendations emanating from the investigation are offered and elements for future research are highlighted.

This study report is concluded with a list of references and the annexures.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The literature review chapter presents an extensive review of all relevant information that was available and accessible on the topic under investigation. The current drug situation in South Africa, policies pertaining to drug use and abuse, and statistical information will be provided. The realities of addiction and the social and psychological factors related to drug use will also be explored. A section will be dedicated to understanding the neurobiological pathways of the listed illicit substances to allow for a better understanding of the deviant behaviour related to drug use and addiction. Understanding the biological effects of the various illicit substances is imperative for an in-depth understanding of the extent of drug use in South Africa in general, but in Chatsworth in particular. Without understanding the basics, one cannot understand the behaviour of the addict. The consequences of certain drug addictions will also be explored.

2.2 The Relationship between Drug Addiction and Crime

“The drug-crime relationship is...a complex phenomenon. Knowledge about and scholarly works regarding the drug-crime relationship have increased since President Reagan re-popularized the term ‘war on illicit substances’ during the mid-1980s” (Powell, 2001:21). There have been countless correlations between illegal illicit substances and forms of criminal activity that mainly highlight the interchangeable influence that they both share. A common suggestion is that criminal activity and psychoactive substance abuse could be linked to underlying socio-economic and subcultural factors (Shoham, Knepper & Kett, 2010:271). Goldstein (1985) proposes the psychopharmacological theory in the quest to understand the relationship between drug use and crime, arguing that “psychopharmacological violence could directly or indirectly be a result of the biochemical behavioural consequences that come with drug-use”. According to Powell (2011:22), Goldstein also proposes that “...economic-compulsive violence could force addicts to engage in income-generating crimes to obtain money to sustain their drug habits and systemic violence could emerge in the context of drug distribution, control of drug markets, and the process of obtaining illicit substances”.

The drug-crime relationship is a rather fragile one and has been the topic of discussion amongst theorists and researchers for years. This relationship is interdependent, as each component feeds on and thrives off others to survive (Casavant & Collin, 2001). However, an investigation of this relationship was beyond the aim of this research study. Rather, the focus was on the use of illicit substances which, from a criminological perspective, is an illegal action. Thus the drug component of the drug-crime relationship was isolated for further investigation. An understanding of illicit drug use can open many doors that will lead towards understanding the drug-crime relationship. Psychoactive substance use and abuse and their biochemical behavioural consequences need to be fully understood before effective and sustainable intervention strategies can be designed in efforts to curb the problem of drug abuse. Thus evaluating the effect that a psychoactive substance has on the mind is instrumental in understanding the behaviour and mental functioning of the user. Considering that trafficking in and the use of illicit substances are illegal acts in South Africa, predictive factors that could indicate the potential for prolonged use play an important role in efforts to deter or curb drug use or to eventually eradicate this devastating phenomenon. A researcher who engages in such a project is thus drawn one step closer to 'fighting the war on illicit substances'.

2.3 Drug Categories

The categorisation of illicit substances is usually based on their effect on the brain and users' mental perception and functioning when using them, but this in no way distinguishes the category between illicit and licit (Hsu, 2015:15). The differentiation usually varies between countries and difficulty in categorisation arises from the potential for abuse and addiction between both sub-groups. Nonetheless, for the purpose of this research, it is important to define licit and illicit substances in terms of South Africa's legislative framework. Licit substances are usually defined as legal substances such as cigarettes, alcohol and prescription medication (Clark, 2013). This means that there is no legal consequence for their possession or use, such as a financial penalty or being criminally charged. Illicit substances, however, are illegal and the possession and use of such illicit substances are in direct conflict with the law, except under certain circumstances. The consequences of the use of illicit substances are generally highly detrimental to one's health within a short space of time, as they lack medical input and are produced outside the prescriptions of the law (Daughton, 2011; Clark,

2013). It should be noted that prescription medication can be abused (NIDA, 2017), but this phenomenon was beyond the scope of this study.

With reference to the above definitions, the current research focused on illicit substance use and abuse in the quest, inter alia, to identify potential psychosocial risk factors that could predispose citizens to drug abuse and addiction. The researcher argues at this point that, by decreasing the number of potential illicit substance users, drug abuse and illegal substance use can be curbed, which will in turn directly decrease the criminological and social impacts of illicit drug use and abuse.

The most commonly abused illicit psychoactive substances are listed in Table 2.1. The information in this table highlights key factors to allow for a better understanding the term ‘illicit drug/s’ that will be used throughout this dissertation.

Table 2.1: Common Illicit Substances that Are Available in South Africa

Name	Psychoactive ingredient	Street names	Form	Use
Marijuana (Cannabis)	Delta-9-Tetrahydrocannabinol (THC)	skyf, zol, green, ganja, hash, weed, cunteen, joint	green buds - dried leaves and flowers (similar to tobacco)	smoked or ingested
Heroin	Opiate - Diacetylmorphine	H, smack, horse, junk, hairy / Harry & Thai, white	brown, white, rose, grey or black powder	injected, smoked, sniffed or snorted
Heroin derivatives: 1) Sugars (heroin + residual cocaine mix)	Diacetylmorphine & Benzoylmethylecgonine	sugars, straws, caps	white/brown powder	heated and vapours inhaled
2) whoonga (heroin + residual cocaine + pesticide)	Diacetylmorphine , Benzoylmethylecgonine and strychnine - rumoured to be in anti-retroviral (ARV) illicit substances – recently proven to be a myth	nyaope or wunga	white powder	added to marijuana or tobacco and smoked
Mandrax (Quaalude)	Methaqualone/ diphenhydramine	white pipe, buttons, cream, gholfsticks, doodies, lizards, press outs, flowers	pill (beige, pink, blue, purple, black, brown or green)	usually crushed and mixed with dagga, then smoked in a dagga pipe
Ecstasy (MDMA)	Methylenedioxyamphetamine	Molly, love-drug, E, pills.	capsule or pill (varies in colour)	ingested

“Tik”	Methamphetamine	ice, crank, speed, frost, crystal, straw chalk, tjoef, glass.	crystalline powder (white)	smoked, snorted, injected, mixed with food and ingested
Codeine	Opioid analgesic (related to morphine)	Syrup, purple drank & cody	Tablets or syrup form (purple)	mixed with carbonated drinks or alcohol or directly ingested
Rohypnol	Flunitrazepam	roofies, rosshies, blue boys	elongated pill – blue or green in colour	taken orally, usually mixed with alcohol or energy drinks
Cocaine	Benzoylmethylecgonine	coke, bags, snow, nose candy	white powder	snorted, smoked
CAT (Methcathinone)	Cathinone	stroof, kat, cadillac express, wonder star, wild cat, the C, gagers.	white or off-white powder; capsules or pressed into tablets, but most often as powder	snorted, but can be smoked, injected, or taken orally

Sources: Adapted from: Van Heerden, Grimsrud, Seedat, Myer, Williams & Stein (2009); Crous (2003); NIDA (2016, 2018); Hitting the streets – SA’s top illicit substances (2016); Garnett & Garnett (2017).

2.4 Current Context

“Narcotics addiction is both a psychophysiological state and a social category. It is a product of behaviour learned within a social context and cannot be adequately understood apart from that context” (Clausen, 1957:34).

South Africa has a serious drug abuse problem, which is reportedly twice that of the world norm (CDA, 2011). Statistics released by the United Nations World Drug Report (2014) indicate that 7.06% of South Africa’s population abuses narcotics of some kind, and one in every 14 people are regular users. In 2015, about a quarter of a million people used illicit substances (UNODC, 2014:2; UNODC, 2015). Historically, locally produced substances such as alcohol and cannabis have influenced drug use in South Africa (Van Heerden et al., 2009:358). This was a consequence of South Africa’s relative isolation from the rest of the world during the apartheid era. However, South Africa’s political transformation, which resulted in a new democratically elected government, brought an end to the country’s socio-economic and political isolation. This led to the reopening of various global links and trades, which unfortunately included increased

trade in illicit substances, drug trafficking, and escalating drug use (UNODCP, 1999; Van Heerden et al., 2009:359). According to UNODCP (1999:1), “South Africa’s geographical location and its international trade links with countries in Asia, Latin America, Western Europe and North America made it an attractive drug transit country”. However, drug use traditions have existed for many years in South Africa. According to Wright (1999), the first drug legislation pertaining to marijuana was promulgated by the authorities in 1928. Marijuana was commonly used by the African population before spreading to other race groups. The UNODCP (1999) also notes that many clandestine laboratories where methaqualone (mandrax) was manufactured mushroomed in the apartheid era. Methaqualone played an important role in the history of psychoactive substance abuse in South Africa, as it was the second most abused drug after marijuana. However, once it was recognised for its potential for abuse and addiction, it was removed from the legal market “and classified as a prohibited dependence-producing drug and listed in part I of the schedule of the South African law on narcotics (Act 41 of 1971)” (UNODCP, 1999; Wright, 1991). Mandrax had been used predominantly by the Indian community before it became popular among other race groups, and particularly in mixed race communities (Khan, 2015).

One of South Africa’s most threatening social problems is the use and abuse of psychoactive substances by adolescents. Young people who use illicit substances are at great risk because of their vulnerability and their curiosity, which leads them to experiment with illicit substances (Mokoena, 2012:3). However, adults are also extremely susceptible to drug abuse, especially if drug use started during their adolescent years (Office of the National Drug Control Policy, 2004:5). The fact that both young people and adults are at risk highlights the need to understand drug use in the context of the psychological influences that impact both; individuals and the community as well as their interaction with social aspects related to drug use. To this end, the researcher adopted a psychosocial approach as the preferred method for understanding this interaction. The research thus explored a combination of psychological and social interaction to understand the phenomenon under investigation (Pillay, 1993:76). Miller and Palacios (2015:69) explain the psychosocial approach as the “development of modes of thinking and acting [that are] capable of recognizing that both social issues and problems have psychological dimensions and that, symmetrically, psychological questions need to be asked”. This approach is not to be understood as simply adding one approach to another, but rather the realisation that individuals

cannot be reduced simply to conform to the group identities from which they originate. There also needs to be an emphasis on the human agency (Bandura, 1999:214), as this promotes a more holistic understanding of the psychosocial element of the abuse of illicit substances.

Substance abuse by individuals has been linked to depression, violent behaviour and various forms of crime, including many accidental and premeditated injuries (Soulcity, 2016). According to Pretorius, Van den berg and Louw (2003), interpersonal social factors that influence drug use are peers, social groups, parents, family issues, and environmental factors. The list by Pretorius et al. (2003) includes environmental factors such as the social environment, drug availability, recreational facilities, and leisure time. In addition, Tyas and Pederson (1998) suggest that sociodemographic factors such as age, level of education, ethnicity and employment status influence deviant behaviour. Both Tyas and Pederson (1998) and Pretorius et al. (2008) identify psychological factors and personality traits such as extraversion and negative emotions such as a low self-esteem, depression, emotional pain, lack of self-appraisal, stress, and a lack of overall intrinsic knowledge (or self-knowledge) as causal factors for substance abuse. Moreover, a psychological predisposition to drug use can have a strong influence in both the adolescent years and in early to late adulthood (Office of National Drug Control Policy, 2004:5). Pillay (1993) believes that hopelessness and aimlessness are factors that may encourage drug use. These factors can affect adults and adolescents when they harbour a feeling of “being lost”. In some cases, more mature adults may feel trapped and stuck in their current position, both at home and at work. This is most commonly known as the midlife crisis when adults have a fear of losing their youth. Metcalf (2012) proposes that the midlife crisis phenomenon is often linked to depression and loss of control. For example, if an individual has to deal with many changes at a certain time, coupled with the fear that s/he is running out of time, this creates a ‘crisis’ situation for that particular individual. This can be experienced by both males and females. The “empty nest” syndrome also affects adults during the midlife crisis stage, but it is known to affect women more than men. This is a stage of sadness and depression for a parent as their child or children leave home either to begin college, to work or to get married (Shakya, 2009). The empty nest syndrome reportedly encourages increased drinking and self-medicating in females (Everett, 2014). Spencer (2015) argues that empty nest syndrome mothers are Britain’s worst problem drinkers. This highlights the fact that behavioural choices have a psychological impact on people.

Overall, drug abuse affects society, causing it to lose the productivity and energies of people affected by substance abuse (Stein et al., 2009:365; Soulcity, 2016). Gopal and Collings (2014:2) also hold this view by stating that the “prevalence rates for substance abuse in South Africa are more than double the world average”. In South Africa, drug-related crimes increased from 52 900 in 2004 (April) to 151 000 in 2011 (March), which marked an increase of 140 percent (SAPS, 2011). Statistics revealed that crimes related to illicit substances increased from 449 in 2004 (April) 2004 to 1 060 in 2011 (March) in the Chatsworth area in Durban (Gopal & Marimuthu, 2014). Moreover, drug-related criminal behaviour, according to local and national members of the SAPS, has a serious negative impact on both primary and secondary schools learners and is prevalent among the youth in general and in virtually all communities (Gopal & Marimuthu, 2014:27). Although updated detailed statistics for South Africa on the prevalence of drug use are not easy to access, what is known is that there is definitely a rise in drug-related problems. Soulcity (2016) found that, at the macro level, prevention and treatment costs associated with drug abuse are phenomenal. Huge amounts of money are being used to create prevention and awareness programmes on a large scale, yet their impact to deter drug abuse is barely noticeable. The same occurs with treatment, as many people start the process only to relapse and fall into addiction all over again (Sinha, 2011).

2.5 Policy and its Context

In 1990, the United Nations General Assembly established the United Nations Drug Control Programme (UNDCP). This programme was initiated because of the need for an organization that would focus on and promote much needed international action against the production, trafficking and abuse of illicit substances. The establishment of the UNDCP bears testimony to the determination of various governments globally to seize the opportunity to work towards the eradication of this scourge (Maithya, 2009:15). According to UNODC (2015), it is estimated “that almost a quarter of a billion people between the ages of 15 and 64 years used an illicit drug in 2013”. The immensity of the drug problem worldwide becomes even more significant when it is borne in mind that for every ten drug users, more than one can be identified as a problem user who suffers either from drug use disorders or drug dependence/addiction (UNODC, 2015). In fact, around 27 million people – almost the entire population of a country

the size of Malaysia – have been categorised as problem drug users, which is undoubtedly a cause for grave concern (UNODC, 2015).

In the South African context, national statistics revealed that, in 2015/16, as many as 259 165 drug-related offences were recorded by the SAPS, which was a decrease of 2.9% from the previous period. This means that 471.1 crimes were recorded for every 100 000 people in the country. The latter figure was down from 492.9 in 2014/15 (Factsheet, 2016). Statistics for persons who were admitted to care centres for drug abuse were recorded for the period of 2008–2010. The highest number of admissions occurred in the Western Cape (17 820), whilst the Free State had the lowest number (3 527). In KwaZulu-Natal, 7 459 people were admitted into treatment centres during the latter three-year period. Dada (2013) maintains that methamphetamine was the drug of choice in the Western Cape, but that the prevalence of this drug in other provinces is on the increase.

World Drug Reports (2006; 2008; 2009) identify five “success indicators” for addressing the drug abuse problem. These indicators and their trends have been used periodically to measure the success rate of combating the illicit drug problem in specific areas (United Nations Office on Illicit substances and Crime, 2009). These indicators are: drug use as described by the total number of persons using illicit substances; the types of illicit substances used; drug production (i.e., knowledge of where the drug is cultivated and produced); drug prices; and the demand for treatment. Knowledge of all these factors sheds light on the reality of the drug problem as it then becomes possible to gauge the exact number of people who have requested help. Newcomb, Maddahian and Bentler (1986:525) suggest that drug use amongst adolescents and young adults has become a serious issue that needs urgent attention:

“[Drug use] has become widespread during the past 25 years, with many characterizing the increase as [being] of epidemic proportions. Although it is not too surprising that many teenagers have experimented at some time with various illicit substances, problems begin to arise when this experimental use becomes regular use or abuse.”

Since this statement in 1986, the only prominent change in the drug scene has been an undeniable increase in the overall use of illicit substances and the constant evolution and invention of increasingly harmful and often fatal illicit substances. Degenhardt and Hall

(2012) note that socioeconomic background is an important factor in understanding drug use as people from more disadvantaged backgrounds are increasingly at risk of engaging in illicit drug use.

2.6 Brief History of Illicit Substance Abuse

Illicit substance abuse has been a dominant phenomenon in social behaviour throughout history; in fact, it can be said that it is as old as civilisation itself. The earliest documented use of illicit substances can be dated as far back as 5 000 B.C. Lindesmith (2008:207) notes that the Sumerians used opium “which is suggested by the fact that they had an ideogram for it which has been translated as HUL, meaning ‘joy’ or ‘rejoicing’.” McGrath (1970:1) also states that “the earliest traces of mind-altering illicit substances, especially opium, go back to the days of the Assyrians, Sumerians and Egyptians”. He also notes that the Greeks left written evidence that the opium poppy was known and used before the birth of Christ. It is also noted by Willis (1973:38) that “the danger of users becoming dependent on opium was actually recognized by the ancient Romans, who referred to the hazards of chronic opium-taking and the ill-effects suffered by the taker when the person was deprived of it”. Fort (1969:14) reports that the earliest historical record of the production of alcohol was found on Egyptian papyrus where a brewery is described in 3 500 B.C.E. Crafts and Timanus (1911:5) found mention of taverns in early Hieroglyphic paintings that dated as far back as 2 000 B.C.E. According to Egyptian mythology, the Egyptian god Osiris, father of the god Horus, bestowed the gift of culture onto humanity and taught them agriculture as well as the skill of brewing beer (Pinch, 2004). It is also interesting to note that Helen Strudwick, an Egyptologist, was able to determine that women were the first to brew beer (2006:408).

It was around 1822 that history started recording opium as a popular drug, especially after the publication of Thomas De Quincey’s *Confessions of an English Opium Eater*. He put forward a very important notion which was that the opium habit, like any other habit, must be learned, and this offered insight into understanding opium addiction (INPUD, 2015). Sigmund Freud, a physician and the father of psychoanalysis whose theories still contribute to the basis of human understanding, is believed to have been suffering from depression. By 1844, when cocaine was isolated in its pure form, Sigmund Freud allegedly treated his depression with cocaine. Earlier, many people failed to realise how common psychoactive substance use was before the

consequences of the use of such substances were fully understood. For example, the famous cool drink, Coca-Cola, contained cocaine. John Pemberton created this well-known drink in 1885 for medicinal purposes, and therefore it contained cocaine (Bellum, 2012). Later the company was bought by Dr John Smith who marketed this product as a popular drink. It is interesting to note that the drink contained cocaine for many more years; it was only in 1929 that cocaine had to be removed from the recipe due to legislative demand (Hamblin, 2013). Years passed, and with the progression of a growing understanding of illicit substances and their effects came the realisation of their extreme adverse consequences. Thus in 1971 President Nixon declared in a message to Congress that “America’s Public Enemy No. 1 is drug abuse”, and he called for the creation of a Special Action Office of Drug Abuse Prevention (INPUD, 2015).

Du Toit (1977) argues that the historical use of cannabis, also known as marijuana, can be traced back to the various rituals and ceremonies performed by the ancient Hindus in India. According to Du Toit (1977:240):

“...cannabis use is chiefly associated with the worship of Siva, the great God of the Hindu trinity, [with which] the hemp plant and perhaps more especially 'ganja' is associated. The hemp plant is popularly believed to have been a great favourite of Siva and it was extensively used in the exercise of religious practices connected with this form of worship.”

The historical use of illicit substances merits a much more comprehensive discussion, but for the purposes of the present research it was deemed necessary to look at it only briefly. Contemporary society, which is far more technologically inclined and highly industrialized, has given rise to the identification and development of more powerful and addictive substances. This raises concerns locally and globally (Pillay, 1990:17). Between then and now, the understanding of illicit substances has taken many different forms and has paved the way for various facets of research.

2.7 Recent Trends in Drug Use and Abuse

Neurobiological drug research began in the early 1970s with the discovery of opioid receptors. “The opioid system controls pain, reward and addictive behaviours” (Merrer, Becker, Befort & Kieffer, 2007:1). Hence, “the discovery of proteins called opiate receptors in the brain showed how morphine and heroin affect the body and established an important new method for studying

illicit substances” (Ariniello, 1994:1). Since then, neurobiological drug research has come a long way and has greatly influenced our overall understanding of illicit substances and the human brain, allowing for further understanding of the consequential effects of drug use on the human brain and the possible psychological impact of illicit substances. Mdukwe (2013:174) defines drug addiction as “a product of prolonged use due to factors like pleasure seeking, stress or pain relief, social or educational disparities, peer pressure, and experimentation”, to name a few. Research has shown that prolonged substance abuse disrupts the stress and reward systems of the brain. Numerous studies have identified comorbidity between psychological distress and substance abuse. True, Heath, Scherrer, Waterman, Goldberg, Lin, Eisen, Lyons, and Tsuang (1997:1 277) and Madukwe (2013:174) assert that genetics plays an important role in initiating smoking, alcohol abuse, and the abuse of psychoactive substances, while Green, Zebrak, Robertson, Fothergill and Ensimerger (2012) affirm that substance use and psychological problems, due to their high prevalence, are a major cause for public health concern.

Also alarming is the co-occurrence of substance abuse and psychological issues followed by the clustering of substance abuse in socio-economically disadvantaged populations (Green et al., 2012; Degenhardt & Hall, 2012). Weiss (2015: n.p) believes that people who consistently abuse substances “do so not because they’re looking to connect and engage; rather, they do so to escape from the discomfort of life and relationships”. He also asserts that there is a strong correlation between psychological issues such as disorders, personality discrepancies and childhood trauma and addiction. Psychological factors, just like social factors, greatly influence psychoactive substance use. Factors like anxiety or childhood sexual abuse can cause intense feelings of guilt and shame in the individual, which could lead to isolation and possibly antisocial behaviour (Weiss, 2015). This emphasizes the indispensable need to comprehend and acknowledge past traumas in an addict and bears immense significance in understanding the psychology of the user. It is important to note that the factors that predispose adolescents towards drug use can also be the same factors that encourage drug abuse by adults. Mokoena (2012:2) posits that the predisposition towards psychoactive substance use can be understood as the sum of different rates and frequencies of multiple factors engaging with one another.

Moreover, the impact of alcohol and substance abuse “continues to ravage families, communities and society [and] the youth of South Africa are particularly hard hit due to increases in the

harmful use of alcohol and the use and abuse of illicit substances” (NDMP, 2013–2017). A study that was conducted by Tshitangano and Tosin (2016) on substance abuse amongst secondary school students in a rural setting in South Africa found that most of the learners had started abusing illicit substances between the ages of 15 to 20. The majority of the learners who were abusing substances were male. It was this fact that, inter alia, led to the formulation of South Africa’s National Drug Master Plan (NDMP, 2013–2017) by the Central Drug Authority (CDA). The latter body was established as an advisory body in terms of the Prevention and Treatment of Drug Dependency Act No. 20 of 1992 as amended, as well as the Prevention of and Treatment for Substance Abuse Act No. 70 of 2008 as amended, and it was approved by Parliament to meet the requirements of international bodies as well as the needs of specific South African communities which sometimes differ from those of other countries (Government Gazette, 2009). The implementation of the NDMP (2013–17) as well as the coordination of all activities associated with the Act is the responsibility of the CDA (Soulcity, 2016).

From a South African perspective, the NDMP of 2013–2017 was established with the intention of helping to realize the goal of a “society free of substance abuse”, which is considered by many as a Utopian dream. A main objective is to give concerted attention to the improvement of the standard of living of the socioeconomically challenged and vulnerable and to develop their skills to enable them to reach their true capabilities. The main outcomes of an assessment of the NDMP of 2006–2011 are described in the NDMP of 2013–2017 and highlight the need for monitoring and evaluation (Public Service Commission of South Africa, 2008). For example, an assessment of the NDMP of 2006–2011 highlighted that the new NDMP should provide “bottom up” solutions instead of the “top down” approach that was being followed. The recommendation was that it should shift from a national approach to a more community-based approach, meaning that solutions should be community-specific instead of trying to employ a “one size fits all” methodology. This was an important point as it highlighted the need to understand a particular phenomenon within a particular group or community of people. This implies that solutions need to come from understanding the problem within a specific habitat, such as the nature of drug use and behaviour in the Chatsworth area, as this would allow for the creation of interventions and solutions that would be specific to this area and address the problems this community is facing. This highlights the need for area-specific drug research.

The NDMP 2013–2017 states that drug abuse is linked to many health-related factors such as the rise in HIV and AIDS, heart disease, cancer, and psychological disorders with a possible dual diagnosis in abusers. It also highlights that abusers are exposed to violent crimes. Their role here, however, is an interchangeable one, as the user could be both a perpetrator and a victim. Abusers are also exposed to issues such as unemployment, conviction, dropping out of school, foetal alcohol syndrome, the possibility of being ostracised, and premature death (NDMP, 2013–2017:2). Greenfield, Back, Lawson and Brady (2010:339) found that, in terms of gender and drug use, males were eight to nine times more likely than females to be abusers of most illicit substances, but that females were more likely to abuse prescription illicit substances than males. The latter authors also found that persons with post matric education were most likely to have used cannabis and that respondents with a low income used significantly more alcohol compared to those with no income. Ramlagan, Peltzer and Matseke (2010:44) could not effectively describe the correlation between education and illicit drug use, but they did find that lower- to middle-income households had a higher prevalence of psychoactive substance use.

Another important factor to acknowledge is the predisposition created by what is known as “gateway illicit substances”. Studies have shown that there is a correlation between the early use of gateway illicit substances such as alcohol and “soft illicit substances” like marijuana to the later use of “hard”, illicit substances like cocaine and heroin (Donovan, 2004:9; Tarter, Vanyukov, Kirisci, Reynolds, & Clark, 2006:2 134). Fundamentally, the “gateway hypothesis” holds that consumption of abusable illicit substances advances in an orderly fashion through several discrete stages, beginning with beer or wine and moving progressively through to hard liquor, tobacco, marijuana and finally hard illicit substances” (Ibid). Conversely, a study conducted by Gopal and Collings (2012:656) revealed that many of their participants went straight to the use of “harder” substances, thus refuting the gateway hypothesis. For example, they discovered that respondents went straight to using the drug known as “sugars” (see Table 2.1) instead of starting with tobacco. This showed that “sugars” had achieved a normalised status in the respondent community as opposed to other illicit substances (Gopal & Collings, 2012:656) and affirms the NDMP (2013–17) notion that area-specific solutions are required. Earlier, based on his research in Texas, Maxwell (2004) noted that cocaine was the primary illicit drug for which people went into rehabilitation. Dada, Pludderman, Parry, Bhana, Vawda and Fourie (2011) concur with the lack of support for the gateway drug hypothesis by noting that 29.5% of

KwaZulu-Natal (KZN) patients who were admitted into treatment facilities had used heroin as their first drug of abuse and that 40.6% of Western Cape patients had used ‘Tik’(see Table 2.1) as their primary drug. These findings highlight the argument that location and environment play an important role in the illicit substances of choice. Dada (2013) states that heroin is the most commonly injected drug in South Africa, whereas Tarter, Vanyukov, Kirisci, Reynolds and Clark (2006:138) found that many drug abuse participants had gone straight to the use of marijuana, bypassing cigarettes and alcohol. Ahmed (1984) and Wansi, Sam-Abbenyi, Befidi Mengue, Enyme, Ntone, Ntone, Ewane, Awah & Bikoi (1996) found that, in Nigeria, users between the ages of 15–30 years tended to abuse cannabis and amphetamines more than alcohol and that in Cameroon, 390 out of 454 respondents (86%) used cannabis regularly. In comparison, an investigation in the Maldives found that opioids were used as a primary drug over the study period (Narcotics Control Board, 2003). Jiloha (2009:168), who conducted a study in Delhi, India, also expressed the need for an understanding of the possible causes of drug use among teenagers. She acknowledged that, within the cultural-religious settings of India, marijuana (cannabis) is used because of its association with Hinduism and its cultural festivals. Substances known as “charas”, “bhang” and “ganja” are regularly used throughout the country. “Charas” is similar to hashish as they are both concentrated forms of marijuana. It is usually rolled into a ball or rope and smoked through a marijuana pipe (Giznik, 2016). “Bhang” is usually used during religious festivals in India. It is a natural intoxicant made from marijuana leaves and flowers which are mixed with milk (Gerner, 2015). “Ganja” is the name given to cannabis in India. The many derivatives of and names given to illicit substances that are derived from mother plants highlight the need for drug research to be culture-, area- and demographic-specific. Van Heeran, Grimsrud, Seedat, Myer, Williams and Stein (2009:365) and Madukwe (2013:174) confirm this by reiterating the importance of understanding the social settings and the culture of drug-use behaviour.

Knowledge of the neurobiological and psychological impact of drug use is tremendously important as it can help shape drug specific prevention, intervention and rehabilitation strategies and has the potential to influence research in the quest to curb drug-specific addiction. In the past 40 years, a number of dramatic breakthroughs in the neurobiology of addiction have occurred with the establishment of the National Institute on Drug Abuse (NIDA) (Knob & Simon, 2009:115). To understand the drug epidemic, understanding the characteristics as well as the

social, genetic and environmental influences that interact with the user is vital. Knob and Simon (2009) define drug addiction as “a chronically relapsing disorder” that occurs in three stages. First, the user feels an irresistible impulse to locate and consume the drug. Secondly, the user loses control of the doses taken. Thirdly, the user experiences an overwhelming emotional state when she or he is unable to take the drug, for example dysphoria, anxiety, and irritability. Drug use and addiction thus cause severe psychological problems, which Madukwe (2013:174) describes as “psychiatric symptoms [that] mimic psychiatric disorders”. He states that substance use “can prompt or worsen the severity of psychiatric disorders; substance use can mask psychiatric disorders and symptoms; withdrawal from severe substance dependence can precipitate psychiatric disorders; psychiatric and substance abuse disorders can coexist; and psychiatric disorders can produce behaviours that mimic ones associated with substances use problems”. It was found by the World Mental Health Survey that there is an alarming prevalence of unmet needs for mental health, including substance abuse treatment, especially in less developed countries such as South Africa (WHO, 2007).

2.8 Conceptualizing Addiction

According to Grant, Potenza, Weinstein and Gorelick (2010:233), several behaviours caused by psychoactive substance ingestion “produce short-term rewards that may engender persistent behaviour despite knowledge of adverse consequences; i.e., diminished control over the behaviour”. The latter authors argue that “diminished control is a core defining concept of psychoactive substance dependence or addiction”. Behavioural addiction is thus centred on a person’s failure to resist impulse and the temptation or drive to engage in harmful acts. It is basically their inability to control their actions despite the knowledge of the consequences (DSM-IV-TR, 2000). With reference to natural history and phenomenology, Chambers, Taylor and Potenza (2003) argue that behavioural delinquency and substance addiction have a number of similarities resulting in adverse consequences. The main ones are that the onset begins in adolescence or young adulthood and that the rate of occurrence is much higher in these groups as opposed to middle adulthood and above.

This research will understand addiction as the repetitive use of psychoactive illicit substances which are illicit substances that, when consumed, “directly engage with the central nervous system (CNS) which causes change to an individual’s mental process[es] and behaviour,

perception of reality, level of alertness, response time, and perception of the world” (Madukwe, 2013:174). Goode (2012:143) identifies two preconditions that are necessary for drug use, namely predisposition in the form of motive or susceptibility, and the availability of psychoactive substances. He believes that singularly these preconditions may be insufficient to explain prolonged drug use, but that together they offer a greater understanding of prolonged drug use.

Drug addiction and use are also influenced by various factors that act on the user at different times in different proportions during different periods of time. Vincent Dole and Marie Nyswander (1965; 1980) propose the metabolic imbalance theory to explain narcotic addiction. This theory was initially used mainly to study heroin addiction. This theory proposes that heroin addicts suffer from a metabolic disease or disorder, much like diabetics do. They justify this by stating that once people have started taking narcotics, “a biochemical process ‘kicks in’ and, psychologically, they begin to crave opiate illicit substances in much the same way that the bodies of diabetics crave insulin”. The repeated use of dosages acts as a stabilizer that normalizes an existing deficiency (Dole & Nyswander, 1965; 1980).

Roberts and Koob (1997:101) define addiction as “a compulsion to use alcohol and other illicit substances which induce the experience of withdrawal symptoms when the prolonged use stops”. Behaviourally, addiction is understood as “the self-administration of alcohol or other illicit substances, despite trying to abstain from it and being knowledgeable about the adverse effects and social consequences” (Grant, 2010:3). Medically, addiction is seen as “a condition characterized by an overwhelming desire to continue taking a drug to which one has become habituated through repeated consumption because it produces a particular effect, usually an alteration of mental status” (Medical Dictionary, 2009). The psychological effects of addiction are understood as “a complex condition, a brain disease that is manifested by compulsive substance use despite harmful consequences” (Parekh, 2017:1). Obtaining and consuming illicit substances is the central component of an addict’s daily activities. Other obligations and responsibilities begin to fade in comparison to satisfying the drug desire. Addiction is also exacerbated by various factors. For instance, a person’s initial use may be influenced by genetic, psychosocial and environmental factors. Addiction is thus defined as:

“...a chronic, relapsing brain disease that is characterized by compulsive drug seeking and use, despite harmful consequences. It is considered a brain disease because illicit substances change the brain; they change its structure and how it works. These brain changes can be long lasting and can lead to harmful, often self-destructive behaviours” (NIDA, 2016:1).

The foregoing definition is a comprehensive description of drug addiction as perceived by this research. Addiction, specifically psychoactive and illicit substance addiction, is understood as a disease of the brain that causes drastic changes in the psychology of the addict. Macleod, Oakes, Copello, Crome, Egger, Hickman, Oppenkowski, Stokes-Lampard, & Davey Smith (2002:4) affirm this by bringing to light the undeniable association between psychoactive substance use and severe health and social impairment. The learned behaviour theory is used by many behavioural psychologists to understand substance abuse, as the learned behaviour is believed to be reinforced by the outcomes of substance consumption (Mdukwe, 2013:176).

2.9 Understanding Addiction from a Behavioural Economics Perspective

Neuroscientists argue that the mind comprises of many different parts or mental processes, each operating by its own judgment (Kurzban, 2011). Brocas and Carrillo (2013) note that the brain is best represented by an organization of systems that interact with one another. A key insight is that the brain functions like a democracy; i.e., there is no dominant decision maker (Tononi, 2012).

Bickel, Green and Vuchinich (1995) describe behavioural economics as “the study of the distribution of behaviour within a system of constraint”. More recently, behavioural economics (BE) has been understood as “psychological experimentation to develop theories about human decision making” and it has also been identified as “a range of biases as a result of the way people think and feel” (Samson, 2014:2). It can be further understood as “an attempt to comprehend the effect of individual psychological processes including norms, emotions, and habits on the individual decision-making process within a variety of economic contexts” (Samson, 2014:2). According to Heshmat (2017: n.p), a basic understanding of behavioural economics is that “humans are fundamentally known to make judgment errors and require help when making decisions that are [not] in their own best interest”. It is thus the understanding of

where people go wrong so that we can help people go right. Bickel and Marsch (2001:73) explored the influence of behavioural economics on drug dependence, and state that behavioural economics “examines conditions that influence the consumption of commodities and provide several concepts that may be instrumental in understanding drug dependence”. One concept that is of significance is that delayed reinforcers are discounted by drug dependent individuals. This means that the value of a delayed reinforcer is reduced in value; it is seen as worthless because it does not act timeously to reduce withdrawal symptoms. Conversely, an immediate reinforcer offers immediate gratification as the user gets “high”, or it reduces withdrawal symptoms. Robles, Huang, Simpson and MacMillan (2011:354) refer to “delay discounting” (DD), which they suggest is “the loss of subjective value of a reward as a function of delay to the reward”. In essence, this shows that a drug user would rather opt for immediate gratification instead of waiting for other rewards (Kirby, 1997). This constant seeking for immediate gratification is what drug peddlers and drug users thrive on. When someone becomes dependent, he or she is always in need of the next “hit”. Users are usually willing to go to any extreme to obtain their drug of choice, as addicts place a lot more value on the drug than on the money they need to purchase it (Promises, 2014). This fact leads directly to an increase in drug-related crimes; particularly because users’ ability to argue logically is disturbed. Thus, instead of waiting to purchase a substance when they have enough money, addicts find ways of obtaining money, even by doing so illegally. They do not care if the quality of the merchandise has been compromised; all that matters is the relief they desire from the mental and biological consequences associated with their craving (Madden, Bucholz, Dinwiddie, Slutske, Bierut, Statham, Dunne, Martin & Heath., 1997). When the drug is injected, new needles are rarely purchased as users rather share them without disinfecting them. This drug use behaviour has grave implications for the health safety of users and highlights two common characteristics amongst drug users, which are impulsivity and loss of control. Both these characteristics directly affect the economic decisions of users. Studies by Petry and Bickel (1998), Bickel and Madden (1999) and Jacobs and Bickel (1999) found that cigarette smokers and heroin dependent individuals were far less sensitive to the price of their “reinforcers” than those users who were non-addicted, showing that monetary value does not decrease or deter use. Robles, Huang and McMillan (2011:354) concur, stating that individuals with substance abuse disorders often seem to behave impulsively “as they choose small, immediate rewards associated with drug use over

ostensibly larger but delayed rewards such as good health, freedom from incarceration, and good family relations”. Research also found that substance dependent or addicted individuals consistently displayed higher DD rates than non-abusing controls or non-users (Robles et al., 2011:354; Liu, Vassileva, Gonzalez & Martin, 2012:980). Moreover, Promises (2014) found that cocaine users were far more willing to consent to smaller, short-term financial and cocaine rewards than they were to accept short-term losses of money or cocaine, as “the willingness to accept short-term (versus long-term) cocaine rewards was greater than the willingness to accept short-term (versus long-term) financial rewards”.

Many DD models have been proposed to understand the process of behavioural economics, and many of these models include monetary rewards for a period of time. Robles et al. (2011:355) found that the degree of discounting was highly dependent on the types of rewards that were made obtainable. They also found that two characteristics of discounting contributed to the definition of drug dependence, namely “the collaboration between the willingness to pay steep prices for the drug in relation to other reinforcers” and “strongly discounting the drug reinforcer” – i.e., the drug was preferred immediately.

This economic view sheds light on the dynamics of drug dependence, and the DD view shows that impulsivity plays an integral role in drug use and addiction (Robles et al., 2011). However, it is suggested that better rewards have the ability to deter users from immediately purchasing illicit substances. It is thus important to understand the context of drug dependence in relation to the area where drug dependents will acquire illicit substances. Moreover, it is also important to understand that the need for immediate gratification has implications for the supply of illicit substances, as this need is directly associated with an increase in the supply of illicit substances in a particular area. This demand thus gives rise to an increased number of drug peddlers in a particular area, such as Chatsworth. The increase in the rate of dependence due to supply and user impulsivity also increases the economic strain felt by drug dependents, thus leading to the economic turmoil that is experienced by many families of drug addicts. Generally speaking, the irrational behaviour of drug addicts in their quest to avoid losing even a small amount of their preferred drug speaks volumes about the impacts and power of drug addiction.

2.10 Criminological View of Substance Abuse

Psychoactive illicit substance abuse has persisted as a major problem globally (Fabiano & Maganga, 2002:124–127). It therefore comes as no surprise that addiction and drug-related crime are two of the most intractable social phenomena. The relationship between drug-related and criminal activities has been a topic of sustained curiosity for many scholars and policy makers and has paved the way for a proliferation of literature and research investigations in this field (Gottfredson, Kearley & Bushway, 2008:602) and thus many debates regarding the dynamics of the drug-crime relationship have been initiated. For example, Gorman and White (1995) suggest that there are three main explanations for this relationship. The first is the interchangeability between crime and drug use; this means that drug use leads to crime, crime leads to drug use, and that a set of common causes can be used to explain the drug-crime relationship. Goldstein (1995) suggests that there are three ways in which drug use leads to criminal activity. First, there is the pharmacological model which focuses on the effects of intoxication such as disinhibition, poor judgment, cognitive-perceptual distortions, and their by-products such as withdrawal, enhancement of psychopathological disorders, and sleep deprivation as causes of criminal behaviour. Secondly, he subscribes to the economic motivation model which assumes that drug users commit income-generating crimes such as robbery, burglary, and drug sales in order to support their drug habits. Finally, he proposes the systemic model, which suggests that “the system of drug distribution and use is intrinsically linked with violent crime through activities such as ‘turf’ skirmishes, assaults to collect debts, and robberies of dealers or buyers” (Goldstein, 1985). The causality of the drug-crime relationship suggests that drug use and crime do not have a direct fundamental tie; instead, they are related by various common causes. According to White, Brick and Hansell (1993), psychological and social factors such as antisocial personality disorder, genetic or temperamental traits, parental alcoholism, and poor relations with parents or guardians have been identified as common causes. Fletcher and Chandler (2009) add that drug abuse is directly involved in at least three forms of drug related crimes. First, offenses occur that are defined by drug possession or sales; secondly, offenses occur that are directly related to drug abuse such as stealing to get money for illicit substances; and thirdly, offenses occur that are related to a lifestyle that predisposes the drug abuser to engage in illegal activity, for example through association with other offenders or with illicit markets. According to NIDA (2007), the crime-drug relationship is determined by the following:

“Individuals who engage in illicit drug use are more likely to commit crimes. It is common for many offenses, including violent crimes, usually committed by individuals who had used illicit substances or alcohol prior to committing the crime, or who were using at the time of the offense [sic].”

2.11 The Psychosocial Context of Drug Use and Abuse

According to Pillay (1993:76), the combination of psychological and social interaction is commonly identified as “the psychosocial understanding of a phenomenon”. Psychosocial scholars such as Stenner and Taylor (2008) explain it as “the development of modes of thinking and acting [that are] capable of recognizing that both social issues and problems have psychological dimensions and that symmetrically, psychological questions need to be asked”. This method is not to be understood as the simple addition of one approach to another; rather, it is the realisation that individuals cannot be reduced to just group identities from which they originate as there is also the need to place emphasis on human agency in the process of becoming addicted (Bandura, 1999). Acknowledging human agency thus promotes a more holistic understanding of a social phenomenon. It is in this context that psychosocial analysis “has become an important and popular form of analysis for behavioural scientists in human centred research as it recognizes the need for more than one explanation or understanding when it comes to human behaviour” (Oyefara, 2014:72). Drug use is not a one-dimensional phenomenon, but it is affected by various compounding factors. Therefore, a psychological understanding is vital in understanding the psyche of the user, whereas the sociological perspective allows insight into the context of addiction and drug use. It is when these two perspectives interact that an explanation of and the consequences of this behavioural phenomenon can be found. It is acknowledged that these perspectives are not the only interactions that lead to an understanding of drug use, because an interaction between many perspectives gives a holistic view of drug addiction. However, the focus of the current study was on a psychosocial understanding of psychoactive use.

According to Pretorius, Van den Berg and Louw (2003), two main factors determine drug use, namely interpersonal and intrapersonal factors. Interpersonal factors are for example family, school, community and general social support (or lack thereof), and intrapersonal factors are personality traits, conduct disorders, negative emotions, emotional pain, and self-appraisal. These can be broken down into social and psychological factors. “Lack of mental or emotional

resources against stress, a low tolerance for frustration, and the need for immediate relief from tension or distress” has been identified as risk factors that predispose people to psychoactive substance abuse (Malunda & Mpinganjira, 2009:147). According to Arterburn and Burns (1989:42-46) peer pressure, biological predisposition, parental attitudes and parenting style are also some of the factors that encourage adolescents to indulge in forms of antisocial behaviour. Meintjies (2001) found that lack of recreational facilities for the youth causes them look for alternative forms of recreation, which usually involves deviant behaviour that includes illicit substance and alcohol abuse. Another factor that has been identified is boredom, which has been dismissed by many as a harmless state of mind. However, evidence suggests that prolonged boredom has a negative impact on mental health. Consequently, a link between experiencing prolonged boredom and feelings of depression, hopelessness, and loneliness has been discovered (Benett, 2013). Boredom is therefore a common reason for the initiation of experimentation with psychoactive substances and alcohol and it is often used as an excuse to continue use, which could lead to the individual developing a dependency (St. Clair, 2015). Grant, Potenza, Weinstein and Gorelick (2010:3) suggest that financial and marital problems are also common factors that cause substance use and subsequent disorders.

Substantial literature exists on the noteworthy association between acute and chronic stress and the motivation for or initiation into the abuse of psychoactive addictive substances (Sinha, 2001). Many major theories of addiction also identify the significant role of stress in addiction processes. Therefore, stress is recognized as a well-known risk factor in the development of addiction and in increased addiction relapse vulnerability (Hassanbeigi, Askari, Hassanbeigi and Pourmovahed (2013:1 333). Sinha (2008:1) also notes that “a series of population-based and epidemiological studies have [sic] identified specific stressors and individual-level variables that are predictive of substance use and abuse”.

The complexity of substance abuse cannot be ignored, and therefore research has provided a variety of theories to explain this phenomenon. One such theory is that reinforcement minimizes the idea of personality differences between psychoactive users and non-users. The reinforcement theory as explained by Spanagel (2011) proposes that reinforcement creates the pleasurable sensation or reward one might experience after a certain action. This means that the “high” sensation the user will feel after taking a psychoactive substance will lead to repeated use, which

is known as positive reinforcement. Negative reinforcement is created by the negative feelings that come with the lack of use of a drug. It leads to withdrawal symptoms that are experienced by the user, and this leads to repeated use to alleviate the withdrawal symptoms. Wikler (1980:174) showed that even animals will compulsively use illicit substances given the right experimental conditions.

Findings such as those elicited above bore testament for the need to explore psychodynamic variables – i.e., conscious and unconscious forces of personality – in the quest of this study to understand the development of drug addiction. However, in scientific research it is argued that one cannot explain a variable without a constant (Goode, 2012:146). Therefore, if two people are taking the same (constant) highly reinforced psychoactive substance, and one becomes addicted and not the other (variable), reinforcement alone is not enough to explain addiction because it is unable to explain the variations in behaviour. Research has thus suggested that psychological pathologies, defects or inadequacies explain drug use, and it has been proposed that drug use is provoked when there is something wrong in the lives of certain individuals and that it is highly related to escapism (Goode, 2012).

In the same breath, it is important to acknowledge that drug users have different degrees of personality inadequacies and defects (Goode, 2012). Kaplan (1975, 1980) states that a variance of the inadequate theory approach is the self-derogation perspective. This perspective assumes that drug use behaviour, like criminal behaviour, is a response to low self-esteem. This negative attitude can be the resultant effect of various factors such as “parental neglect, peer rejection, high expectations for achievements, school failure, physical and social stigmata, sex role identity confusion, ego deficiencies, and low coping abilities and mechanisms” (Goode, 2012:149). If the drug fulfils a valuable need, a user may find that he or she is becoming increasingly reliant on it. People may thus take illicit substances to calm or energize themselves, or to make themselves feel more confident (Robinson, Smith, Saisan & Shubin, 2017). In the early 1990s Pillay (1993) noted that hopelessness and aimlessness were possible factors that encouraged drug use and argued that these factors could affect adults and adolescents by permitting them to “feel lost”. More than 20 years later, Weiss (2015) notes that “people who consistently abuse substances do so not because they are looking to connect and engage; rather, they do so to escape from the discomfort of life and relationships”. In some cases social or peer pressure and experimentation

account for the initial use by many users. However, the more inadequate the personality, the higher the risk for prolonged use and severe addiction (Goode, 2012), because it seems that for people with stronger, more resilient personalities experimentation leads to abstention, not abuse. The inadequate personality theory thus proposes that drug abuse is a defence mechanism as it helps a person to abolish feelings of inferiority. Coleman (1986:47) explains this by using Erikson's (1950, 1963) theory pertaining to adolescents: "They are faced with many psychosocial and psychosexual challenges and conflicts, for example a search for identity, [the] need for peer group approval, and coming to terms with the so-called 'generation gap'."

Problematic behaviour proneness is also noted as a psychological predisposition. Social psychologists have noted that shared attitudes, values and personalities amongst psychoactive substance users, as mentioned above, drastically differ from the behaviour of the non-using population. Jessor and Jessor (1977; 1980) note that users are more likely to be "rebellious, independent, open to new experiences, willing to take a wide range of risks, tolerant of differences, hedonistic, peer-oriented, non-conformist and unconventional". It was also found that users tend to be less religious, lack social bonding with parents and family, are less goal oriented and definitely less cautious. Longitudinal studies were used by Jessor and Jessor (1980) and Goode (2012) to validate their emphasis on unconventional personality traits as significant factors that lead to drug use.

2.12 Illicit substances and the Brain

The impact of psychoactive substances cannot be fully understood if no attention is given to their biological effects. It is thus imperative that the biological pathways of psychoactive substances are explored in order to understand the psychological and social consequences related to drug use behaviour.

2.12.1 Biochemical and neurobiological processes and structures

Biologically, indicators of addiction are related to changes in the nerve cell function by which the brain attempts to adjust to a drug's presence in the body. These changes account for the continuation of drug-seeking behaviour by acting on the brain directly, leading to addiction. This highlights the need for understanding the neural processes that underline drug-taking behaviour (Roberts & Kood, 2009:101). Behaviour is regulated through two main factors: reinforcement

and neuroadaptation, which contribute to the overall addictive process (Koob & Nestler, 1997:2; Roberts & Koob, 1997:102).

The brain is a complicated, complex structure comprising approximately 100 billion neurons (Freudenrich & Boyd, 2001; Dombeck, 2002:1). Neurons are cells within the nervous system “that transmit information to other nerve cells, muscle, or gland cells” (Brainfacts, 2012). Although the brain has billions of neurons, there is no actual physical contact between them and neurotransmitters carry messages back and forth between the neurons. Neurotransmitters affect specific areas of the brain, including areas related to behaviour and mood. Should they malfunction, it can cause effects ranging from anxiety and mood swings to increased aggression (Elements of Behavioural Health, 2010). The neuron is “the information processing and information-transmitting element of the nervous system” and neuronal characteristics are specific to the duties that each of them performs (Carlson, 2011:25). Every thought, action or feeling is the result of inter-neuronal communication through electrochemical signals, which is the process of sending and receiving messages. It is in the inter-neuronal communication process where illicit substances have their affect, as they interfere directly with neurotransmission (Dombeck, 2002:2). Alcohol and other illicit substances are believed to have a positive reinforcing effect due to their direct interaction with a particular neurotransmitter within the reward system. It is this interaction that could lead to tolerance, dependence, withdrawal, sensitization and addiction (Roberts & Koob, 1997:103).

The neuron is a nerve cell that has three prominent parts: the dendrites, the nucleus, and the axon. Information passes through neurons starting at the dendrites and ending at the terminal part of the axon. The axon is a long cable-like projection from the cell which is wrapped in a myelin sheath and which carries the electrochemical message along the length of the cell (Freudenrich & Boyd, 2001; Carlson, 2011:1). Information is received by neurons through branch-like structures called dendrites. These structures enable the cells to “talk” to one another. As neurons grow, their dendrites spread out and make contact with the axons of adjacent neurons (Dombeck, 2002:2). The “receiving” parts of a neuron then make contact with the “sending” parts of other neurons, or vice versa. The space between the neurons where the signal of action is transmitted is called the synapse. Some of these signals are excitatory signals which tell the neuron to self-activate, while other signals are inhibitory signals which tell the neuron to remain passive

(Dombeck, 2002:2; Carlson, 2011:25). When the number of excitatory signals gets larger than the number of inhibitory signals, the neuron activates, and this is when an electrochemical signal is generated and initiated at the top of the neuron. It then makes its way down the axon until it hits the terminal button, which is found at the end of the axon branches and is responsible for forming synapses as well as sending information to other neurons. The signal at the terminal button is received by the dendrites of other neurons, and the process is repeated (Dombeck, 2002:2; Carlson, 2011:25).

The exact nature of how a signal passes from one neuron to another was particularly important for this research which attempted to understand how illicit psychoactive substances work. An important piece of information was that, although neurons communicate with one another through “their interconnected axons and dendrites, there is no physical contact between the terminal button of one neuron and the dendrites of another”; instead, there is a gap between them called the synapse, which is the area where the message is transmitted from one neuron to the next (Roberts & Koob, 1997:103). It is therefore noteworthy that, when the electrochemical signal of an “activated” neuron reaches its terminal button, the electrical signal stops and chemical messengers known as neurotransmitters are secreted from the terminal buttons and introduced into the synapse. This neural communication leads to a flow of intracellular alteration that causes a change in the excitability of the cell, thus altering neural circuit activity (Roberts & Koob, 1997:103). The neuron uses amino acids, vitamins and co-factors to create the neurotransmitter in the cell and then passes it to the next neuron (Schnakenberg, 2011). Neurotransmitters thus have “an excitatory or inhibitory effect on the other neurons” (Carlson, 2011:27). These neurotransmitter chemicals float across the synapse and connect in a “lock-and-key” fashion with protein structures known as “receptors”, which are embedded in the walls of the dendrites of the receiving neurons (Dombeck, 2002:2). It is the presence of the neurotransmitter “keys” that open the receptor “locks” on the surface of the dendrites of the post-synaptic neurons that excites or inhibits the post-synaptic neurons into activating or not. After a short while in the synapse, the neurotransmitters that have been released are recalled back into the terminal button in a process called the “re-uptake”, so that they are available should the neuron need to “fire” again (Dombeck, 2002:2). The inhibitory neurotransmitters are mainly gamma amino butyric acid (GABA) and serotonin. The main excitatory neurotransmitters are dopamine and norepinephrine (Boeree, 2003, 2009; Neurogistic, 2016)

Psychoactive substances work on the activity of the neurotransmitters and receptors in the synapses by alteration due to enhancement or interference of a chemical process. Two types of natural illicit substances are involved in this process, namely agonist and antagonist illicit substances. An agonist drug is a drug that can increase the production of certain neurotransmitters by act to enhance the message carried by the neurotransmitter. Excitatory (stimulating) neurotransmitters become more excitatory and the inhibitory (calming) neurotransmitters become inhibitory. An agonist drug can also interfere with the re-uptake of the neurotransmitter. This allows them to remain in the synapse where they interact with receptors for an extended period of time. They also have the ability to bypass the neurotransmitter entirely, remain in the synapse, and bind (prohibit) or activate the receptors (Dombeck, 2002:2; Farinde, 2016). In contrast, antagonist illicit substances interrupt the transfer of the neurotransmitter message. The natural action of the neurotransmitters is obstructed and their effects are lessened or even eliminated. They can also compete with the neurotransmitter for the binding of the neurotransmitter's receptor. By doing so, it blocks the activation by the neurotransmitter. It can also alter the number of neurotransmitters once the neuron is activated (Dombeck, 2002:2; Farinde, 2016). However, agonist illicit substances are abused the most as they work to elevate the natural effect of the neurotransmitter. The manner and dose in which these illicit substances are taken also affect the feeling that is produced by the drug; however, this variance could lead to fatality as the effects of the drug are dependent on the quantity or dose a person would need to take. For instance, a user could take two ecstasy pills and feel the desired effect, whereas another user may need five or more. Prolonged use also increases tolerance, and this leads to the user always increasing the dosage to achieve the same effect, which in turn leads to a stronger impact on the specified neurotransmitters, thus affecting the neurotransmitters' ability to behave normally. This naturally leads to detrimental consequences for the user's mental health (Dombeck, 2002).

The most common ways to use illicit substances are direct intravenous injection into the bloodstream, inhalation, and oral consumption. Of the three methods, injecting the drug directly into the bloodstream is the fastest and most intensely felt method. The more retarded method with a prolonged period before the effects of drug are felt is oral consumption, as the drug reaches the bloodstream via the normal process of digestion (Dombeck, 2002). Mental

functioning of a user is altered at different levels by the use of different illicit substances which work to trigger specific neurotransmitter action.

Snyder (1986), Van Niekerk (1998), Dombeck (2002) and the National Institute on Drug Abuse (2004) state that illicit substances can be divided into four main categories namely depressants, stimulants, hallucinogens and opioids. Depressants, also known as “central nervous system depressants”, are the most frequently abused illicit substances. They act on the neurotransmitter GABA which is an inhibitory neurotransmitter that decreases the activity of other neurons by allowing chloride ions into the postsynaptic neurons. These illicit substances are GABA agonists, meaning they are able to reduce neuron activation a lot more effectively by slowing down the CNS action. This makes the user a lot calmer, relaxed and feeling more in control (NCSACW, 2002; Snyder, 1986; Van Niekerk, 1998; Dombeck, 2002). These illicit substances are commonly known as “downers”.

Stimulants, also known as central nervous system stimulants, speed up the mind and body (NIDA, 2004). They affect the neuron directly by entering through the nerve cell membranes. These illicit substances primarily affect the neurotransmitter known as dopamine. They do so by altering the terminal button of dopamine production neurons to allow for an increased quantity of dopamine to be released, and they also keep the dopamine in the synapse much longer than usual. This causes an immediate and powerful “high” for a short period. It can be described as “an overpowering feeling of well-being, mental clarity and great energy” (NDMP, 2013-17). These illicit substances are commonly known as “uppers” (NCSACW, 2002; Snyder, 1986; Van Niekerk, 1998; Dombeck, 2002).

Hallucinogens are illicit substances that have the ability to distort one’s perception of objective reality (NIDA, 2004). They alter a user’s senses to experience things that are not really there and by enhancing sight, sound and smell. The user’s sense of direction, distance and time also become disorientated. These illicit substances antagonize serotonin neurotransmitters by blocking their release. Serotonin is an important neurotransmitter in various brain regions as it is directly involved in functions such as regulation of mood and survival functions such as sleeping and eating.

Opioids have the ability to stick to special endorphin receptors in the brain that are associated with pain. Basically, opioids have the ability to alter the perception of pain. However, they also release a feeling of euphoria which leads to addiction and abuse. One of the most commonly abused illicit opioids is heroin (Dombeck, 2002; NIDA, 2015), which is a morphine derivative. In South Africa, heroin is usually inhaled or smoked. It is also known to be mixed with other illicit substances. In Gauteng, heroin is mixed with marijuana to create a drug called “nyaope”, whereas in Durban there are two popular mixed derivatives of heroin known as “whoonga” and “sugars”. Table 2.1 lists “nyaope” and “whoonga” as the same heroin derivate, with the name change being due to geographical location. “Whoonga” is a drug that is most popular in African townships (Strydom, 2010; Dada, 2013), whereas “sugars” are most commonly used in Indian communities such as Chatsworth and Phoenix (Tolsi, 2006).

Table 2.2 presents a summary of the drug categories that were discussed above.

Table 2.2: Categories of Psychoactive Substances

Depressants	Stimulants	Hallucinogens	Opioids
Alcohol	Amphetamines	Lysergic acid diethylamide (LSD)	Heroin
Benzodiazepines	Methamphetamines	NN-dimethyltryptamine (DMT)	Codeine
Solvents	Cocaine	Mescaline	Hydrocodone
Barbiturates	Nicotine	Phencyclidine (PCP)	Morphine
Cannabis (low dose)	Khat / Cat	Ketamine	Oxycodone
	Caffeine	Cannabis (high dose)	Hydromorphone
	Methylenedioxymethamphetamine (MDMA) (Ecstasy)	Mushrooms	Fentanyl
		Methylenedioxymethamphetamine (MDMA- both an upper & stimulant)	

Source: Adapted from: Madukwe (2013) and Ratini (2017)

The neurotransmitters and the illicit substances that affect them are summarised in Table 2.3

Table 2.3: Neurotransmitters and the Illicit substances that Affect Them

Neurotransmitter	What it does	What illicit substances affect it
Dopamine	Involved in regulation of movement, reward and punishment, pleasure, energy	Every drug that affects feelings of pleasure, including cocaine, amphetamine, opiates, marijuana, heroin and PCP
Norepinephrine (also called noradrenaline)	Involved in arousal and alertness, energy and feelings of pleasure	Stimulants
Serotonin	Involved in regulation of mood and impulsivity	Alcohol, hallucinogens, stimulants, anti-depressants
Acetylcholine	Inhibitory neurotransmitter involved in movement, memory function, motivation and sleep	PCP and hallucinogens, marijuana, stimulants
GABA (gamma aminobutyric acid)	Inhibitory neurotransmitter involved in arousal, judgment and impulsiveness	Depressant illicit substances, marijuana
Glutamate	Excitatory neurotransmitter	Ketamine, Phencyclidine and alcohol
Endorphins	Substances involved in pain relief and reward/punishment	Opioids, Depressants

Source: Adapted from: Dombeck (2002)

Images are presented below to illustrate the effects of various illicit substances on the brain.

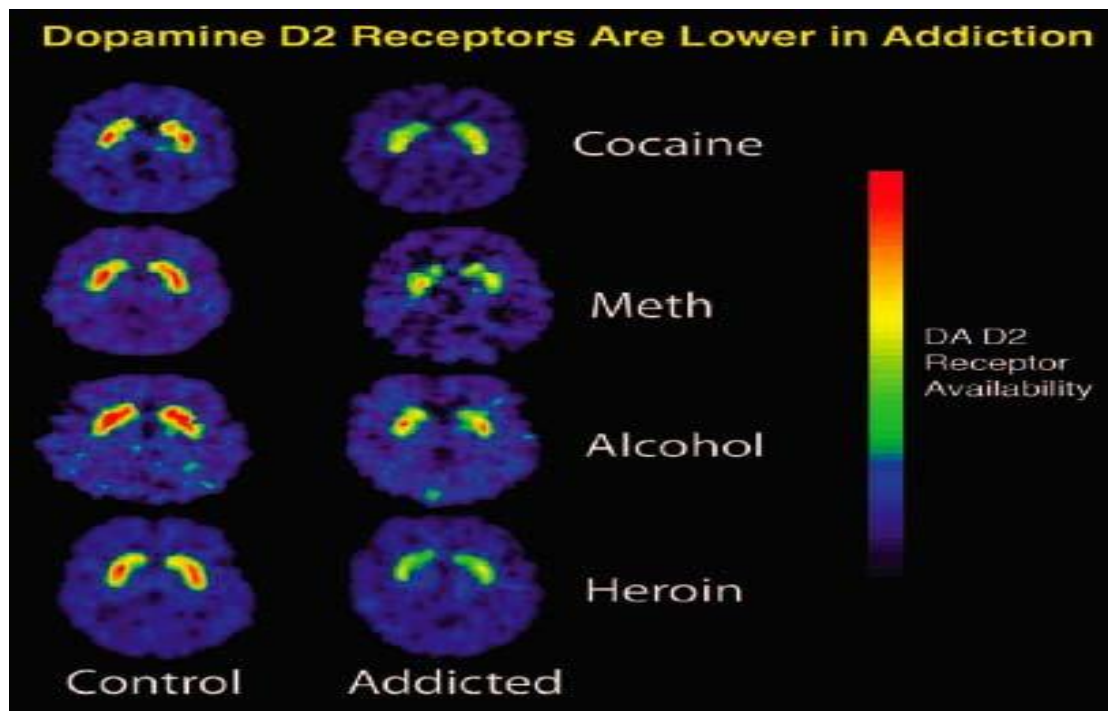


Image 1: Brain Scan of Different Addiction Activities

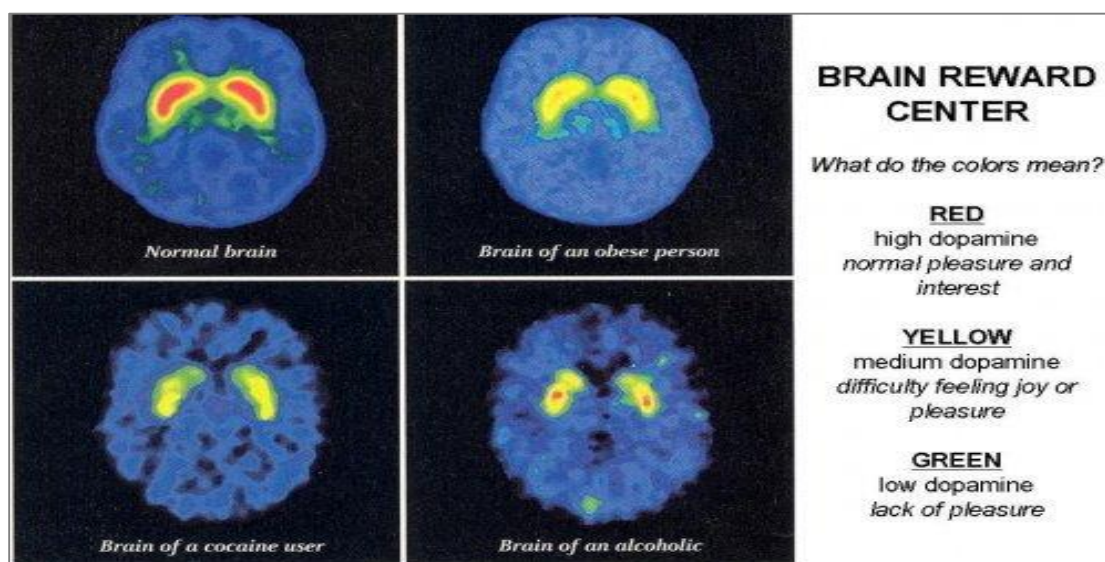


Image 2: Brain Scan of Difference in Dopamine Levels Caused by Addiction

Source: NIDA (2014, 2017)

Most scientists believe that a mental illness occurs as a result of problems with the communication between neurons in the brain. However, depression and anxiety can be a consequence of the disruption of the movement of the neurotransmitters serotonin or norepinephrine (Yatham, Liddle, Shiah, Scarrow, Lam, Adam, Zis & Ruth, 2000). Anxiety could also be a reflection of reduced GABA activity (Cruciani, 2016). Moreover, there is evidence that there are disturbances in the neurotransmitters dopamine, glutamate and norepinephrine in individuals who have been diagnosed with schizophrenia (Pearlson, 2000; Tenant & Rey, 2004:58). Cruciani (2016) posits that “increased presynaptic release, synthesis of dopamine, sensitivity or density of postsynaptic dopamine receptors” or combinations of these are linked to schizophrenia. The importance of the dopamine neurotransmitter in schizophrenia is affirmed by the observation that cocaine addicts sometimes show symptoms similar to those related to schizophrenia. Hence the argument that cocaine acts directly on dopamine-containing neurons in the brain to increase the amount of dopamine in the synapse. Cruciani (2016) suggests that increased norepinephrine and dopamine activity and an abnormal glutamate neurotransmission are linked to mania. Interestingly, attention-deficit hyperactivity disorder (ADHD) is also believed to be a result of intermittent passages of dopamine or norepinephrine (Jaska, 1998; Allan, Kay & Lieberman, 1997; Elements of Behavioural Health, 2010).

It has been found that the illicit substances that affect neurotransmitters in the same manner as certain disorders increase the user’s risk and susceptibility to specific mental disorders. For example, Large, Sharma, Compton, Slade and Nielssen (2011) investigated the link between marijuana and schizophrenia, and found that the age of onset of schizophrenia for users was 2.7 years earlier than for non-users. It has also been suggested that marijuana is more likely to lead to psychotic symptoms and disorders than depression (Wilson & Cadet, 2009). Moreover, the rates of self-reported suicide attempts are much higher for opioid, cocaine and amphetamine users when compared to the non-drug using population of the same demographics and socioeconomic status (Rossow & Lauritzen, 1999; Maloney, Degenhardt, Drake, Mattick & Nelson, 2007).

2.12.2 Disorders and drug use

The relationship between psychoactive substance use and mental health is a rather fragile one. Mental illness could lead to or encourage drug use, or vice versa. It is important to note that drug

addiction itself is a mental illness, as it has been identified by various researchers as a multifaceted brain disease that is characterized by compulsive and often uncontrollable drug craving, seeking and use regardless of the devastating consequences. These behaviours stem from drug-induced changes in the structure and functions of the brain (Leshner, 2001; Volkow, 2010; Hartney, 2017). Moreover, these changes occur in some of the same areas of the brain that are disrupted by other mental disorders such as depression, anxiety or schizophrenia, as was mentioned above. Drug addiction interrupts a person's normal hierarchy of needs and desires as it has the ability to substitute livelihood priorities with new ones that are mainly concerned with obtaining and using the drug. It can therefore be argued that the compulsive behaviours that result from using illicit substances “override the inability to control impulses despite [the fact that] the consequences are similar to hallmarks of other mental illnesses” (Horvath et al., 2013, Hartney, 2017).

The culmination of decades of research and clinical knowledge brought with it the creation of the Diagnostic and Statistical Manual of Mental Disorders (DSM-V) criteria for substance abuse. The Fifth Edition of this manual, often referred to as the DSM-V or DSM 5, is the latest version of the American Psychiatric Association’s gold-standard text for the names, symptoms, and diagnostic features of every recognized mental illness and addictions (American Psychiatric Association, 2017). Substance Abuse and Mental Health Services Administration (SAMHSA, 2015) states that the main differentiation between abuse and dependence is that dependence is a harsher manifestation of abuse.

2.12.2.1 What are substance use disorders?

According to the DSM-V (APA, 2013), substance-related disorders result from the use of various illicit substances and substances:

“...substance-related disorders result from the use of ten separate classes of illicit substances: alcohol, caffeine, cannabis, hallucinogens (phencyclidine or similarly acting arylcyclohexylamines), other hallucinogens such as LSD, inhalants, opioids, sedatives, hypnotics or anxiolytics, stimulants (including amphetamine-type substances [such as] cocaine and other stimulants), tobacco, and other or unknown substances.”

Therefore, according to Hartney (2017), “while some major groupings of psychoactive substances are specifically identified, the use of other or unknown substances can also form the basis of a substance-related or addictive disorder”.

A central component of drug-related problems is the impact illicit substances have on the brain’s reward system. The rewarding feeling that people experience from abnormalities in levels of neurotransmitters as a result of taking psychoactive substances may be so intense that they disregard the importance of other activities. Primarily, their priorities change and their behaviour focuses on taking the drug. Although the chemical composition for each class of drug is different, the initiation of the reward system remains quite similar amongst users of the different classes of illicit substances. This ultimately leads to producing feelings of euphoria, more commonly known as a “high” (Horvath, Misra, Epner & Cooper, 2013). The latter authors argue that the DSM-V recognizes that people are not all automatically or equally vulnerable to developing substance-related disorders. However, some people have lower levels of self-control and tolerance that are exacerbated by other factors such as social and environmental issues that predispose them to developing problems if they take illicit substances (Ibid).

There are two groups of substance-related disorders, namely substance-use disorders and substance-induced disorders. Substance-use disorders “are patterns of symptoms resulting from the use of a substance that one continues to take despite experiencing problems as a result”, whereas substance-induced disorders, “including intoxication, withdrawal [and] other substance- or medication-induced mental disorders, are detailed alongside substance use disorders” (American Psychiatric Association, 2017).

2.12.2.2 Substance use and disorders

Image 3 on the next page is a visual image that compares the brain of a healthy person with that of a habitual drug user.

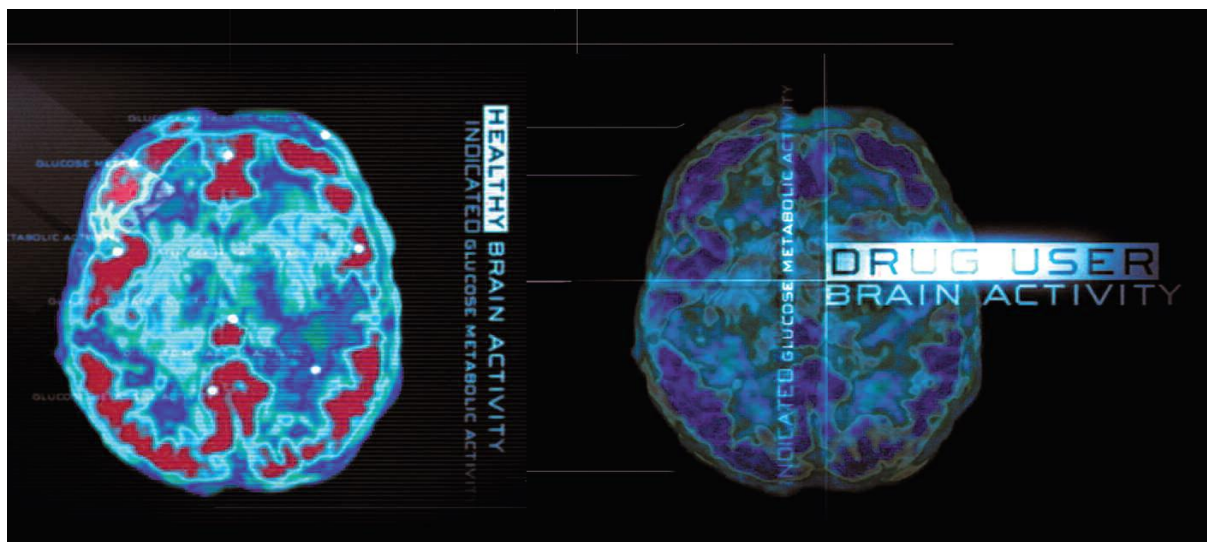


Image 3: Healthy Brain (left) and the Brain of a Drug User (right)

Source: NIDA (2016)

This image clearly explains Volkow’s (2015) argument that drug addiction “is a brain disease that can be treated”.

When investigating the prevalence of comorbidity between drug-related disorders and other mental disorders, it does not always mean that a person is predisposed to one or the other even if one disorder was diagnosed (NIDA, 2011, 2016). Therefore, trying to establish a causal relationship between drug use and mental disorders is a rather difficult task as the diagnosis of certain mental illnesses can only be achieved once they have progressed to particular levels (Drake, Mercer-McFadden, Mueser, McHugo & Bond, 1998; NIDA, 2011, 2016). Nevertheless, a probable cause for the co-occurrence of these disorders may be strongly related to psychoactive substance abuse (NIDA, 2016). The fact that psychoactive substance abuse can mimic symptoms of other mental disorders was previously discussed. Suffice it to say that research has found that there is an increased risk of psychosis in vulnerable marijuana users. In some cases psychoactive substances are consumed as a method of self-medication to deal with a mental disorder (NIDA, 2016). For example, anxiety and depression could be the cause for dependency on alcohol, tobacco or other illicit substances which could be used as a coping mechanism. Moreover, these disorders may possibly have shared risk factors such as genetic vulnerability or environmental triggers. This means that predisposing genetic factors or environmental triggers may make a

person vulnerable to both addiction and other mental disorders, or increase their risk of a second disorder once the first appears (NIDA, 2011). Stress, trauma such as physical or sexual abuse and early (childhood or young adulthood) exposure to illicit substances are common environmental factors that can predispose people to addiction and other mental illnesses (NIDA, 2011; Hartney, 2017). There is thus irrefutable evidence that addiction directly influences one's chances of contracting a mental illness; in such cases, the illness may be worse and harder to treat if it is not diagnosed early (Saisan, Smith, Robinson & Segal, 2017). Adults who abuse alcohol are nearly three times more likely to be diagnosed with a mental illness and "the risk of dementia, suicide, depression, anxiety, and sleep problems is much greater in older people who are dependent on alcohol" (NIDA, 2016). In terms of genetic predisposition, babies born from drug-addicted mothers have a greater probability of later becoming addicted to the drug that the mother was taking during her pregnancy (Bevilacqua & Goldman, 2009). The use of the drug by the mother causes a genetic predisposition to the drug in the foetus, thus making it easy for the child to become addicted to the drug if it is ever consumed. A family history of drug abuse can also predispose a child to a particular drug. For example, if an individual's great grandfather, grandfather and father (three generations) had an opiate addiction, "the father's child has a high likelihood of developing an opiate addiction if he or she ever experiments with the drug". It is important to note that, regardless of the cause of a person's addiction, the majority of health practitioners consider drug addiction to be more psychological than a physical problem (Bevilacqua & Goldman, 2009; NIDA, 2016). It is thus noteworthy that earlier research has shown that individuals with substance use disorders score high on self-reported measures of impulsivity and sensation seeking and generally low on harm avoidance measures (Kelly, Robbins, Martin, Fillmore, Lane, Harrington & Rush, 2006).

2.13 Poly-drug Use

Poly-drug use refers to the simultaneous use of different illicit substances, or a sequential use of different illicit substances. This can result in more problems for the user than they would encounter using just one drug and it greatly increases the chance of an overdose as well as mental health problems. It also increases risky behaviour (EMCDDA, 2002; Dunlop & Keats, 2012). Dunlop and Keats (2012) propose possible reasons for poly-drug use such as that it increases the "high" sensation; reduces the unwanted side effects of one drug; relieves

withdrawal symptoms when one of the illicit substances is not available; reduces chronic pain; and helps with sleeping disorders. Ramlagan, Peltzer and Matseke (2010:40) found that, in South Africa, the initiation age of poly-drug use with respect to soft illicit substances such as alcohol, tobacco, and cannabis (or marijuana) is 14 years, whereas harder illicit substances like cocaine and heroin are introduced at the ages 16 or 17.

2.13.1 Common drug combinations

“Speedball”: A combination drug known as “speedball” combines a depressant or downer substance with a stimulant or upper drug. Although the two illicit substances cancel each other out in the beginning with the depressant lowering the heart rate and blood pressure, the stimulant increases them. The rate of use differs: the stimulant often wears off much faster than the depressant which results in an amplified opiate effect that could cause the user to stop breathing. Stimulants are also combined with energy drinks to improve the upper feeling (EMCDDA, 2002; McCabe, Cranford, Morales & Young, 2006; Ruiz & Strain, 2011).

Cocaine, tobacco and alcohol: Cocaine is often combined with tobacco smoking, as both illicit substances act on the brain chemical, dopamine. One drug is responsible for addiction, while the other substance helps to make the addiction stronger, and vice versa. The smoking of cigarettes also acts as a “charger” as it increases the effect of the cocaine. Users of both substances may find it harder to quit either of the illicit substances. Cocaine is also often also combined with alcohol consumption, which directly affects the heart (EMCDDA, 2002; McCabe, Cranford, Morales & Young, 2006; Ruiz & Strain, 2011; Dunlop & Keats, 2012).

Antidepressants and MDMA: These two types of illicit substances are combined in order for the antidepressants to balance out the reduction in serotonin caused by illicit substances like ecstasy and psychedelics. Basically, the downer helps the user to ‘come down’ from the hallucinogenic “trip”. For some users, using antidepressants could lead to a fatal reaction known as the “serotonin syndrome”. This is caused by an excess amount of serotonin in the brain. MDMA is also combined with alcohol to escalate the feeling of being “high” (EMCDDA, 2002; McCabe, Cranford, Morales & Young, 2006; Ruiz & Strain, 2011; Dunlop & Keats, 2012).

Marijuana combined with other illicit substances: Marijuana combinations could lead to fatal consequences. For instance, when used in combination with some antidepressants, heart rate

irregularities such as a slowed rate are common. It may also increase the effects of cocaine and offset the results of antipsychotic medication. In some cases marijuana is used after the consumption of hallucinogens as a method to ‘come down’ from the upper that was taken. This will help the user relax and fall asleep, which is not easy unless a downer is taken to cancel out the effects of the upper (McCabe, Cranford, Morales & Young, 2006; Ruiz & Strain, 2011).

2.14 Life Stages and Drug Abuse

2.14.1 Adolescence and illicit substances

It is common knowledge that the majority of psychoactive substance users and abusers are found among the youth and young adults (Malunda & Mpinganjira, 2009:147). Crews, He and Hodge (2007:190) theorise that the adolescence stage “is a critical period of development when the individual is transitioning from childhood to adult [hood]”. This transformative stage is usually a stage when biological changes in adolescents make them more susceptible to the environment around them (Gunnarsson, 2012:10). During this stage the adolescent brain is in a state of transition, as “it undergoes both progressive and regressive changes providing a biological basis for the unique adolescent behaviours and changes to behaviours” (Crews et al., 2007:190). The transformation of the brain during this stage mainly occurs in the cortico-limbic and frontal regions of the brain which regulate emotional, analytical and executive processes (Crews et al., 2007:194). These brain changes increase the adolescents’ vulnerability, and it is a time of their lives when their choices are dependent on their social circles. Squeglia, Jacobus and Tapert (2009:750) believe that adolescence is “a unique period of neurodevelopment”. During this phase higher levels of risk taking behaviour become common and the adolescent attempts to find independence. It is for these reasons that external bonds become more important than family bonds (Mokoena, 2002:13-15; Donovan, 2004:527). Jessor (1991:598) contends that “risk taking behaviour allows the adolescent to achieve peer acceptance and respect, autonomy, rebellion against authority, anxiety and frustration coping mechanisms, and the marking of the transition into adulthood”. Successful accomplishment of many of the challenges adolescents experience allow for the healthy creation of personality, as explained by Erikson’s (1950; 1963) psychosocial development theory. However, risk taking by adolescents usually occurs when there is no alternate way of attaining their goals, and this accounts for the often delinquent behaviour of adolescents. It is this fact that emphasises the need to understand adolescent

behaviour as well as the neurobiological conditions in the developing brain (Crews et al., 2007:194). For example, increased susceptibility is intensified by the biogenetic alterations that adolescents undergo, and it also accounts for possible genetic predispositions (Umra, 2017:97). It is therefore imperative to understand drug use among adolescents as many adult users start their “drug using careers” during their adolescent years and carry it well into their adult years. It is interesting to note that Jiloha (2009:167) hypothesizes that “drug use behaviour should be understood like any other human behaviour such as through the interaction of genetics and biochemical characteristics, past learning, motivational states, psychological factors and cultural context”. However, these interactions should be understood from an individual context as substance use and abuse varies among individuals (Jiloha, 2009:167).

Goode (2012:151) proposes that the more unconventional the youth, the greater the probability that they would engage in drug use. There are three levels of unconventional youth. The first is “mildly unconventional”, which comprises youngsters who are likely to drink and experiment with cannabis or marijuana. The second is “moderately unconventional”, which are youngsters who engage in heavy alcohol drinking, use marijuana more regularly, and experiment with other illicit substances. The third is “highly unconventional”. These youths have a greater potential for serious involvement with alcohol, marijuana and harder substances as well. This model was created to explain the recreational drug user, and it is important to note that what causes a person to use illicit substances is different from what causes the abuse of illicit substances.

2.14.2 Young adults’ and adults’ use of illicit substances

Weiss (2015: n.p) believes that people who consistently abuse substances “do so not because they’re looking to connect and engage; rather, they do so to escape from the discomfort of life and relationships”. He also asserts that childhood trauma and psychological and personality issues are factors that could predispose people to psychoactive substance addiction. Intense feelings of shame and guilt due to unresolved issues could lead to isolation and antisocial behaviour (Weiss, 2015). This emphasizes the indispensable need to understand and acknowledge past traumas in an addict’s life in order to understand the psyche of the user. In this context, it is noteworthy that the factors that predispose adolescents towards drug use can also be the factors that encourage drug use in adults. In some cases, trauma during the adolescent years could initiate drug use in this phase, or it could cause the person to engage in drug use as an

adult. The onset of primary drug use can often only be determined through interaction with the user. Weiss (2016) found evidence that many adults tend use illicit substances as a coping mechanism to deal with stresses caused by work, marital or family issues. This finding corroborates Jessor's (1991) arguments concerning coping mechanisms and adolescence. O'Hara (2012) asserts that the adolescent years that lead into adulthood are rather difficult as an individual goes through a lot of social and individual challenges. She explains these challenges in light of Erikson's fifth stage of his psychosocial development theory, which is "identity versus role confusion" and the sixth stage, which is "intimacy versus isolation". (This theory is fully explained in Chapter three.) The argument is that, from late adolescence to early adulthood, an individual undergoes various social and psychological changes. They move from establishing their self-esteem to the desire for long-term relationships (Davis & Clifton, 1995; O'Hara, 2012). It is at this point of trying to transition and the need to establish relationships outside of the family that the situation can sometimes lead to drug use. Moving from early adulthood to late adulthood, individuals begin to be more settled in their thoughts and life around them. However, the inability or difficulty to reach this place, especially when an individual is dealing with isolation due to not being able to establish themselves in a long-term relationship, could lead to an emotional downward spiral that may (and often does) result in drug use and eventually abuse (O'Hara, 2012). Weiss (2015) affirms this viewpoint, stating that the situation is exacerbated by the fact that "most people dealing with these underlying intimacy issues begin the process of self-medicating". In his understanding of adult addiction, he places a lot of emphasis on what he terms as "genitality", and he asserts that the balance between intimacy and sexuality is very fragile. Thus the inability to achieve real companionship leads to various other consequences, such as drug use and abuse which soon lead to addiction.

2.15 Conclusion

This chapter explored the key factors that play an integral role in psychoactive substance use and addiction. The importance of understanding the neurobiological pathway of psychoactive substances was explained while common social (or interpersonal), psychological (or intrapersonal) and environmental factors that could encourage substance use were elucidated. Addiction was defined, and policies related to illicit substance abuse was investigated.

The next chapter will illuminate the three main scholarly theories that underpinned this research study. These theories formed the basis for the triangulation of the data that were obtained in the quest to understand the factors related to psychosocial factors in psychoactive addiction.

CHAPTER 3

THEORETICAL FRAMEWORK

3.1 Introduction

This research drew on three theories as points of reference, namely Erikson's (1963) psychosocial development theory with respect to the fifth and sixth stages – i.e., identity vs role confusion and intimacy vs isolation; Hirschi's social bond theory (1969); and Shaw and McKay's social disorganization theory (1942; 1969). These theories were used to understand psychosocial at risk factors of psychoactive substance use and abuse in Chatsworth.

3.2 Erikson's Stages of Psychosocial Development

According to Krogler (2015:1), identity is “that entity which enables one to move with direction and effectiveness, to find meaningful outlets for the actualization of one's interests, talents, and values within a social milieu”. Identity is constantly changed by contextual forces as it mediates or is affected by the very same contextual forces. Personality development is described by Franz and White (1985:224) as “...a hierarchically ordered sequence of stages which progress [sic] from initial narcissistic involvement...stages of identification and socialization...individuation and establishment of an individual identity”. Being in agreement, Kroger (2015) postulates that, during adolescence and young adulthood, identity development can be noted as a primary concern. During this period the adolescent faces decisions on which foundations should pass into adult life and which should be abolished, thus giving importance to Erikson's (1963) fifth stage of the theory of psychosocial development. This stage leads into the sixth stage to construct a foundational understanding of the psychological factors related to the psychosocial at-risk factors that are explored in this research, in relation to illicit substances.

Erikson's developmental stage theory is centralized on the significance of social interaction during the course of one's life. People are unquestionably social creatures as social interaction is an inevitable and an integral part of existence (McKay, 2017). Erikson assumes that “social development is a central motivating theme in our lives, and social development can influence how we see ourselves”. Erikson's acknowledgment of this socialisation process as it is presented

in his book, *Stages of Psychosocial Development*, is a cornerstone for understanding the psychosocial at-risk factors that impact drug addiction (McKay, 2017).

3.2.1 Theory development

Schwartz (2001) posited that Erik Erikson's influential writings gave rise to more than 50 years of literature in the field of social science. Erikson is a dynamic figure in this field due to the countless number of research studies that have been born from his theories on development (Kroger, 2007). Erikson wrote extensively on identity, with his main focus being the period of adolescence. However, insights during both childhood and adulthood are regularly offered in his work. Several learnings from Erikson's research can be identified in almost all areas of identity research. According to Hoare (2002), Erikson maintains that identity development does not end at the point of formation; rather, it should be viewed as a continuous process that captures a person's investments throughout adulthood. Thus, identity development can be encapsulated as a normative period of adolescence combined with the evolving aspect of adulthood (Meier & Allen, 2008:26). This means that the individual is presented with an intrinsic task or conflict at each stage, and this task or conflict requires successful resolution to proceed on the journey of development. Erikson emphasises the importance of sociocultural factors and their role that strongly influences development. These factors are viewed as vital during identity formation (Sokol, 2009:140).

Ongoing psychosocial development during adulthood as well as the formation and functioning of identity were considered by Erikson as far back as 1963. Erikson's clinical work on identity was greatly influenced by veterans who returned from World War II and who were suffering from a loss of sense of sameness and stability (McLean & Syed, 2014:66; Schlein, 2016:18). Because of its absence, Erikson (1968:50) cautiously began to detail the parameters of ego identity, arguing that "ego identity, in its subjective aspect, is the awareness of the fact that there is a self-sameness and continuity to the ego's synthesizing methods, the style of one's individuality, and that this style coincides with the sameness and continuity of one's meaning for significant others in the immediate community". Erikson (1963) believes that young adulthood is the main period of identity unification, and this belief was prompted by the actualisation of previous individual identity inspection and decisions made within the social context (McLean & Syed, 2014:67; Kroger, 2015:3). The actualisation of identity during adolescence is usually achieved by one's

occupational and principle undertakings, coupled with their long-term relational commitments to intimate partners and friends. Erikson, Erikson and Kivnick (1986:130) note that life's fluctuations often ignite a re-evaluation of past values and commitments which are defined by identity during the identity development stage among midlife adults. Thus, during adulthood, "the individual struggles to balance a faithfulness to some commitments with an inevitable confusion and abandonment of others, all the while living a life that, in turn, both represents and reflects an underlying sense of self" (McLean & Syed, 2014:67). There is a possibility that older role models guide identity development between early through mid-adulthood; however, "only an individual's personally internalised 'hero', past experiences and generational expectations help redefine their identity during late adulthood" (McLean & Syed, 2014:67). Overall, the emphasis that is placed on outside social interactions in relation to human development and how this affects people in finding their identity is one of the key pillars of the psychosocial theory (Pinker, 2003). It thus argues that a newly born infant is not completely "tabula rasa" (i.e., a blank slate), but that birth is the start of its interchangeable role in being influenced by and influential within the environment and societies into which it is born (McLeod, 2017b). Erikson thus believes that the purpose of life is to discover an identity as the ego progresses via society's demands through the stages of life development (McLeod, 2017b).

Table 3.1: Erikson's Key Stages of Psychosocial Development

Approximate Age	Psycho Social Crisis
Infant – 18 months	Trust vs Mistrust
18 months – 3 years	Autonomy vs Shame & Doubt
3 – 5 years	Initiative vs Guilt
5 – 15 years	Industry vs Inferiority
13 – 21 years	Identity vs Role Confusion
21 – 39 years	Intimacy vs Isolation
40 – 65 years	Generativity vs Stagnation
65 and older	Ego integrity vs Despair

3.2.2 Erikson's psychosocial theory of development in context

Erikson's (1950, 1963) psychosocial theory of development examines the effects of maternal and paternal influence, society, and external factors on personality development throughout childhood and into adulthood. According to Erikson's theory, people need to navigate their way through a sequence of eight interrelated stages throughout their lives, which are more commonly known as the psychosocial stages (Davey, 2014). In essence, Erikson believes that "development consists of progressive and lifelong evolution of the individual's innate potential" and he also views the "interaction between the individual and society as complementary" (Meyer et al., 1989:149).

McLeod (2009) states that Erikson's ideas were greatly influenced by Freud, as they were "going along with Freud's (1923) theory regarding the structure and topography of personality". However, his psychosocial theory of development differs from Sigmund Freud's theory, mainly by the proposition that development continues throughout one's life and that people have the ability to rectify any issues that may arise at the different stages [of their lives] independently (Meyer, Moore & Viljoen, 1989:147). As reported by Fleming (2004:4), Erikson saw "that each stage of development presents its own unique challenges, which he called crises". The ability of one to overcome these challenges successfully allows for the creation of personality. Erikson based his development theory on the epigenetic principle. Originally, this principle was used in embryology to describe the physiological development of the embryo which involves the natural unfolding of the developing embryo into a foetus – i.e., the development of a child in the uterus (Davis & Clifton, 1995; Fleming, 2004). If a disturbance occurs at a critical time, development does not occur; for example, if something interrupts the development of a limb at the most critical point of development, the limb will never develop (Fleming, 2004:4). The same is true for the development of personality, and thus the stages and the crises at each stage need to occur. Erikson proposes eight stages of psychosocial development, but for the purpose of this research only two stages will be discussed, namely the fifth and sixth stages which are identity versus role confusion and diffusion and intimacy versus isolation respectively.

Erikson's fifth stage, identity versus role confusion, is generally the period when adolescents attempt to determine their identity by untying themselves from their parents. Coleman (1986:47) states that it is at this stage that they "are faced with many psychosocial and psychosexual challenges and conflicts; for example, a search for identity, need for peer group approval and coming to terms with the so-called 'generation gap'." During this stage, adolescents develop a sense of self by exploring their independence (Cherry, 2017:1). This is a significant period for understanding adolescents and their propensity for using illicit psychoactive substances, and it is also during this phase that other social groups become increasingly critical (Umra, 2017:99).

A Canadian development psychologist, James Marcia (1966, 1980), later expanded on Erikson's stages of psychosocial development. The majority of his writings centres largely on the development of the adolescent and his work aims at identifying and categorizing the processes that the adolescent undergoes when faced with what is known as an "identity crisis" (Oswalt, 2010). The four processes that Marcia identifies that may illuminate possible drug use related outcomes are presented in Table 3.2.

Table 3.2: Adolescents' coping mechanisms with reference to Erikson's fifth stage

Coping mechanism	Identification	Outcome (drug use related)
Foreclosure	The adolescent employs someone else's value system for convenience (e.g., his/her parents' values).	This could normalize drug use if the adolescent has parents or role models that use illicit substances or alcohol. It also increases the accessibility of illicit substances.
Moratorium	The adolescent usually breaks away from finding him-/herself by allowing him-/herself to explore different options.	Adolescents begin to develop an identity by exploring different social groups.
Diffusion	The adolescent begins to lack passion and commitment (i.e., the apathy stage).	Adolescents are more concerned with themselves and do not really consider the consequences of their actions or events.
Identity achievement	Adolescents have a sense of knowing who they are and what they would like to do in the future.	Adolescents are able to identify themselves and determine who they are in a social group setting.
Negative role identity	This is a rebellious mechanism. The adolescent denies the norms of society	Adolescents feel the need to experience life on their own terms

	and expectations of the parents	
--	---------------------------------	--

Source: Adapted from: Marcia (1980:111-112) and Fleming (2004:13)

The sixth stage of Erikson's theory of psychosocial development is intimacy versus isolation. During this period, the key struggle centres on creating loving and intimate relationships with other people and these relationships could be romantic or non-romantic. These close, committed relationships between people are viewed as a necessity by Erikson (Cherry & Gans, 2017; McLeod, 2017b).

As people enter the stage of adulthood, these intimate relationships play a vital role in the intimacy versus isolation stage. The relationships are usually romantic in nature; however, Erikson holds that close friendships are also significant. He further describes intimate relationships as having characteristics such as closeness, honesty and love. However, these relationship characteristics can be achieved if a person passes through the previous stages of psychosocial development successfully. Cherry and Gans (2017) state that those who successfully resolve the struggles that occur in the intimacy versus isolation stage are more likely to grow deep, meaningful relationships. These people tend to have lasting romantic relationships as well as strong relationships with friends and family and they are also able to strengthen social bonds. Successfully navigating through this stage leads to strong relationships; conversely, failure in this stage results in isolation and loneliness. Adults who struggled through this phase often find themselves in broken romantic relationships and have difficulty in forming strong relationships with people. They may never be able to share deep intimacy while in a romantic relationship or they struggle to develop any form of a lasting relationship (Cherry, 2017). They watch acquaintances and friends fall in love, go through marriage and start families, but they fail to successfully achieve these goals themselves. The feeling of loneliness and isolation often follows those who have struggled to form an intimate relationship. Others may get the same feeling of isolation if they fail to form close friendships with people (Cherry & Gans, 2017). This sense of isolation could initiate substance use, or prolong it. To reiterate this point, it is emphasised that Weiss (2015: n.p) believes that people who consistently abuse substances “do so not because they’re looking to connect and engage; rather, they do so to escape from the discomfort of life and relationships”.

3.2.3 A sense of self contributes to intimacy

After an individual has formed an identity, he/she is now ready to take on long term commitments to others. This is the point where young adults are able to establish warm and mutual connections; in turn, they are now willing to compromise and sacrifice for the good of their relationships such as marriage or close friendships (Erikson & Erikson, 1950).

Conversely, if a person is incapable of forming intimate relationships, a feeling of isolation may prevail. Erikson (1980) believes that establishing a completed sense of self through the identity versus confusion stage is crucial and a direct contributor to one's ability to form intimate relationships. It is in this context that Chapman (2013) cautions that while the psychosocial theory "is often presented as a series of neatly defined, sequential steps, it is important to remember that each stage contributes to the next". Studies have shown that people with a poor sense of self are likely to have less committed relationships and have higher chances of suffering emotional isolation, depression and loneliness. Erikson and Erikson (1950) note that, as young adults establish relationships and are now ready to engage in serious affairs, they also expose themselves to the possibility of experiencing pain and hurt due to rejection. Rejection occurs when a person is turned down or rejected by someone special to them or having a partner end the relationship. Both these experiences can negatively encourage people to become scared and to seek other avenues for intimacy. Rejection can also be seen as negative reinforcement of relationship isolation. However, Erikson (1968) describes a concept that is the opposite of intimacy, which he refers to as "distantiation". This happens when young adults isolate themselves to avoid or destroy negative forces that are deemed intrusive and harmful to them (Johnson & Friedman, 2014:64).

It is important to note that each stage builds on skills gained in the previous stages. Positive relationships with family is thus a key factor in the sixth stage. Once this stage has been successfully resolved, the virtue known as love can be shared (Davis & Clifton, 1995) and meaningful relationships can be formed with others. One requirement for a positive outcome, as stated by Cramer, Flynn and LaFave (1997), is that a young adult must develop intimate relationships with others. Not resolving conflict leaves the young adult feeling isolated, and s/he must therefore be willing to be open and committed to another individual. In contrast, actions related to a negative outcome occur when an individual begins to isolate him-/herself due to the

lack of a sense of identity, and such a person fears the involvement that is required by commitment in a relationship (Cherry & Gans, 2017).

3.2.4 Criticism of Erikson's theory

Despite its profound influence, Erikson's theory of psychosocial development has been subject to various criticisms. One criticism is that it lacks attention to emotional and cognitive development, as it focuses on people and their attitudes towards other people (i.e., relationships) and life in general. Also, the causes and challenges of development are too vague, and the experiences needed for development at each stage are never explained (Louw, 1998). Moreover, Shultz and Shultz (2005) state that Erikson's theory focuses "on ambiguous terminology, incomplete descriptions of the psychosocial stages, and poorly supported claims of male-female personality differences based on biological factors."

3.3 Hirschi's Social Bond Theory

Humans are social beings and social bonds play an integral role in their everyday lives. In fact, the very desire to belong stems directly from the reward system of the brain. The hormone and neurotransmitter, oxytocin, sometimes known as the "trust hormone", is produced in the hypothalamus, which heightens the brain's reward system of joy and pleasure when responding to love and social bonding (Mogan & Kalra, 2011:158; MacGill, 2017). Socially it impacts bonding behaviour, the creation of group memories, social recognition, and contributes to the formation long-term relationship and other social functions. Oxytocin causes a calming effect that is felt in the brain which, in turn, facilitates the creation of positive social bonds in both humans and animals as it can impact emotional, cognitive and social behaviours (MacGill, 2017; Heshmat, 2014:1; Pappas, 2015).

Social bonding can protect a person against addiction. Baumeister and Leary (1995:497) suggest that a sense of belonging has several noticeable effects on cognitive processes and emotional patterns. Lack of attachments can be directly linked to many harmful effects on adjustment, well-being and overall health, and the existence of strong social bonds in a person's life may decrease his/her vulnerability to drug abuse during adulthood (Heshmat, 2014:1; Salamon, 2010). Oxytocin can lessen the pleasure of psychoactive substances and reduce stress levels. It also contributes to relaxation, trust, and psychological stability. However, for people with irregular

oxytocin systems, the inverse can happen, and only illicit substances will induce a deepened sense of pleasure.

According to Heshmat (2014):

“Positive social interactions result in the release of oxytocin in the brain, which may be a natural way to reduce addictive behaviours and other psychological problems. For example, in individuals who are already addicted, close relationships between spouses or family members aid in recovery from drug addiction. Similarly, the positive effects of social support groups like [the] 12-step program have shown to contribute to addiction treatment outcomes”.

It is against this backdrop that the researcher will elaborate on Hirschi’s social bonding theory in which social bonding and interaction are central. This theory was applied in this research study to support the growing understanding of the psychosocial risk factors associated with drug use.

3.3.1 Current context of Hirschi’s social bond theory

Travis Hirschi (1969) introduced the world to the social bond theory which is a major cornerstone in the criminology discipline. In the past four decades, the man himself has remained a prominent figure in the field and year after year he is among the most mentioned criminologists (Wright, 2002). Indeed, only a handful of academics can claim to be this relevant for this long in the discipline. This fame has not come by chance – there is a reason why his philosophies have persevered where others have been ignored. It is against this background that this chapter focuses on the social bonding theory.

To explain the cause of delinquency was not one of Hirschi’s (1969) main interests. Rather, he was more concerned with factors that may deter delinquency. His social bonding theory thus remains one of the very few theories that are still relevant in the explanation of delinquency. After the publication of Hirschi’s (1969) seminal work, *Cause of Delinquency*, 71 studies between 1969 and 1991 in the US tested the social bond theory (Kempf, 1993). The social bond theory comprises four elements: “attachment to significant others; commitment to traditional types of action; involvement in traditional activities; and beliefs in the moral values of society” (Hirschi, 1969).

The main question in understanding deviance has always been, “Why don’t we do it?”. Hirschi believes that the bonds formed by people in prosocial institutions and with prosocial people and prosocial values is where the answer lies (Marimuthu, 2014). Hirschi holds that it is these bonds that ultimately control one’s behaviour when tempted to partake in deviant or criminal acts. This theory leans towards being combative as opposed to being inclusive and it inspired Hirschi, in the spirit of theoretical competition, to test the measures resulting from other theories against one another. His assumption was that the outcome would yield a winner and potentially multiple losers, which was exactly the outcome of Hirsch’s tests. Simply put, he found that measures of social bonds matter in relation to predicting delinquent behaviour (Cho, 2014:3). The social bonding theory maintains that people with strong and lasting attachments to conventional society – such as beliefs, involvement and investment – as opposed to people who have shallow or weak bonds are less likely to deviate towards delinquency.

The social bond theory notably contributed to the holistic understanding of deviance (Chriss, 2007:698-700; Hodwitz, 2014:1). Ford (2009) states that, according to the theory, “conformity is based on the internalization of the societal values and norms, and integration into prosocial groups”. This is reiterated by Chriss (2007), who states that a key element is the strong attachment that people should have with conventional society. The third stage of Erikson’s development theory (initiative versus guilt) is crucial for a child as siblings and family play a significant role in a child’s socialisation and directly influence the behaviour of the child (Franz & White, 1985). Hirschi (1969:83-197) elaborates on this view, arguing that the social bond consists of four dimensions, namely attachment, commitment, involvement and belief, each of which responds to a different level: attachment-affective, commitment-cognitive, behavioural-involvement, and evaluative-belief. Each of these dimensions is summarized in Table 3.2 below.

Table 3.3: Hirschi's Four Dimensions of the Social Bond

Element	Level	Conceptualisation	Operationalisation
Attachment	Affective	<ul style="list-style-type: none"> • The internalization of norms, conscience, and superego is determined by an individual's attachment to others. • Hirschi argues that this is the sociological counterpart to the superego. 	<ul style="list-style-type: none"> • Close, affective ties to others • Identification with others such as parents (i.e., the more insensitive we are towards others the less we care about their values (e.g., psychopaths)) • Presented by: emotional closeness to family, peers, and schools
Commitment	Cognitive	<ul style="list-style-type: none"> • People obey rules in fear of the consequences of breaking them. This is the counterpart of the ego. • Staked in conformity, investment in pro-social, conventional lines of action, careers, education, etc. 	<ul style="list-style-type: none"> • 'Rational' element in the theory but only indirectly • Rewards for deviance not taken into account • Cost of deviance: loss of investment in conformity • Action: Rational calculation of the costs of law-breaking for future goals
Involvement	Behavioural	<ul style="list-style-type: none"> • A person's personal involvement in conventional activity • Hirschi states that an individual involved heavily in conventional activities simply does not have time to engage in deviant behaviour. • Participation in conventional 'lines of activity' 	<ul style="list-style-type: none"> • Time: amount taken up with conforming activities • Engrossment and importance • Action: Time spent in conventional activities
Belief	Evaluative	<ul style="list-style-type: none"> • A common value system within a culture • Belief plays a role in deviance in two ways: the criminal either disregards the beliefs s/he has been taught entirely, or rationalizes his/her deviant behaviour so that he/she can engage in criminal activity and still believes that it is wrong. • This subset of the social control theory involves the strain theory in that it demonstrates an individual's belief in the common goals and morals of society, and it shows a lack of means for 	<ul style="list-style-type: none"> • General conforming and law-abiding beliefs • Conventional morality, values • Religious beliefs not specifically included but are by implication • Presented through ideas that support a conventional orientation

		achieving those goals which in turn encourages deviant behaviour as a means of achieving those goals. <ul style="list-style-type: none"> • General beliefs in conventional values and roles of society 	
--	--	---	--

Source: Adapted from Hirschi (1969), and Livingston (1996) and Chriss (2007)

Hirschi believes that people “do not break laws to the extent that they have internalised law abiding norms or developed social bonds [but that] humans, like other animals, will violate rules if those rules have not been socially indoctrinated (i.e., inculcated through a proper socialization process) as part of a moral code in them” (Brown et al., 1996:309). Hirschi (2002) maintains that broken, or even weakened, social bonds can cause a decrease in conformity, thus ultimately leading individuals to surrendering to their deviant desires. This causes the weakening of one relationship (such as ties with parents or the social order) and a growing strength in another (such as delinquency and engaging in illicit drug use behaviour) (Marimuthu, 2014).

Bartollas (2000) evaluated Hirschi’s theory and provides meaningful insights into the understanding of societal delinquency. For example, he suggests that it considers the significance of intra-family relationships as being the main contributor of modelling the youth to conformity. However, this particular theory has come under criticism for neglecting the varying strengths of social bonds and their origins. The control theory states that deviant behaviour and delinquency are the result of having weakened bonds with the conventional order and conventional norms. In the constitution of behaviour as either conformity or deviance, the strength of social bonds can only provide a partial answer. If social bonds are the key contributors to the behaviour, the clear concern is to understand those bonds (Marimuthu, 2014). If, as Hirschi states, there is varying strengths of bonds, it is crucial to account for such differences, especially when trying to understand deviance in the form of a social phenomenon such as substance use or abuse (Maguire et al., 2000:354).

To summarise, Hirschi claims that the higher the levels of attachment between people and other members of society, the higher the likelihood of them believing in the values of conventional society. Therefore, people who are more involved and invested in conventional forms of activity are less likely to deviate than those who lack the inclination to invest in conventional norms (Chriss, 2007:692).

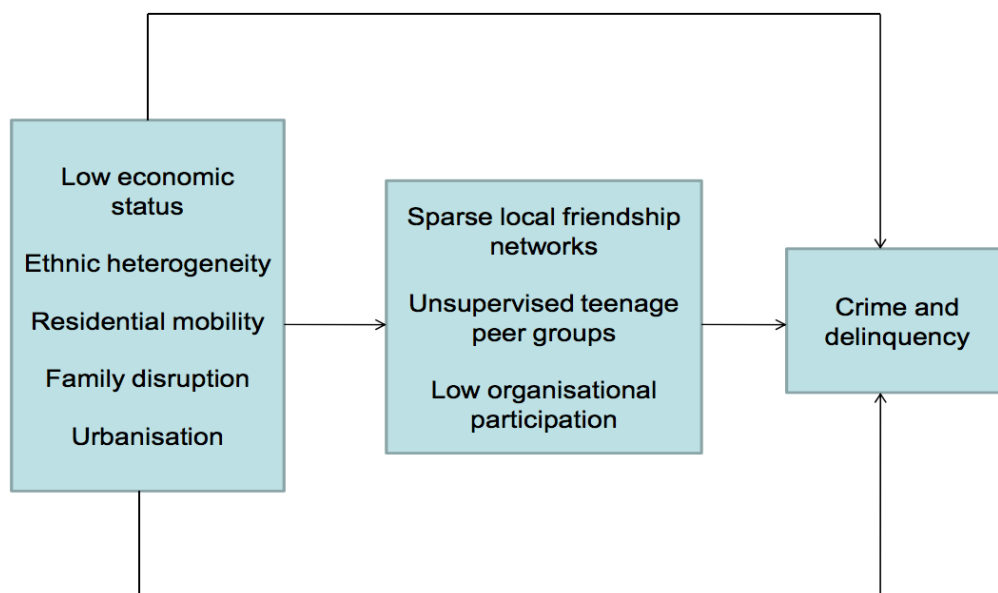
3.4 Social Disorganisation Theory

The third theory that this research harnessed is the social disorganisation theory. It is of importance to note that not only is psychoactive substance use and abuse socially deviant behaviours, but they are illegal as the possession and use of such substances are officially criminal offenses.

The twentieth century Chicago School of Sociology is the founding school of the social disorganization theory (Holcombe, 2008:10). To date, one of the core significant ecological thoughts in sociology in the study of delinquency and crime is derived from the research of the Chicago School, and more specifically from the work of Clifford R. Shaw and Henry D. McKay (1942). Together they investigated the association between the social organization of communities or neighbourhoods and the growth processes of major cities. More specifically, they sought to realize why increased rates of delinquency continued in certain locations for several years, independent of deviations in the population structure. According to their theory, crime is apparent in societies that are characterized by social disorganization and is disseminated through a course of generational cultural transmission. It is through this transmission process that traditions and traits are passed on from one generation to the next (Da Silva, 2014:219). Burke (2015) confirms this view by stating that this approach has highlighted the significance of social regulations and guidelines in the upkeep of social conformity and organization. This theory posits that “a person’s physical and social environments are primarily responsible for the behavioural choices that a person makes”. Shaw and McKay (1942) claim that three structural factors contribute to this phenomenon, namely residential mobility, low socioeconomic status, and ethnic heterogeneity, and that it is primarily these three factors that cause disruption in a community’s social organization. These factors also explain the spatial differences in the rates of delinquency and crime that occur in specific settings. It is in this context that the community, categorized as a small zone in the interior of a metropolitan space, has become the unit that environmental sociologists analyze when seeking the causes of crime within large cities (Shaw & McKay, 1969). Social order requires community members to supervise and control teenagers; local friendship networks; and the participation of residents in formal and/or voluntary organizations (Holcombe, 2008:11). When these factors for social cohesion are absent, an increase in deviance may result. When examining this in relation to psychoactive substance use,

it highlights the importance of “social bonds”, as attachment to certain social structures could be a deterrent to delinquency, and more specifically to the use of psychoactive illicit substances among idle teen groups who may otherwise engage in recreational psychoactive substance use. The overall effectiveness of social bonds is controlled by the community itself.

According to Vetter and Silverman (1986:297), when laws and regulations no longer encourage order and the effective functioning of a society, social disorganization makes its appearance. The argument that delinquency is the result of institutional disruption and the unravelling of community-based controls is thus the general premise that explains delinquency in society (Bartollas, 2000). Shoemaker (1990:82) believes that when faced with disorganization, communities and societies will begin to develop criminal values and customs, which is exemplified by illicit psychoactive substance use and abuse. As far back as 1948, Robert (1948) elaborated on the conceptualization of social disorganization to explain social pathologies and problems, arguing that social issues include crime, suicide, mental illness, and mob violence. Robert later defined organization as “definite and enduring patterns of complementary relations”, and he explained social disorganization as “the weakening or destruction of the relationships which hold together a social organization” (Robert, 1955:81). Figure 3.2 is a visual representation of the extended version of Shaw and McKay’s social disorganization theory.



Causal model of extended version of Shaw and McKay's theory of community systemic structure and rates of crime and delinquency in (Sampson, R.J. and Groves, W.B. (1989) 'Community Structure and Crime: Testing Social-Disorganisation Theory', *American Journal of Sociology*, Vol. 94, No. 4, page 783)

Figure 3.2: Extended Causal model of the Social Disorganization Theory

During the period between the 1950s and the 1980s, the social disorganization theory was subjected to considerable criticism, which prompted the abandonment of the theory as a feasible theoretical explanation for empirical studies of crime and delinquency (Da Silva, 2014:220). These criticisms were focused on the effectiveness and capacity of “macro-level interpretation, the assumed stability in the standards for urban land use, and the measurement of social disorganization as a construct independent of that construct’s outcome” (Veysey & Messner, 1999:156). In more recent times, the social disorganization theory gained renewed attention from researchers, which was mainly due to “the advancement of computer-based statistical techniques, new methodologies and theoretical approaches” (Da Silva, 2014:219). Towards the latter part of 1980, Sampson and Groves (1989) pursued the basic logical sequence and ideas of the pioneered theory of Shaw and McKay (1949) whilst simultaneously depending on current work concerning the ecology of crime to create a theory-based explanation of crime at community level. Sampson and Groves (1989) tested the facilitating effect of what was termed the “intervening dimensions of social disorganization” in conjunction with the structural characteristics of the community, or “exogenous sources of social disorganization” and rates of crime (Da Silva, 2014:220). Based on their research Sampson and Groves (1989) created indicators of social disorganisation, namely friendship networks, organizational involvement, and the control of teenaged peer groups who usually roam the streets (Jensen, 2003:9; Da Silva, 2014:220). With the help of these indicators, they were able to understand social disorganisation, criminal offending and criminal victimization in a particular area.

3.4.1 The current context of social organisation versus social disorganisation

Kubrin and Weitzer (2003:376) describe social disorganisation as “the failure of a community to recognise common goals to work together to solve chronic problems”. Location is the crux of the social disorganisation theory as far as the prediction of criminal activity is concerned (Bond, 2015). According to Jensen (2017:35), the concept may be defined “in terms of the absence or breakdown of certain types of relationships among people, and is intimately tied to conceptions of those properties of relationships that are indicative of social or communal organization”. Thus, instead of focusing on people, this theory focuses on places – neighbourhoods in particular – and their ability to create conditions that are favourable or unfavourable for the commission of crime

and the eruption of delinquency (Kubrin & Weitzer, 2003). Within the social disorganisation paradigm, several variables are highlighted as drivers of a community's proficiency to develop social relationships and to maintain them. These variables are residential unpredictability, population density, monetary status, ethnic diversity, levels of family disturbance, and proximity to urban areas (Osgood & Chambers, 2003). Thus a neighbourhood's inability to control residents' public behaviour increases the likelihood of crime (Kubrin & Weitzer, 2003). According to Sampson and Grooves (1989), the intervening dimensions of the theory are the effective supervision and control of teenage peer groups, the establishment of community friendship networks, and community involvement in formal and voluntary organisations. These propositions hold strongly when trying to understand deviance in the form of illicit drug use and abuse in a particular area, with specific reference to Chatsworth.

Joubert (2003) suggests that an indication of social disorganisation in South Africa is illegally and randomly erected shanty town areas known as squatter camps that can be found in many different locations. Housing structures in these areas are dilapidated and non-serviced and there is a high level of unemployment amongst the residents. Many of these households are run by single parents or they are child-headed households due to the HIV/Aids pandemic. Currently, Chatsworth is facing a land invasion dilemma as there is a boom in informal settlements in and around it (Naidoo, 2017), and this phenomenon has caused a notable socioeconomic divide in certain areas in Chatsworth. For example, there are well-constructed homes built of brick and mortar on one side of a road, while illegally constructed squatter camps are rising directly opposite these houses. The concern of the residents and the extent of the disruption and disorganisation in such areas are evident in a resident's statement that was reported in a local newspaper (Naidoo, 2017):

“There are a lot of informal settlements in the Crossmoor area and we fear the mushrooming of this informal settlement [sic] will compromise our safety and the safety of motorists and visitors who frequent the area. We are afraid to sleep at night because we hear noises and are disturbed by the construction of the illegal shacks. As the co-operation of community leaders decreases, the onus to stop the perpetrators fall on the residents...”

The level of disorganisation in this area evidently has great potential to create an environment that is conducive to social deviance.

The social disorganisation theory further explains the distribution of deviant behaviour and the significance of family influence on the frequency of deviant behaviour, both of which play an important role in illicit drug use behaviour. In this context, mention is made of Shaw and McKay's (1949) concentric zone model. Using this model, the city of Chicago is divided into five zones or circles (Figure 3.3).

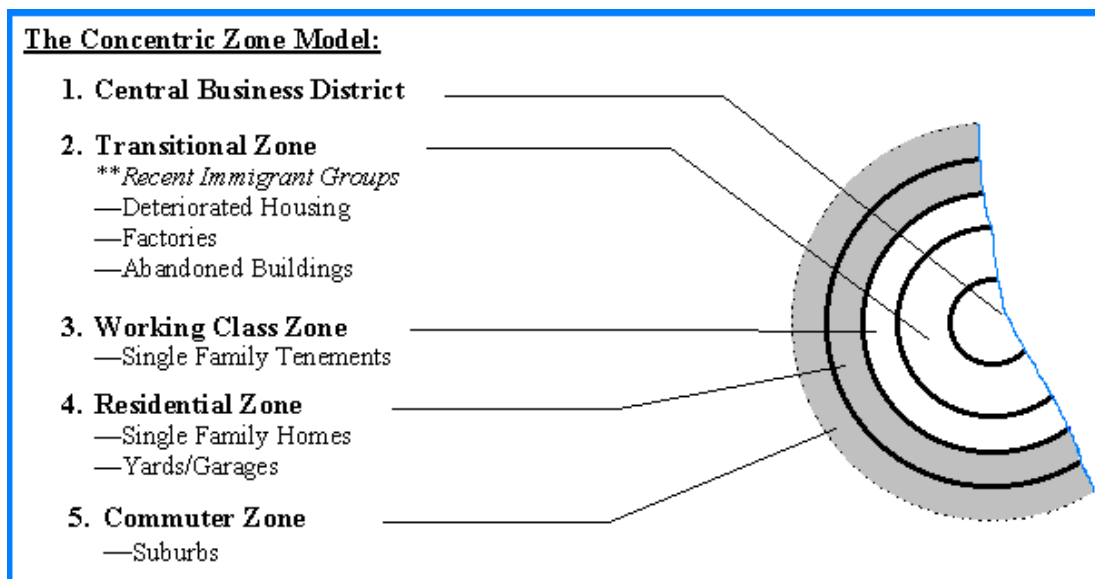


Figure 3.3: The centric zone model

Source: Crime and place: <http://www.umsl.edu/~keelr/200/socdisor.html>

Vetter and Silverman (1986:300) used this model to explore the relationship between deviant behaviour and circumstances of social disorganisation, and found that Zones 1 and 2 were the areas of the most highly concentrated deviance. They were able to uncover that there was a decline of delinquency in a sloping pattern from the centre of the city towards Zone 5. High population density, economic dependency and high levels of school truancy were contributors to crime and delinquency in some of the areas (Kratcoski & Kratcoski, 1979:79). They were also able to uncover that high rates of deviance persisted in particular areas of Chicago despite demographic fluctuations in the population, and they were able to conclude that deviance and

delinquency encouraging factors are characteristic to the nature of the community. This is confirmed by Shaw and McKay's (1969) statement that "the differences in areas where there is a high rate of delinquency versus areas of low rates of delinquency can...also be attributed to differences in norms, social values, and attitudes to which residents are exposed". The researchers thus argue that, in locations where delinquency rates are low, there is adherence to conventional norms; residents abide by the law; education is given priority; and other social organisation factors are in place. Thus people in such areas engage in conventional activities due to the pressure exerted on them by formal and conventional associations that exist in these areas (Vetter & Silverman, 1986:42).

Esbensen and Huizinga (1990:691) found no significant difference in rates of illicit drug use in the three distinct types of identified socially disorganized areas that they explored. However, there was a noted location-based difference in mediating factors of three different types of communities. These factors were found to directly influence substance use and abuse. In contrast, the Dai study that was conducted from 1928 until 1934 in Chicago can be considered a pioneer study in preliminary ecological investigations of illicit drug users as a distinctive subpopulation. This study found that communities with inflated numbers of opium addicts resided in or around the central business district of this city, whereas low addiction areas were identified near the borders of the city. It was also found that there was a decline in rates of addiction as the distance away from the inner city increased. Thus, as the distance from the inner city grew, addiction rates decreased. Martínez, Rosenfeld and Mares (2008:2) also found that "the ecological distribution of drug addicts was similar to that of other social problems". Shaw and McKay (1969) argue that the three main dimensions of social disorganisation also characterise the rates of illicit substance abuse as being concentrated in areas in the same way that delinquency rates are characterised. In essence, delinquency and substance abuse may be characterised by the same three dimensions of social disorganization in particular areas. An important question put forward by Martínez, Rosenfeld and Mares (2008:4) is whether drug markets are "also a product of social disorganization". This seems to be the case, as the same neighbourhood conditions that produced crime and delinquency were found by early Chicago School researchers to produce illicit drug addiction as well (Martínez, Rosenfeld & Mares (2008). Current research suggests that "out in the open" or street-corner drug dealing takes control in urban neighbourhoods, which means that existing social structures are incapable of

keeping them out (Sullivan, 1989; Anderson, 1990, 1999; Jacobs, 1999; Currie, 1993). Moreover, current research and theoretical developments in social disorganisation suggest that drug markets may even act as a catalyst to allow disorganised social conditions to progress into high rates of violent crime (Martínez et al., 2008:4). This once again brings attention to the interchangeable relationship between psychoactive substance use and crime. It was also discovered by Shaw and McKay (1969) that residents, especially the children, in areas of inflated rates of crime are exposed to a vast array of norms and behavioural standards. In these particular areas there seems to be “a tug-of-war between conventional standards and deviant values” (Marimuthu, 2014:70).

Recently examined research on social disorganisation has determined that crime alone is not necessarily the issue; rather, it may be a consequence of inadequate social networks, which can be understood as the level of collective efficacy found in neighbourhoods (Sampson, Morenoff & Earls, 1999; Taylor, 2001; Sampson & Raudenbush, 2001; Reisig & Cancino, 2004). The lack of social efficacy in a community is a challenging, multifaceted problem that local authorities and law enforcement need to address. Collective efficacy, as explained by Farmer (2014:1), is “the basic tenet of the theory that communities with strong mutual trust, shared expectations, and the capacity to influence informal social controls will have stronger neighbourhood collective efficacy, which will lead to lower rates of crime”. Consequently, it is proposed by Sampson and Groves (1989:774) that “a lack of supervision, lack of community involvement, reduced friendship and other social networks are primary cause [sic] of disorder in neighbourhoods”. To elaborate, in socially disorganised communities there is a lack of trust, and when problems arise, collaboration from the community in an attempt to develop and institute a solution would almost be non-existent (Taylor, 2001). Collective efficacy can therefore help deal with socially disruptive phenomena in a socially disorganised setting and it can help at community level to initiate change in order to deter deviant behaviours. The effectiveness of deterrence methodologies relies on the ability of all components of the community to act together. There thus needs to be faith in law enforcement as well, and communities need to know that they can trust the authorities. One such method of deterrence that would require community cooperation is illicit substance related local authority practices. In essence, such practices require policing strategies with the main aim of reducing and possibly eradicating illicit drug use, drug dealing,

and associated problems at geographical locations where drug-dealing occurs. This will require police visibility as a deterrence method for drug peddlers (Nhleko, 2016).

3.4.2 Partnering the social disorganisation and the social bond theories

In an interesting initiative, Jensen and Rojek (1980) consider the social disorganisation and the social bonding theories as a mutual “macro-micro theory” and highlight their common differences in comparison with other perspectives. They suggest that ecological variations in crime are addressed by the social disorganisation theory and that the social bond theory addresses variable behaviours among individuals. Bursik (1988:521) states that the social disorganisation theory is the “group-level analogue of control theory”. However, both the social disorganisation and the social bond theories emphasise “the variations of the barricades to crime, delinquency and deviance in conjunction to the deconstruction of social institutions as correlates of crime and delinquency at either the ecological or individual level” (Jensen, 2003:17). It may thus be argued that the combination of both theories creates a better model for understanding deviance in the form of substance abuse in particular communities, as this partnership allows for the analysis of substance abuse from different theoretical angles.

A common criticism aimed at both the social disorganisation and the social bond theory is that they are “absence of something” theories (Jensen, 2003:16). This means that they both assume that when mechanisms that reinforce conformity, order and control are weakened or interrupted, crime is at its most probable phase. Both theories predominantly emphasise the failures and discrepancies associated with the socialisation of the youth as a core causality when examining delinquency. However, the disorganisation theory differs in this regard by highlighting the ecological variables that could account for these failures and discrepancies. The social disorganisation theory, as an “absence of something” perspective, ignores the influence of pressures from society (Merton, 1957) or motivational forces (Cohen, 1979) that produce crime, delinquency and deviance.

In the current study, the triangulation of the selected three theories allowed the researcher to better understand psychoactive substance use and abuse in the community under study. This process facilitated an in-depth understanding of the psychological component of psychoactive substance abuse through the application of Erikson’s life stages theory. The social factors that

impact the studied phenomenon were investigated by the application of Hirschi's social bond theory, whereas community and social interaction as it relates to psychoactive substance abuse was considered through the lens of Shaw and McKay's (1942; 1969) social disorganisation theory.

3.5 Conclusion

In this chapter, the three predominant theories that applied to this research were reviewed and their application and relevance to this study were explained. Relevant information pertaining to these three theories will be referred to throughout this report, particularly as salient points that apply to the collected data. The analysis and discussion of the data in Chapters 5 and 6 will therefore be presented within the framework of these theories.

CHAPTER 4

RESEARCH METHODOLOGY

4.1 Introduction

Rajasekar, Philominathan and Chinnathambi (2011:4) propose that systematic problem solving is the most appropriate way to describe research methodology. In essence methodology can be considered as “the science of studying how to conduct research”. Research methodology is thus centralised around the goals of the research and the steps formulated by the researcher to attain or reach these particular goals (Marimuthu, 2014:79). Research methodology thus encompasses the conceptualisation of the research, an illumination of the advantages of the selected research design, sampling methodology, and an elucidation of logical and causal inferences (or causality) (Fitzgerald & Cox, 1987:39). Rajasekar et al. (2011:5) state that, essentially, “the procedures by which researchers go about their work of describing, explaining and predicting phenomena are called research methodology”. This chapter will therefore elaborate on the research methodology and design that were employed in this study. The research aim and objectives, the data collection and analysis methods, the procedures to ensure reliability and validity, and the ethical considerations will therefore be illuminated.

4.2 Aim, Objectives and Research Hypotheses

Thus the aim of this research was to investigate psychological (intrapersonal) and social (interpersonal) (psychosocial) factors related to psychoactive substance use in select sample in Chatsworth near Durban, South Africa. In achieving this aim, it is envisaged that the study will add to the existing body of knowledge pertaining to illicit psychoactive substance addiction in Chatsworth. To this end, it focused mainly on psychological and social factors that influence and sustain drug use among Chatsworth residents. An overarching aim was to provide information of a psychosocial nature to the Anti-Drug Forum (ADF) which may help this organisation to design more effective rehabilitation, intervention and prevention programs.

This research was driven by three main objectives. First, it aimed to identify psychological (intrapersonal) factors that promote psychoactive substance abuse. Secondly, it aimed to determine social (interpersonal) factors that promote psychoactive substance use. Thus,

accounting for the psychosocial dimension that is instrumental in this research. Thirdly, it aimed to identify individual (psychological), family and community structures that prevent the use of psychoactive illicit substances that could possibly be harnessed to deter drug use.

The objectives of the research were to:

- Determine psychological (intrapersonal) factors that promote illicit psychoactive substance use
- Identify social (interpersonal) factors that promote illicit psychoactive substance use
- Identify individual (psychological), family and community structures that may be harnessed to prevent illicit psychoactive substance use.

The research hypotheses were:

- H0¹ – Psychological (intrapersonal) factors promote illicit psychoactive substance use.
- H0² – Social (interpersonal) factors promote illicit psychoactive use
- H0³ - Individual (psychological), family and community structures can be harnessed to prevent illicit psychoactive substance use.

4.3 Conceptualising the Research and the Research Design

This research was conceptualised with reference to an in-depth literature-based assessment of psychosocial drug use. This assessment process involved the engagement of a review of relevant literature comprising past and contemporary research with the intention of understanding both psychological and social risk factors in relation to psychoactive substance use.

A research design is “a blueprint for conducting a study with maximum control over factors that may interfere with the validity of the findings” (Burns & Grove, 2003:195). Rubin and Babbie (2001:107) propose that the research design should include more or less the entire process of research as well as decisions regarding units of analysis, sampling, sources and data collecting procedures, issues of measurement, and strategies for the analysis and interpretation of the data. Consequently, a research design is not only a plan of action in terms of answering the research questions, but it should also indicate how the data will be analysed and interpreted.

This research employed a quantitative paradigm as this type of paradigm enabled the researcher to distinguish numerical trends to illuminate psychoactive drug use among the study sample effectively and appropriately. According to Cohen and Manion (1980), quantitative research is defined as social research that employs empirical methods and empirical statements. Creswell (1994, 2002) & Greenland, Senn, Rothman, Carlin, Poole, Goodman, and Altman (2016) define quantitative research methodology as a research method that explains phenomena through the collection of numerical data which are analysed mathematically, especially, through statistical analysis. This methodology permits the analysis of numerical frequencies or trends of phenomena within certain populations. Furthermore, Guba and Lincoln (1985) note that the quantitative paradigm conveys emphasis to the measurement and analysis of causality, which is the causal relationships between variables. Thus it allows the researcher to focus objectively on the causes of particular behaviours (Bogdan & Biklen, 1998). The essence of quantitative research is the testing of hypothetical generalisations through the use of experimental methods and quantified measurements (Hoepfl, 1997).

Collectively, Singh (2007), Manheim, Rich, Brians and Craig (2007), David (2008) and Babbie (2010) highlight some vital characteristics of quantitative research:

- Structured instruments are usually used for data collection.
- The population is represented through larger sample sizes on which the results are based, or of a particular sample that can be generalised to a population with the particular characteristics.
- Research questions are effectively defined by the researcher, after which objective answers are pursued.
- Prior to data collection, every aspect of the research study is effectively designed, which shows the importance of research design.
- Data are represented in the form of numbers and statistics, which are usually visually presented as graphs and tables.
- Tools such as questionnaires or other equipment to collect numerical data are used by quantitative researchers.

Thus a quantitative paradigm was used to analyse and find answers to psychosocial, psychoactive substance abuse trends in Chatsworth. A structured closed-ended questionnaire was used as the main tool for data collection. The research was based on the premise of the research questions it intended to investigate. The data that were collected from the responses were analysed using SPSS version 24.0. The analysis of the data will be divided into three sections in Chapter five, which will present descriptive and inferential statistics. The analysis will include descriptive frequencies of the data in the form of pie charts and bar graphs. The next section will present the cross-tabulations and chi-square test values which are interpreted using the p-values. The last section will include logistic regressions in order to obtain odds ratios for the variables. According to Sperandei (2013:12), logistic regression is used “to obtain odds ratio in the presence of more than one explanatory variable”. Psychosocial factors will be considered in each form of analysis that is used. Due to the nature of this research, a non-experimental quantitative exploratory descriptive research design was employed.

4.3.1 Characteristics of an exploratory descriptive research design

Hopkins (2000), Burns and Grove (2003:201) and Shuttleworth (2008) all agree that in a descriptive research design the subject of the research is to be observed in a completely natural and unchanged environment, and that no attempt should be made to change behavior or conditions. Thus the researcher measures things as they are. According to Shuttleworth (2008), a valid method for researching specific subjects is the descriptive research design.

According to Uys and Basson (1991:38), an exploratory descriptive research design has the following characteristics:

- It is a flexible research design that provides an opportunity to examine all aspects of the problem being studied.
- It strives to develop new knowledge.
- It is usually a field study in a natural setting.

To analyse the data for this study, both descriptive and inferential statistics were used.

Descriptive statistics are used:

“...to describe the basic features of the data in a study. They provide simple summaries about the sample and the measures. Together with simple graphics analysis, they form the basis of virtually every quantitative analysis of data” (Trochim, 2006).

Spriestersbach, Röhrig, Du Prel, Gerhold-Ay and Blettner (2009:579) add that the description of collected data is vital, stating that, “if the data are of a good quality, valid and important conclusions can already be drawn when they are properly described”. Furthermore, data description provides a basis for inferential statistics. The essence of descriptive data is to highlight the most important characteristics and describe the variables of the sample being studied (Pérez-Vicente & Expósito Ruiz, 2009:314; Satake, 2015).

Inferential statistics examine the differences and relationships between two or more samples of the population. These are more complex analyses as the researcher is looking for significant differences between variables and the sample groups of the population. According to Trochim (2006), inferential statistics “make judgments of the probability that an observed difference between groups is a dependable one or one that might have happened by chance in this study, to make inferences from our data to more general conditions”. In essence, it involves taking a random sample of data from a population to describe and make inferences about the population. It is also a primary means for deciding the importance of the effects (Hopkins, Cole & Mason, 1998:125; Byrne, 2007:32).

4.4 Sampling of Participants

Data collection is a crucial step in research, as data are intended to contribute, complement and promote a better understanding towards the theoretical framework of the research (Bernard, 2002). It was imperative that the selection of the data collection method and the respondents from whom data would be sought would be conducted with sound judgment, especially because no amount of analysis can make up for inadequately collected data (Bernard et al., 1986). Hence the researcher selected the purposive sampling method for this research.

4.4.1 Sampling characteristics

The purposive sampling technique is a form of non-probability sampling (Tongo, 2007:147). The nature of this method of data collection contributes to its competence and the method stays

strong even when tested against random probability sampling. This method of sampling is based entirely on the judgment of the researcher. It involves selecting participants “on the basis of the sample characteristics the researcher requires and the nature of the research aim and objectives” (Tongo, 2007:147). By utilising purposive sampling, the researcher was able to select participants who had used illicit psychoactive substances either periodically or regularly. The sample characteristics for this research were 62 people between the ages of 15 to 45 who attended therapy and support group sessions at the Anti-drug Forum (ADF) in Chatsworth on a weekly basis. The Anti-Drug Forum is a voluntary organisation which was formed in April 2005 to assist a community that was and still is being ravaged by substance abuse. The main objectives of the Anti-Drug Forum are to assist the Community in handling substance abuse related problems. The ADF facilitates and promotes awareness campaigns and facilitates rehabilitation and prevention strategies in the community. The sample included females and males of the Indian and Black population groups. The researcher acknowledges that this non-random sampling method does not permit generalisations of the findings beyond the characteristics of the sample group.

The demographic characteristics of the population sample are summarised in Table 4.1 below. The male participants of this sample accounted for nearly ninety percent (88.7%) with the majority (69.4%) representing the Indian population group. Twenty nine percent (29%) of the participants fell within the 15 to 18 year age group, followed by above nineteen percent (19.4%) in the 27 to 30 age group. All 62 (100%) of the participants in this research resided within the geographical area of Chatsworth and townships bordering Chatsworth.

Table 4.1: Participant Demographics

Characteristic	Variable	N	%
Gender	Female	7	11.3
	Male	55	88.7
Race	Indian	43	69.4
	African	19	30.6
Age	15-18	18	29
	19-22	7	11.3
	23-26	6	9.7
	27-30	12	19.4
	31-34	9	14.5
	35-38	5	8.1
	41-45	5	8.1
Sample characteristics (N = 62)			

4.5 Research Instrument – Questionnaire

Koh and Owen (2000:220) state that “the most common descriptive research method is the survey, which [may include] questionnaires, personal interviews, phone surveys, and normative surveys”. For this research a questionnaire was used as the mode for primary data collection. The questions focused on social and psychological factors to assist the researcher in carrying out a psychosocial assessment in order to understand the causes of drug use or the lack of drug use by the participants. A psychosocial assessment is an evaluation of an individual’s physical, mental and emotional health, along with their ability to function within a community and their perception of themselves. The term questionnaire refers to “a list of questions to be answered by a survey respondent. The term is restricted to a self-administered instrument as opposed to an interview” (Marimuthu, 2014:83). O’Sullivan and Rassel (1999:207) state that survey and

questionnaire writing is based on the decision of what variable should be measured and the most efficient way to measure it. In applied social research, survey research is one of the most important areas of measurement. Survey research is broad and encompasses any measurement procedures that involve asking questions of respondents. According to Sekeran (1992), the questionnaire is the best method to use when the researcher knows what is required and the most appropriate way to measure the variable.

4.5.1 Characteristics of a questionnaire

Popper (1959) and Ackroyd and Hughes (1981) suggest that the following are good properties and advantages of the questionnaire data collection methodology:

- It yields a large amount of information collected from a large number of people within a short period of time in a fairly cost-efficient way.
- Either a researcher or software package, Excel or SPSS for example, can easily and quickly quantify the results obtained from the returned questionnaires
- It allows for a more scientific and objective analysis as opposed to other forms of research, and is a practical option
- It can either be administered by the researcher or various other people to ensure its validity and reliability.
- Positivist theorists believe that quantitative data obtained from questionnaires can be used in the creation of new theories or to test existing hypotheses.

The advantages mentioned above supported the decision to utilise the questionnaire methodology as the most relevant data generating tool to use in this study. The questionnaire that was used in this study elicited data on the social and psychological factors that either supported or prevented drug use among the respondents. The questionnaire was split into two major categories, section A and B. Section A were community based questions which were from question one (1) to question fifteen (15). Section B was the psychosocial section, this section included questions based on both psychological and social factors; question sixteen (16) to question forty seven (47). The research questionnaire was designed after the researcher had conducted an intensive review of related literature using relevant books, articles in professional journals, academic research reports, relevant dissertations and appropriate instruments, namely the DAST-20 (Drug

Abuse Screening Test) as proposed by Skinner (1982), the Personal Drug Use Questionnaire (EMCDDA) as suggested by Miller (1994), and the NIDA (2012) Drug Use Screening test. Various internet websites were also consulted for directional guidance. Every relevant piece of information was selected on the basis of the following criteria to create the research questionnaire:

- The identification of operational assessment areas to be measured by the questionnaire as stated in the objectives of this study.
- Conceptualization: Defining the central theoretical concepts and the psychological and social factors that impact drug use and abuse.
- Operationalization: Identification and formulation of real characteristics that represent abstract concepts such as social-community drug availability and psychological and intrapersonal aspects.

The above points and how they were applied are explained in detail below.

4.5.2 Conceptualisation and operationalisation of measurable components

At the onset of the study, it was vital to define all the theoretical concepts clearly so that they could be operationalised into visible or measurable components by means of the questionnaire. This was achieved through the process of conceptualisation, which entailed the attachment of theory-based concepts that fitted within the parameters of the intended research, as was discussed in Chapter 2 and Chapter 3.

Two core concepts gave impetus to this research, namely psychological (or intrapersonal) and social (or interpersonal) risk factors related to drug use and abuse.

4.5.2.1 Conceptualisation

Psychological or intrapersonal factors that influence psychoactive substance use include factors that influence a person's thoughts and which, in turn, affect decisions and relationships in a person's daily life. These factors involve feelings, thoughts and other cognitive characteristics that affect the attitude, behaviour and functions of the human mind. Overall, psychological factors include individual-level processes and meanings that influence a person's mental state (Upton, 2013). An example is a predisposition for chaos (i.e., the disruption of social norms) at

home, which can lead to psychological stress. It is this form of stress that people attempt to address by self-medicating with illicit substances to alleviate stress or emotional pain. This self-medication process becomes the primary foundation of illicit psychoactive addiction (Smileband, 2017). A vast range of variables fall within the general domain of psychological factors, such as personality traits, conduct disorders, negative emotions, emotional pain, reward potential, self-appraisal, and negative emotions such as depression, feelings of rejection, low self-esteem, hopelessness and a sense of failure, anxiety, tension, and confusion. All of these were explored by the research questionnaire, as every one of these factors can increase the risk of psychoactive substance abuse.

Social or interpersonal factors are conceptualised as “overall factors at the level of human society [that are] concerned with social structure and the social processes that impact on the individual” (Upton, 2013). Social factors are also defined as “circumstances, characteristics, or aspects that influence and affect the way one lives and behaves” (Upton, 2013), and also comprise the experiences that influence an individual’s personality, attitudes and lifestyle that may prompt psychoactive substance use. Social factors include a close social group such as family and friends, which are factors that were explored in the research questionnaire. Questions eliciting responses regarding the community, environmental structures, individual bonds, community efficacy and recreational activities were also incorporated in the questionnaire. According to Egan, Tannahill, Petticrew and Thomas (2008), these bonds – or family ties – are important as they allow the individual to: engage with family members; regularly participate in organised activities with a social or religious interest; integrate into wider society; attach to the neighbourhood in the belief that neighbours are friendly; feel part of the area rely on others for practical support; and feel comfortable.

4.5.2.2 Operationalisation

According to Naser (2006:124), “...definitions of theoretical terms spell out what is meant by the theoretical concepts used (conceptualisation), [whereas] operational definitions (operationalisation) link these abstract concepts to the real characteristics or activities necessary to obtain measurable results.” Therefore several indicators for psychosocial analysis were identified from the literature and these were formulated as items in the questionnaire. For the purposes of operationalisation, the following were used as indicators:

- The psychological factors that were operationalised for this study included negative emotions (self-perceived negativity, lack of direction, isolation); escapism (feeling overwhelmed, forgetful of a situation); self-worth (confidence, perceived confidence); mental strain (stress; coping methods); peer influence (pressure, psychoactive substance users).
- The social factors that were identified for this study, and that were addressed by the questionnaire, included family ties (family bonds, psychoactive substance use in the family); community participation (recreational activities); support (nature of communication with family); community/collective efficacy (community bond and belonging); and knowledge of the community (psychoactive substance use awareness, knowledge of drug trafficking in the community/by community members).

4.5.3 Structure of the questionnaire

The questionnaire was divided into four sections: demographics, the Chatsworth community, psychological at-risk factors, and social at-risk factors. It consisted of a total of 47 easily phrased multiple choice questions. It was a structured questionnaire as all 47 questions were closed-ended. A copy of the questionnaire may be found in Appendix 5.

The sections were divided as follows:

Section A focused on demographics and included age, gender, and the place of residence. *Section B* elicited responses about the Chatsworth community. The items tackled issues such as psychoactive drug use awareness, community descriptions, and the community's knowledge about psychoactive substances. *Section C* was concerned with psychological at-risk factors and included questions on peer pressure, stress, self-worth and self-reflection. *Section D* looked at social at-risk factors such as drug use by family members, family bonds, a sense of belonging in the community, and recreational activities.

4.5.4 Reliability and validity of the questionnaire

4.5.4.1 Reliability

An instrument's (i.e., the questionnaire's) ability to measure the attribute it was designed to measure and the degree of consistency and accuracy it achieves defines its reliability (Polit & Hungler, 1997:296; Uys & Basson, 1991:75). A reliable study would indicate that upon

replication by other researchers that employ the same method, the same results will be obtained. Carmines and Zeller (1979:11) propose that the extent to which an experiment, test or measuring procedure produces replicated results on repeated trials is the basis of reliability. The consistency due to repeated measurement is directly related to the level of reliability, hence the higher the consistency, the higher the reliability; thus low reliability will be due to little consistency in a research instrument (Cozby, 2001). In the current study the researcher attempted to ensure that the questionnaire was reliable by applying the conceptualisation and operationalization approaches that were referred to earlier. Conceptualisation ensured that a theoretical definition was given to the constructs that were identified by the objectives of this study. Also, by ensuring the operationalisation of the conceptualised constructs, the researcher was able to make certain that the questionnaire measured what it intended to. However, this questionnaire was not subjected to repeat testing, but was pilot tested. Only minor changes were made after the pilot test had been conducted and the pilot test results correlated positively with the final results.

4.5.4.2 Validity

Kelley (1927) formulated the concept of validity, which suggests that if a test is valid, it will measure what it claims to measure. To reiterate, a test of weight gain should measure weight gain and not for example the hours spent sleeping (McLoed, 2013). Likewise, Uys and Basson (1991:80) state that validity refers to “the degree to which an instrument measures what it is supposed to be measuring”. Joppe (2000) further proposes that a research’s ability to truly measure what is intended to be measured, or the truthfulness of the research results, is determined by the validity of the research. Simply put, Huizinga and Elliott (1986:308) conclude that validity is reached “if the measuring instrument indicates evidence of measuring what it was created to investigate”. Validity can be subcategorized, and these were achieved as follows:

- *External validity*: Burns and Grove (1999:191) describe external validity as “the extent to which the results can be generalised beyond the sample used in the study”. This usually depends on the degree to which the sample represents the population. Due to the nature of this research, it had low external validity as generalizations outside the respondent characteristic parameters were difficult. A larger respondent sample would have increased the external validity. Moreover, randomization could not be used as the respondents had to have engaged with psychoactive substances.

- *Internal validity*: The extent to which psychological and social factors the influence psychoactive substance use reflects a true reality as opposed to results of the effects of extraneous or chance variables which are not essentially related to factors influencing psychoactive substance, is measured by internal validity (Hall, 1998). ‘Chance’ variables refer to unforeseen influences on the variables that could have occurred during the research and that could have affected the results (Weiten, 2007:44). The researcher thus took concerted steps to decrease the probability of this occurring. For example, an inclusion criterion was that each respondent had to have used illicit psychoactive substances periodically or for a prolonged period of time. This was achieved by selecting participants who currently attended therapy and support groups at the ADF.
- *Construct validity*: Cornball and Meehl (1955) were the originators of the concept of construct validity. This type of validity refers to the degree to which a test captures a specific theoretical construct or trait. “Construct validity refers to the degree to which inferences can legitimately be made from the operationalizations in your research to the theoretical constructs on which those operationalizations were based” (Trochim, 2006). In essence, construct validity is a valuation of how effectively researchers translate their ideas or theories into actual programmes or measures. This was achieved through the conceptualisation and operationalisation of the constructs in the questionnaire, which permitted the investigation of both psychological and social factors related to psychoactive substance use.
- *Face validity*: Operationalisation is important to achieve face validity as it allows the researcher to make the decision whether, at face value, a finding seems like a sound translation of the construct. Thus face validity simply determines “whether the test appears (at face value) to measure what it claims to [measure]” (Trochim, 2006). This means that the possibility of the face validity of a test being considered a strong construct “is dependent on whether there is a reasonable amount of convergence in agreement from the raters invited to examine it” (Trochim, 2006). Face validity was one of the measures that was achieved with the pilot study, as both experts in the field and other reputable scholars examined the questionnaire and provided feedback on the effectiveness of the questionnaire to examine what they thought was being investigated. The researcher received positive feedback as the people who had been approached understood what was being investigated – i.e., psychological and social factors that impact psychoactive substance use.

- *Content validity*: In essence, the operationalisation against the relevant content domain for the construct is checked by establishing content validity in a study (Trochim, 2006). The measurement of content validity is most often dependent on the knowledge of people who are familiar with the construct being investigated. “These subject-matter experts are usually provided with access to the measurement tool and are asked to provide feedback on how well each question measures the construct in question. Their feedback is then analyzed, and informed decisions can be made about the effectiveness of each question” (Clause, 2017). The operationalisation of the construct was achieved after a review of content-related literature. This was further achieved when the newly constructed questionnaire, in its semi-final format, was subjected to peer-criticism by a team of experts familiar with the nature and scope of this research. The draft instrument was revised and amended according to the feedback received, and the final questionnaire was constructed.

4.6 Research Procedures

4.6.1 Piloting the questionnaire

Cozby (1989:113) defines a pilot study as a “mini experiment in which the investigator tests the procedures or questionnaire with a small number of subjects”. The newly constructed survey questionnaire, in its semi-final format, was subjected to a pilot study during which peer criticisms were offered by a team of experts familiar with the nature and scope of this research. The draft instrument was revised and amended according to the feedback received. The researcher went to the same location and selected participants with similar characteristics as the study sample. During the pilot study, eighteen (18) questionnaires were completed by thirteen (13) respondents who were drug users and five (5) respondents who were non-users. This allowed the researcher to ensure that the questions were related to illicit substance use as the answers completed by the users were compared with those of the non-users. In doing so, the researcher was able to correct any of the questions that were difficult to understand and to remove irrelevant or replicated questions. The questionnaire was then reviewed and drawn up in its final format. One of the most important outcomes of piloting the questionnaire was the ability of the researcher to test whether the respondents would understand the instructions as well as the nature of the questions, which included question phrasing. Another reason for the pilot study was to determine the reliability and the validity of the questionnaire as an instrument of measurement

(Champion, 2000; Marimuthu, 2014:86). At the end of the pilot study, and after a few relevant changes, it was confirmed that the instrument was a worthy measure of what the researcher intended to investigate.

4.6.2 Data collection

The data collection process occurred over a period of three weeks (21 days). There was no intervention or treatment scheduled as it was not needed for this research. The participants were recruited in two stages as follows:

In the first stage, the researcher attended the weekly group therapy sessions held at the anti-drug forum (ADF). Together, the researcher and reputable members of the ADF – which included the founder, the manager and in house-social workers – jointly identified potential participants (PP). Inclusion criteria determined that the identified drug users had to be eager to participate in the group sessions and that they fell in the pre-determined age category, which was between eighteen (18) years and forty-five (45) years. The questionnaire was not translated into any other language as participants were a part of an English medium therapy group and therefore one of the selection criteria's were that they had to be proficient with English. Majority of the schools in Chatsworth and surrounding areas are English medium schools with isiZulu and Afrikaans being offered second language options.

The identification criteria for adolescent participants between the ages of 15 to 18 were the same, except that the PPs' parents or guardians were contacted and given all the details pertaining to the research. The parents/guardians were allowed to ask any questions for further clarification. Thereafter, the adolescents' permission to participate voluntarily in the research study was verbally obtained.

In the second stage, the researcher, with the assistance of members of the ADF, contacted the PPs who were over 18 years of age and requested for their voluntary participation in the research. The purpose of the research was then fully explained, and they were able to request any further information or clarification of anything they did not understand. Once each PP was satisfied, a formal request was made for their participation. Thereafter, a consent form was handed to each to complete (Appendix 4). Once the consent form had been completed voluntarily, they were given the questionnaire to complete.

Adolescent participants between the ages of 15 to 17 were approached and the nature and purpose of the research was explained. They were asked if they wanted to participate voluntarily. If the adolescent agreed, two consent forms (Appendix 3 and Appendix 4) were then sent home with them, one seeking parental consent and the other individual assent. Only once the consent and assent forms had been returned were the questionnaires administered to them.

The researcher fully acknowledged that members of the ADF were more familiar with the participants of the therapy groups and therefore did not approach any participant without the approval of these members.

Once the data collection process had been completed, the data from the completed questionnaires were captured on a spreadsheet for descriptive analyses. These analyses focused largely on the frequency of responses within the categories of each question.

4.7 Ethical Considerations

Due to the sensitive nature of this research, the researcher took every relevant step to ensure that it was conducted in an ethical manner. Full ethical approval was obtained from the Humanities and Social Sciences Ethics Committee of the University of KwaZulu-Natal, Westville campus before the commencement of this research. The Ethical Clearance Certificate number is HSS/0907/017M and a copy of the certificate may be found in Appendix 1.

As mentioned in the recruitment process, informed consent was obtained from each participant, and if the consent form was not returned, the participant was not allowed to participate in the research. The guardians and parents of the participants under the age of eighteen (18) were contacted and their consent was personally requested before the participants' participation was confirmed. The participants were included in the study only once the appropriate consent forms had been signed and returned voluntarily. Participants were not required to write any of their personal details for the completion of the questionnaire, as they completed the questionnaire they were asked to leave it in a box by themselves. Apart from the signatures, which could not be traced back to anyone in particular there were records made of any participants details thus ensuring anonymity and confidentiality.

Considering the basis of this research, the possibility of encountering a participant who might have experienced traumatic or stressful life circumstances which would increase their vulnerability was quite probable and therefore anticipated by the researcher. Precautionary measures were thus put in place to ensure that the possibility of upsetting any participant would be limited. This was done by ensuring that the members of the ADF were present at all times during the data collection period. These members had years of experience in dealing with people with drug-related experiences and the researcher made certain that she utilized their expertise while conducting her research. Additionally, group therapy sessions are held weekly on the ADF premises, and the members were ready to help any participant that might experience any form of discomfort during the data collection process. Finally, in case of unforeseen extreme reactions, the researcher ensured that a registered, trained psychologist was available during the prescribed data collection period so that emotions or reactions evoked or triggered by the questionnaire could be dealt with if the researcher was not sufficiently trained for this. It should be noted at this point that no such responses occurred and that none of the participants completed the questionnaires under any duress or adverse emotional conditions.

4.8 Conclusion

In this chapter the researcher accounted for the quantitative methodology employed by this research to analyse psychosocial at-risk factors of illicit psychoactive substance use in a select sample in Chatsworth. The reiteration of the objectives allowed for demonstrating the interaction between the research and the research objectives. Information pertaining to the respondent population, the recruitment of the participants and the data collection tool (i.e., a questionnaire), and the reasoning for these decisions were discussed. The manner in which the questionnaire was constructed and validity was achieved was also elucidated. Finally, the ethical considerations that were central to the research were discussed. It is important to note that this chapter has provided the fundamentals for the next chapter, which presents the data that were obtained by means of the questionnaire.

CHAPTER FIVE

PRESENTATION, INTERPRETATION AND DISCUSSION OF THE PRIMARY DATA

5.1 Introduction

Marshall and Rossman (1990:150) define data analysis as “the procedure of bringing order, structure and meaning to the mass of collected data”. This process is also understood as “the process of systematically applying statistical and/or logical techniques to describe and illustrate, condense and recap, and lastly, evaluate collected data” (Resnik, 2000:169). Hence, data analysis permits the examination and interpretation of the collected data in an attempt to develop answers to the research questions (Whiting, 2017; Dudovskiy, 2017). Best and Khan (2006:354) and Shamoo and Resnik (2003) propose that the analysis and interpretation of the data represent the application of deductive and inductive logic by distinguishing the signal (the phenomenon of interest) from the noise (statistical fluctuations) present in the data. These authors also stress that a researcher is an essential component of the research as s/he has to ensure that the integrity of the data is accurate and that the analyses and interpretation of the research findings are appropriate.

In this chapter, the results pertaining to the data that were obtained from the questionnaires are presented and the findings are discussed. The questionnaire was the primary tool that was used to collect data and was distributed to selected voluntary respondents at the ADF in the Chatsworth area. The data that were collected were analysed using SPSS version 24.0. The discussion of the data will be presented in three sections: a) frequencies; b) cross-tabulations and chi-square test correlations; and c) logistic regressions. The results are presented as descriptive statistics in the form of graphs and cross tabulations in tables. Inferential techniques include the use of correlations and chi-square test values which are interpreted using the p-values. A logistic regression analysis to produce odd ratios was also conducted and will be referred to in the text where appropriate.

5.1.1 Sample size and response

In total, 62 questionnaires were despatched and 62 were returned, which resulted in a 100% response rate. Generally, to ensure that reliable data are obtained, a respondent sample of 60

requires a five percent (5%) margin of error and a confidence level of ninety five percent (95%), with a minimum recommended size of returned questionnaires being fifty three (53). The 100% response rate that was obtained for this study was thus most gratifying.

5.1.2 The research instrument

The research instrument (i.e., the questionnaire) consisted of 47 items with a level of measurement at a nominal or an ordinal level. The questionnaire was divided into three sections which measured various pre-determined themes, as illustrated below:

1. Biographical data
2. Psychological dimension (Erikson's psychosocial development theory)
3. Social dimension (Hirschi's social bond theory)
4. Social environment (Shawn & McKay's Social disorganisation theory)

5.2 Section A: Biographical Data

This section summarises the biographical characteristics of the respondents as obtained from the returned questionnaires.

The table below describes the overall gender distribution by age.

Table 5.1: Respondents' Gender and Age Distribution

			Gender		Total
			Female	Male	
Age (years)	15-18	Count	0	18	18
		% within Age	0.0%	100.0%	100.0%
		% within Gender	0.0%	32.7%	29.0%
		% of Total	0.0%	29.0%	29.0%
	19-22	Count	2	5	7
		% within Age	28.6%	71.4%	100.0%
		% within Gender	28.6%	9.1%	11.3%
		% of Total	3.2%	8.1%	11.3%
	23-26	Count	2	4	6
		% within Age	33.3%	66.7%	100.0%
		% within Gender	28.6%	7.3%	9.7%
		% of Total	3.2%	6.5%	9.7%
	27-30	Count	3	9	12
		% within Age	25.0%	75.0%	100.0%
		% within Gender	42.9%	16.4%	19.4%
		% of Total	4.8%	14.5%	19.4%
	31-34	Count	0	9	9
		% within Age	0.0%	100.0%	100.0%
		% within Gender	0.0%	16.4%	14.5%
		% of Total	0.0%	14.5%	14.5%
	35-38	Count	0	5	5
		% within Age	0.0%	100.0%	100.0%
		% within Gender	0.0%	9.1%	8.1%
		% of Total	0.0%	8.1%	8.1%
	41-45	Count	0	5	5
		% within Age	0.0%	100.0%	100.0%
		% within Gender	0.0%	9.1%	8.1%
		% of Total	0.0%	8.1%	8.1%
Total	Count	7	55	62	
	% within Age	11.3%	88.7%	100.0%	
	% within Gender	100.0%	100.0%	100.0%	
	% of Total	11.3%	88.7%	100.0%	

When examining the results, one of the most significant demographic finding was the difference between the genders of the respondents. Given that all the respondents were selected from therapy and support groups which were attended by individuals with varying degrees of addiction, it is noteworthy that nearly ninety percent (88.7%) was male (55 out of 62) and just

above eleven percent (11.3%) was female (88.7%>11.3%). The highest number of respondents fell in the 15-18 age group (29%) and the second highest was the 27-30 age group (19.4%). The median age group was found to be the 23-26 year category. Overall, the ratio of males to females was approximately 9:1 (88.7%:11.3%). Given that it was a purposive sample, only 7 females were available for selection.

5.3 Statistical Frequencies

“A frequency is the number of times a data value occurs” (Stephanie, 2011). The frequencies of the data collected in this research pertaining to illicit substances, social factors and psychological factors will be explained below.

5.3.1 Knowledge of Community Members’ Use of Illicit Psychoactive Illicit substances

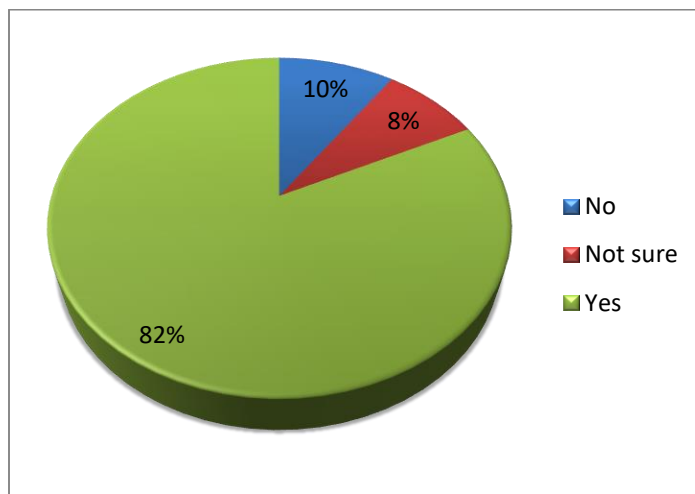


Figure 5.1: Awareness of Illicit Psychoactive Drug Use in the Community

Figure 5.1 illustrates that eighty two percent (82%) said that they were aware of other community members who used illicit substances. Ten percent (10%) said they were not aware of this and only eight percent (8%) said that they were not sure. This finding shows that a large portion of the respondents admitted to being aware of extensive illicit substance use in their communities (82% > 8%). Thus the high awareness of drug use in the Chatsworth area suggests that the community at large could be socially disorganised for its supposed inability to address or curb drug use within the larger community. This finding resonates with the social disorganisation theory that proposes that socially disorganised communities contribute to overall social deviance

in a particular area by their inability to control and solve chronic problems (Kubrin & Weitzer, 2003), such as the supposed widespread use of illicit substances in Chatsworth. However, as this finding did not expose the alleged number of users, the extent of the problem could not be determined by this finding.

5.3.2 Availability of Illicit Psychoactive Substances in Chatsworth

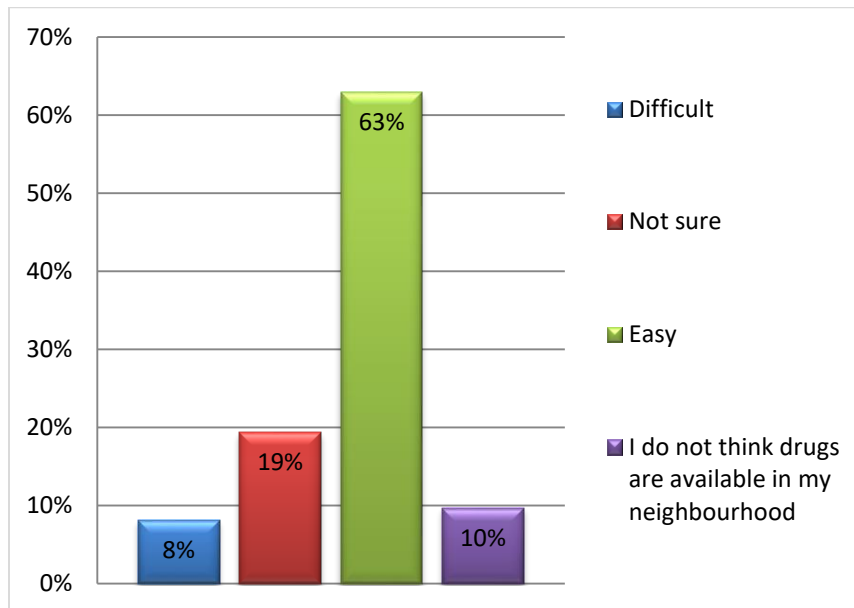


Figure 5.2: Perceptions of the Availability of Illicit Psychoactive Substances in Chatsworth

Figure 5.2 reveals that sixty-three (63) % stated that drug availability was ‘easy’, while only eight percent (8%) said that it was ‘difficult’ to procure illicit illicit substances. Nineteen percent (19%) selected the ‘not sure’ option and ten percent (10%) were unaware that illicit substances were available in their neighbourhood. Nonetheless, overall more than half of the respondents agreed that illicit substances were readily available in their neighbourhood. On the strength of this finding, as well as findings based on previous studies that state that drug use and crime are strongly related (Powell, 2005; McBride, VanderWaal & Terry-McElrath, 2001), it may be argued that the extensive rate of drug use in Chatsworth increases the potential for social deviance in the area. A social issue such as drug use can only be deterred by better community functioning and the presence of collective efficacy (Ansari, 2013).

5.3.3 Knowledge of Drug Dealers in the Community

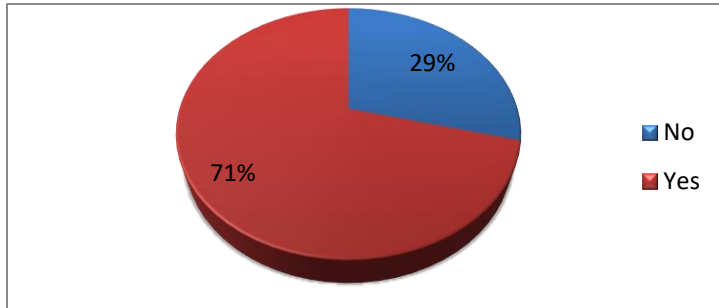


Figure 5.3: Knowledge of Drug Dealers in the Community

Of the 62 respondents, seventy one percent (71%) admitted that they were aware of drug peddlers operating in the community. Only twenty nine percent (29%) stated that they were not aware of such dealings. Because a large majority of the respondents knew that dealers operated in the community, this finding could correlate with the extent of drug use in the community.

5.3.4 Possible Reasons for the Increase in Illicit Substance Use

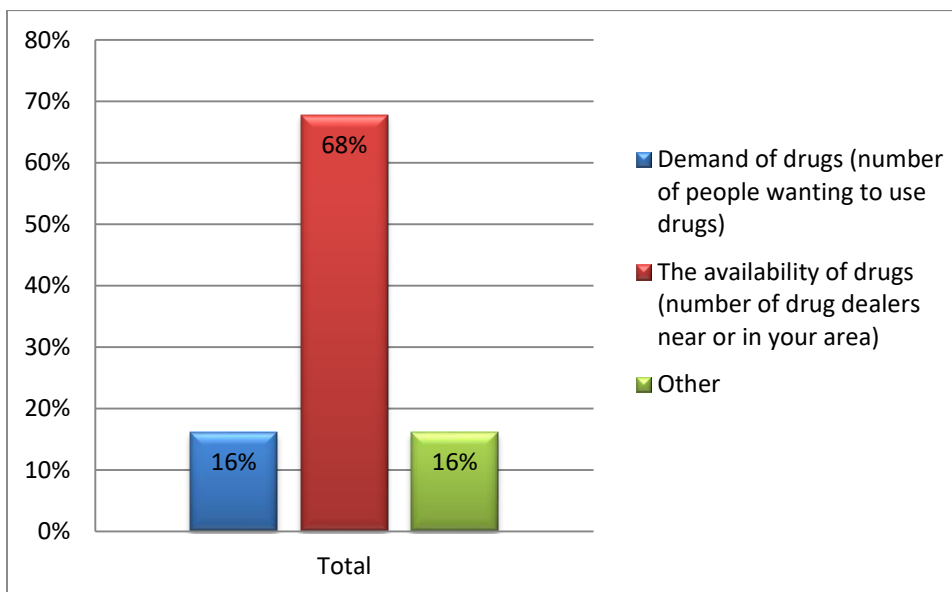


Figure 5.4: Reasons for the Increase in Illicit Substance Use

Of the 62 respondents, sixty eight percent (68%) (n=62) suggested that the easy availability of illicit substances, characterised by the number of drug dealers in or near the area, was the main contributor to the increase of drug availability (supply) in Chatsworth, whereas only sixteen percent (16%) thought that it was the demand for illicit substances that contributed to the

increase (68% > 16%). These results are noteworthy as they directly contradict the view put forward by the NDMP (2013-2017), which is that the demand for illicit substances in society seems to be higher than the supply. It was the latter proposal that initiated the drug reduction plan by the Drug Master Plan (NDMP, 2013-2017). However, the finding of this study suggests that the high presence of dealers in the Chatsworth area keeps people in addiction as there is a constant, easy supply of illicit substances.

5.3.5 Attitude to the suggestion that Chatsworth is notorious for drug use

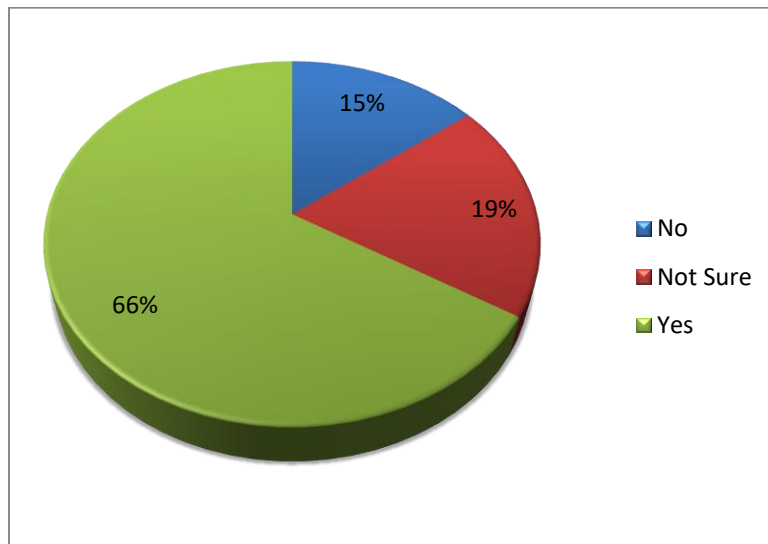


Figure 5.5: Attitude towards the Suggestion that Chatsworth is Notorious for Drug Use

Figure 5.5 illustrates that sixty six percent (66%) agreed with the statement that Chatsworth is notorious for drug use. Only a small fifteen percent (15%) said that they did not agree (66%>15%). In light of this finding, it must be borne in mind that all the respondents lived in or near Chatsworth, went to schools in Chatsworth and attended these therapy and support sessions in a Chatsworth facility. This predominant negative view can therefore be noted as an overall lack of collective efficacy of the society to curb the problem of drug use in the area.

5.3.6 Use of illicit substances as a coping mechanism

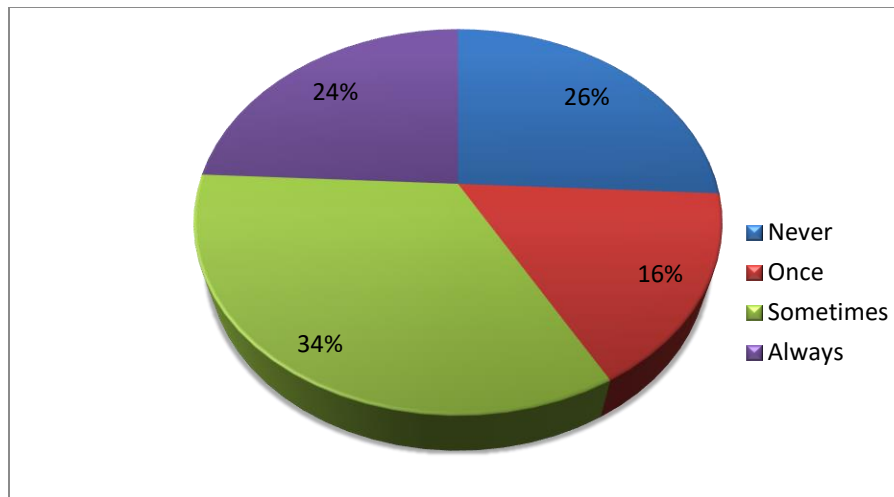


Figure 5.6: Use of Illicit Substances as a Coping Mechanism

A total of Thirty four percent (34%) respondents admitted that they ‘sometimes’ used illicit substances to cope with their stress. The second highest selected response was ‘never’ namely twenty six percent, (26%) who stated that illicit substances were never used as a coping mechanism. However, this rate was closely followed by twenty four percent (24%) who stated that they ‘always’ used an illicit substance to cope with their stress, which suggests that taking illicit substances was their main coping mechanism. Of particular interest was the two percent (2%) difference between respondents who ‘never’ and ‘always’ used illicit substances to cope with stress (26% > 24%). Moreover, sixteen percent (16%) admitted that they had used an illicit substance ‘once’ to cope with stress. Thus a total of seventy four percent (74%) (a combination of three positive options) had had an experience where an illicit substance was used to cope with stress, as opposed to twenty six percent (26%) who said ‘never’ (16% + 34% + 24% = 74% > 26%). This directly confirms the literature that states that illicit substance abuse and use are usually linked to psychological intrapersonal factors such as stress. For example, Sinha (2001:343) affirmed this relationship in her research on stress and its influence on drug use, and she confirms that “[m]ost major theories of addiction postulate that stress plays an important role in increasing drug use and relapse”.

5.3.7 Family bonding

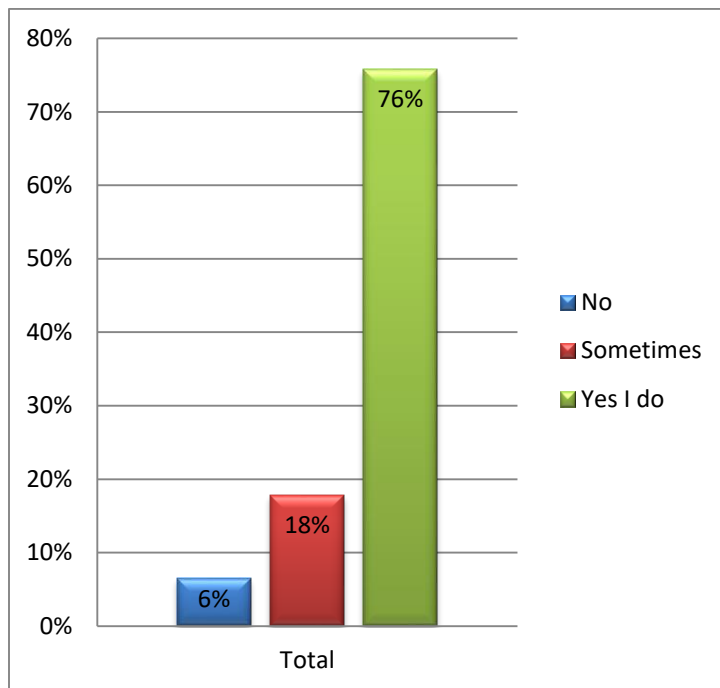


Figure 5.7: Respondents' Ties with Their Families

According to Figure 5.7, seventy six percent (76%) respondents shared a positive relationship through strong bonds with their family. Merely six percent (6% or 4 respondents) stated that they did not have a strong family bond. With reference to family communication, results showed that six percent (6%) said they would not tell their family about problems they might be facing. Eighteen percent (18%) 'sometimes' had family bonds and 6% admitted that they had no family bonds. The importance of the family in addiction as well as in recovery is affirmed by the following statement that was made by a member working in a rehabilitation facility: "A family is deeply involved with the creation of the addict. They can also be a very important influence when it comes to helping an addict recover" (Lynn, 2017). Treatment usually encourages family communication and bonding as these factors have been noted to have a positive influence on the recovery of the addict (Gifford, 2016). Thus the finding that the majority of respondents might seek sanctuary and support from within the family circle could demonstrate the possible positive influence of therapy and support sessions (discussed in chapter two and with the social bond theory in chapter three) where family is present.

5.3.8 Commonly used illicit substances in Chatsworth

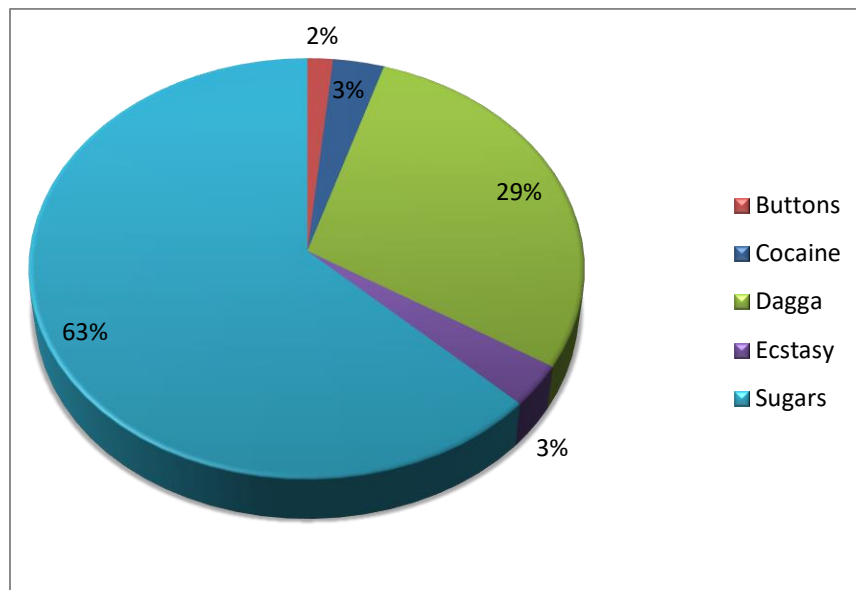


Figure 5.8: Commonly Used Illicit Substances in Chatsworth

Figure 28 illustrates that sixty three percent (63%) of respondents believed that “sugars” a heroin based opioid derivate was the most commonly used substance in Chatsworth. This finding has been corroborated by various articles in local newspapers such as The Rising Sun and the Chatsworth Tabloid, in which reports stressed the detrimental nature of “sugars” on the Chatsworth community. Heroin and its derivatives have ravaged the lives of many and have left many broken homes in their wake (Tolsi, 2006). This finding is also affirmed by Gopal and Collings (2012:656), who found that the respondents in their study had gone straight to using “sugars” instead of starting with tobacco, for example. This demonstrates that “sugars” had a more normalised status in the community as opposed to other illicit substances. It is readily available, cheap, and commonly used in the Chatsworth community and has proven to be one of the biggest illicit substance challenges in the Chatsworth area (Govender, 2015).

5.3.9 Respondents' feelings of worthlessness

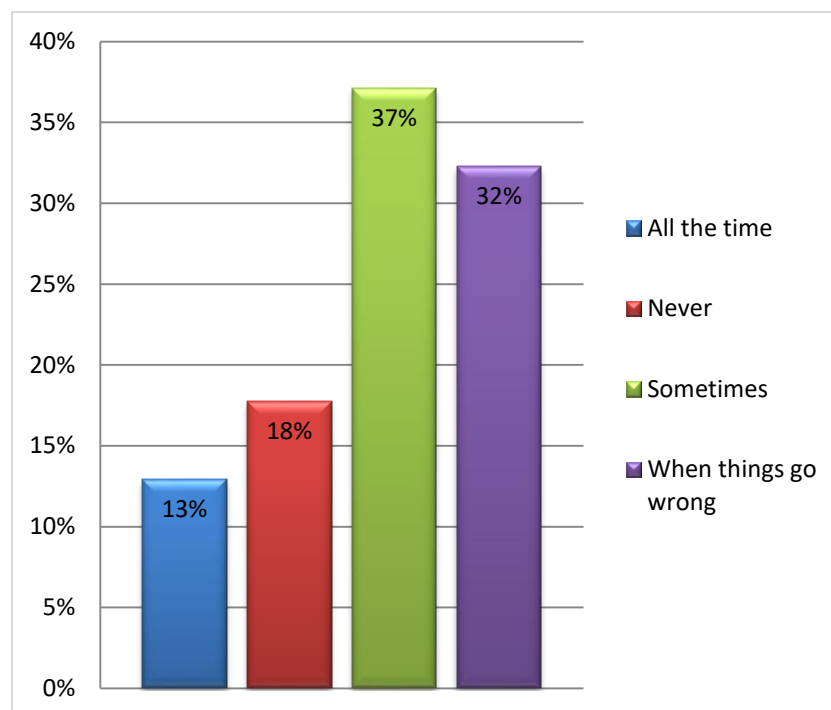


Figure 5.9: Respondents' Feelings of worthlessness

The question reads: “Do you sometimes feel worthless?” which intended to determine if the respondents experienced feelings of little or limited self-worth. Of the 62 respondents, thirty seven percent (37%) said that they ‘sometimes’ felt unworthy (or “worth little”), whereas thirty two percent (32%) felt unworthy (of little worth) ‘when things go wrong’. Eighteen percent (18%) selected that they ‘never’ felt unworthy (or “worth little”), in comparison with thirteen percent (13%) who said that they felt of little worth (“worth little”) ‘all the time’. Only eighteen percent (18%) respondents had a sense of worth and self-value, whereas a total of 82% admitted to having feelings of little self-worth ($82\% > 18\%$). To add Cherry & Gans (2017) stated that feeling of loneliness and isolation often follows those who have struggled to form an intimate relationship. Others may get the same feeling of isolation if they fail to form close friendships with people, this isolation could initiate substance use or prolong it.

It can be deduced from these results that there was a connection between a lack of a sense of self-worth and addiction, as all the respondents had been selected from addiction therapy and

support groups. Feelings of worthlessness or lowered self-esteem can gravely affect the overall mental functioning of a person, leaving them with feelings of depression and even the potential for suicidal thoughts (Rahim & Patton, 2015:1). According to Mental Health (2014) and Rahim and Patton (2015), an individual who feels worthless may avoid relationships, have constant negative thoughts, or turn to abusing psychoactive substances and alcohol.

5.3.10 Drug use by the respondents' partners

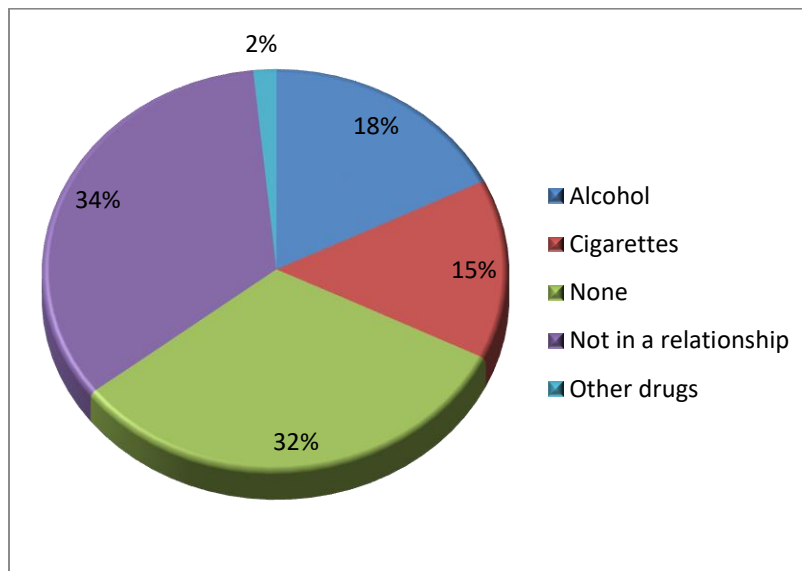


Figure 5.10: Drug Use by the Respondents' Partners

Research has shown that partner influence plays a role in substance abuse and use; however, this influence usually involves the influence of a female counterpart or a male familiar. Riehm, Iguchi, Zeller and Morral (2003) confirm this in their statement that more women than men are likely to have substance-using partners, which can be a catalyst for relapse. Figure 5.10 illustrates that the most preferred substance that was used by the respondents' partners was alcohol at eighteen percent (18%), followed by fifteen percent (15%) who preferred cigarettes. Only two percent (2%) said their partners used 'other illicit substances'. A large percentage of the respondents were not in a relationship (34%), so this question could not be further examined. In contrast, Erikson (1980) believed that establishing a completed sense of self through the identity versus confusion stage is crucial and a direct contributor to one's ability to form intimate relationships. It could be possible, that inadequate personality (Goode, 2012), influences and

sustains substance use, thus resulting in the inability to successfully complete all psychosocial stages proposed by Erikson.

5.3.11 Respondents' friends who used illicit substances

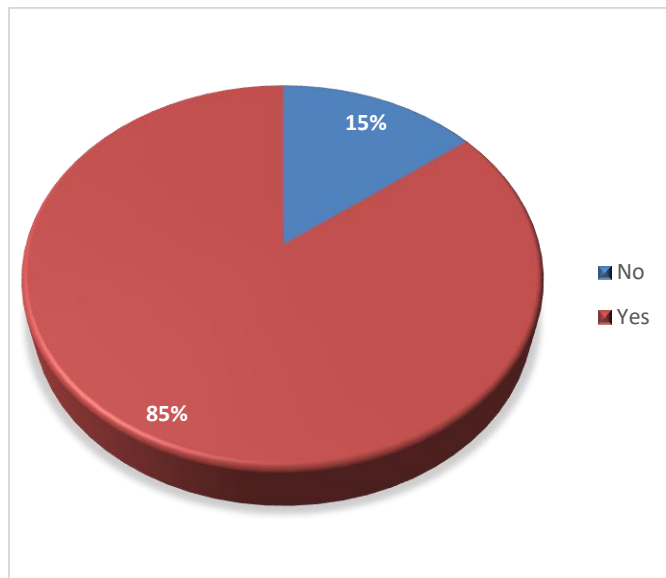


Figure 5.11: Respondents' Friends Who Used Illicit Substances

Eighty five percent (85%) of the respondents have friends who also used illicit substances, whereas fifteen percent (15%) said that their friends did not use illicit substances. Research has shown that most people begin experimenting with or initiating the use of illicit substances due to “peer pressure” (NIDA, 2015; 2016), and the influence of friends on a drug user can be both social and psychological (Arterburn & Burns, 1989:42-46). Weiss (2015) believes that adolescents sometime use illicit substances as a method to connect with other people, whereas NIDA (2015; 2016) highlights the point that drug use can be linked to “wanting to belong”. In Eriksons 5th stage of psychosocial development, it is proposed that during “Moratorium”, adolescents begin to develop an identity, explore different social groups. Interestingly, Peters (2016) found that adults also experience peer pressure. Steinberg and Monahan (2007) found that “resistance to peer influences increases linearly between ages 14 and 18, in contrast, there is little evidence for growth in this capacity between ages 10 and 14 or between 18 and 30”. However, the above finding showed that fifteen percent (15%) of the participants (albeit a relatively low

figure) had friends that did not use illicit substances may therefore open the door for further research into this phenomenon.

5.3.12 Respondents' perceptions of visible patrolling police vehicles as a deterrence

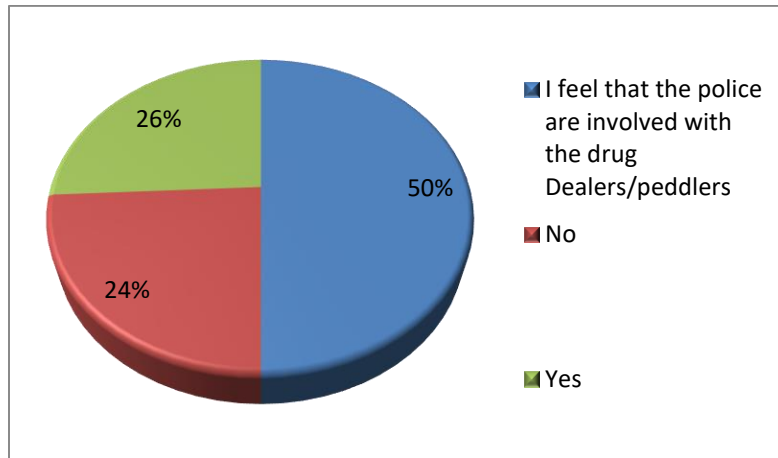


Figure 5.12: Respondents' perceptions of visible patrolling police vehicles as a deterrence

Twenty six percent (26%) believed that an increased number of visible police patrolling vehicles would help serve as deterrence to drug peddlers in the area. In contrast twenty four percent (24%) disagreed that this would affect the number of dealers present in the area. Of the 62 respondents, a high fifty percent (50%) suggested ('I feel that') local law enforcement was involved with drug peddlers in the community. This finding suggests a lack of faith or trust in the police among half of the respondents. However, there was not a significant difference between those who affirmed patrolling would decrease the present drug peddlers and those who did not (26%>24%). This suggests that police visibility in the study area is generally not trusted as a deterrent for drug peddling and use by the respondents who were part of this study.

5.4 Section B: Analysis

In the section that follows, the scoring patterns of the respondents per variable per section are analysed. The results are first presented using summarised percentages for the variables that constitute each section, and they are then further analysed according to the importance of the statements.

5.4.1 Cross-tabulations

This section provides cross-tabulations between several of psychological and social items relating to illicit psychoactive substance addiction.

Cross-tabulations (also referred to as cross-tabs) are a quantitative analysis procedure that is suitable for analysing the relationship between two or more variables (e.g., individual drug use and having family members that use illicit substances) that occur at the same time (Frazier, 2012). Cross-tabulation can provide additional information when disaggregating data into different categories (e.g., psychosocial factors and drug use patterns). By employing this statistical technique, the researcher was able to quickly identify where the most significant relationships between two items fell (e.g., social factors influence drug use – having friends that use illicit substances encourages drug use by an individual). This statistical technique indicates whether an interdependent relationship exists between two sets of values, but it does not identify a causal relationship between the values (DeFranzo, 2012).

Each cross-tabulation will first utilise Fisher's Exact Test (with the significant p-value), followed by a table and a narrative analysis.

5.4.1.1 Cross-tabulation between experimentation with illicit substance use and the fairness of statement Chatsworth "Notoriously known for drug related problems" relation to this phenomenon

In terms of the above variables, Fisher's Exact Test p-value is less than 0.05 and the level of significance is $p=0.009$. This implies a significant relationship between drug experimentation and the respondents' feelings towards the statement Chatsworth, "Notoriously known for drug related problems".

Table 5.2: Drug experimentation and statement of Chatsworth, “Notoriously known for drug related problems”

			When people describe Chatsworth as being “Notoriously known for drug related problems”, do you feel that it is a fair statement?			Total
			No	Not Sure	Yes	
Have you experimented with illicit substances?	More than once (Less than 5 times)	Count	6	5	13	24
		% within “When people describe Chatsworth as being “Notoriously known for drug related problems”, do you feel that it is a fair statement?”	66,7%	41,7%	31,7%	38,7%
	Never	Count	0	2	1	3
		% within “When people describe Chatsworth...”	0,0%	16,7%	2,4%	4,8%
	Often (More than 5 times)	Count	2	2	25	29
		% within “When people describe Chatsworth...”	22,2%	16,7%	61,0%	46,8%
	Once	Count	1	3	2	6
		% within “When people describe Chatsworth...”	11,1%	25,0%	4,9%	9,7%
Total		Count	9	12	41	62
		% within “When people describe Chatsworth....”	100,0%	100,0%	100,0%	100,0%

Fifty nine (59) of the respondents indicated that they had had encounters with illicit substances ($59/62 = 95.2\%$). While 3 said they had no encounter, there is some doubt regarding the response of the three given that all participants were part of a drug rehabilitation initiative. Just over nineteen percent (19.4%) was ‘not sure’ if the statement was fair. In contrast, 66.1% indicated that they agreed that the statement was fair and a total of 14.5% did not agree that the statement was fair. Of the nine respondents who said the statement was not fair (14.5%), 6 stated that they had used illicit substances fewer than five times.

These findings highlight the respondents’ feelings towards their community and the illicit drug use phenomenon. In essence, it sheds light on an overall lack of collective efficacy as there was agreement with negative statements instead of seeking the more positive, hopeful option. While

engaging in drug activity and indirectly contributing to the statement assumption, they also accepted that it was a community problem.

5.4.1.2 Cross-tabulation between family communication and the perception of a drug-free community

The Fisher's Exact Test p-value is less than 0.05, and the level of significance is $p = 0.001$. This implies that there is a significant relationship between family communication and perceptions of a drug-free community.

Table 5.3: Family Communication and a Drug-Free Society

			Is it possible to make Chatsworth a drug free community?				Total
			Maybe some time in the future	No	Uncertain / don't know	Yes	
Do you communicate well with your family, would you speak to them if you had a problem?	Depends on what the problem is	Count	14	10	3	2	29
		% within "Is it possible to make Chatsworth a drug free community?"	77,8%	45,5%	60,0%	11,8%	46,8%
	I would prefer speaking to my friends	Count	2	1	1	2	6
		% within "Is it possible to make..."	11,1%	4,5%	20,0%	11,8%	9,7%
No		Count	0	1	1	2	4
		% within "Is it possible to make..."	0,0%	4,5%	20,0%	11,8%	6,5%
Yes		Count	2	10	0	11	23
		% within "Is it possible to make ..."	11,1%	45,5%	0,0%	64,7%	37,1%
Total		Count	18	22	5	17	62
		% within "Is it possible to make ..."	100,0%	100,0%	100,0%	100,0%	100,0%

Of the 62 respondents, 35.5% (n=22) (highest selected response) believed that it would not be possible to make Chatsworth free of illicit substances. Nearly twenty two percent (22.6%) (n=14) of the respondents thought that a drug-free community might be possible in the future, but these respondents also indicated that family communication would be based on the nature of the issue they were experiencing. A total of 37.1% (23) of the respondents indicated that they would communicate with their families if they had a problem, whereas 16.1% (10) of the respondents further indicated that it would not be possible to make Chatsworth a drug-free community. These findings suggest an overall negative perception of the potential within the Chatsworth society to curb or eventually eradicate the drug problem, regardless of family unity and bonding.

5.4.1.3 Cross-tabulation between individual's current situation and the knowledge of commonly used illicit substances

The Fisher's Exact Test p-value is less than 0.05, and the level of significance is $p=0.006$. This implies that there is a significant relationship between individuals current situation and knowledge of commonly used illicit substances.

Table 5.4: Individuals Current Situation and Commonly Used Illicit substances

			What is the most commonly used drug in your unit?							Total
			Buttons	Cocaine	Dagga	Do not know	Ecstasy	Other	Sugars	
Does your current situation overwhelm you?	I am managing my current situation	Count	0	0	11	0	0	1	11	23
	% within "What is the most commonly used drug in your unit?"		0,0%	0,0%	40,7%	0,0%	0,0%	100,0%	40,7%	37,1%
No	Count		0	1	14	4	1	0	6	26
	% within "What is the most "		0,0%	100,0%	51,9%	100,0%	100,0%	0,0%	22,2%	41,9%
Yes	Count		1	0	2	0	0	0	10	13
	% within "What is the most .."		100,0%	0,0%	7,4%	0,0%	0,0%	0,0%	37,0%	21,0%
Total	Count		1	1	27	4	1	1	27	62

% within "What is the most .."	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%
--------------------------------------	--------	--------	--------	--------	--------	--------	--------	--------	--------

Respondents who indicated that they ‘...are managing their current situation’ (37.1%) also indicated that both dagga and “sugars” were the most commonly used illicit substances (11:11 = 17.1%). A total of 21.0% (13) of the respondents admitted that their current situation overwhelmed them. Of these 13 respondents, 16.1% (10) indicated that “sugars” was the most commonly used drug. Just over forty percent (41.9%) (n=26) indicated that their current situation did not overwhelm them, and of these 26 respondents, 22.6% (14) indicated that dagga was the most commonly used drug.

Based on these finding the following inferences are made:

- People who use “sugars” (i.e., an opiate derivative drug) are more likely to feel overwhelmed. This corresponds with the feelings associated with the use of “sugars” as discussed in Chapter two – e.g., a feeling of the ability/need to escape current issues.
- The respondents who did not feel overwhelmed were most aware of the use of dagga in the community. This finding is similar to previous studies (discussed in Chapter two) that dagga is considered a mellowing drug as it is a ‘downer’ and therefore used for reasons other than ‘escaping’ (Van Heerden et al, 2009)
- People who feel more overwhelmed than others by their situation are more likely to engage in the use of ‘harsher’ illicit substances, as it will make them ‘feel good’ faster by experiencing a stronger ‘high’(The Cabin, 2016). Resorting to harsher substances can also be a by-product of tolerance that a user may have created due to prolonged drug use (Peper, 2009:192).

5.4.1.4 Cross-tabulation between illicit substance use as a stress coping mechanism and awareness of dealers in the community

Fisher’s Exact Test p-value is less than 0.05 and the level of significance is p=0.007. This implies a significant relationship between illicit substances as a stress coping mechanism and awareness of drug dealers in the community.

Table 5.5: Coping with Stress and Awareness of Drug Dealers in the Community

			Do you know of any members in your community that sell illicit substances?		Total
			No	Yes	
Have you ever taken illicit substances to cope with stress?	Never	Count	4	12	16
		% within "Do you know of any members in your community that sell illicit substances?"	22,2%	27,3%	25,8%
	Once	Count	4	6	10
		% within "Do you know of any members in..."	22,2%	13,6%	16,1%
	Sometimes	Count	10	11	21
		% within Do you know of any members in..."	55,6%	25,0%	33,9%
	Yes, it is how I manage my stress	Count	0	15	15
		% within Do you know of any members in..."	0,0%	34,1%	24,2%
Total		Count	18	44	62
		% within Do you know of any members in..."	100,0%	100,0%	100,0%

A total of 24.2% (15) respondents indicated that they used illicit substances as a stress coping mechanism and also agreed that they were aware of drug dealers in the community. This was followed by a total of 33.9% (21) of the respondents who stated that they ‘sometimes’ used illicit substances as a stress coping mechanism, with 17.7% (11) indicating that they were aware of drug dealers in the community. Just over twenty five percent (25.8%) (n=16) of the respondents indicated that they had never used illicit substances as a stress coping mechanism, but of these 16 respondents, 12 (75%) indicated that they were aware of drug dealers operating in the community. Of particular interest is the positive correlation between knowing community dealers and the use of illicit substances to help cope with stress. It may be deduced that knowledge of drug dealers influences use of illicit substances.

Thus a total of 46 respondents had used illicit substances as a coping mechanism at some time, whereas only 16 respondents had never used it for this purpose (46>16). This finding suggests that a large percentage of respondents had turned to illicit substances at some time to deal with stress. Their knowledge of community drug dealers supports this theory. Overall, 44 (70.9%) of respondents admitted to having knowledge of who the drug dealers in the community were. This finding suggests that drug use may be linked to easy accessibility. This lack of organisation and social structures to protect residents suggests that youth in particular has become most vulnerable to this threat, as discussed in the literature review (Chapter two). Moreover, if it remains unchecked, the problem may escalate to levels that could hold dire consequences for the Chatsworth community. The use of illicit substances as a coping mechanism is consistent with other research findings on the relationship between illicit substances and stress. For example, Sinha (2009) highlights the point that considerable research has been done with regards to stress and illicit substances. She states that studies have shown that behavioural and neurobiological correlates have been discovered to link stress and addiction. Knowledge of the local dealers can play a role in purchase and use of illicit substances. As a total of eighteen (29%) respondents did affirm that they were not aware of community dealers, and from those 18, 0% indicated that illicit substances were 'how they managed their stress'. Moreover, various theories illuminate the important role that stress plays in addiction, with special attention being given to the psychological approaches that view addiction and drug use as a coping mechanism to deal with stress (Tomkins, 1966; Sinha, 2009; Baker, Piper, McCarthy, Majeskie & Fiore, 2011). The results of these studies emphasise the psychological factors that contribute to psychoactive addiction.

5.4.1.5 Cross-tabulation between Perceived life direction and perceived confidence

The Fisher's Exact Test p-value is less than 0.05 and the level of significance is $p < 0.001$. This implies that there is a significant relationship between respondents' perceived life direction and perceived confidence.

Table 5.6: Perceived life direction versus perceived confidence

			Do your friends and family describe you as a confident person?					Total
			I Do not know	I do not think so	No	Sometimes	Yes	
Do you feel like you know who you are as a person?	I am still discovering who I am	Count	3	1	1	5	7	17
		% within "Do you feel like you know who you are as a person?"	17,6%	5,9%	5,9%	29,4%	41,2%	100,0%
		% within "Do your friends and family describe you as a confident person?"	75,0%	16,7%	16,7%	55,6%	18,9%	27,4%
		% of Total	4,8%	1,6%	1,6%	8,1%	11,3%	27,4%
	No, I am very lost	Count	0	4	4	0	0	8
		% within "Do you feel like you know who you are as a person?"	0,0%	50,0%	50,0%	0,0%	0,0%	100,0%
		% within "Do your friends and family describe you as a confident person?"	0,0%	66,7%	66,7%	0,0%	0,0%	12,9%
		% of Total	0,0%	6,5%	6,5%	0,0%	0,0%	12,9%
	Yes, I have direction	Count	1	1	1	4	30	37
		% within "Do you feel like you know who you are as a person?"	2,7%	2,7%	2,7%	10,8%	81,1%	100,0%
		% within "Do your friends and family describe you as a confident person?"	25,0%	16,7%	16,7%	44,4%	81,1%	59,7%
		% of Total	1,6%	1,6%	1,6%	6,5%	48,4%	59,7%
Total	Count		4	6	6	9	37	62
	% within "Do you feel like you know who you are as a person?"		6,5%	9,7%	9,7%	14,5%	59,7%	100,0%

	who you are as a person?"						
	% within "Do your friends and family describe you as a confident person?"	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%
	% of Total	6,5%	9,7%	9,7%	14,5%	59,7%	100,0%

Respondents that have direction also believed that people saw them as confident. Overall there was a positive relationship with perceived confidence being linked to having self-knowledge. However the 8 respondents who admitted to being very lost believed that they were not perceived as confident by friends and family, this reinforces the positive link between these two variables by showing that lack of perceived life direction was linked to lower perceived confidence. In total 12 respondents had lowered perceived confidence, 4 were unsure, and 46 believed that they were perceived as confident.

5.4.1.6 Cross-tabulation between family bonding and opinions on a drug-free community

Fisher's Exact Test p-value is less than 0.05 and the level of significance is $p=0.007$. This implies that there is a significant relationship between family bonds and opinions on a drug-free community.

Table 5.7: Family Bonding and a Drug-Free Society

			Is it possible to make Chatsworth a drug free community?				Total
			Maybe some time in the future	No	Uncertain / don't know	Yes	
Do you have a strong relationship with your family?	No	Count	1	2	0	1	4
		% within Is it possible to make Chatsworth a drug free community?	5,6%	9,1%	0,0%	5,9%	6,5%
	Sometimes	Count	0	4	4	3	11
		% within Is it possible to make Chatsworth a drug free community?	0,0%	18,2%	80,0%	17,6%	17,7%
	Yes I do	Count	17	16	1	13	47
		% within Is it possible to make Chatsworth a drug free community?	94,4%	72,7%	20,0%	76,5%	75,8%
Total		Count	18	22	5	17	62
		% within Is it possible to make Chatsworth a drug free community?	100,0%	100,0%	100,0%	100,0%	100,0%

The above table shows that, despite the nature of the family bond, more respondents believed that a drug-free utopia could not be achieved in Chatsworth than those who thought that it was possible as this was the highest scored category (22/62). However a further analysis of the above table indicated that the stronger the family bond was, the more optimistic the respondents were towards a drug-free community. Seventeen (17) indicated that they believed it may be possible sometime in the future with thirteen (13) indicating that ‘Yes’ they did believe it would be possible. From this table it can be noted that perceived collective efficacy with regards to Chatsworth is varying within this group of respondents.

Just over seventy five percent (75.8%) (n=47) of respondents had strong family bonds. 35.4% (22) of this group did not think that a drug-free community was possible and 27.4% (17) thought it was possible (22 > 17). Just over six percent (6.5%) (n=4) indicated that they did not have a strong bond with their families, whereas 17.7% (11) indicated that they ‘sometimes’ had a good

family bond. From these two categories a total of 6 out of 62 (9.6%) respondents indicated that it would not be possible to make Chatsworth “Drug-free”.

5.4.1.7 Cross-tabulation between where time is most spent and awareness of people using illicit substances in the community

Fisher’s Exact Test p-value is less than 0.05 and the level of significance is $p=0.006$. This implies that there is a significant relationship between where time is most spent and awareness of people using illicit substances in the community.

Table 5.8: Where Time is most Spent and Awareness of Drug Use in the Community

			Are you aware of other people using illicit substances in your community?			Total
			No	Not sure	Yes	
Where do you spend most of your time during the week?	At campus	Count	2	0	0	2
		% within “Are you aware of other people using illicit substances in your community?”	33,3%	0,0%	0,0%	3,2%
	At home	Count	2	4	19	25
		% within “Are you aware of other people using illicit substances in your community?”	33,3%	80,0%	37,3%	40,3%
	At school	Count	2	0	5	7
		% within “Are you aware of other people using illicit substances in your community?”	33,3%	0,0%	9,8%	11,3%
	At work	Count	0	0	14	14
		% within “Are you aware of other people using illicit substances in your community?”	0,0%	0,0%	27,5%	22,6%
	Other	Count	0	1	13	14
		% within “Are you aware of other people using illicit substances in your community?”	0,0%	20,0%	25,5%	22,6%
Total		Count	6	5	51	62
		% within “Are you aware of other people using illicit substances in your community?”	100,0%	100,0%	100,0%	100,0%

The respondents who spent most of their time at home were also aware of other people using illicit substances in their community. This was the most commonly selected option at 30.6% (19/62). All respondents who spent most of their time at school, at home, at work and 'other' places were more likely to be aware of other people using illicit substances as opposed to not knowing (51 > 4). This means that a total of above eighty percent (82.2%) was aware of other people using illicit substances in their community. By accepting the term 'other' people, the respondents accepted the reality of their own illicit substance use. This finding suggests that not being obligated to dedicate time specific activities and spending most of their time at home with no real obligation could influence their own drug use habits and the people that these respondents interact with. Given the above statistics, it may be argued that there was a significant relationship between where most of the respondents spent their time and their knowledge of other (or more) users.

5.4.1.8 Cross-tabulation between the commonly used drug and statement of Chatsworth being "Notoriously known for drug related problems" fairness of the statement

Fisher's Exact Test p-value is less than 0.05 and the level of significance is $p=0.004$. This implies that there is a significant relationship between commonly used drug and respondents' and fairness of Chatsworth being "Notoriously known for drug related problems".

Table 5.9: Commonly used Drug and Respondents' Perception of the fairness of Chatsworth "Notoriously known for drug related problems"

			When people describe Chatsworth as being "Notoriously known for drug related problems", do you feel that it is a fair statement?			Total
			No	Not Sure	Yes	
Which drug do you think is the most used in Chatsworth?	Buttons	Count	0	0	1	1
		% within "When people describe Chatsworth as being 'Notoriously known for drug related problems', do you feel that it is a fair statement?"	0,0%	0,0%	2,4%	1,6%
	Cocaine	Count	1	0	1	2
		% within "When people describe Chatsworth as being 'Notoriously..."	11,1%	0,0%	2,4%	3,2%
	Dagga	Count	5	7	6	18
		% within "When people describe Chatsworth as being 'Notoriously..."	55,6%	58,3%	14,6%	29,0%
	Ecstasy	Count	0	1	1	2
		% within "When people describe Chatsworth as being 'Notoriously..."	0,0%	8,3%	2,4%	3,2%
	Sugars	Count	3	4	32	39
		% within "When people describe Chatsworth as being 'Notoriously..."	33,3%	33,3%	78,0%	62,9%
Total		Count	9	12	41	62
		% within "When people describe Chatsworth as being 'Notoriously..."	100,0%	100,0%	100,0%	100,0%

The above table illustrates that a large percentage (51.7%) of the respondents who agreed that the statement "Notoriously known for drug related problems" was fair, also indicated that the most commonly used drug was "sugars". This statistic shows that there was a high significant relationship between knowledge of commonly used illicit substances and the respondents'

opinions regarding the above mentioned statement, as most respondents (66.1%) agreed with the statement that Chatsworth was notorious for drug use. Based on this finding, it may be assumed that the respondents' lack of 'faith' in the Chatsworth society was influenced by their knowledge of illicit substances being sold in the area.

5.4.1.9 Cross-tabulation between the use of illicit substances for non-medical reasons and the most commonly used illicit substances in Chatsworth

For this particular analysis, Fisher's Exact Test p-value is less than 0.05 and the level of significance is $p=0.001$. This implies that there was a significant relationship between the use of illicit substances for non-medical purposes and the most commonly used illicit substances in the Chatsworth community.

Table 5.10: Illicit substances Used for Non-Medical Purposes and the Most Commonly Used Illicit substances

			What is the most commonly used drug in your unit?							Total
			Buttons	Cocaine	Dagga	Do not know	Ecstasy	Other	Sugars	
Do you use illicit substances for medical reasons?	No	Count	0	1	22	0	0	0	16	39
		% within "What is the most commonly used drug in your unit?"	0,0%	100,0%	81,5%	0,0%	0,0%	0,0%	59,3%	62,9%
	Yes	Count	1	0	5	4	1	1	11	23
		% within "What is the most commonly used drug in your unit?"	100,0%	0,0%	18,5%	100,0%	100,0%	100,0%	40,7%	37,1%
Total		Count	1	1	27	4	1	1	27	62
		% within "What is the most commonly used drug in your unit?"	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

A total of 16 from 62 respondents indicated that they did not use illicit substances for medical reasons. These respondents also selected “sugars” as the drug of preference in their unit (17.7%). Of the respondents who indicated that they did not use illicit substances for medical reasons, 22 (35.4%) selected dagga as the most commonly used drug. Overall, of the respondents who admitted to using illicit substances for other reasons compared to those who didn’t, both dagga and “sugars” were selected as the most commonly used illicit substances (43.5%) (27 = 27). Thirty nine (39) of the respondents indicated that they did not use illicit substances for medical purposes; rather, it was optional and they thus used it by choice. The finding that illicit substances are frequently used for non-medical purposes is affirmed by various researchers who looked at initiation or reasons for drug use, e.g. Pillay (1993:76) and Stenner and David (2008).

5.4.1.10 Cross-tabulation between family bond and perceived life direction

Fisher’s Exact Test p-value is less than 0.05 and the level of significance is $p = 0.006$. This implies that there is a significant relationship between family bond and perceived life direction.

Table 5.11: Family bond and Perceived life direction

			Do you feel like you know who you are as a person?			Total
			I am still discovering who I am	No, I am very lost	Yes, I have direction	
Do you have a strong relationship with your family?	No	Count	0	2	2	4
		% within "Do you feel like you know who you are as a person?"	0,0%	25,0%	5,4%	6,5%
	Sometimes	Count	3	4	4	11
		% within "Do you feel like you know who you are as a person?"	17,6%	50,0%	10,8%	17,7%
	Yes I do	Count	14	2	31	47
		% within "Do you feel like you know who you are as a person?"	82,4%	25,0%	83,8%	75,8%
Total		Count	17	8	37	62
		% within "Do you feel like you know who you are as a person?"	100,0%	100,0%	100,0%	100,0%

Nearly seventy six percent (75.8%) (n=47) respondents said they had a strong family bond. Almost seventy percent ($31 / 47 = 65.9\%$) of the same group also admitted to having a strong perceived life direction by stating that they ‘had direction’. From this it may be noted that there is a positive relationship between family bond and perceived life direction. A total of twenty seven percent (27.4%) (n=17) respondents felt like they were still discovering ‘who they are’. A total of six percent (6.4%) (n=4) admitted to not having a strong family bond. Of notable interest is that half of the respondents (50%) (n=2) who admitted this selected that they were ‘very lost’. Close to eighteen percent (17.7%) stated they ‘sometimes’ had a strong bond, from the thirty six

percent ($4 / 11 = 36.3\%$) 4 admitted to being “very lost”. From the above table it can be deduced that family bond can influence perceived life direction.

5.4.1.11 Cross-tabulation between family bonding and family communication

Fisher’s Exact Test p-value for these variables is less than 0.05 and that the level of significance is $p=0.004$. This implies that there is a significant relationship between family bonds or bonding and family communication.

Table 5.12: Family Bonds and Communication within the Family

			Do you communicate well with your family, would you speak to them if you had a problem?				Total
			Depends on what the problem is	I would prefer speaking to my friends	No	Yes	
Do you have a strong relationship with your family?	No	Count	2	0	2	0	4
		% within “Do you communicate well with your family, would you speak to them if you had a problem?”	6,9%	0,0%	50,0 %	0,0%	6,5%
	Sometimes	Count	5	2	2	2	11
		% within “Do you communicate..”	17,2%	33,3%	50,0 %	8,7%	17,7%
	Yes I do	Count	22	4	0	21	47
		% within “Do you communicate..”	75,9%	66,7%	0,0%	91,3 %	75,8%
Total		Count	29	6	4	23	62
		% within “Do you communicate..”	100,0%	100,0%	100,0 %	100,0 %	100,0%

Of the 62 respondents, nearly thirty four percent (33.8%) ($n=21$) agreed that they would communicate with their families if they had a problem and that they had strong family bonds. Just over thirty five percent (35.4%) ($n=22$) of respondents who said that they had a strong

relationship with their families, also said that their communication with their families was dependent on the nature of the issue involved. A total of nearly ten percent (9.6%) (n=6) of the respondents indicated that they would rather speak to their friends than to family members if they had a problem, and a total of 4 respondents said that they would not communicate with their family members if they had a problem. Overall, there was a positive relationship between family bonds and communication between these drug users and their families. This finding reinforces the point that was made in the literature review (Chapter 2) that social factors such as family bonding and sound familial relationships should be better understood and used in addiction therapy as well as in relapse prevention.

5.4.1.12 Cross-tabulation between boredom and the use of illicit substances as a coping mechanism

The analysis pertaining to Table 12 indicates that Fisher's Exact Test p-value is less than 0.05 and the level of significance is $p=0.002$. This implies that there is a significant relationship between boredom and illicit substances as a coping mechanism.

Table 5.13: Boredom and the Use of Illicit substances as a Coping Mechanism

			Have you ever taken illicit substances to cope with stress?				Total
			Never	Once	Sometimes	Yes, it is how I manage my stress	
Do you find yourself getting bored easily?	I have a lot of free time	Count	3	0	5	0	8
		% within "Do you find yourself getting bored easily?"	37,5%	0,0%	62,5%	0,0%	100,0%
		% within "Have you ever taken illicit substances to cope with stress?"	18,8%	0,0%	23,8%	0,0%	12,9%
		% of Total	4,8%	0,0%	8,1%	0,0%	12,9%
	No, I always find something to do	Count	6	9	6	3	24
		% within "Do you find yourself getting bored easily?"	25,0%	37,5%	25,0%	12,5%	100,0%
		% within "Have you ever taken illicit substances to cope with stress?"	37,5%	90,0%	28,6%	20,0%	38,7%
		% of Total	9,7%	14,5%	9,7%	4,8%	38,7%
	Yes I get bored really fast	Count	7	1	10	12	30
		% within "Do you find yourself getting bored easily?"	23,3%	3,3%	33,3%	40,0%	100,0%
		% within "Have you ever taken illicit substances to cope with stress?"	43,8%	10,0%	47,6%	80,0%	48,4%
		% of Total	11,3%	1,6%	16,1%	19,4%	48,4%
Total		Count	16	10	21	15	62
		% within "Do you find yourself getting bored easily?"	25,8%	16,1%	33,9%	24,2%	100,0%
		% within "Have you ever taken illicit substances to cope with stress?"	100,0%	100,0%	100,0%	100,0%	100,0%
		% of Total	25,8%	16,1%	33,9%	24,2%	100,0%

A total of 30 (48.3%) respondents said that they got bored easily, whereas 12 (12/30 = 40%) of this group admitted that they used illicit substances to cope with stress. A total of 10 (10/62 = 33.3%) of the respondents said that they used illicit substances 'sometimes' to cope with stress. Of the former 30 respondents who said that they got bored easily, 22 (22/30 = 73.3%) indicated that they used illicit substances as a coping mechanism. This indicates a significant relationship between boredom and the use of illicit substances as a coping mechanism. A group of nearly twenty six percent (25.8%) (n=16) of all the respondents said that they had never used illicit

substances as a coping mechanism for stress. This rate is less than the number of respondents who admitted to using a drug to cope with stress (22 > 16).

Benett (2013) highlights the relationship between drug use and boredom, stating that an influential relationship exists between these two variables. In the current study, boredom and stress seemed to be an issue. The literature is clear on the point that these are two factors that can work together or individually to influence drug use (Gopiram & Kishore, 2014), hence the fragility of the situation needs to be properly assessed.

5.4.1.13 Cross-tabulation between individual's current situation and awareness of commonly used illicit substances in the neighbourhood

Fisher's Exact Test p-value is less than 0.05 and the level of significance is $p=0.006$. This implies a significant relationship between individual's current and awareness of commonly used illicit substances in the neighbourhood.

Table 5.14: Individual's current situation and Commonly Used Illicit substances in Chatsworth

			What is the most commonly used drug in your unit?							Total
			Buttons	Cocaine	Dagga	Do not know	Ecstasy	Other	Sugars	
Does your current situation overwhelm you?	I am managing my current situation	Count	0	0	11	0	0	1	11	23
	% within "Does your current situation overwhelm you?"		0.0%	0.0%	47.8%	0.0%	0.0%	4.3%	47.8%	100.0 %
	% within "What is the most commonly used drug in your unit?"		0.0%	0.0%	40.7%	0.0%	0.0%	100.0 %	40.7%	37.1%
	% of Total		0.0%	0.0%	17.7%	0.0%	0.0%	1.6%	17.7%	37.1%
No		Count	0	1	14	4	1	0	6	26
	% within "Does your current situation overwhelm you?"		0.0%	3.8%	53.8%	15.4%	3.8%	0.0%	23.1%	100.0 %

	% within "What is the most commonly used drug in your unit?"	0.0%	100.0%	51.9%	100.0 %	100.0%	0.0%	22.2%	41.9%
	% of Total	0.0%	1.6%	22.6%	6.5%	1.6%	0.0%	9.7%	41.9%
Yes	Count	1	0	2	0	0	0	10	13
	% within "Does your current situation overwhelm you?"	7.7%	0.0%	15.4%	0.0%	0.0%	0.0%	76.9%	100.0 %
	% within What is the most commonly used drug in your unit?"	100.0 %	0.0%	7.4%	0.0%	0.0%	0.0%	37.0%	21.0%
	% of Total	1.6%	0.0%	3.2%	0.0%	0.0%	0.0%	16.1%	21.0%
Total	Count	1	1	27	4	1	1	27	62
	% within "Does your current situation overwhelm you?"	1.6%	1.6%	43.5%	6.5%	1.6%	1.6%	43.5%	100.0 %
	% within "What is the most commonly used drug in your unit?"	100.0 %	100.0%	100.0%	100.0 %	100.0%	100.0 %	100.0%	100.0 %
	% of Total	1.6%	1.6%	43.5%	6.5%	1.6%	1.6%	43.5%	100.0 %

Of the 13 respondents who admitted to being overwhelmed by their current situation, 10 (10/13= 76.9%) indicated that "sugars" was the most commonly used drug in their neighbourhood. Thus a sense of being overwhelmed by their drug use problem showed a positive correlation with knowledge of commonly used illicit substances in the neighbourhood. Nearly forty two percent (41.9%) (n=26) of the respondents denied that they were overwhelmed by their current situation, and 14 of this group indicated that dagga was the most commonly used drug. Of the respondents who said that they were managing their current situation, 11 indicated dagga and 11 indicated "sugars" as the most common drug. This finding suggests that dagga and "sugars" were equally rated as the most commonly used drug by users who were relatively comfortable with (not overwhelmed by) their situation. Pillay (1993) notes that feelings of being overwhelmed (i.e.,

hopelessness and aimlessness) are factors that possibly encourage drug use. These factors may affect adults and adolescents by engendering a feeling of “being lost”. Weiss (2015) believes that people who “consistently abuse substances do so not because they are looking to connect and engage; rather, they do so to escape from the discomfort of life”. The results of the current study indicated that people who felt overwhelmed were still aware of commonly used illicit substances regardless of their possible sense of feeling lost or abandoned. This suggests that their awareness of the drug that is most commonly used – and where it might be obtained – exacerbates their vulnerability and may influence their personal drug of choice based on its accessibility.

5.4.1.14 Cross-tabulation between boredom and feelings of worthlessness

Fisher’s Exact Test indicates that the p-value for these variables is less than 0.05 and the level of significance is $p=0.007$. This implies a significant relationship between boredom and feelings of worthlessness.

Table 5.15: Respondents’ response to boredom and feelings of worthlessness

			Are there times when you feel worth little feel?				Total
			All the time	Never	Sometimes	When things go wrong	
Do you find yourself getting bored easily?	I have a lot of free time	Count	0	3	2	3	8
		% within “Are there times when you feel worth little?”	0,0%	27,3%	8,7%	15,0%	12,9%
	No, I always find something to do	Count	3	8	6	7	24
		% within “Are there times when you feel worth little?”	37,5%	72,7%	26,1%	35,0%	38,7%
	Yes I get bored really fast	Count	5	0	15	10	30
		% within “Are there times when you feel worth little?”	62,5%	0,0%	65,2%	50,0%	48,4%
Total		Count	8	11	23	20	62
		% within “Are there times when you feel worth little?”	100,0%	100,0%	100,0%	100,0%	100,0%

A total of 38 respondents, just over sixty percent (61.2%) admitted to having feelings of boredom. Of these 35 ($35/38 = 92\%$) affirmed that they had feelings of worthlessness at least once. From 62 respondents just above twelve percent (12.9%) ($n=8$) admitted to feeling worthless 'all the time'. What is most striking about these results was that within the "Yes, I get bored really fast" category, 0% selected that they 'Never' had feelings of worthlessness, this implies that from all the respondents within this category, each of them had experienced feelings of worthlessness. Overall these results showed that there was a relationship between feelings of boredom and feelings of worthlessness. It may be deduced from this that respondents who had less time obligations, had more leisure (free-time) time, it may be possible that their feelings of worthlessness were attributed to their lack of time commitment which may be linked to being at campus or having full-time employment. These findings speak to the psychosocial stages by Erikson, emphasising the 6th stage, a stage where life is generally supposed to be more stable for most people, as they find life partners and begin to settle into their career paths. The lack of the fulfilment of this stage could encourage feelings of 'worthlessness' especially when individuals begin to compare their situations to other people around them.

5.4.1.15 Cross-tabulation between escapism and rate of drug use

Fisher's Exact Test p-value is less than 0.05 and the level of significance is $p=0.001$. This implies a significant relationship between escapism and rate of drug use.

Table 5.16: Escapism and rate of drug use

			In your community, would you say that the availability of illicit substances (number of drug dealers near or in your area) or the demand of illicit substances (number of people wanting to use illicit substances) increases the drug problem in Chatsworth?			Total
			Demand of illicit substances (number of people wanting to use illicit substances)	Other	The availability of illicit substances (number of drug dealers near or in your area)	
Have you ever taken illicit substances to make yourself feel happier or forget your current situation?	All the time	Count	2	0	6	8
		% within “In your community, would you say that the availability of...”	20,0%	0,0%	14,3%	12,9%
	Never	Count	0	3	11	14
		% within “In your community, would you say that the availability of...”	0,0%	30,0%	26,2%	22,6%
	Sometimes	Count	7	2	4	13
		% within “In your community, would you say that the availability of...”	70,0%	20,0%	9,5%	21,0%
	Yes	Count	1	5	21	27
		% within “In your community, would you say that the availability of...”	10,0%	50,0%	50,0%	43,5%
	Total	Count	10	10	42	62
		% within “In your community, would you say that the availability of...”	100,0%	100,0%	100,0%	100,0%

Most respondents who indicated that they had used illicit substances as a form of escapism (33.8%) (n=21) also indicated that they believed that the presence of drug dealers in the

neighbourhood (supply) exacerbated the issues related to drug use. Of the 8 (12.9%) respondents who indicated that they used illicit substances as a form of escapism 'all the time', 6 (6/8 = 75%) believed that the number of drug dealers in the neighbourhood exacerbated the issues related to drug use. The respondents who indicated that they used illicit substances as a form of escapism 'sometimes' (20.9%) (n=13) was the only category to believe that the number of people wanting to use illicit substances (11.2%) impacted drug related issues more so than the number of drug dealers (6.5%) in the area. In total just above seventy seven percent (77.4%) (n=48) of the respondents indicated that they had used illicit substances as a form of escapism, with 67.8% (42) of this group agreeing that the supply of illicit substances played a great role in the increase of drug issues, in comparison with 16.1% (10) of the respondents who stated that demand was a greater contributor (42 > 10). This indicated a positive relationship between the two above mention variables. In addition drug users who want to escape the issues of everyday life commonly use these as their reasons for drug use (Weiss, 2015), and this logically becomes much more viable if there is a constant supply of illicit substances to aid this form of escapism.

5.4.1.16 Work satisfaction and awareness of other users

Fisher's Exact Test p-value is less than 0.05 and the level of significance is $p=0.004$. This implies a significant relationship between work satisfaction (enjoyment of one's job) and awareness of other users.

Table 5.17: Work Satisfaction and Awareness of Other Drug Users

			Are you aware of other people using illicit substances in your community?			Total
			No	Not sure	Yes	
If you are currently employed, do you enjoy your job?	I am still in school/campus, I do not have a job	Count	6	5	15	26
		% within "If you are currently employed, do you enjoy your job?"	23.1%	19.2%	57.7%	100.0%
		% within "Are you aware of other people using illicit substances in your community?"	100.0%	100.0%	29.4%	41.9%
		% of Total	9.7%	8.1%	24.2%	41.9%
	I do not have a job	Count	0	0	18	18
		% within "If you are currently employed, do you enjoy your job?"	0.0%	0.0%	100.0%	100.0%
		% within "Are you aware of other people using illicit substances in your community?"	0.0%	0.0%	35.3%	29.0%
		% of Total	0.0%	0.0%	29.0%	29.0%
	No, I do not enjoy my job	Count	0	0	2	2
		% within "If you are currently employed, do you enjoy your job?"	0.0%	0.0%	100.0%	100.0%
		% within "Are you aware of other people using illicit substances in your community?"	0.0%	0.0%	3.9%	3.2%
		% of Total	0.0%	0.0%	3.2%	3.2%
	Yes, I enjoy my job	Count	0	0	16	16
		% within "If you are currently employed, do you enjoy your job?"	0.0%	0.0%	100.0%	100.0%
		% within "Are you aware of other people using illicit substances in your community?"	0.0%	0.0%	31.4%	25.8%
		% of Total	0.0%	0.0%	25.8%	25.8%
Total		Count	6	5	51	62
		% within "If you are currently employed, do you enjoy your job?"	9.7%	8.1%	82.3%	100.0%
		% within "Are you aware of other people using illicit substances in your community?"	100.0%	100.0%	100.0%	100.0%
		% of Total	9.7%	8.1%	82.3%	100.0%

Just above forty percent (41.9%) indicated that they were still studying (they were either at school or on a campus) and did not have a job; of these, 24.1% were aware of other users. It is noteworthy that all 29.1% (n=18) who indicated that they did not have a job were aware of other people in the community who were using illicit substances. The 2 (3.2%) respondents who admitted to not enjoying their jobs were also aware of other people in the community who were using illicit substances. In total, 82.2% (n=51) were aware of other people using illicit substances. These results suggest that employment status did not influence knowledge of people using illicit substances, as it was revealed that, irrespective of employment or not, drug use by people in the community was common knowledge among the respondents. Moreover, the respondents who did not have a job could have been more prone to boredom and thus they would have roamed the streets more freely than the working respondents, which could have informed their knowledge of other people using illicit substances. Their knowledge could also be based on association with their immediate social groups.

5.4.1.17 Cross-tabulation between knowledge of drug dealers in the community and other users

According to Fisher's Exact Test, the p-value is less than 0.05 and the level of significance is $p < 0.001$. This implies a significant relationship between knowledge of drug dealers in the community and other users.

Table 5.18: Knowledge of Drug Dealers and other users in the community

			Are you aware of other people using illicit substances in your community?			Total
			No	Not sure	Yes	
Do you know of any members in your community that sell illicit substances?	No	Count	6	1	11	18
		% within "Do you know of any members in your community that sell illicit substances?"	33,3%	5,6%	61,1%	100,0%
		% within "Are you aware of other people using illicit substances in your community?"	100,0%	20,0%	21,6%	29,0%
		% of Total	9,7%	1,6%	17,7%	29,0%
	Yes	Count	0	4	40	44
		% within "Do you know of any members in your community that sell illicit substances?"	0,0%	9,1%	90,9%	100,0%
		% within "Are you aware of other people using illicit substances in your community?"	0,0%	80,0%	78,4%	71,0%
		% of Total	0,0%	6,5%	64,5%	71,0%
Total		Count	6	5	51	62
		% within "Do you know of any members in your community that sell illicit substances?"	9,7%	8,1%	82,3%	100,0%
		% within "Are you aware of other people using illicit substances in your community?"	100,0%	100,0%	100,0%	100,0%
		% of Total	9,7%	8,1%	82,3%	100,0%

An analysis of the above table shows that there was a highly significant relationship between knowledge of dealers in the community and knowledge of people using illicit substances in the community. A total of 64.5% admitted to being aware of both. Nearly thirty percent (29%) was 'not aware of community dealers' and 17.7% were 'aware of other people using illicit substances in the community'. In total, 82.3% of the respondents was 'aware of other people using illicit substances' and 71% was 'aware of community dealers'. These results show a positive relationship between knowledge of dealers and knowledge of other users. The community and the social influences it has on individuals play an important role in drug use behaviours in

Chatsworth. The significant rates of knowledge of drug dealing and use among the respondents suggest a lack of collective/community efficacy to deter/decrease the number of drug dealers in the community. Instead, there appears to be a reinforced relationship between using illicit substances and knowing of people who sell illicit substances, which is indicative of the strength of the drug use cycle in Chatsworth. Social factors within the community seem to play an integral role in the drug use problem in Chatsworth of which apathy, poor or limited social leadership skills and law enforcement members' complicity in the drug peddling phenomenon seem to be the worst. It may therefore be assumed that the drug use practice will be curbed only if a dramatic change occurs in the community's attitude and desire towards eradicating this problem.

5.4.1.18 Perceptions regarding the availability of illicit substances and knowledge of dealers in the community

Fisher's Exact Test p-value is less than 0.05 and the level of significance is $p = 0.003$. This implies a significant relationship between perceptions of drug availability and knowledge of drug dealers in the community.

Table 5.19: Perceptions regarding the Availability of Illicit substances and Knowledge of Drug Dealers in the Community

			Do you know of any members in your community that sell illicit substances?		Total
			No	Yes	
How would you describe the availability of illicit substances in your neighbourhood?	Difficult	Count	1	4	5
		% within "How would you describe the availability of illicit substances in your neighbourhood?"	20,0%	80,0%	100,0%
		% within "Do you know of any members in your community that sell illicit substances?"	5,6%	9,1%	8,1%
		% of Total	1,6%	6,5%	8,1%
	Easy	Count	6	33	39
		% within "How would you describe the availability of illicit substances in your neighbourhood?"	15,4%	84,6%	100,0%
		% within "Do you know of any members in your community that sell illicit substances?"	33,3%	75,0%	62,9%
		% of Total	9,7%	53,2%	62,9%
	I do not think illicit substances are available in my neighbourhood	Count	4	2	6
		% within "How would you describe the availability of illicit substances in your neighbourhood?"	66,7%	33,3%	100,0%
		% within "Do you know of any members in your community that sell illicit substances?"	22,2%	4,5%	9,7%
		% of Total	6,5%	3,2%	9,7%
	Not sure	Count	7	5	12
		% within "How would you describe the availability of illicit substances in your neighbourhood?"	58,3%	41,7%	100,0%
		% within "Do you know of any members in your community that sell illicit substances?"	38,9%	11,4%	19,4%
		% of Total	11,3%	8,1%	19,4%
Total		Count	18	44	62
		% within "How would you describe the availability of illicit substances in your neighbourhood?"	29,0%	71,0%	100,0%
		% within "Do you know of any members in your community that sell illicit substances?"	100,0%	100,0%	100,0%
		% of Total	29,0%	71,0%	100,0%

Nearly sixty three percent (62.9%) (n=39) indicated that illicit substances were readily available in their communities, and 53.2% of this group said that they were aware of dealers in the community. Of the 19.4% (n= 12) who said that they were not sure about the availability of illicit substances, 8.1% (n=5) said that they were aware of drug dealing in the community, and of these 5 that said it was difficult to get illicit substances in their neighbourhood while 4 of these (4/5 = 80%) said that they were aware of dealers in their communities. This shows that even though perceptions of drug availability varied, most respondents were aware of dealers in their areas. This finding highlights various social factors that influence drug use, such as overall knowledge of illicit substances and socialisation. It also highlights the presence of social disorganisation based on the high knowledge of drug dealers in the community, implying that Chatsworth has a thriving market for illicit substances. Vahed (2013), Gopal and Marimuthu (2014) and Gopal (2015) affirm this in their various research which indicate the high prevalence of illicit psychoactive substance trafficking and use that is correlated to the steady increase of drug-related issues in Chatsworth. Hence, interpersonal factors that influence drug use can also be noted based on the above results, with the main focus on community based knowledge of influence.

5.4.1.19 Drug experimentation and drug use as a means of escape

Fisher's Exact Test p-value is less than 0.05 and the level of significance is $p = 0.044$. This implies a significant relationship between drug experimentation and escapism.

Table 5.20: Drug Experimentation and Escapism

			Have you ever taken illicit substances to make yourself feel happier or forget your current situation?				Total
			All the time	Never	Sometimes	Yes	
Have you experimented with illicit substances?	More than once (Less than 5 times)	Count	1	5	8	10	24
		% within "Have you experimented with illicit substances?"	4,2%	20,8%	33,3%	41,7%	100,0%
		% within "Have you ever taken illicit substances to make	12,5%	35,7%	61,5%	37,0%	38,7%

	yourself feel happier or forget your current situation?"					
	% of Total	1,6%	8,1%	12,9%	16,1%	38,7%
Never	Count	0	2	1	0	3
	% within "Have you experimented with illicit substances?"	0,0%	66,7%	33,3%	0,0%	100,0%
	% within "Have you ever taken illicit substances to make yourself feel happier or forget your current situation?"	0,0%	14,3%	7,7%	0,0%	4,8%
	% of Total	0,0%	3,2%	1,6%	0,0%	4,8%
Often (More than 5 times)	Count	7	4	3	15	29
	% within "Have you experimented with illicit substances?"	24,1%	13,8%	10,3%	51,7%	100,0%
	% within "Have you ever taken illicit substances to make yourself feel happier or forget your current situation?"	87,5%	28,6%	23,1%	55,6%	46,8%
	% of Total	11,3%	6,5%	4,8%	24,2%	46,8%
Once	Count	0	3	1	2	6
	% within "Have you experimented with illicit substances?"	0,0%	50,0%	16,7%	33,3%	100,0%
	% within "Have you ever taken illicit substances to make yourself feel happier or forget your current situation?"	0,0%	21,4%	7,7%	7,4%	9,7%
	% of Total	0,0%	4,8%	1,6%	3,2%	9,7%
Total	Count	8	14	13	27	62
	% within "Have you experimented with illicit substances?"	12,9%	22,6%	21,0%	43,5%	100,0%
	% within "Have you ever taken illicit substances to make yourself feel happier or forget your current situation?"	100,0%	100,0%	100,0%	100,0%	100,0%
	% of Total	12,9%	22,6%	21,0%	43,5%	100,0%

Of the respondents who indicated that they "Often" experimented with illicit substances (24.1%), 11.3% (n=7) said that they also used illicit substances as a form of escapism. In total, 95.1% (24+29+6) of the respondents admitted to having encounters with illicit substances at (different

frequencies) and 43.5% said that they used illicit substances as a form of escapism. Overall, a positive relationship exists between drug use (experimentation) and using illicit substances as a form of escapism. This finding suggests resonates with Berry’s (2011) research that showed drug use was highly related to escapism. People tend to “run away” from their problems or are overwhelmed by adverse situations instead of directly dealing with them (Jurich & Polson, 1984:371). At times, current life situations can become so daunting that people need to turn to psychoactive substances to de-stress, forget and even just to relax (The cabin, 2016).

5.4.1.20 Overall drug awareness in the Chatsworth community

Table 5.21: Drug Awareness in Chatsworth

			Age		Total
			< = 30	> 30	
Are you aware of other people using illicit substances in your community?	Yes	Count	33	18	51
		% within Are you aware of other people using illicit substances in your community?	64.7%	35.3%	100.0%
		% within Age	76.7%	94.7%	82.3%
		% of Total	53.2%	29.0%	82.3%
	No	Count	5	1	6
		% within Are you aware of other people using illicit substances in your community?	83.3%	16.7%	100.0%
		% within Age	11.6%	5.3%	9.7%
		% of Total	8.1%	1.6%	9.7%
	Not sure	Count	5	0	5
		% within Are you aware of other people using illicit substances in your community?	100.0%	0.0%	100.0%
		% within Age	11.6%	0.0%	8.1%
		% of Total	8.1%	0.0%	8.1%
Total	Count		43	19	62
	% within Are you aware of other people using illicit substances in your community?		69.4%	30.6%	100.0%
	% within Age		100.0%	100.0%	100.0%
	% of Total		69.4%	30.6%	100.0%

Table 5.21 reveals an important finding, which is that people in all age categories were aware of other drug users in the Chatsworth community. This finding shows that age does not affect

knowledge of users as learners who were still in school and young adults or adults who were out of school, studying or working all possessed knowledge of drug users.

Before further analyses of the findings are discussed, it is important to note that the statistical accuracy is 87.1% as presented in the classification table (appendix 6). “The Classification Table compares the predicted number of successes to the number successes actually observed and similarly the predicted number of failures compared to the number actually observed” (Zainontz, 2013). This high accuracy rate implies that the inclusion of the variables has made the model more accurate. This means that the model gives an accurate prediction 87.1% of the time in relation to drug taking behaviour.

5.5 Logistic Regression

Logistic regression is a statistical method “for analysing a dataset in which there are one or more independent variables that determine an outcome. The outcome is measured with a dichotomous variable” (in which there are only two possible outcomes) (Hosmer, Lemeshow & Sturdivant, 2013).

The description and explanation of the relationship between one dependent (binary) variable and one or more continuous level independent variables can be achieved by logistic regression (Lani, 2018). Logistic regression is usually used when the dependent variable is dichotomous (binary), meaning that the variable can only have two possible values (Lani, 2018). This is a form of predictive analysis. Therefore, when a logistic regression analysis is conducted, instead of trying to work out how an independent variable predicts a score, the prediction lies in which of the two dependent groups various people would fall into; for example, people “who have taken illicit substances” and people “who have not taken illicit substances”. To do this, the odds ratio is analysed.

Logistic regression is thus used:

“...to obtain odds ratio in the presence of more than one explanatory variable. The procedure is quite similar to multiple linear regressions, with the exception that the response variable is binomial. The result is the impact of each variable on the odds ratio of the observed event of interest” (Sperandei, 2013:12).

It is important to understand the difference between odds and probability for this analysis. Probability can be understood as “the ratio between the number of events favourable to a particular outcome and the total number of events”; in contrast, the odds are the ratios between probabilities (Sperandei, 2013:14). It is important to note that “odds are constrained between zero and infinity whereas probability is constrained between zero and one” (Fleiss, Levin & Cho Paik, 2013: 404). Based on these analyses, the odds that were generated for the purpose of this research are discussed below.

5.5.1 Interpretation of the logistic regression table

When the odds ratio is greater than one (1), it describes a positive relationship.

It is important to note that the results presented below show the statistical odds between variables. In this research the odds ratio among drug use, the environment, and social and psychological factors were investigated. All the odds ratios that were greater than 1 (i.e., >1) thus indicated a positive relationship, and these are highlighted and explained.

Table 5.22: Logistic Regression Table

Variables in the Equation		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
								Lower	Upper
Step 1 ^a	Age(1)	-1.994	1.340	2.213	1	0.137	0.136	0.010	1.884
	Gender(1)	-2.210	1.900	1.353	1	0.245	0.110	0.003	4.543
	Are you aware of other people using illicit substances in your community?	-2.178	1.277	2.910	1	0.088	0.113	0.009	1.383
	How would you describe the availability of illicit substances in your neighbourhood?	0.661	0.719	0.846	1	0.358	1.937	0.474	7.920
	Do you know of any members in your	-2.488	1.706	2.127	1	0.145	0.083	0.003	2.353

	community that sell illicit substances?								
	Is it possible to make Chatsworth a drug free community?	2.543	1.549	2.696	1	0.101	12.717	0.611	264.657
	Do you communicate well with your family, would you speak to them if you had a problem?	3.447	1.988	3.005	1	0.083	31.399	0.637	1546.963
	Do you feel like you are a confident person?	0.416	1.904	0.048	1	0.827	1.515	0.036	63.289
	Does your current situation overwhelm you?	0.744	0.726	1.053	1	0.305	2.105	0.508	8.727
	How well do you handle stress?	-0.934	1.055	0.784	1	0.376	0.393	0.050	3.106
	Have you ever taken illicit substances to cope with stress?	-0.254	1.364	0.035	1	0.852	0.775	0.053	11.244
	Do you sometimes feel like there isn't anything worth living for?	2.962	1.403	4.457	1	0.035	19.341	1.236	302.616
	Do you feel like you belong to your community, that you are a part of something bigger?	-2.785	2.321	1.439	1	0.230	0.062	0.001	5.840
	Do you have a strong relationship with your family?	-6.251	3.177	3.871	1	0.049	0.002	0.000	0.976
	Do any of your family members use illicit substances?	0.995	1.229	0.655	1	0.418	2.704	0.243	30.092

What do you think is the most common reason for people deciding to use illicit substances?	-0.228	0.365	0.391	1	0.532	0.796	0.389	1.628
Which drug do you think is the most used in Chatsworth?	2.163	1.091	3.933	1	0.047	8.698	1.026	73.751
Does someone (Family or Friends) you know personally, sell illicit substances?	2.852	1.337	4.553	1	0.033	17.325	1.261	237.949
Have you been medically identified to experience any one of the options listed below	-0.142	0.434	0.106	1	0.744	0.868	0.371	2.033
Do you find yourself getting bored easily?	0.622	0.986	0.398	1	0.528	1.863	0.270	12.868
Are you a part of any community organisation ?	-0.055	0.445	0.015	1	0.901	0.946	0.396	2.264
Constant	-0.152	5.209	0.001	1	0.977	0.859		

The logistic regression analysis table above elucidated ten (10) significant odd ratios, which are discussed below.

- The odds of a person taking illicit substances is 1.397 times more likely for a person that says illicit substances are easily available in their neighbourhoods than for those who did not. This shows that drug availability could influence drug use, which in turn could shed light on the form of social disorganisation that may exist in Chatsworth as discussed in Chapter 2. Desai and Vahed (2013), Gopal and Marimuthu (2014) and Gopal (2015) refer to the rife existence of illicit psychoactive substance trafficking and use that lead to an increase in drug-related issues in Chatsworth.

- The odds of a person taking illicit substances is 12.717 times more likely for a person who agrees that it would be possible to make Chatsworth a drug-free community in the future compared to those who did not believe in a drug-free society in Chatsworth.
- The odds of a person taking illicit substances is 31.399 times more likely for a person who communicates with their family compared to those who did not. This suggests that communication with family did not necessarily deter drug use among this study sample.
- The odds of a person taking illicit substances is 1.515 times more likely for a person who has perceived confidence compared to a person who did not. Based on this finding, one can infer, in accordance with research conducted by Boys, Marsden and Strang (2001), that many users engaged in the use of psychoactive illicit substances to increase their level of confidence. This inference is based on the fact that the participants in this study were all acknowledged drug users in a treatment programme, which may account for their sense of feeling confident. It may be acknowledged that for some of people drug taking may be reinforced by the feelings of perceived confidence it gives the user. overall reasons for drug use engagement varies between people, Some may take it to increase their confidence levels whereas others may use it to cope with stress
- The odds of a person taking illicit substances is 2.105 times more likely for a person who feels overwhelmed by their current situation compared to a person who did not feel overwhelmed. This suggests that this form of emotional stress for certain individuals was more likely to influence drug use. Emotional stress can be defined as “[...] a physiological response to a trigger from the environment and a crucially your perception of it” (Potter, 2015:1). People who feel that they cannot deal with their current situation may look for ways such as drug use to escape or cope with their situation instead of dealing with it in a more positive lifestyle manner.
- The odds of a person taking illicit substances is 19.341 times more likely for a person who sometimes feels that there isn’t anything worth living for compared to a person who did not feel this way. Various researchers such as Dragisic, Dickov, Dickov and Mijatovic (2015), Quello, Brady and Sonne (2005), and Wilcox (2004) have shown the

continued link between depression, possible suicidal thoughts and escapism. These factors continue to be highly influential in illicit psychoactive use (The cabin, 2016).

- The odds of a person taking illicit substances is 2.704 times more likely for a person who has family members using illicit substances compared to a person whose family members were clean of illicit substances. The importance of the family is undeniable, as affirmed by Freeman and Showel (1951:97) who state that the family “is recognized as perhaps the most influential agent in the socialization of the individual”. The family is the primary unit of a person’s first socialisation encounters and family members influence personality, thought processes and behaviour (Grusec, 2010:243).
- The odds of a person taking illicit substances is 8.698 times more likely for a person who selects “sugars” (the most commonly used drug in Chatsworth) compared to those who did not. This finding resonates with the finding that most of the respondents were aware that “sugars” was the drug of choice in Chatsworth (Figure 5.8). This finding positively correlates with the literature (Chapter two) which revealed that “sugars” was the most predominantly used drug in Chatsworth with the most devastating consequences for the community.
- The odds of a person taking illicit substances is 17.325 times more likely for a person who knows someone personally (family members or friends) who sold illicit substances compared to those who did not. The correlation between drug use and the knowledge of a familiar person who sold or peddled drug is a highly significant relationship, as Fisher’s Exact Test p-value is less than 0.05 and the level of significance is $p = 0.033$ for this relationship. This shows that familiarity with someone who sells illicit substances directly influences drug use. This finding confirms the argument that social factors influence drug use.
- The odds of a person taking illicit substances is 1.863 times more likely for a person who is easily bored compared to those who were not. The results thus suggest that people who have more free time and are bored are more likely to turn to drug use (Benett, 2013).

5.6 Synthesis of Analysis

The analyses of the data that were discussed in the sections above revealed many significant statistical relationships. The most important findings will be discussed in this section and will include comments on the psychological and social risk factors (i.e., intrapersonal and interpersonal factors) that impact psychoactive substance use as well as the environmental influence that facilitates the psycho-social dimension.

5.6.1 Environmental and social factors that impact drug use in the Chatsworth area

The social disorganisation theory (Hirschi, 1969) posits that a community plays an important role in deviant behaviour among its members. A plethora of research has shown the impact of environmental factors on psychoactive substance use. For example, Ramlagan et al. (2010:44) found that “higher substance abuse prevalence is generally seen in lower- to middle-income households”. However, environmental factors alone are not enough to understand psychoactive use, as both psychological and social factors impact this phenomenon. Psychoactive substance use and addiction are dynamic and complex issues and therefore require various points of understanding to come to a conclusive view of what psychoactive use and addiction truly are. In this context, Robinson, Smith, Saisan and Shubin (2017) highlight that people try illicit substances for the first time in social situations with friends and acquaintances. A strong desire to fit in with the group can thus make a person feel as if using a drug or illicit substances with them is the only option.

This research obtained data that reinforced the findings of the literature. The main findings support the social disorganisation theory as it was found that Chatsworth is socially disorganised and dysfunctional in the context of illicit psycho active substance use and addiction. The study revealed a high combined average of seventy two percent (72%) of respondents who were aware of other users, described drug availability as easy, and who were aware of drug dealers in their respective neighbourhoods. The statistical extent of these findings creates the sense that illicit psychoactive substance use has a somewhat normalised identity in the Chatsworth community. Moreover, respondents, from this research, believed that the availability of illicit substances fuels the demand for illicit substances contributing to the overall illicit drug problems in the community. A possible assumption regarding illicit psychoactive use in Chatsworth is that the

easy availability, the close proximity and the perceived minimal effort required by the user or potential user to obtain them sustains the presence and use.

The practice of using and the possession of illicit psychoactive substances is in itself an anti-social, deviant and delinquent act but still continues to flourish in the Chatsworth neighbourhood. This is despite it being against every South African law that labels the possession, trafficking and use of these illicit substances as illicit. Conferring with the social disorganisation theory, “the notion that delinquency is primarily the result of [an] institutional disturbance of community-based controls is the general premise of social disorganization as an explanation of delinquency” (Bartollas, 2000). Shoemaker (1990:82) also believes that, “when community or society is disorganized, it will result in the development of criminal values and customs such as illicit drug use”. The “institutional disturbance of community-based controls” is acknowledged by half the respondents (50%) believed that members of the police were involved with local drug dealers. In accordance to research by Shaw and McKay (1969) and Vetter and Silverman (1986) this finding could lead to a possible decrease in community efficacy causing an increase social disorganisation through the ‘inability of the community to form positive, healthy relationships’.

This disorganisation is further prompted by the lack of residential participation in formal and voluntary community structures, which was demonstrated by the fact that forty two percent (42%) of the respondents admitted that they were not part of any community organisation, with the rest being split between various religious organisations. It was also noteworthy that sixty six percent (66%) agreed that Chatsworth was notorious for drug-related problems, which demonstrates that more than of half the respondents believed that the use of illicit substances was a major problem in Chatsworth. This finding also highlights the lack of community efficacy and affirms the presence of disorganisation. The proliferation of the presence of psychoactive substances was further affirmed when drug availability, respondents’ knowledge of people who used illicit substances, and their knowledge of drug dealers were evaluated. All three statistical results showed a robust, positive inclination towards the presence and use of illicit psychoactive substances in the Chatsworth area.

These statistics also bring into question the “collective efficacy” of the Chatsworth community. As mentioned before, collective efficacy is when “... communities with strong mutual trust,

shared expectations, and the capacity to influence informal social controls will have stronger neighbourhood collective efficacy, which will lead to lower rates of crime” (Farmer, 2014:1). The demonstrated lack of trust in law enforcement could prove detrimental in achieving collective efficacy in Chatsworth, as the possibility exists that many drug users (and/or their families) may blame law enforcement for their addiction due to the inability of the police to eradicate the very active and constant sale of psychoactive substances in their neighbourhoods. Such a tendency is common among drug users, as Sigmund Freud (1894) proposes that they tend to create a “defence mechanism” to help them make sense of their addiction and to justify it. In fact, mechanisms such as “psychological projection” and “rationalisation” help the user on an individual level to make sense of their addiction (Samaolo & Chopra, 2017). Projection is understood as “the displacement of unwanted feelings onto another person, where they then appear as a threat from the external world” and rationalization is “the substitution of a safe and reasonable explanation for the true (but threatening) cause of behaviour” (Mathews, 2013: n.p). In these circumstances, users will deflect their own complicity and look for blame for the cause of their addiction externally instead of internally, thus creating a negative attitude towards law enforcement.

One concept of significance is how delayed reinforcers are discounted by drug dependent individuals. “The discounting of delayed reinforcers denotes the observation that the value of a delayed reinforcer is reduced in value [and is] worthless, because it is not in time to reduce the withdrawal symptoms, compared to an immediate reinforcer [which is] an immediate gratification to get ‘high’ or reduce withdrawal symptoms” (Calvert, 2010:172). Robles, Huang, Simpson and MacMillian (2011:354) expand on this concept by stating that “delay discounting (DD) refers to the loss of subjective value of a reward as a function of delay to the reward”. In essence, this shows that a drug user would rather opt for immediate gratification than to waiting and probably receive more rewards (Kirby, 1997). DD helps understand the presences of dealers in the respondents’ neighbourhoods and the findings suggest that immediate gratification is highly attainable in the Chatsworth area. This comment is supported by the number of respondents (67.7%) who believed that the number of dealers in the area directly impacted the increase in illicit substance issues experienced in the community.

5.6.2 Psychological risk factors

Previous research suggests that the effects of intimate partner relationships on substance use depend on partner use and the quality of the relationship (Rhule-Louie & McMahon, 2007). Some association between an individual's substance use and that of his/her partner is due to the fact that individuals tend to choose partners who engage in behaviours that are similar to theirs. However, the results of this study revealed that partner-influenced relationships were not strongly present. In fact, thirty two percent (32%) of the respondents said that their partners did not use any illicit substances or alcohol. A factor that needs to be considered when looking at this result is that nearly ninety percent (88.7%) of the respondents was male. The literature suggests that it is usually the male (intimate) partner who influences the female (NIDA, 2016; 2017), so the fact that only a few females participated in this study may have skewed this particular result.

Some common reasons for illicit psychoactive substance abuse that are highlighted by Mdukwe (2013:174) are factors such as “pleasure seeking, stress or pain relief, social or educational disparities, peer pressure, and experimentation”. Robinson et al. (2017:5) add that “family history of addiction, past trauma, mental disorders, early initiation and even the method of drug administration add to a person's vulnerability to addiction”. In this research study, some of the most commonly assumed reasons for drug use selected by the respondents were peer pressure (26%), followed by stress (19%) and escapism (18%). It is noteworthy that these results correlate with the findings of other studies (NIDA, 2012; Weiss, 2015). Peer pressure, stress, escapism, being overwhelmed and feeling like there isn't anything worth living for were highlighted as common reasons for illicit psychoactive use, thus affirming the hypothesis that psychological factors influenced drug use among this sample group. This was reinforced by Erikson's theory of psychosocial development (1950, 1963) that highlighted the importance of finding social identity outside of the family group. An impactful finding from this research was that eighty two percent (82%) of the respondents admitted that, at some point, they experienced ‘feeling worth little’ (or unworthy) and therefore succumbed to drug use. This demonstrated the psychological influence of drug use on the respondents. Moreover, some respondents also admitted to feeling ‘overwhelmed’ by their current situation and that they were unable to manage their stress. Forty eight percent (48%) said that there were times that they felt that there wasn't anything worth living for (i.e., they harboured suicidal thoughts). Kaplan (1975, 1980) & Goode (2012) proposed that inadequacies in personality could promote negative feelings leading to substance use. Inadequacies in personality may be a result of the incompleteness of the challenges proposed by

Erikson (1950, 1963) at the different life stages, which stem from the epigenetic principle understanding (further explained in Chapter three). In addition, a total of seventy four percent (74%) admitted that, at some point, they used illicit substances to cope with the stress they were feeling. Of this group, twenty four percent (24%) said that they always used illicit substances as a coping mechanism.

The neurobiological pathways of illicit substances have many implications for the user. Inter-neuronal communication is where illicit substances have their affect, as they interfere directly with neurotransmission (Dombeck, 2002:2). Alcohol and other illicit substances are believed to have a positive reinforcing effect due to their direct interaction with the particular neurotransmitter within the reward system. These interactions could lead to tolerance, dependence, withdrawal, sensitization and addiction (Roberts & Koob, 1997:103), which illuminates the biological reasons why individuals use illicit substances. It also leads to behavioural changes, which highlights the behavioural consequences of mind altering substances. These fluctuations in neurotransmitters can lead to users experiencing feelings of depression when they are not on the drug, as was discussed in Chapter two. This could influence the need for escapism and engender feelings of being overwhelmed. Pillay (1993) notes that feelings of being overwhelmed (hopelessness and aimlessness) are possible factors that encourage drug use. These factors may affect adults as well as adolescents as they affect them to the extent that they “feel lost”. Weiss (2015) believes that “people who consistently abuse substances do so not because they are looking to connect and engage; rather, they do so to escape from the discomfort of life”. Robinson, Smith and Saisan (2017) affirm this statement and add that relying on illicit substances to escape life’s problems only creates more detrimental consequences for the user. They argue that it intensifies existing problems and could lead to the development of feelings of isolation, helplessness and shame. In confirmation Erikson (1950, 1963) proposed that the inability to successfully form healthy relationships with other people could result in feelings of isolation and hopelessness. This could influence substance use. The imbalance caused by mind-altering illicit substances can also influence the feelings of stress, hence encouraging the continued use of illicit substances as a coping mechanism, which was the case for many respondents in this study who had come to seek help at the ADF.

Sinha (2011:11) states that drug abuse “that causes alterations in stress and dopaminergic pathways is accompanied by high distress, craving states and neural responses that are needed for stress regulation and impulse control”. This means that control and stress regulators decrease in the user, making him/her more susceptible to these factors. This is possible because illicit substances such as nicotine, amphetamines, opiates and marijuana that stimulate the brain reward pathways (dopamine) also activate the brain stress system (Sinha, 2000:348). Thus important brain pathways are irrevocably affected by psychoactive substances. Parts of the medial prefrontal cortex that are involved with impulse control, distress regulation and decision making (to name a few) is usually altered during illicit substance use, causing a change in the functioning processes of the individual. To affirm this comment, Greco and Carli (2003) and Anestis, Selby and Joiner (2007) argue that psychosocial and behavioural scientists emphasise that physiological stress causes a decrease in behavioural control and an increase in impulsivity. Increased levels of distress are accompanied by an increase in maladaptive behaviour such as illicit psychoactive substance use. Stressors experienced by adolescents may thus encourage illicit substance use (Wills et al., 2006). These alterations therefore make illicit substances a viable coping mechanism for a user, who is unknowingly affecting neural pathways in favour of addiction as opposed to mere stress relief.

5.6.3 Social risk factors

In essence, the social bonding theory argues that “persons who have strong and abiding attachments to conventional society (in the form of attachments, involvement, investment, and belief) are less likely to deviate than persons who have weak or shallow bonds” (Chriss, 2001:690). Therefore, if a person experiences a great sense of belonging and a strong form of collective efficacy, there is a positive possibility that s/he may deter from psychoactive substance indulgence. Robinson et al. (2017) argue that illicit substance abuse may start as a way to connect socially. However, addiction disrupts families and completely derails the normal order or sequence of life steps; this may cause extreme discomfort to the family unit itself. Chriss (2007:698-700) further explains the social bond as “a strong attachment to conventional society”. This bond could be a deterrent for anti-social behaviour such as substance abuse. MacBride (2015) also states that the lack of affection increases people’s risk of addiction, and cautions that the effects of child neglect and social isolation may adversely affect young people at risk and

recovery. Social bonding could thus provide protection against addiction. Moreover, the presence of strong social bonds in adulthood may decrease people's vulnerability to drug abuse. The presence of oxytocin in the system can reduce the pleasure of the effects of illicit substances and feelings of stress. In the current study, the majority of the respondents (>50%) claimed that they were able to communicate with their families and share a positive social bond with them. However, they revealed an overall lack of community bonding as, apart from their family bonds, the majority did not have recreational ties with people in society. This finding highlights a lack of conventional bonding which seemed to be exacerbated by a high rate of unemployment and a lot of free time which increased their boredom. The analysis showed that the odds of a person taking illicit substances "were 1.863 times more likely for a person who is easily bored compared to those who were not". The result thus suggests that people who have more free time are more likely to turn to drug use out of boredom. The literature review revealed that boredom and substance use share a close relationship, and it is argued that experimentation with illicit substances and alcohol usually results from boredom. In many cases it is also the reason why people keep returning to illicit substances or alcohol which results in inadvertent dependency (Wurmser, 1974:825; Benett, 2003; Willging, Quintero & Lilliot, 2014:3).

The results of this study suggest that the overall concept of social bonding was generally absent and thus unfulfilled among the respondents in this research. However, social group influence was clearly experienced by the respondents, as many of them (45.2%) admitted to personally knowing people such as friends and family members who peddled illicit substances. It was also discovered that many of the respondents had family members (45%) and friends (85%) who engaged in drug use. A further analysis of the data also showed that the odds of a person taking illicit substances "were 17.325 times more likely for a person who knew someone personally (family or friends) who sold illicit substances compared to those who did not". This is a noteworthy finding as the literature highlights the importance of the family's influence on the individual (Pratt, Gill, Barrett & Roberts, 2014). In light of the latter finding, it could be assumed that drug initiation for these respondents was influenced or encouraged by family members. Moreover, having friends who used illicit substances and who knew other people who used illicit substances was also common amongst the respondents, which revealed damage in the social bonding of this sample. In confirmation, Frisher and Beckett (2006:134) report that "drug use tends to occur in environments that have paired with illicit substances (e.g., friends who are still

drug users, neighbourhoods where illicit substances are easily available)”. This statement was confirmed by the results of the current study regarding the influential role of family and friends for drug use as well as drug availability in Chatsworth. Peer pressure was thus noted as an influence that prompted psychoactive addiction. It is important to acknowledge that peer pressure may be seen as both a psychological and social factor that influences drug use. It is social because it is a group activity for both adolescents and adults and it is psychological because it influences the need of the individual to belong and fit in, which are needs that predominately affect adolescents but impact on people in adulthood as well. The results of this study thus affirm the hypothesis that social factors influence illicit psychoactive use.

5.7 Conclusion

The results that have been presented in this chapter confirm the hypothesis that psychosocial factors influenced psychoactive drug use and addiction in a select sample in Chatsworth. It was found that psychological as well as social factors influenced drug use among the respondents. It was revealed that a ubiquitous illicit psychoactive substance industry existed and functioned unchecked in Chatsworth, with most people being aware of users and dealers. The majority of the respondents had used illicit substances due to the direct influence of people in their immediate social circles. Factors such as peer pressure, a need to escape, stress and the feeling of being unworthy were found to affect and influence drug use and abuse in this research sample to varying degrees. It may thus be concluded that concerted community efforts to restore or create collective efficacy and community identity (such as community bonding and involvement) could decrease drug use in the Chatsworth area.

CHAPTER SIX

LIMITATIONS, RECOMMENDATIONS AND CONCLUSION

6.1 Introduction

This chapter will focus on limitations that were experienced by the researcher during the course and recommendations that stem from findings presented in chapter 5 and for future research. Aims and objects will also be included.

The aim of this research is to illuminate psychological (intrapersonal) and social (interpersonal) (psychosocial) factors related to psychoactive substance addiction in Chatsworth near Durban, South Africa. The objectives included analyzing psychological and social factors (individually and in combination) that influence and sustain psychoactive illicit substance use among residents of Chatsworth.

6.2 Limitations of the Study

- Due to the sensitive nature of the study and the fact that the respondents invited to participate in this study are viewed as a sensitive group the researcher experienced some challenges in accessing a sample.
- There were a limited number of organisations that could be utilized for this study, at the time of the study the, the ADF was the only organization that were able to allow us access to their client base. The sample was limited due to there being a limited amount of people at the ADF.
- The number of female participants used in this study was much lower than males, due to fewer females being enrolled at the ADF therapy programs during the time of the study. Due to the large difference between females and males gender-specific trends could not be analysed
- Due to the limited number of participants the results cannot be generalised to a much larger population.

6.2 Recommendations Based on the Research Findings

The results of this research shed light on the influence of psychological and social factors relating to psychoactive illicit substance use and addiction in Chatsworth. The analyses and the discussions highlight major areas of concern with regards to illicit psychoactive addiction. In the likelihood that these methods are not already being utilised, possible recommendations for NGO's and NPO's that focus on use and addiction rehabilitation will be discussed.

Given that just over seventy seven percent (77%) of the respondents turned to illicit psychoactive substances at least once as a form of escapism the researcher recommends that therapy should involve encouraging individuals to 'face' their issues directly by embracing it as well as embracing the positives in their life leading to psychological coping mechanism that encourages healthy mental thinking. Diamond (2010) found that, "The draw of escapism can sometimes be stronger than dealing with the realities of life, especially the negative elements". In addition, a high eighty two percent (82.3%) of respondents stated that at one time or the other they experienced feelings of worthlessness. In recommendation to this the researcher suggests that therapy groups may also incorporate psychological coping mechanism that encourages healthy mental thinking when dealing with feelings of 'worthlessness'. Therapy groups may perhaps acknowledge that people in recovery need the most assistance with "soberly dealing with inner and outer reality. And part of existential reality involves personal responsibility" (Ibid). It may be considered that learning to tolerate reality could be the antidote to addiction. This statement underlines an important approach for drug deterrence therapy. As was mentioned previously in this report, some theories assume that drug use may arise from an inadequate personality, which implies that some individuals are more vulnerable than others to drug use which adheres with the high percentage of respondent's feelings of worthlessness.

Subsequently, a high number of respondents (75%) confessed to using illicit substances to manage their stress. These results coincide with current literature on factors that influence illicit substance use and is affirmed by Sinha (2001:351) in the suggestion that drug abusers predominately use avoidant coping strategies and that stress increases vulnerability to drug use (Sinha, 2001:344). NGOs and NPOs could include stress coping mechanisms in their programs for rehabilitation. These mechanisms should include physical activity, relaxation techniques and the enhancement of problem solving skills to ensure that they are effective (Galor, 2012; Cramer,

2015). McLeod (2015) proposes the use of stress management techniques that were first proposed by Lazarus and Folkman (1984), such as emotion-focused coping strategies that reduce negative emotional responses associated with stress which usually occurs when the stress is beyond the person's control and problem-focused coping abilities. Such strategies deal directly with the root of the problem. The results presented in chapter 5 reinforce the psychological influences that were found in this study to encourage drug use, particularly; low self-esteem, escapism, the feeling of being overwhelmed, and the inability to cope (or stress-related impacts). The odds ratio analyses showed that "the odds of a person taking illicit substances were 2.105 times higher for a person who felt overwhelmed by their current situation compared to a person who did not feel so overwhelmed". Moreover, the odds of a person taking illicit substances "were 19.341 times higher for a person who sometimes felt like there wasn't anything worth living for compared to a person" who did not experience this negative emotion. These results confirm that the building or rebuilding of an individual's sense of self-identity could play an integral part in the deterrence of illicit psychoactive addiction. Various simple techniques may be used in confidence building therapy, and most of them involve introspection. A possible recommendation of this type of therapy is the cognitive behavioural therapy (CBT). This form of therapy involves changing dysfunctional thinking patterns and altering ineffective behavioural patterns that hinder an individual's progression (Boyes, 2015). Some of the interventions used in CBT are cognitive restructuring, systematic exposure, mindfulness training, and problem solving skills (Boyes, 2015; Ryan, 2018).

In addition, given that eighty two (82%) of respondents knew 'other' people that used illicit substances (82%), it can be noted that respondents in this study self-identified as 'users' themselves. This highlights another important factor addiction therapists could consider; the transition of the identity of an addict. In this context, Dingle et al. (2014:2) suggest that the transition to new a social identity is part and parcel of the recovery process from addiction. They argue that when a person identifies with a positive social identity, other members of society are viewed as a part of who that person is. This positive internalisation "has an effect on health and well-being by enabling a sense of belonging, meaning, and purpose" (Ibid). This can also be improved by the external environment users find themselves in.

Interestingly, results from this research also showed the following; respondents that knew other people that used illicit substances (82%), having friends (85.5%) or family (54.8%) that used illicit substances, or knowing someone personally that sold illicit substances (61%) or local dealers (71%). In affirmation to these results, as mentioned in chapter three by demonstration of the social bond theory, people in the user's immediate circle can be seen as an influencer and reinforcer for their drug use behaviour. Hence, deterrence from addiction should probably involve social interaction circles such as greater community and youth groups, extended families, education and community healthcare facilities as well community social workers. A possible solution is for rehabilitation facilities is to focus on helping individuals move from the 'addict' identity to a 'recovery' identity as suggested by Robinson et al (2017). By emphasizing this process, the individual will internalise the transition from 'substance user' to a 'recovery identity'. In assertion, research conducted by Dingle et al. (2014) hypothesized that positive recovery identification positively influenced the overall recovery process of a habitual user. They were able to conclude that identity transition appeared to be an important step in recovery, and confirmed that "the transition from a 'user' identity to a 'recovery' identity over time encouraged reduced substance use and improved well-being. They also found individuals began to move towards new social groups that were independent of drug use, which encouraged the formation of new, healthier activities. This in turn would motivate users to detach from addiction encouraging/sustaining social groups.

In relation to 'healthier' activity, it is supported by the finding in the study that found almost fifty percent (49.1%) of respondents had no social activity (participation in community and social organizations). There was a highly positive relationship noted between lack of social activity and knowledge of other users. In addition fifty percent (50%) spent most of their time at home; this association also shared a highly positive relationship with the knowledge of other users. The importance of social activity was emphasized by Best, Gow, Taylor, Knox and White (2011) "...a new social identification within the therapeutic community may form the basis of a transitional identity which could serve as the basis for an assertive linkage with other groups in the wider community, such as sporting, cultural or employment networks and new social groups". It may be valuable for addiction recovery facilities to acknowledge the identity transition process for individuals and to actively promote it. Moreover, Robinson et al. (2017) note that people who are addicted abandon activities that they used to once enjoy. Much more

emphasis could therefore be given to activities of pleasure prior to and in the process of healing addiction. There needs to be an active shift in priorities for the individual, encouraging involvement in community initiatives helps reinforce a habitual user's conventional bonding, leaving less time for idleness.

A further recommendation based on the high percentage of respondents who are aware of local dealers (71%) and the easy availability of psychoactive illicit substances (62.9%), is to find ways to reduce the easy accessibility of illicit substances. Subsequently, the finding that “[t]he odds for a person taking illicit substances were 1.397 times higher for a person who said that illicit substances were easily available in their neighbourhood than those who did not” reiterating the need for reduction. This may be achieved through the community policing forum working closely with the community using a focused intervention and prevention strategy. The CPF could empower members of the community to report the sale and purchase of illicit substances.

Moreover, the odds ratio analysis revealed that “the odds of a person taking illicit substances were 2.704 times higher for a person who had family members using illicit substances compared to a person who did not”; and the “odds of a person taking illicit substances were 17.325 times higher for a person who knew someone personally (family or friends) who sold illicit substances compared to those who did not”. A recommendation would be that rehabilitation and support centers could continuously stress the inclusion of family and family-bond re-building as these findings demonstrates the direct influence of the family on drug taking behaviour. This indicates that the recovery of a drug user comprises a bigger picture than just the individual fighting his/her addiction. As previously mentioned, illicit psychoactive use is a strong social phenomenon, so there needs to be a social change as well when considering addiction. Support facilities and communities can perhaps actively involve families and help people in recovery to break unhealthy bonds (such as drug use based on results that indicated that family members/friends who may be dealers or encourage their use), and rebuild and strengthen healthy bonds. It becomes difficult for an individual to understand the deviance and detrimental consequence of psychoactive use in a household where it has been normalised. A user may be unable to decipher clearly between societal norms and their own constructed norms. It could then become the responsibility of the community to assist those who need this form of direction. Community organisations such as youth and support groups, school counsellors and community

social workers have the ability to help individual understand the difference between unhealthy learned behaviours and healthy behaviour. The social bond theory highlights the importance of the people we interact with; changing the interaction from use reinforcing to use deterring interaction has the potential to reduce repetitive drug use and drug reliance while creating greater awareness to the community by providing more in-depth awareness workshops and support programs. In confirmation Robinson et al. (2017) stress that support is essential to recovery. They propose that support can come from family members and close friends (non-using family and friends), healthcare providers, therapists or counsellors, others in recovery (sponsor system) and people from the community. They also highlight that recovery from addiction is a long process with often many setbacks, but they insist that these setbacks should not be seen as failure but rather as a “jolt” to get back on track, readjust the current program or try a different treatment approach. The crux is never to give up.

6.3 Recommendations for Further Research

In view of the results of this study, the researcher offers some recommendations for future studies. It is acknowledged at this point that an undertaking of this research on a larger scale would have extended the potential to produce influential results towards an overall understanding of psychoactive addiction not only in a limited location, but in KZN – and even in South Africa – as a whole. It is in this context that it is recommended that a larger sample of habitual drug users be used and that stratified sampling be employed to ensure the inclusion of a more representative sample of female participants. This would facilitate a gender-based analysis. A larger sample should be selected with the assistance different geographically based NGOs and NPOs, which would allow increased generalisability of the data. Possible further research should include a qualitative aspect. Non-users of illicit substances should also be included in a study of this nature as this will illuminate the difference in psychosocial trends between users and non-users, allowing for different understandings in psychoactive drug use; such as structures of influence or possible deterrence.

6.4 Conclusion

This research study explored and highlighted the psychological and social dimensions that influence illicit psychoactive substance use within a select sample of the Chatsworth community.

The psychosocial influences were highlighted through various factors fully discussed in Chapter five. It was demonstrated that these dimensions individually and collectively influence drug use and abuse; in fact, it was illuminated that the respondents experienced psychosocial influences in terms of their drug use and, most importantly, that one dimension did not take precedence over the other but rather both work simultaneously. The results also showed that community, family and individual structures can deter potential drug use. The strengthening of each of the three components individually, followed by the triangulation of these structures as a collective influence on drug use deterrence, could be considered a drug use prevention or reduction method.

REFERENCES

- Ackroyd, S., & Hughes, J. A. (1981). *Data collection in context*. London: Longman.
- Ahmed, M. H. 1986. Drug abuse as seen in the University Department of Psychiatry, Kaduna, Nigeria, in 1980–1984. *Acta Psychiatrica Scandinavica*, Volume 74, Issue 1: 98-101.
- Aleem, Z. (2015). 14 years after decriminalizing all illicit substances, here's what Portugal looks like. Retrieved from: <https://mic.com/articles/110344/14-years-after-portugal-decriminalized-all-illicit-substances-here-s-what-s-happening#.pAfvHgZAg> (accessed on 22 July 2017).
- American Psychiatric Association. (2017). DSM: History of the manual. Available from: <http://www.psychiatry.org/practice/dsm/dsm-history-of-the-manual> (accessed on 25 July 2016).
- Anand Singh¹ and Sheetal Bhoola, 2017. Substance abuse in South Africa : the growing disconnect between moral regeneration and moral degeneration. *Acta Criminologica: Southern African Journal of Criminology*, Volume 30 Number 1, Special Edition : Illicit drugs, p. 48 – 64
- Anestis M. D., Selby, E. A., & Joiner, T. E. (2007). The role of urgency in maladaptive behaviors. *Behav. Res. Ther*, 45, 3018–29. Retrieved from: <https://www.ncbi.nlm.nih.gov/pubmed/17923108> (accessed on 10 May 2017).
- Ansari, S. (2013). Social Capital and Collective Efficacy: Resource and Operating Tools of Community Social Control. *Journal of Theoretical and Philosophical Criminology Social Capital & Collective Efficacy*, 5(2): 75- 94.
- Ariniello, L. (1994). Brain briefing: The opiate receptor. *Society for Neuroscience*, Washington DC. Retrieved from: http://thebrain.mcgill.ca/flash/capsules/pdf_articles/opiate.pdf (accessed on 18 September 2016).
- Arterburn, S., & Burns, J. (1989). *Drug-proof your kids: A prevention guide and an intervention plan*. California: Pomona
- Babbie, E. R. (2010). *The practice of social research* (12th ed.). Belmont, CA: Wadsworth Cengage, 2010
- Bandura, A. (1999). A sociocognitive analysis of substance abuse: An agentic perspective. *Psychological Science*, 10(3), 214-217.
- Barlow, D. H., & Ferdinand, T. N. (1992). *Understanding delinquency*. New York: Harper Collins.

- Bartollas, C. (1991). *Correctional treatment theory and practice*. Englewood Cliffs: Prentice Hall.
- Bartollas, C. (2000). *Juvenile delinquency* (5th ed.). Needham Heights: Pearson Education.
- Bartz, A. E. (1971). Basic descriptive statistics for education and the behavioral sciences (4th ed.). Oxford, UK: Burgess.
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117(3), 497-529.
- Baxter, D. J. (2017). CBT treatment for low confidence. Cognitive behavioral therapy. Retrieved from: <http://cogbtherapy.com/cbt-for-improving-low-confidence/> (accessed on 24 November 2017).
- Bellum, S. (2012). National Institute on Drug Abuse Blog Team: Coca-Cola's scandalous past. Retrieved from: <https://teens.drugabuse.gov/blog/post/coca-colas-scandalous-past> (accessed on 9 November 2017).
- Bernard, H. R. (2002). Research methods in anthropology: Qualitative and quantitative methods (3rd ed.). Walnut Creek, California: AltaMira Press.
- Bernard, H. R., Peltó, P. J., Werner, O., Boster, J., Romney, A. K., Johnson, A., Ember, C. R., & Kasakoff, A. (1986). Construction of primary data in cultural anthropology. *Current Anthropology*, 27, 382-396.
- Bernstein, S., & Bernstein, R. (1999). *Schaum's outline of elements of statistics I: Descriptive statistics and probability*. New York: McGraw-Hill.
- Berry, W. (2011). Substance use: Escaping or embracing life? The difference between use and abuse may be attitude. *Psychology Today*. Retrieved from: <https://www.psychologytoday.com/blog/the-second-noble-truth/201106/substance-use-escaping-or-embracing-life> (accessed on 16 November 2017).
- Best, D., Gow, J., Taylor, A., Knox, A. & White, W. (2011). Recovery from heroin or alcohol dependence: A qualitative account of the recovery experience in Glasgow. *Journal of Drug Issues*, 41, 359-377.
- Bevilacqua, L., & Goldman, D. (2009). Genes and addiction. *Clinical Pharmacology & Therapeutics*, 85(4), 359-361.
- Bezuidenhout, C., & Joubert, S. (2003). *Child and youth misbehavior in South Africa: A holistic approach*. Pretoria: Van Schaik.

- Bhardwaj, V. 2016. Do 15% of SA's population have a drug problem? We fact-check 4 'shocking stats'. Farca check. Reterievvd from: <https://africacheck.org/reports/do-15-of-s-africans-have-a-drug-problem-we-fact-check-4-shocking-drug-statistics/> (accessed on: 07 September 2017)
- Bond, L., Butler, H., Thomas, L., Carlin, J., Glover, S., Bowes, G., & Patton, G. (2006). Social and school connectedness in early secondary school as predictors of late teenage substance use, mental health, and academic outcomes. *Journal of adolescent health*, 40(4), 357, e9-18.
- Botvin, G. J., Griffin, K. W., Diaz, T., Scheier, L. M., Williams, C., & Epstein, J. A. (2002). Preventing illicit drug use in adolescents: Long term follow-up data from a randomized control trial of a school population. *Addictive Behaviours*, 25(5), 769-774.
- Boys, A., Marsden, J., & Strang, J. (2001). Understanding reasons for drug use amongst young people: A functional perspective. *Health Education Research*, 16(4): 457–469. Retrieved from: <https://doi.org/10.1093/her/16.4.457> (accessed on 28 October 2017).
- Brocas, I., & Carrillo, J. D. (2013). Dual-process theories of decision-making: A selective survey. *Journal of Economic Psychology*. Retrieved from: <http://dx.doi.org/10.1016/j.joep.2013.01.004> (accessed on 25 July 2017).
- Brown, D. (2012). A literature review of Erikson's psychosocial development theory. Retrieved from: <http://studylib.net/doc/8274287/a-literature-review-of-erikson-s-psychosocial-development> (accessed on 12 June 2017).
- Brownfield, W. R. (2011) International Narcotics Control Strategy Report: Volume 1: Drug and Chemical Control. Israel: Diane Publishing.
- Bruwer, C. (2017). Heroin trafficking through South Africa: Why here and why now? Retrieved from: <http://ewn.co.za/2017/08/21/analysis-heroin-trafficking-through-sa-why-here-and-why-now> (accessed on 25 September 2017).
- Burns, N., & Grove, S. K. (2001). *The practice of nursing research: Conduct, critique and utilization* (4th ed.). Philadelphia, WB Saunders.
- Burton, N. (2012). Building Confidence and self-Esteem: 17 simple suggestions for building confidence and self-esteem. *Psychology Today*. Retrieved from: <https://www.psychologytoday.com/us/blog/hide-and-seek/201205/building-confidence-and-self-esteem> (accessed on 23 December 2017).
- Butler, A. C., & Beck, J. S. (2000). Cognitive therapy outcomes: A review of meta-analyses. *Journal of the Norwegian Psychological Association*, 37, 1-9.

- Byrne, G. (2007). A statistical primer: Understanding descriptive and inferential statistics. *Evidence Based Library and Information Practice*, 2(1), 32-47. Retrieved from: <https://doi.org/https://doi.org/10.18438/B8FW2H> (accessed on 8 August 2017).
- Calvert, A. L., Green, L., & Myerson, J. (2010). Delay Discounting of Qualitatively Different Reinforcers in Rats. *Journal of the Experimental Analysis of Behavior*, 93(2), 171–184. <http://doi.org/10.1901/jeab.2010.93-171>
- Carter, A., Hall, W., Capps, B., & Daglish, M. (2009). Neurobiological research on addiction: A review of the Scientific, Public Health and Social Policy implications for Australia. Final review. Retrieved from: [http://www.nationalillicit substancestrategy.gov.au/internet/illicit substancestrategy/Publishing.nsf/content/1F49C6D81F2C58F4CA25796600067D60/\\$File/Neuroscience%20of%20Addiction%20Report.pdf](http://www.nationalillicit substancestrategy.gov.au/internet/illicit substancestrategy/Publishing.nsf/content/1F49C6D81F2C58F4CA25796600067D60/$File/Neuroscience%20of%20Addiction%20Report.pdf) (accessed on 19 June 2017).
- Casavant, L., & Collin, C. (2001). Illegal drug use and crime: A complex relationship. Prepared for the Senate Special Committee on Illegal Illicit substances. Retrieved from: <https://sencanada.ca/content/sen/committee/371/ille/library/collin-e.htm> (accessed on 9 March 2017).
- Chambers, R. A., Taylor, J. R., & Potenza, M. N. (2003). Developmental Neurocircuitry of Motivation in Adolescence: A Critical Period of Addiction Vulnerability. *The American Journal of Psychiatry*, 160(6), 1041–1052.
- Chandler RK1, Fletcher BW, Volkow ND. 2009. Treating drug abuse and addiction in the criminal justice system: improving public health and safety. *JAMA*, 301(2):183-90. doi: 10.1001/jama.2008.976.
- Chatsworth, Map of. (n.d.). Google Maps. Retrieved from: https://www.google.co.za/search?source=hp&ei=TVhSWpeoDcnDkwWPkpfwAQ&q=map+of+chatsworth&oq=map+of+chatsworth&gs_l=psy-ab.3..35i39k1j0l9.2080.6551.0.7256.19.15.0.0.0.863.2492.4-1j2j1.5.0....0...1c.1.64.psy-ab..14.5.3718.6..0i131k1.1227.B02RM10WiI4 (accessed on: 25 August 2017).
- Chou K. L., Liang K., & Sareen J. (2011). The association between social isolation and DSM-IV mood, anxiety, and substance use disorders: Wave 2 of the National Epidemiologic Survey on Alcohol and Related Conditions. *Journal of Clinical Psychiatry*, 72, 1 468–76. 10.4088/JCP.10m06019gry
- Chriss, J. J. (2007). The functions of the social bond. *Sociological Quarterly*, 48(4): 689-712.
- Clark, A. 2013. Whatever next? Predictive brains, situated agents, and the future of cognitive science. *BEHAVIORAL AND BRAIN SCIENCES* (2013), Page 1 of 73 doi:10.1017/S0140525X12000477

- Clausen, J. A. (1957). Social and psychological factors in narcotics addiction. *Law and Contemporary Problems*, 22(1), 34-51.
- Cohen, L. & Manion, L. (1980). *Research Methods in Education*, London: Groom Helm Ltd..
- Collins, D and Lapsley, H 2008, The Costs of Tobacco, Alcohol and Illicit Drug Abuse to Australian Society in 2004/05, National Drug Strategy Monograph Series No. 64.
- Cox, M. F. (2007). Maternal demandingness and responsiveness as predictors of adolescent abstinence. *Journal of Paediatric Nursing*, 22, 197-205.
- Crafts, W. F., & Timanus, S. R. (1911). Intoxicating drinks and illicit substances in all lands and times: A twentieth century survey of temperance, based on a symposium of testimony from one hundred missionaries and travelers. International Reform Bureau, Washington. Retrieved from: https://archive.org/stream/cu31924032587929/cu31924032587929_djvu.txt (accessed on 28 June 2017).
- Cramer, C., Flynn, B., & LaFave, A. (1997). Erik Erikson's 8 stages of psychosocial development. Retrieved from: <http://web.cortland.edu/andersmd/ERIK/welcome.HTML> (accessed on 28 June 2017).
- Cramer, P. (2015). Understanding defense mechanisms. *Psychodynamic Psychiatry*, 43(4), 523-552.
- Creswell, J. (2002). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*. Upper Saddle River, NJ: Merrill Prentice Hall.
- Creswell, J. (2009). *Research design: Qualitative, quantitative and mixed methods approaches* (3rd ed.). Los Angeles, London, New Delhi, Singapore: SAGE.
- Creswell, J. W. (1998). *Qualitative inquiry and research design: Choosing among five traditions*. Thousand Oaks, CA: SAGE Publications.
- Crews, F., He, J., & Hodge, C. (2007). Adolescent cortical development: A critical period of vulnerability for addiction. *Pharmacology, Biochemistry and Behaviour*, 86(2), 189-99.
- Cronbach, L. J., & Meehl, P. E. (1955). Construct validity in psychological tests. *Psychological Bulletin*, 52, 281-302.
- Crous, V. (2003). Drug aware: About illicit substances. Retrieved from: <http://www.drugaware.co.za/aboutd.php> (accessed on 21 March 2017).
- Cullen, F. T., & Agnew, R. (2003). *Criminological theory: Past to present* (2nd ed.). Los Angeles, CA: Roxbury.

- Da Silva, B. F. A. (2014). Social disorganization and crime: Searching for the determinants of crime at the community level. *Latin American Research Review*, 49(3), 218-230.
- Dada, S., Burnhams, N. H., Erasmus, J., Parry, C., Bhana, A., Timol, F., & Fourie, D. (2017). South African community epidemiology network on drug use report: July update. Retrieved from: <http://www.mrc.ac.za/adarg/sacendu/SACENDUupdatejUNE2017.pdf> (accessed on 4 March 2017).
- Dadge, D. (2017). Statement of the Executive Director on the International Day Against Drug Abuse and Illicit Trafficking. Retrieved from: <https://www.unodc.org/unodc/en/press/releases/2017/June/statement-on-the-international-day-against-drug-abuse-and-illicit-trafficking.html> (accessed on 28 August 2017).
- Daughton CG1, 2011. Illicit drugs: contaminants in the environment and utility in forensic epidemiology. *Reviews of Environmental Contamination and Toxicology*, 210:59-110. doi: 10.1007/978-1-4419-7615-4_3.
- David, E. (2008). *Research methods in public administration and nonprofit management: Quantitative and qualitative approaches* (2nd ed.). Armonk, NY: M.E.
- De Langen, A. N. (2009). Research design and methodology, Chapter 3. Retrieved from: <http://ais.utm.my/researchportal/files/2015/02/Example3-Res-Design.pdf> (accessed on 28 October 2017).
- Degenhardt, L., & Hall, W. 2012. Extent of illicit drug use and dependence, and their contribution to the global burden of disease. *Lancet*, 379, 55-70. doi:10.1016/S0140-6736(11)61138-0
- Desai, A. (2000). *The poor of Chatsworth: Race, class and social movements in post-apartheid South Africa*. Durban: Madiba Publishers.
- Desai, A., & Vahed, G. (2013). *Chatsworth: The making of a South African Township*. Durban: University of KwaZulu-Natal Press.
- Diamond, S. 2010. Avoidance, Sobriety and Reality: The Psychology of Addiction. *Psychology today*. Retrieved from: <https://www.psychologytoday.com/us/blog/evil-deeds/201002/avoidance-sobriety-and-reality-the-psychology-addiction> (Accessed on: 18 January 2018)
- Dingle, G. A., Cruwys, T., & Frings, D. (2015). Social identities as pathways into and out of addiction. *Frontiers in Psychology*, 6, 1 795. Retrieved from: <http://doi.org/10.3389/fpsyg.2015.01795> (accessed on 27 July 2017).

- Dintwe, S. 2017. Understanding the profile of a Nyaope addict and its connotations for law enforcement agencies. *Acta Criminologica: Southern African Journal of Criminology*, Volume 30 Number 1, Special Edition : Illicit drugs, p. 150 – 165
- Dobson, K. S. (1989). Meta-analysis of the efficacy of cognitive therapy for depression. *Journal of Consulting and Clinical Psychology*, 57(3), 414-19. Retrieved from: <http://dx.doi.org/10.1037/0022-006X.57.3.414> (accessed on 13 April 2017).
- Dole, V. P. & Nyswander, M. 1965. A medical treatment for diacetylmorphine (heroin) addiction. a clinical trial with methadone hydrochloride. *JAMA*, 23;193:646-50.
- Dombeck, M. (2016). How Illicit substances Affect The Brain. Mental help. Retrieved from: <https://www.mentalhelp.net/articles/how-illicit-substances-affect-the-brain/> (accessed on 10 September 2016)
- Donovan, J. E. (2004). Adolescent alcohol initiation: A review of psychosocial risk factors. *Journal of Adolescent Health*, 35(6), 9-17.
- Donovan, J. E., Jessor, R., & Costa, F. M. (1991). Adolescent health behaviour and conventionality-unconventionality: An extension of problem behaviour theory. *Health Psychology*, 10(1), 52-61.
- Dragisic, T., Dickov, A., Dickov, V., & Mijatovic, V. (2015). Drug addiction as risk for suicide attempts. *Materia Socio-Medica*, 27(3), 188-191. Retrieved from: <http://doi.org/10.5455/msm.2015.27.188-191> (accessed on 28 October 2017).
- Drake, R. E., Mercer-McFadden, C., Mueser, K. T., McHugo, G. J., & Bond, G. R. (1998). Review of integrated mental health and substance abuse treatment for patients with dual disorders. *Schizophrenia Bulletin*, 24(4), 589-608.
- DU Toit, B.M. 1977. "Historical And Cultural Factors Influncing Cannabis Use Among Indian in South Africa", *Journal of Psychedelic Drugs*, Vol . 9, (3), September.
- Du Toit, BM (ed.) (1971). *Drugs Ritual and Altered States of Consciousness*, A.H. Balkema Publishers, Rotterdam.
- Egan, M., Tannahill, C., Petticrew, M., & Thomas. S. (2008). Psychosocial risk factors in home and community settings and their associations with population health and health inequalities: A systematic meta-review. *BMC Public Health*. Retrieved from: <https://doi.org/10.1186/1471-2458-8-239> (accessed on 04 April 2017).
- Elements of Behavioural Health. (2010). Mental Health & Addiction Resources. Reterievvd from: <https://www.elementsbehavioralhealth.com/addiction-resources/> (accessed on 12 April 2016)

- Ellis, A. (1957). Rational psychotherapy and individual psychology. *Journal of Individual Psychology*, 13, 38-44.
- Emling, S. 2014. 4 Things They Never Tell You About Empty Nest Syndrome. Reterievcd from: https://www.huffingtonpost.com/shelley-emling/empty-nest-syndrome_b_3956231.html (accessed on: 17 July 2017).
- Erikson, E. H. (1963). *Childhood and society*. New York: Norton.
- Erikson, E. H. (1968). *Identity, youth, and crisis*. New York: Norton.
- Erikson, E. H. (1980). *Identity and the life cycle*. New York: Norton.
- Erikson, E. H. (1982). *The life cycle completed*. New York/London: Norton.
- Esbensen, A. F., & Huizinga, D. (1990). Community structure and drug use: From a social disorganization perspective. *Justice Quarterly*, 7(4), 691-709.
- Evans, J. (2017). Dagga can be used in the home, Western Cape High Court rules. Retrieved from: <https://www.news24.com/SouthAfrica/News/dagga-can-be-used-in-the-home-western-cape-high-court-rules-20170331> (accessed on 12 April 2017).
- Fabiano, M., & Maganga, J. (2002). *Malawi secondary social and development studies*. Malawi: Macmillan.
- Faris, R. E. L. (1955). *Social disorganization*. New York: Ronald Press.
- Farmer, A. K. (2014). Collective efficacy theory. *Encyclopedia of Theoretical Criminology*, 1–4.
- Fitzgerald, C. J. D., & Cox, C. N. (1987). *Research methods in criminal justice: An introduction*. Chicago: Nelson-Hall.
- Fleiss, J. L., Levin, B., & Cho Paik, M. (2013). *Statistical methods for rates and proportions*. New York: John Wiley & Sons.
- Fleming, C. B., White, H. R., & Catalano, R. F. (2010). Romantic relationships and substance use in early adulthood: An examination of the influences of relationship type, partner substance use, and relationship quality. *Journal of Health and Social Behavior*, 51(2), 153-167.
- Fleming, J. S. (2004). Erikson's psychosocial developmental stages. Retrieved from: <http://swppr.org/textbook/ch%209%20erikson.pdf> (accessed on 30 March 2016).
- Ford, J. A. (2009). Nonmedical prescription drug use among adolescents: The influence of bonds to family and school. *Youth & Society*, 40(3), 336-352.

- Fort, J. (1969). *Pleasure seekers: The drug crisis. Youth and Society*, New York: Grove Press.
- Franz, C. E., & White, K. M. (1985). Individuation and attachment in personality development: Extending Erikson's theory. *Journal of Personality*, 53(2), 224-256.
- Freeman, H. E., & Showel, M. (1953). Role of the family in the socialization process. *Journal of Social Psychology*, 37(1), 97-101. DOI: 10.1080/00224545.1953.9921873
- Freud, S. (1894). The neuro-psychoses of defence. SE, 3: 41-61.
- Freud, S. (1896). Further remarks on the neuro-psychoses of defence. SE, 3: 157-185.
- Freudenrich, P. C. & R. B. 2001. How Your Brain Works. Retrieved from :<https://science.howstuffworks.com/life/inside-the-mind/humanbrain/brain.htm> (accessed on: 31 October 2017)
- Frisher, M. & beckett, H. (2006). Drug use desistance. *Criminology & Criminal Justice*
- Galor, S. (2012, February 26). Defense mechanisms vs. coping. Retrieved from <https://drsharongalor.wordpress.com/2012/02/26/defense-mechanisms-vs-coping>
- Garnett, C., & Garnett, D. (2017). Learn about: various illicit substances. Retrieved from: <https://www.bethesda4recovery.com/tik-drug> (accessed on 4 April 2017).
- Gerner, K. 2015. Flashbacks: Media Representations of Illicit Hallucinogenic Substance Use in Medical Therapies Before and After Marijuana Decriminalization. Retrieved from: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.901.7535&rep=rep1&type=pdf> (accessed on: 27 July 2017)
- Gifford, S. (2016). Family involvement is important in substance abuse treatment. *Psych Central*. Retrieved from: <https://psychcentral.com/lib/family-involvement-is-important-in-substance-abuse-treatment/> (accessed on 18 January 2018).
- Gillum, L. R. (1995). Reducing verbal and physical abuse behaviours of ninth through twelfth grade students, through a structured support group process. Unpublished doctoral thesis for a PhD in Education. Nova South-Eastern University, Fort Lauderdale, Fla. Retrieved from: <http://files.eric.ed.gov/fulltext/ED383969.pdf> (accessed on 15 May 2016).
- Giznik, D. 2016. Have You Heard Of Charas Concentrate? Here's How You Make It. Retrieved from: <https://herb.co/marijuana/news/charas-concentrate/> (accessed On: 25 September 2017)
- Global Drug Survey. (2016). Key findings (data collected Nov 15–Jan 16). Retrieved from: <https://www.globalillicitsubstancesurvey.com/past-findings/the-global-drug-survey-2016-findings/> (accessed on 4 March 2017).

- Goldstein, B. E. 2011. *Cognitive Psychology: Connecting Mind, Research, and Everyday Experience*. 3rd ed. Belmont: Wadsworth.
- Goldstein, P. J. (1985). The drugs/violence nexus: A tripartite conceptual framework. *Journal of Drug Issues*, 15(4), 493-506. Retrieved from: <http://dx.doi.org/10.1177/002204268501500406> (accessed on: 08 september 2017)
- Goode, E. (2012). *Illicit substances in American society: Theories of drug use* (8th ed.). New York: McGraw-Hill.
- Gopal, N., & Collings, S. J. (2012). Incidence of polysubstance abuse among treatment seeking youth in Durban, South Africa. *Journal of Psychology in Africa*, 655-658.
- Gopal, N., & Marimuthu, B. A. (2014). Gatekeeping: An obstacle to criminological research with Indian youth drug users in Chatsworth, KwaZulu-Natal. *Acta Criminological: Southern African Journal of Criminology. Special Edition No. 2/2014: Research and Application in Criminology and Criminal Justice*, 27-35.
- Gopiram, P., & Kishore, M. T. (2014). Psychosocial attributes of substance abuse among adolescents and young adults: A comparative study of users and non-users. *Indian Journal of Psychological Medicine*, 36(1), 58-61. Retrieved from: <http://doi.org/10.4103/0253-7176.127252> (accessed on 08 June 2017).
- Gorman, H.R & White, D.M. 1995. Dynamics of the Drug-Crime Relationship. The nature of crime: continuity and change, 1:151-68. Retrieved from: https://www.ncjrs.gov/criminal_justice2000/vol_1/02d.pdf (accessed on: 29 September 2017)
- Gottfredson, D.C., Kearley, B.W. & Bushway, S.D. 2008. Substance Use, Drug Treatment, and Crime: An Examination of Intra-Individual Variation in a Drug Court Population. *Journal of Drug Issues* 0022-0426/08/02 601-630
- Gounden, F. (2006). Drug forum on mission to root out 'sugars'. IOL news. Retrieved from: <https://www.iol.co.za/news/south-africa/drug-forum-on-mission-to-root-out-sugars-289088> (accessed on: 16 March 2017)
- Govender, L. 2015. Massive sugars factory bust. IOL News. Retrieved from: <https://www.iol.co.za/thepost/massive-sugars-factory-bust-1859156> (accessed on 15 August 2016)
- Grant, J. E., Potenza, M. N., Weinstein, A., & Gorelick, D. A. (2010). Introduction to behavioral addiction. *American Journal of Drug Alcohol Abuse*, 36(5), 233-241.
- Grant, J., Scherrer, J. F., Lynskey, M. T., Lyons, M. J., Eisen, S. A., Tsuang, M. T., True, W. R., & Bucholz, K. K. (2006). Adolescent alcohol use is a risk factor for adult alcohol and drug

- dependence: Evidence from a twin design. *Psychological Medicine*, 36(1), 109-118. Cambridge University Press.
- Greco B., & Carli, M. (2006). Reduced attention and increased impulsivity in mice lacking NPY Y2 receptors: Relation to anxiolytic-like phenotype. *Behav. Brain Res.* 169, 325-34. [PubMed]. Retrieved from: <https://www.ncbi.nlm.nih.gov/pubmed/16529827> (accessed on 13 June 2016).
- Green, K. M., Zebrak, K. A., Robertson, J. A., Fothergill, K. E., & Ensminger, M. E. (2012). Interrelationship of substance use and psychological distress over the life course among a cohort of urban African Americans. *Drug and Alcohol Dependence*, 123(1), 239-248.
- Greenfield SF. Women and substance use disorders. In: Jensvold MF, Halbreich U, editors. *Psychopharmacology and Women: Sex, Gender, and Hormones*. Washington, DC: American Psychiatric Press; 1996. pp. 299–321. [Reference list]
- Greenfield, S. F., Back, S. E., Lawson, K., & Brady, K. T. (2010). Substance abuse in women. *Psychiatric Clinics of North America*, 33(2), 339-355. Retrieved from: <http://doi.org/10.1016/j.psc.2010.01.004> (accessed on 18 April 2017).
- Greenland, S., Senn, S. J., Rothman, K. J., Carlin, J. B., Poole, C., Goodman, S. N., & Altman, D. G. (2016). Statistical tests, P values, confidence intervals, and power: a guide to misinterpretations. *European Journal of Epidemiology*, 31, 337–350. Retrieved from: <http://doi.org/10.1007/s10654-016-0149-3> (accessed on 08 June 2017).
- Grusec, J., E. (2011). Socialization processes in the family: Social and emotional development. *Annual Review of Psychology*, 62, 243-69. doi: 10.1146/annurev.psych.121208.131650
- Guba, E. & Lincoln, Y. (1985). *Naturalistic Inquiry*. Newbury Park, CA: Sage.
- Gunnarsson, M. (2012). Psychological factors associated with substance use in adolescents. Unpublished thesis for a PhD in Psychology, University of Gothenburg, Sweden. Retrieved from: https://gupea.ub.gu.se/bitstream/2077/29148/2/gupea_2077_29148_2.pdf (accessed on 22 March 2016).
- Hall, R. (1998). Extraneous and Confounding Variables and Systematic vs Non-Systematic Error. Psychology world. Retrieved from: <https://web.mst.edu/~psyworld/extraneous.htm> (accessed on 18 September 2017)
- Hamblin, J. (2013). Why we took cocaine out of soda. Retrieved from: <https://www.theatlantic.com/health/archive/2013/01/why-we-took-cocaine-out-of-soda/272694/> (accessed on 25 October 2017).
- Hassanbeigi, A., Askari, J., Hassanbeigi, D., & Pourmovahed, Z. (2013). Relationship between stress and addiction. *Social and Behavioral Sciences*, 84, 1 333-40.

- Hathaway, S. R., & McKinley, J. C. (1943). *Manual for the Minnesota Multiphasic Personality Inventory*. New York: Psychological Corporation.
- Hawkins, J. D., Catalano, R. F., & Miller, J. Y. (1992). Risk and protective factors for alcohol and other drug problems in adolescence and early adulthood: Implications for substance abuse prevention. University of Washington. *Psychological Bulletin*, 112(1), 64-105.
- Haynes P1, Ayliffe G. (1991). Locus of control of behaviour: is high externality associated with substance misuse? Retrieved from: British journal of addiction, 86(9):1111-7 (accessed on 16 August 2017)
- Heshmat, S. (2014). Social bonding and addiction: Social bonding can decrease the motivation to use illicit substances. Retrieved from: <https://www.psychologytoday.com/blog/science-choice/201411/social-bonding-and-addiction> (accessed on 09 May 2017).
- Heshmat, S. (2017). What is behavioral economics? Retrieved from: <https://www.psychologytoday.com/blog/science-choice/201705/what-is-behavioral-economics> (accessed on 14 August 2017).
- Hirschi, L., & Gottfredson, M. (1983). Age and the explanation of crime. *American Journal of Sociology*, 89, 552-584.
- Hirschi, L., & Stark, R. (1969). Hellfire and delinquency. *Social Problems*, 17(2), 202-213.
- Hirschi, T. (1969). *Causes of delinquency*. Berkeley: University of California Press.
- Hirschi, T. (2002). Control theory of delinquency. In: J. H. Laub (Ed.). *The craft of criminology*. New Jersey: Transaction Publishers.
- Hitting the streets—SA's top illicit substances. (2016, DATE). *Carte Blanche*. Retrieved from: <https://carteblanche.dstv.com/street-illicit-substances/> (accessed on 4 April 2017).
- Hodwitz, O. (2014). Social bonding theory. *Encyclopedia of Criminology and Criminal Justice*, 1–5.
- Hoepfl, M. C. (1997). Choosing qualitative research: A primer for technology education researchers. *Journal of Technology Education*, 9(1), 47-63. Retrieved from: <http://scholar.lib.vt.edu/ejournals/JTE/v9n1/pdf/hoepfl.pdf> (accessed on 8 July 2017).
- Hoffman, D. (2000). *Cliff's quick review of criminal justice*. S.l.: Houghton Mifflin Harcourt. Retrieved from: <https://www.cliffsnotes.com/study-guides/criminal-justice/crime/illicit-substances-and-crime> (accessed on 8 June 2017).
- Hopkins, B. L., Cole, B. L., & Mason, T. L. (1998). Critique of the usefulness of inferential statistics in applied behavior analysis. *Behavior Analyst*, 21(1), 125-137.

- Hopkins, W. G. (2000). Quantitative research design. *Sport Science*, 4(1). Retrieved from: sportsci.org/jour/0001/wghdesign.html (accessed on 31 October 2017).
- Hoskins, D. H. (2014). Consequences of parenting on adolescent outcomes. *Societies*, 4(3), 506-31.
- Hosmer, D. W. Jr., Lemeshow, S., & Sturdivant, R. X. (2013). *Applied logistic regression* (3rd ed.). New Jersey: John Wiley & Sons. Book info.
- Hsu, S. 2015. "A Comparison of Illicit and Licit Substances as Primary Substances of Abuse at Admission to Substance Abuse Treatment Centers in Georgia, 2009-2012." Thesis, Georgia State University, 2015. https://scholarworks.gsu.edu/iph_theses/401
- Informing Practice for Healthy Youth Behavior. Research Paper Series, No. 14 retrieved from: http://www.bridgingthegapresearch.org/_asset/md3wne/ITResearch_14mcbride2001.pdf (accessed on 26 May 2017)
- International Network of People who Use Drugs, 2015. INPUD Consensus Statement on Drug Use Under Prohibition - Human Rights, Health, and the Law. Retrieved from: <http://www.inpud.net/en/news/inpud-consensus-statement-drug-use-under-prohibition-human-rights-health-and-law> (accessed on: 23 June 2017).
- Jensen, G. (2017). *Social learning theory and the explanation of crime*. London: Routledge.
- Jensen, G. F. (2003). Social disorganization theory. In: Wright, R. A. (Ed.). *Encyclopedia of Criminology*. Chicago: Fitzroy Dearborn.
- Jessor, R. (1991). Risk behaviour in adolescence: A psychological framework for understanding and action. *Journal of Adolescent Health*, 12(8), 597-605.
- Jessor, R., Van Den Bos, J., Vanderryn, J., Costa, F. M., & Turbin, M. S. (1995). Protective factors in adolescent problem behaviour: Moderator effects and developmental change. *Developmental Psychology*, 31(6), 923-933.
- Jiloha, R. C. (2009). Social and cultural aspects of drug abuse in adolescents. *Delhi Psychiatry Journal*, 12(2), 167-75.
- Johnson, C. V., & Friedman, H. L. (2014). *Praeger handbook of social justice and psychology*. ABC-CLIO.
- Jurich, A. P., & Polson, C. J. (1984). Reasons for drug use: Comparison of drug users and abusers. *Psychological Reports*, 55(2), 371-378. Retrieved from: <https://doi.org/10.2466/pr0.1984.55.2.371> (accessed on 18 January 2018).
- Justice statistics, 85-002-xie, 21(8), 11.

- Kandel, D. B. (1980). Drug and drinking behaviour among youth. *Annual Review of Sociology*, 6, 235-285.
- Kandel, D. B., & Logan, J. A. (1984). Patterns of drug use from adolescence to young adulthood: Periods of risk for initiation, continued use, and discontinuation. *American Journal of Public Health*, 74(7), 660-666.
- Kelley, T. L. (1927). *Interpretation of educational measurements*. New York: Macmillan.
- Kelly, T. H., Robbins, G., Martin, C. A., Fillmore, M. T., Lane, S. D., Harrington, N. G., & Rush C. R. (2006). Individual differences in drug abuse vulnerability: d-amphetamine and sensation-seeking status. *Psychopharmacology*, 189(1), 17-25.
- Kendall, P. C., & Kriss, M. R. (1983). Cognitive-behavioral interventions. In: C. E. Walker (Ed.). *Handbook of clinical psychology: theory, research and practice*, 770-819. Homewood, IL: Dow Jones-Irwin.
- Kendler, K. S., Karkowski, L. M., Neale, M. C., & Prescott, C. A. (2000). Illicit psychoactive substance use: Heavy use, abuse, and dependence in a US population-based sample of male twins. *Archives of General Psychiatry*, 57, 261-269.
- Keyes, C. L. (2007). Promoting and protecting mental health as flourishing: A complementary strategy for improving national mental health. *American Psychologist*, 62(2), 95-108.
- Khan, J. 2015. Commonly used drugs in South Africa Part 7: Mandrax – (buttons). Lenasia rising sun. retrieved from: <https://risingsunlenasia.co.za/.../commonly-used-drugs-in-south-africa-part-7-mandrax> (Accessed on: 21 July 2017).
- Kilpatrick, D. G., Acierno, R., Saunders, B., Resnick, H. S., Best, C. L., & Schnurr, P. P. (2002). Risk factors for adolescent substance abuse and dependence data from a national sample. *Journal of Consulting and Clinical Psychology*, 68(1), 19-30.
- Kirby, K. N. (1997). Bidding on the future: Evidence against normative discounting of delayed rewards. *Journal of Experimental Psychology: General*, 126(1), 54-70. <http://dx.doi.org/10.1037/0096-3445.126.1.54>
- Knesting, K. (2008). Students at risk for school dropout: Supporting their persistence. *Preventing School Failure: Alternative Education for Children and Youth*, 52(4), 3-10.
- Knesting-Lund, K., O'Rourke, B., & Gabriele, A. (2015). Teachers' efficacy for supporting at-risk students and their perceived role in dropout prevention. *Journal of Studies in Education*, 5(2), 187-198.
- Koh, E., T. & Owen, W., .L. (2000) Descriptive Research and Qualitative Research. In: Introduction to Nutrition and Health Research. Springer, Boston,

- Koob, G. F., & Simon, E. J. (2009). Neurobiology of addiction: Where we have been and where we are going. *Journal of Drug Issues*, 39(1), 115-132.
- Krentzman, A. (2013). Review of the application of positive psychology to substance use, addiction and recovery research. *Psychology of Addictive Behaviours*, 27(1), 151-165. Retrieved from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3531570/> (accessed on 1 August 2016).
- Kroger, J. (2015). Identity development through adulthood: The move toward “wholeness”. In: *Oxford handbook of identity development*. (Ed) K. C. McLean & M. Syed: Oxford University Press. Retrieved from: <http://www.oxfordhandbooks.com/view/10.1093/oxfordhb/9780199936564.001.0001/oxfordhb-9780199936564-e-004> (accessed on 26 September 2017).
- Laerd Statistics. (2013). Descriptive and inferential statistics. Retrieved from: <https://statistics.laerd.com/statistical-guides/descriptive-inferential-statistics.php> (Accessed on 23 October 2017).
- Lani, J. (2018). Using logistic regression in research. Retrieved from: <http://www.statisticssolutions.com/using-logistic-regression-in-research/> (accessed on 25 October 2017).
- Large, M., Sharma, S., Compton, MT., Slade, T & Nielssen, O. 2011. Cannabis use and early onset of psychosis : a systematic meta-analysis. *Arch gen psychiatry*, 68(6):555-61.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer.
- Ledoux, S., Miller, P., Choquet, M., & Plant, M. (2002). Family structure, parent-child relationships, and alcohol and other drug use among teenagers in France and the United Kingdom. *Alcohol & Alcoholism*, 37(1), 52-60.
- Leshner, A. I. (2001). Addiction is a brain disease. Addiction Recovery Guide Website. Retrieved from: www.addictionrecoveryguide.org/articles/article151.html (accessed on 28 July 2017).
- Liberante, L. (2012). The importance of teacher-student relationships, as explored through the lens of the NSW Quality Teaching Model. *Journal of Student Engagement: Education Matters*. 2(1), 2-9.
- Lichtenberg, J. D. (2013). *Psychoanalysis and motivation*. London: Routledge.
- Lindesmith, A. R. (2008). *Addiction and opiates*. London and New York: Taylor & Francis group, 205-217.

- Liu, R. T., Vassileva, J., Gonzalez, R., & Martin, E. M. (2012). A comparison of delay discounting among substance users with and without suicide attempt history. *Psychology of Addictive Behaviors*, 26(4), 980-985. <http://dx.doi.org/10.1037/a0027384>
- Logan, R. (2000). Crime statistics in Canada. Justice Statistics Canada. Canadian Center for
- Loke, A.Y., & Mak, Y-W. (2013)5. Family process and peer influences on substance use by adolescents. *International Journal of Environmental Research and Public Health*, 10, 3 868-3 885. Retrieved from: <http://www.mdpi.com/journal/ijerph> (accessed on 3 August 2016).
- Louw, D. A. (1998). *Human development* (2nd ed.). South Africa: Kagiso Tertiary.
- Lynn, K. 2017. Supporting Recovery Without Enabling. Operation clean recovery. Retrieved from: <http://operationcleanrecovery.com/2018/02/12/supporting-recovery-without-enabling/> (accessed on 20 October 2017)
- MacGill, M. (2017). Oxytocin: The love hormone? Retrieved from: <https://www.medicalnewstoday.com/articles/275795.php> (accessed on 13 July 2017).
- Macleod, J., Oakes, R., Copello, A., Crome, I., Egger, M., Hickman, M., Oppenkowski, T., Stokes-Lampard, H., & Davey Smith, G. (2004b). Psychological and social sequelae of cannabis and other illicit drug use by young people: A systematic review of longitudinal, general population studies. *Lancet*, 363, 1579–1588.
- Macleod, J., Oakes, R., Oppenkowski, T., Stokes-Lampard, H., Copello, A., Crome, I., Smith, G. D., Egger, M., Hickman, M., & Judd, A. (2004a). How strong is the evidence that illicit drug use by young people is an important cause of psychological or social harm? Methodological and policy implications of a systematic review of longitudinal, general population studies. *Drugs: Education Prevention & Policy*, 11, 281–297.
- Madden, P.A., Bucholz, K.K., Dinwiddie, S.H., Slutske, W.S., Bierut, L.J., Statham, D.J., Dunne, M.P., Martin, N.G., Heath, A.C. Nicotine withdrawal in women. *Addiction* ;92(7):889-902.
- Magon, N., & Kalra, S. (2011). The orgasmic history of oxytocin: Love, lust, and labor. *Indian Journal of Endocrinology and Metabolism*, 15(3), S156–S161. Retrieved from: <http://doi.org/10.4103/2230-8210.84851>
- Maithya, R. W. (2009). Drug abuse in secondary schools in Kenya: Developing a programme for prevention and intervention. Doctor of Education in socio-Education, University of South Africa

- Maltzman, I., & Schweiger, A. (1991). Individual and family characteristics of middle class adolescents hospitalized for alcohol and other drug abuse. *British Journal of Addiction*, 86(11), 1 435-47.
- Malunda, H., & Mpinganjira, M. (2009). Jhango: social and development studies book 4. Blantyre: Jhango Publishing.
- Manheim, J. B., Rich, R. C., Willnat, L. B., & Craig, L. (2007). Quantitative analysis lab manual for empirical political analysis: Quantitative and qualitative research methods. Longman.
- Marcia, J. E. (1966). Development and validation of ego-identity status. *Journal of Personality and Social Psychology*, 3(5), 551.
- Marcia, J. E. (1980). Identity in adolescence. In: Archer, S., L & Waterman, A., S. *Handbook of Adolescent Psychology*, 9(11), 159-187.
- Marimuthu, B. A. (2014). Quantitative analysis of juvenile delinquency trends among school going adolescents in a select sample of secondary schools in Chatsworth, Durban. Unpublished dissertation, MSocSci (Criminology), University of KwaZulu-Natal, Durban. Retrieved from: https://researchspace.ukzn.ac.za/bitstream/handle/10413/11128/Marimuthu_Bonita_Adele_%20_2014.pdf?sequence=1&isAllowed=y (accessed on 27 July 2016).
- Mark, J. J. (2017). Beer in Ancient Egypt. *Ancient history encyclopedia*. Retrieved from: <https://www.ancient.eu/article/1033/> (accessed on 28 September 2017).
- Marshall, C. & Rossman, G., B. (1999) Designing qualitative research. 3rd ed. London: Sage Publications.
- Martínez, R., Rosenfeld, R., & Mares, D. (2008). Social disorganization, drug market activity, and neighborhood violent crime. *Urban Affairs Review*, 43(6), 846–874. (Thousand Oaks, Calif.). Retrieved from: <http://doi.org/10.1177/1078087408314774>
- Mathews, A. (2013). Projection and identity: How much of who you think you are is really just incorporated projection? *Psychology Today*. Retrieved from: <https://www.psychologytoday.com/blog/traversing-the-inner-terrain/201304/projection-and-identity> (accessed on 28 February 2017).
- Mbhele, K. (2017). Nyaope “bluetooth” trend disturbing. Retrieved from: <http://www.politicsweb.co.za/politics/nyaope-bluetooth-trend-disturbing--zakhele-mbhele> (accessed on 6 August 2017).
- McBride, D., C, VanderWaal, ., J & Terry-McElrath, Y., M. (2006). The Illicit substances-Crime Wars: Past, Present and Future Directions in Theory, Policy and Program Interventions. SAGE Publications. Retrieved from:

- <http://journals.sagepub.com/doi/pdf/10.1177/1748895806060670> (accessed on 28 May 2017)
- McHugh, M. L., & Hudson-Barr, D. (2003). Descriptive statistics, part II: Most commonly used descriptive statistics. *Journal for Specialists in Pediatric Nursing*, 8(3), 111-116.
- McLean, K. C., & Syed, M. (2014). *Oxford handbook of identity development*. Oxford: Oxford University Press.
- McLeod, S. A. (2009). Emotion focused coping. Retrieved from: www.simplypsychology.org/stress-management.html#em (accessed on 28 June 2017).
- McLeod, S. A. (2013a). What is validity? Retrieved from: www.simplypsychology.org/validity.html (accessed on 07 October 2016).
- McLeod, S. A. (2013b). Erik Erikson. Retrieved from: www.simplypsychology.org/Erik-Erikson.html (accessed on 2 June 2016).
- McLeod, S. A. (2015). Cognitive behavioral therapy. Retrieved from: www.simplypsychology.org/cognitive-therapy.html (accessed on 23 October 2017).
- McPherson, G. (2001). *Applying and interpreting statistics: A comprehensive guide* (2nd ed.). New York: Springer-Verlag.
- Meier, A., & Allen, G. (2008). Intimate Relationship Development during the Transition to Adulthood: Differences by Social Class. *New Directions for Child and Adolescent Development*, (119), 25–39. Advance online publication. retrieved from: <http://doi.org/10.1002/cd.207>
- Meintjies, D. (2001). South Africa: Lack of Recreational Facilities Causes Youth to Turn to Drink, Illicit substances And Sex. AllAfrica. Retrieved from: <http://allafrica.com/stories/200108240117.html> (accessed on 18 August 2017)
- Melchior, M., Chastang, J-F., Goldberg, P., & Fombonne, E. (2008). High prevalence rates of tobacco, alcohol and drug use in adolescents and young adults in France: Results from the GAZEL Youth study. *Addictive Behaviours*, 33(1), 122-133.
- Merrer, J. L., Becker, J. A. J., Befort, K., & Kieffer, B. L. (2009). Reward processing by the opioid system in the brain. *Physiological Reviews*, 89(4), 1 379-412. <http://doi.org/10.1152/physrev.00005.2009> (accessed on 13 August 2016).
- Metcalf, B. 2012. Effectiveness of intervention on physical activity of children: systematic review and meta-analysis of controlled trials with objectively measured outcomes. *BMJ*: 345:e5888. Reterievvd from: <https://www.bmj.com/content/345/bmj.e5888> (accessed om: 14 July 2017)

- Miller, J., & Palacios, W. R. (2015). *Advances in criminological theory*. London: Transaction Publishers.
- Miller, W. R. (1994). Personal drug use questionnaire. EMCDDA. Retrieved from: <http://www.emcdda.europa.eu/html.cfm/index4173EN.html> (accessed on 2 February 2017).
- Ministerial Council on Drug Strategy (Australia), 2006. National alcohol strategy 2006 -2009. Retrieved from: [http://www.alcohol.gov.au/internet/alcohol/publishing.nsf/Content/B83AD1F91AA632ADCA25718E0081F1C3/\\$File/nas-06-09.pdf](http://www.alcohol.gov.au/internet/alcohol/publishing.nsf/Content/B83AD1F91AA632ADCA25718E0081F1C3/$File/nas-06-09.pdf) (accessed on: 13 September 2017)
- Ministerial Council on Drug Strategy, 2010-2015. National Drug Strategy: A framework for action on alcohol, tobacco and other drugs. Retrieved from: [http://www.nationaldrugstrategy.gov.au/internet/drugstrategy/publishing.nsf/Content/DB4076D49F13309FCA257854007BAF30/\\$File/nds2015.pdf](http://www.nationaldrugstrategy.gov.au/internet/drugstrategy/publishing.nsf/Content/DB4076D49F13309FCA257854007BAF30/$File/nds2015.pdf) (accessed on: 15 August 2017)
- Mkhize, N. (2017). Bluetooth drug cause concern. *News24*. Retrieved from: <https://www.news24.com/SouthAfrica/Local/Hillcrest-Fever/bluetooth-drug-cause-concern-20170228> (accessed on 8 October 2017).
- Mokoena, T. L. (2002). Social factors influencing adolescent drug abuse: A study of inpatient adolescent at Magaliesoord Centre. Unpublished MA dissertation (Social Work), University of Pretoria, Pretoria. Retrieved from: <http://repository.up.ac.za/bitstream/handle/2263/29845/Complete.pdf?sequence=4> (accessed on 16 March 2016).
- Muijs, D. (2011). *Doing Quantitative Research in Education with SPSS* (2nd ed.). London: SAGE.
- Naidoo, V. (2017). Land invasion threat in Crossmoor. *Chatsworth Rising Sun*. retrieved from : <https://risingsunchatsworth.co.za/84016/land-invasion-threat-crossmoor/> (accessed on 18 June 2017)
- Narcotics Control Board. 2003. Report of the International Narcotics Control Board for 2003: Drugs, Crime and Violence- the Micro level Impact. Retrieved from: <http://www.hr-dp.org/contents/761> (accessed on: 18 August 2017)
- National Institute for Health and Clinical Excellence. 2009. Cognitive restructuring workbook. Retrieved from: <https://www.talkplus.org.uk/downloads/Cognitive%20Restructuring.pdf> (accessed on 26 September 2017).
- National Institute of Drug Abuse (NIDA). (2008, 2010, 2014). Illicit substances, brain and behaviour: The science of addiction. NIH Pub No. 14-5605.

- National Institute of Drug Abuse (NIDA). (2015). Drug facts: Substance use in women. Retrieved from: www.drugabuse.gov (accessed on 29 July 2017).
- National Institute of Drug Abuse (NIDA). (2016) Substance use in women. Institute on drug abuse. Retrieved from: <https://www.drugabuse.gov/publications/drugfacts/substance-use-in-women> (accessed on 23 March 2017)
- National Institute of Drug Abuse (NIDA). (2016, 2018). Commonly abused illicit substances charts. Retrieved from: https://www.drugabuse.gov/illicit_substances-abuse/commonly-abused-illicit_substances-charts (accessed on 5 April 2017).
- National Institute of Drug Abuse (NIDA). (2017) Women and Illicit substances. Institute on drug abuse. Retrieved from: <https://www.drugabuse.gov/publications/drugfacts/substance-use-in-women> (accessed on 02 September 2017)
- Neser, J. J. (2006). Peer victimization in public schools: An exploration of the psychosocial attributes of victims. *Acta Criminologica: Southern African Journal of Criminology*, 19(2), 191-141.
- Neurogistics (2016). What are Neurotransmitters? Retrieved from: <https://www.neurogistics.com/TheScience/WhatareNeurotransmi09CE.asp> (accessed 14 August 2016).
- Newcomb, M. D., Maddahian, E., & Bentler, P. M. (1986). Risk factors for drug use among adolescents: Concurrent and longitudinal analyses. *American Journal of Public Health*, 76(5), 525-531.
- Nhleko, N. (2016). Building a united front to help and protect communities. Retrieved from: <https://www.saps.gov.za/newsroom/msspeechdetail.php?nid=7929> (accessed on 28 September 2017).
- Nyswander, M (1957). "How To Help The Addict", Contemporary ' Psychology, Vol. 2. Spring.
- Oetting, E. R., Edwards, R. W., Kelly, K., & Beauvais, F. (1995). Risk and protective factors for drug use among rural American youth. In *NIDA technical review: Rural substance abuse: State of knowledge and issues*. Rockville.
- Office of National Drug Control Policy, 2004. United States Government Manual (2004-2005) Edition. Retrieved from: <https://www.gpo.gov/fdsys/pkg/GOVMAN-2004-06-01/pdf/GOVMAN-2004-06-01-Pg96.pdf> (accessed on: 05 June 2017)
- O'Hara, C. 2012. Examining Addiction in each of Erik Erikson's Stages of Psychosocial Development. Retrieved from : <https://prezi.com/q48kei0imc78/addiction-across-the-lifespan-a-view-from-erik-eriksons-perspective/> (accessed on: 16 October 2017)

- Oswalt, A. 2010. James Marcia and self-identity. Retrieved from: <https://www.mentalhelp.net/articles/james-marcia-and-self-identity/> (accessed on 05 July 2017).
- Pappas, S. (2015). Oxytocin: Facts about the 'cuddle hormone'. Retrieved from: <https://www.livescience.com/42198-what-is-oxytocin.html> (accessed on 13 July 2017).
- Peltzer K, Ramlagan S, Johnson BD, Phaswana-Mafuya N. Illicit Drug Use and Treatment in South Africa: a review. *Substance use & misuse*. 2010;45(13):2221-2243. doi:10.3109/10826084.2010.481594.
- Pentz, M. A., Dwyer, J. H., MacKinnon, D. P., Flay, B. R., Hansen, W. B., Wang, E. Y. I., & Johnson, C.A. (2009). A multi-community trial for primary prevention of adolescent drug abuse: Effects on drug use prevalence. *Journal of the American Medical Association*, 261(22), 3 259-66.
- Peper, A. (2009). Aspects of the Relationship Between Drug Dose and Drug Effect. *Dose-Response*, 7(2), 172–192. <http://doi.org/10.2203/dose-response.08-019>.
- Pérez-Vicente, S., & Expósito Ruiz, M. (2009). Descriptive statistics. *Allergologia et Immunopathologia*, 37(6), 314-20. doi:10.1016/j.aller.2009.10.005
- Pergamit, M. R., Huang, L., & Lane, J. (2001). *The long term impact of adolescent risky behaviors and family environment*. Washington DC: Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation. Retrieved from: <http://aspe.hhs.gov/hsp/riskybehav01> (accessed on 30 June 2016).
- Pillay, K. (1990). Investigation into drug use amongst pupils in selected Indian high schools in the Durban municipal area. *Acta Criminologica*, 6(1), 76-80.
- Pinch, G. 2004. *Egyptian Mythology: A Guide to the gods, Goddesses, and Traditions of Ancient Egypt*. (Oxford University Press).
- Plüddemann, A., Flischer, A., McKetin, R., Parry, C., & Lombard, C. (2010). Prospective study of methamphetamine use as a predictor of high school non-attendance in Cape Town, South Africa. *Substance Abuse Treatment, Prevention & Policy*, 5(1), 5-25.
- Popper, K. (1959). *Logic of scientific discovery*. London: Routledge, Taylor & Francis,
- Potter, R. (2015). What is the definition emotional stress? Retrieved from: <https://www.quora.com/What-is-the-definition-emotional-stress> (accessed on: 29 November 2017)

- Powell, A. (2017). South African court OKs marijuana for home use. Retrieved from: <https://www.voanews.com/a/south-africa-marijuana-cannabis/3794445.html> (accessed on 22 July 2017).
- Powell, M., A. (2011). A Comprehensive Analysis of the Drug-Crime Relationship. Research Papers. Paper 100. Retrieved from: http://opensiuc.lib.siu.edu/gs_rp/100 (accessed on 12 October 2017)
- Pratt, C., W., Gill, K., J., Barrett, N., M & Roberts, M., M. (2014). The Role of the Family in Psychiatric Rehabilitation. Psychiatric Rehabilitation (Third Edition). Science direct. Retrieved from: <https://doi.org/10.1016/B978-0-12-387002-5.00014-7> (accessed on 30 March 2017)
- Pretorius, C., Van den Berg, H. S., & Louw, D. A. (2003). Psychosocial predictors of substance abuse among adolescents. *Acta Criminologica*, 16(4), 1-11.
- Pretorius, C., Van den Berg, H.S. and Louw, D.A. (2003). "Psychosocial predictors of substance abuse among adolescents" *Acta Criminologica* 16(4):1-11.
- Promises. 2014. Drug and Alcohol Detox. Retrieved from: <https://www.promises.com/treatment-programs/detox/> (accessed on: 12 October 2017)
- Quello, S. B., Brady, K. T., & Sonne, S. C. (2005). Mood disorders and substance use disorder: A complex comorbidity. *Science & Practice Perspectives*, 3(1), 13-21.
- Quinsey, V. L., Skilling, T. A., Lalumiere, M. L., & Craig, W. M. (2004). *Juvenile delinquency: Understanding the origins of individual differences*. SL: American Psychological Association.
- Rahim, M., & Patton, R. (2015). Association between shame and substance use in young people: A systematic review. *Peer Journal*, 3, e737. Retrieved from: <http://doi.org/10.7717/peerj.737> (accessed on 26 November 2018).
- Ramlagan, S., Peltzer, K., & Matseke, G. (2010). Epidemiology of drug abuse treatment in South Africa. *South African Journal of Psychiatry*, 16(2), 40-49.
- Ratini, M. (2017). Opioid (narcotic) pain medications. WebMD LLC. Retrieved from: <https://www.webmd.com/pain-management/guide/narcotic-pain-medications> (accessed on 22 October 2017).
- Resnik, D. (2000). Statistics, ethics, and research: An agenda for educations and reform. *Accountability in Research*, 8, 163-88.

- Rhule-Louie, D. M., & McMahon, R. J. (2007). Problem behavior and romantic relationships: Assortative mating, behavior contagion, and desistance. *Clinical Child and Family Psychology Review*, 10, 53-100.
- Roberts, A. J., & Koob, G. F. (1997). The neurobiology of addiction: An overview. *Alcohol Health & Research World*, 21(2), 101-106.
- Robinson, L., Smith, M., Saisan, J., & Shubin, J. (2017). Drug abuse and addiction. Recognizing the signs and symptoms of drug addiction. Retrieved from: <https://www.helpguide.org/articles/addictions/drug-abuse-and-addiction.htm> (accessed on 24 August 2017).
- Robles, E., Huang, E. B., & McMillan, D. E. (2011). Delay discounting, impulsiveness, and addiction severity in opioid dependent patients. *Journal of substance abuse treatment*; 41(4):354-362.
- Rocha-Silva, L., & Stahmer, I. (1996). *Nature, extent and development of alcohol/drug related crime*. Pretoria: Human Sciences Research Council.
- SAHO, 2013. Chatsworth: The origin of Chatsworth. Retrieved from: <https://www.sahistory.org.za/place/chatsworth> (accessed on: 16 September 2017)
- Salatore, C., & Taniguchi, T. A. (2012). Do social bonds matter for emerging adults? *Deviant Behaviour*, 33(9), 738-756.
- Samaolo, M., & Chopra, S. (2017). Defense mechanism: Human psychology. *Encyclopedia Britannica*. Retrieved from: <https://www.britannica.com/topic/defensemechanism#ref195659> (accessed on 03 April 2017).
- Sampson, R. J., & Groves, W. B. (1989). Community structure and crime: Testing the social disorganization theory. *American Sociological Review*, 94(4), 774-802.
- Sampson, R. J., Raudenbush, S. W., & Earls, F. (1997). Neighborhoods and violent crime: A multilevel study of collective efficacy. *Science*, 277(5 328), 918-24.
- Sampson, R., J. & Groves, W., B. (1989). Community structure and crime: Testing social disorganization theory (image). *American journal of sociology*, 94(4):783.
- Samson, A. (2014). Introduction to behavioral economics. Retrieved from: <https://www.behavioraleconomics.com/introduction-behavioral-economics/> (accessed on 28 March 2017).
- Schildhaus, S., Shaw-Taylor, Y., Pedlow, S., & Pergamit, M. R. (2005). Predicting heavy drug use: Results of a longitudinal study, youth characteristics describing and predicting heavy

- drug use by adults. Washington, DC: Executive Office of the President/Office of National Drug Control Policy. (Publication No. NCJ 208382). Retrieved from: <http://www.whitehousedrugpolicy.gov> (accessed on 30 March 2016).
- Schlein, S. (2016). The clinical Erik Erikson: A psychoanalytic method of engagement and activation. London: Routledge, 10-80.
- Scott, S., Doolan, M., Beckett, C., Harry, S., & Cartwright, S. (2010). How is [sic] parenting styles related to child antisocial behavior? Preliminary findings from the Helping Children Achieve study. *Research Report*. London: UK Department of Education.
- Sekaran, U. (1992). *Research methods for business: A skill-building approach* (2nd ed.). New York: John Wiley and Sons.
- Shakya, D. R. 2009. Empty Nest Syndrome - An Obstacle for Alcohol Abstinence. *Journal of Nepal Health Research Council*, 7(2): 15. Retrieved from: www.jnhrc.com.np/index.php/jnhrc/article/view/209/207 (accessed on: 24 October 2017)
- Shamoo, A. E. (1989). *Principles of research data audit*. New York: Gordon and Breach.
- Shamoo, A. E., & Resnik, B. R. (2003). *Responsible conduct of research*. Oxford: Oxford University Press.
- Shaw, C. R., & McKay, H. D. (1942). *Juvenile delinquency and urban areas*. Chicago: University of Chicago Press.
- Shaw, C. R., & McKay, H. D. (1969). *Juvenile delinquency in urban areas*. Chicago: Chicago University Press.
- Shinebourne, P., & Smith, J. A. (2009). Alcohol and the self: An interpretative phenomenological analysis of the experience of addiction and its impact on the sense of self and identity. *Addiction Research and Theory*, 17, 152-67.
- Shoemaker, D. J. (1990). *Theories of delinquency. An examination of explanations delinquent bahavior* (2nd ed.). New York: Oxford University Press.
- Shoham, S. G., Knepper, P., & Kett, M. (2010). *International handbook of victimology*. London: CRC Press, Taylor & Francis Group.
- Shultz, D. P., & Shultz, S. E. (2005). *Theories of personality* (8th ed.). USA: Thomson Learning.
- Shuttleworth, M. (2008). Descriptive research design. Retrieved from: Explorable.com: <https://explorable.com/descriptive-research-design> (accessed on 06 November 2017).

- Simons-Morton, B., & Farhat, T. (2010). Recent findings on peer group influences on adolescent substance use. *Journal of Primary Prevention*, 31(4), 191-208. Retrieved from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3313483/> (accessed on 10 June 2016).
- Singh, A. (2013). Substance abuse among Indian youth in Durban: Their rehabilitation through extended family intervention and support. *Journal of Social Science*, 34(3), 201-209.
- Singh, K. (2007). *Quantitative social research methods*. Los Angeles, CA: SAGE.
- Sinha R. (2001). How does stress increase risk of drug abuse and relapse? *Psychopharmacology* (Berl.), 158(4), 343-59.
- Sinha, J. W., Cnaan, R. A., & Gelles, R. W. (2007). Adolescent risk behaviors and religion: Findings from a national study. University of Pennsylvania. Retrieved from: http://repository.upenn.edu/spp_papers/54 (accessed on 04 March 2017).
- Sinha, R. (2008). Chronic stress, drug use, and vulnerability to addiction. *Annals of the New York Academy of Sciences*, 1141, 105-130. Retrieved from: <http://doi.org/10.1196/annals.1441.030> (accessed on 28 August 2017).
- Skinner, H. A. (1982). Drug abuse screening test (DAST-20). Retrieved from: <http://www.emcdda.europa.eu/html.cfm/index3618EN.html> (accessed on 2 February 2017).
- Skinner, H. A., Holt, S., & Israel, Y. (1981). Early identification of alcohol abuse: Critical issues and psychosocial indicators for a composite index. *CMA Journal*, 124, 1 141-52.
- Smart, R. G., & Fejer, D. (1972). Drug use among adolescents and their parents: Closing the generation gap in mood modification. *Journal of Abnormal Psychology*, 79, 153-60.
- Soulcity, 2016. A review of Literature on Drug and Substance Abuse amongst Youth and Young Women in South Africa. Reterievvd from: <https://www.soulcity.org.za/research/literature-reviews/soul-city-institute-drug-abuse-youth-south-africa.pdf> (accessed on: 19 August 2017)
- South African Community Epidemiology Network on Drug Use, 2017. Monitoring Alcohol, Tobacco and Other Drug Abuse Treatment Admissions in South Africa. Retrieved from: <http://www.mrc.ac.za/sites/default/files/attachments/2017-05-22/SACENDUPhase40.pdf> (accessed on: 18 Agust 2017)
- Spanagel, R. (2011). Why do we take illicit substances? From the drug-reinforcement theory to a novel concept of drug instrumentalization. *The behavioural and brain sciences*, 34(6):322. doi: 10.1017/S0140525X11000847.

- Spear, L. P. (2002). Adolescent brain and age related behavioral manifestations. *Neuroscience and Biobehavioral Review*, 24(4), 417-63. Retrieved from: <https://www.ncbi.nlm.nih.gov/pubmed/10817843> (accessed on 28 June 2016).
- Spencer, B. 2015. Empty nest mums are Britain's worst problem drinkers: Two fifths admit consuming more than their grown-up children. Retrieved from: <http://www.dailymail.co.uk/news/article-3338828/Empty-nest-mums-Britain-s-worst-problem-drinkers-Two-fifths-admit-consuming-grown-children.html> (accessed on: 19 September 2017)
- Sperandei, S. (2014). Understanding logistic regression analysis. *Biochemia Medica*, 24(1), 12–18. Retrieved from: <http://doi.org/10.11613/BM.2014.003> (accessed on 24 November 2017)
- Spriestersbach, A., Röhrig, B., du Prel, J.-B., Gerhold-Ay, A., & Blettner, M. (2009). Descriptive statistics: The specification of statistical measures and their presentation in tables and graphs. Part 7 of a Series on Evaluation of Scientific Publications. *Deutsches Ärzteblatt International*, 106(36), 578-583. Retrieved form: <http://doi.org/10.3238/arztebl.2009.0578>
- Spriestersbach, A., Röhrig, J., Du Prel, A.B, Gerhold-Ay, A. & Blettner, M .2009. Descriptive statistics: the specification of statistical measures and their presentation in tables and graphs. Part 7 of a series on evaluation of scientific publications. *Dtsch Arztebl international*, 106(36):578-83.
- Squeglia, L. M., Jacobus, J., & Tapert, S. F. (2009). Influence of substance use on adolescent brain development. *Clinical EEG and Neuroscience*, 40(1), 31-38.
- Squeglia, L. M., Pulido, C., Wetherill, R. R., Jacobus, J., Brown, G. G., & Tapert, S. F. (2012). Brain Response to Working Memory Over Three Years of Adolescence: Influence of Initiating Heavy Drinking. *Journal of Studies on Alcohol and Illicit substances*, 73(5), 749–760.
- Steinberg, L., & Monahan, K. C. (2007). Age Differences in Resistance to Peer Influence. *Developmental Psychology*, 43(6), 1531–1543. Retrieved from: <http://doi.org/10.1037/0012-1649.43.6.1531> (accessed on 12 February 2017)
- Stenner, P. & Taylor, D. 2008. Psychosocial welfare: reflections on an emerging field. *Critical Social Policy*, 28(4) pp. 415–437.
- Stevenson, A. (2010). *Oxford dictionary*. Illicit definition. Retrieved from: <https://en.oxforddictionaries.com/definition/illicit> (accessed on 6 April 2017).
- Stewart, S. H. (1996). Alcohol abuse in individuals exposed to trauma: A critical review. *Psychological Bulletin*, 120(1), 83-112.

- Strudwick, H. (2006). *Encyclopedia of Ancient Egypt*. London: Amber Books.
- Strydom, H. (2005). Sampling and sampling methods. In: A. S. De Vos, H. Strydom, C. B. Fouché, & C. S. L. Delport (Eds.). *Research at grass roots for the social sciences and human service professions*. Pretoria: Van Schaik, 192-204.
- Tarter, R. E., Vanyukov, M., Kirisci, L., Reynolds, M., & Clark, D. B. (2006). Predictors of marijuana use in adolescents before and after licit drug use: Examination of the gateway hypothesis. *American Journal of Psychiatry*, 163(12), 2 134-140.
- Taylor, R. B. (2001). Ecology of crime, fear, and delinquency: Social disorganization versus social efficacy. Los Angeles: Roxbury Press, 124-140.
- Tenant, C., & Rey, J. (2004). Psychiatric illness in young people using cannabis: Evidence update. *Modern Medicine of South Africa*, 58-59.
- The Cabin. (2016). Reasons Drug Addiction Continues to Rise. Retrieved from: <https://www.thecabinsingapore.com.sg/reasons-drug-addiction-continues-to-rise/> (accessed on: 29 October 2017)
- The Influence. (2016). These four countries prove that decriminalization works better than prohibition. Retrieved from: <http://theinfluence.org/these-four-countries-prove-that-decriminalization-works-better-than-prohibition/> (accessed on 22 July 2017).
- Tolsi, N. (2006). Durban hit by 'sugars' rush. Mail & guardian. Retrieved from: <https://mg.co.za/article/2006-04-21-durban-hit-by-sugars-rush> (accessed on 18 July 2016)
- Tononi, G. (2012). *Phi: A voyage from the brain to the soul*. New York: Knopf Doubleday Publishing Group, Pantheon.
- Trochim. W. M. K. (2006). Web cebter for social research methods. Research Methods Knowledge Base. Reteriievd from: <https://socialresearchmethods.net/kb/index.php> (accessed on 15 June 2016)
- True, W. R., Heath, A. C., Scherrer, J. F., Waterman, B., Goldberg, J., Lin, ... & Tsuang, M. (1997). Genetic and environmental contributions to smoking. *Addiction*, 92, 1 277-87.
- True, W.R., Heath, A.C., Scherrer, J.F., Waterman, B., Goldberg, J., Lin, N., Eisen, S.A., Lyons, M.J., Tsuang, M.T. 1997. Genetic and environmental contributions to smoking. *Addiction*, 92: 1277- 1287.
- Tshitangano, T. G., & Tosin, O. H. (2016). Substance use amongst secondary school students in a rural setting in South Africa: Prevalence and possible contributing factors. *African Journal of Primary Health Care & Family Medicine*, 8(2), 1-6.

- Tuchman, E. (2010). Women and addiction: The importance of gender issues in substance abuse research. *Journal of Addictive Disease*, 29, 127-38.
- Tyas, S. L., & Pederson, L. L. (1998). Psychosocial factors related to adolescent smoking: A critical review of the literature. *Tabaco Control*, 7, 409-20.
- Umra, A. (2017). Secondary school learners' perspectives on illicit substances. *Acta Criminologica: Southern African Journal of Criminology*, 30(1), 96-114.
- United Nations Office on Illicit substances and Crime (UNODC) (2016). *World drug report*. Retrieved from: http://www.unodc.org/doc/wdr2016/WORLD_DRUG_REPORT_2016_web.pdf (accessed on: 4 March 2017)
- United Nations Office on Illicit substances and Crime (UNODC). (2003). *Conducting school surveys on drug abuse*. Global Assessment Programme on Drug Abuse, Toolkit Module 3. Vienna: United Nations Office on Illicit substances and Crime. Retrieved from: <https://www.unodc.org/documents/GAP/GAP%20Toolkit%20Module%203%20ENGLISH.pdf> (accessed on 02 March 2016).
- Upton, J. (2013). *Psychosocial factors: Encyclopedia of behavioral medicine*. New York: Springer, 1 580-81.
- Vahed, G. 2012. Chatsworth. The Making of a South African township. Retrieved from: https://www.academia.edu/10218835/Chatsworth._The_Making_of_a_South_African_township (accessed on: 11 September 2017)
- Van den Berg, H. S. & Pretorius, C. Psychosocial predictors of substance abuse among adolescents. 9th Psychological Society of SA conference, held at Caesar's Palace, Johannesburg, 23-26 September 2003
- Van den Bree, M. B. M., Johnson, E. O., Neale, M. C., & Pickens, R. W. (1998). Genetic and environmental influences on drug use and abuse/dependence in male and female twins. *Drug & Alcohol Dependence*, 52(3), 231-41.
- Van Heerden, M. S., Grimsrud, A. T., Seedat, S., Myer, L., Williams, D. R., & Stein, D. J. (2009). Patterns of substance use in South Africa: Results from the South African Stress and Health study. *South African Medical Journal*, 99(5), 358-66.
- Van Schalkwyk, I., & Wissing, M. (2010). Psychosocial wellbeing in a group of South African adolescents. *Journal of Psychology in Africa*, 20(1), 53-60.
- Vetter, H. J., & Silverman, I. J. (1986). *Criminology and crime: An introduction*. New York: Harper & Row.

- Veysey, B. M., & Messner, S. F. (1999). Future testing of social disorganization theory: An elaboration of Sampson and Groves' community structure and crime. *Journal of Research in Crime and Delinquency*, 36, 156-74.
- Villalobos, G., Vargas, A., Rondon, M., & Felknor, S. A. (2013). Design of psychosocial factors questionnaires: A systematic measurement of approach. *Am J Ind Med*, 56(1), 100-110.
- Volkow, N. D. (2010). Comorbidity: Addiction and other mental illnesses. Retrieved from: <https://www.drugabuse.gov/publications/research-reports/comorbidity-addiction-other-mental-illnesses/letter-director> (accessed on 24 August 2017).
- Waddell, N. D. (2012). Childhood factors affecting aggressive behavior. Unpublished MA dissertation, (Criminal Justice & Criminology), East Tennessee State University, Johnson City, Tennessee. Retrieved from: <http://dc.etsu.edu/cgi/viewcontent.cgi?article=2602&context=etd> (accessed on 30 May 2016).
- Waites, N. S., & Sprague, J. E. (2004). Pharmacology and toxicology of ecstasy. *Journal of Modern Pharmacy*, 53-55.
- Walton, K. (2012). Educators' experiences of their relationships with adolescents involved in drug use. *South African Journal of Education*, 36(3), 1-10. Retrieved from: <https://dx.doi.org/10.15700/saje> (accessed on 12 June 2016).
- Wansi, E.A. Sam-Abbenyi, R. Befidi Mengue, F.N. Enyme, F. N. Ntone, F. Ntone, Ewane, Awah & Bikoi. 1996. Rapid Assessment of Drug Abuse in Cameroon. *Bulletin on Narcotics*, 48 (1 and 2): 79 - 88.
- Weiss, R. 2016. Addictions are Learned Behaviours. Psych Central. Retrieved from <https://blogs.psychcentral.com/sex/2016/11/addictions-are-learned-behaviors/> (accessed on: 14 July 2017)
- Weiten, W. (2007). *Psychology: Themes and Variations: Themes And Variations*. Cengage Learning, Thomson wadsworth.
- White HR1, Brick J, Hansell S. 1993. A longitudinal investigation of alcohol use and aggression in adolescence. *Journal of studies on alcohol*, supplement, 11:62-77.
- White, W. L. (2007). Addiction recovery: Its definition and conceptual boundaries. *Journal of Substance Abuse Treatment*, 33, 229-41.
- Wilcox, H. C. (2004). Epidemiological evidence on the link between drug use and suicidal behaviors among adolescents. *Canadian Child and Adolescent Psychiatry Review*, 13(2), 27-30.

- Willing, C. E., Quintero, G. A., & Lillioth, E. A. (2014). Hitting the wall: Youth perspectives on boredom, trouble, and drug use dynamics in rural New Mexico. *Youth & Society*, 46(1), 3-29. Retrieved from: <http://doi.org/10.1177/0044118X11423231> (accessed on 23 October 2017).
- William, B. (2011). Substance Use: Escaping or Embracing Life? *Psychology today*. Retrieved from: <https://www.psychologytoday.com/us/blog/the-second-noble-truth/201106/substance-use-escaping-or-embracing-life> (Accessed on: 12 January 2018)
- Wilson, N., & Cadet, J. L. (2009). Comorbid mood, psychosis, and marijuana abuse disorders: a theoretical review. *Journal of Addictive Diseases*, 28(4), 309–319. Retrieved from: <http://doi.org/10.1080/10550880903182960>
- World Health Organization (WHO). (2004). Neuroscience of psychoactive substance use and dependence: Summary. *Global use of psychoactive substances and burden to health*, 1-12. Retrieved from: <https://www.greenfacts.org/en/psychoactive-illicit-substances/index.htm#1> (accessed on: 4 March 2017).
- Wright, J. (1991). Illicit substances situation in South Africa: Drug trafficking in South Africa and trends in the southern sub-region of Africa. *Illicit substances Arena*.
- Writer, S. (2017). High court legalises marijuana for private use in South Africa. Retrieved from: <https://businesstech.co.za/news/general/167611/high-court-legalises-marijuana-for-private-use-in-south-africa/> (accessed on 12 April 2017).
- Wurmser, L. (1974). Psychoanalytic considerations of the etiology of compulsive drug use. *Journal of the American Psychoanalytic Association*, 22(4), 820-43. Retrieved from: <https://doi.org/10.1177/000306517402200407> (accessed on 21 November 2017).
- Wyatt, J., & Carlo, G. (2002). What will my parents think? Relations among adolescents: Expected parental reactions, pro-social moral reasoning, and pros-social and antisocial behaviour. *Journal of Adolescence Research*, 1, 646-66.
- Zaiontz, C. (2015). Classification Table, Real Statistics Using Excel. Reteriev d from: <http://www.real-statistics.com/descriptive-statistics/roc-curve-classification-table/classification-table/> (accessed on: 25 October 2017)

APPENDIX 1



29 August 2017

Ms Umra Anira 211514243
School of Applied Human Sciences – Criminology and Forensic Studies
Howard College Campus

Dear Ms Anira

Protocol reference number: HSS/0907/017M

Project title: Analysing psycho-social risk factors of illicit drug use in a select sample in Chatsworth.

Full Approval – Full Committee Reviewed Protocol

In response to your application received 27 June 2017, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number.

PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

Dr Shenuka Singh (Chair)
Humanities & Social Sciences Research Ethics Committee

/pm

cc Supervisor: Dr N Gopal
cc Academic Leader Research: Dr Jean Steyn
cc School Administrator: Ms Ayanda Ntuli

Humanities & Social Sciences Research Ethics Committee

Dr Shenuka Singh (Chair)

Westville Campus, Govan Mbeki Building

Postal Address: Private Bag X54001, Durban 4000

Telephone: +27 (0) 31 260 3587/8350/4557 Facsimile: +27 (0) 31 260 4800 Email: ximbaga@ukzn.ac.za / ammanne@ukzn.ac.za / mohunp@ukzn.ac.za

Website: www.ukzn.ac.za



1918 - 2018



100 YEARS OF ACADEMIC EXCELLENCE

Forming Campuses

Edgewood

Howard College

Medical School

Pietermaritzburg

Westville

APPENDIX 2

ANTI – DRUG FORUM

NPO 062985

"Striving for a Drug Free Community..."

17 Trisula Avenue
Arena Park
Chatsworth
4092

P.O.Box 56391
Chatsworth
4030
Tel: 031 404 6993

CONSENT TO FACILITATE RESEARCH

I, Samasivan Pillay voluntarily agree to help facilitate this research study.

I understand that even if I agree to help now, I can withdraw at any time without any consequences of any kind.

I have had the purpose and nature of the study explained to me in writing and I have had the opportunity to ask questions about the study.

I understand that I will assist with a small part of questionnaire distribution

I understand that all data collected in this study is confidential and anonymous.

I understand that I am free to contact any of the people involved in the research to seek further clarification and information.

Names, degrees, affiliations and contact details of researchers (and academic supervisors when relevant).

Signature of gate keeper

[Signature] 27/03/2017

Signature of gate keeper Date

Signature of researcher

I believe the participant is giving informed consent to participate in this study

[Signature] 27/03/2017

Signature of researcher Date

Anti-Drug Forum

NPO 062-985
17 Trisula Avenue,
Arena Park, Chatsworth, 4092
Tel: 031 404 6993

Email: antidrugforumsa@gmail.com

APPENDIX 3

INFORMED CONSENT FORM (For parents / guardians of participants under 18)

Dear Parent / Guardian

RE: Permission for your adolescent's participation in completing a questionnaire on analyzing psycho-social at risk factors of psychoactive illicit substances in a select sample in Chatsworth

I am a Masters Research student at the University of KwaZulu-Natal. I am collecting data for my research study on *“AN ANALYSIS OF PSYCHOSOCIAL FACTORS OF PSYCHOACTIVE ILLICIT SUBSTANCE USE IN A SELECT SAMPLE IN CHATSWORTH”*. This study is being carried out under the supervision of Professor N. Gopal, lecturer in the School of Criminology and Forensic Studies at the University of KwaZulu-Natal. I assure you that any information provided by your adolescent will remain confidential and anonymous and will not cause your child any harm.

The aim of this study is to analyse the psycho-social factors of illicit psychoactive use in a select sample in Chatsworth. In addition, it aimed to add to the existing body of knowledge, specifically on drug research in Chatsworth, focusing mainly on psychological and social factors that influence and sustain drug use. Overall it hoped to provide psycho-social information that could help the Anti-drug forum (ADF) specifically in designing rehabilitation, intervention and prevention programs.

It would be greatly appreciated if you would agree to your adolescent's participation in the study. If you would not like your adolescent to participate, please return form with a written decision. Your adolescent will not be inconvenienced in any way, or put under any pressure to participate. Thank you for your consideration in this matter, and for taking the time to read this letter. If you agree please fill out the form below, cut out and send with your adolescent to return to me.

Should you require further clarification please feel at liberty to contact me Miss Anira Umra : aniraumra@gmail.com or my supervisor Professor N. Gopal on 031 2607896.

.....
I..... (Signature of Parent), on the .../...../....., hereby confirm that I understand the contents of this document and the nature of this research study, and I consent my child's participation in this research study.

Signature of student/researcher: Date:.....

Signature of supervisor: Date:

APPENDIX 4

Informed Consent participants (Below 18 and Above 18)

Dear Participant,

My name is Anira Umra, I am a Criminology and Forensic studies Masters Student (Student no. 211514243) from the school of applied human sciences at the University of KwaZulu-Natal. My contact number is: 0832999958 and email address: aniraumra@gmail.com

You are being invited to consider participating in a study that involves research on drug use and its effects on the community, titled; *“AN ANALYSIS OF PSYCHOSOCIAL FACTORS OF PSYCHOACTIVE ILLICIT SUBSTANCE USE IN A SELECT SAMPLE IN CHATSWORTH”*. The focus of this study will be the analysis of psychological and social predictors factors related to illicit psychoactive substance use. It will focus on both the individual and the community. The study is expected to enroll 60 participants from various sites in Chatsworth. Your participation will involve completing a simply phrased 46 question, multiple choice questionnaire, which will not take a lot of time to complete. The duration of your participation if you choose to participate in this study is just the amount of time you take to complete the questionnaire.

We hope that the study will create the following benefits; to make the above findings available to the community in order to better address issues of illicit substances and related criminal activities, therefore it is aimed at creating a better community instead of an individual gain

Please note that:

- The information that you provide will be used for scholarly research only.
- Your participation is entirely voluntary. You have a choice to participate, not to participate or stop participating in the research. You will not be penalized for taking such an action.
- Your views will be presented anonymously. Neither your name nor identity will be disclosed in any form in the study.
- The questionnaire will take about 30mins.
- The questionnaires will be held in a password-protected file accessible only to me and my supervisor. After a period of 5 years, in line with the rules of the university, it will be disposed by shredding and burning.

If you agree to participate please sign the declaration attached to this statement (a separate sheet will be provided for signatures)

I can be contacted at: School of applied human sciences, University of KwaZulu-Natal, Howard College Campus, Durban. Email: aniraumra@gmail.com

Cell: 0832999958

My supervisor is Professor. N. Gopal. who is located at the School of applied human sciences Social Sciences, Howard College Campus, Durban of the University of KwaZulu-Natal. Contact details: email: Gopal@ukzn.ac.za

Phone number: 0837922957

The Humanities and Social Sciences Research Ethics Committee contact details are as follows:

Research Office, Westville Campus
Govan Mbeki Building
Private Bag X 54001
Durban
4000
KwaZulu-Natal, SOUTH AFRICA
Tel: 27 31 2604557 - Fax: 27 31 2604609
Email: HSSREC@ukzn.ac.za

.....

DECLARATION

I..... (*full names of participant*) hereby confirm that I understand the contents of this document and the nature of the research titled : “AN ANALYSIS OF PSYCHOSOCIAL FACTORS OF PSYCHOACTIVE ILLICIT SUBSTANCE USE IN A SELECT SAMPLE IN CHATSWORTH”, and I consent to participating in the research by completing the research questionnaire.

I understand that I am at liberty to withdraw from the project at any time, should I so desire. I understand the intention of the research. I hereby agree to participate.

SIGNATURE OF PARTICIPANT

DATE

.....

.....

Thank you for taking time to read this document and for your contribution to this research.

APPENDIX 5

Thank you for agreeing to participate in answering this questionnaire, your assistance is highly appreciated. Your participation in this research is voluntary. You can withdraw at any time you feel without any repercussions. This is an anonymous confidential research. Your name and other personal details will not be needed to participate in this research

Please answer the questions by simply selecting the option that is best suited to your feelings. Please note that you are only required to select one option for each question. You are required to please answer every question unless otherwise specified

Section A

1. Age (please pick a category):

15-18	19-22	23-26	27-30	31-34	35-38	41-45	Other
-------	-------	-------	-------	-------	-------	-------	-------

2. Sex (Gender):

Female	Male
--------	------

3. Which unit do you reside in (please pick a number): Unit-

1	2	3	5	6	7	9	10	11	Mobeni Heights	Kharwastan	Other
---	---	---	---	---	---	---	----	----	----------------	------------	-------

4. How would you describe the people in your community (Chatsworth):

Supportive	Unsupportive	Friendly	Unfriendly	They keep to themselves
------------	--------------	----------	------------	-------------------------

5. Would you describe your community as:

Peaceful	Violent	In-between peaceful & violent	Other
----------	---------	-------------------------------	-------

6. Are you aware of other people using illicit substances in your community?

Yes	No	Not sure
-----	----	----------

7. How would you describe the availability of illicit substances in your neighbourhood?

Easy	Difficult	Not sure	I don't think illicit substances are available in my
------	-----------	----------	--

			neighbourhood
--	--	--	---------------

8. Who do you think is responsible for drug related problems in your unit?

Government	Community	Family	Individual	Police	Educational System	Religious organisations	Other
------------	-----------	--------	------------	--------	--------------------	-------------------------	-------

9. Do you know of any members in your community that sell illicit substances?

Yes	No
-----	----

10. In your community, would you say that the availability of illicit substances (number of drug dealers near or in your area) or the demand of illicit substances (number of people wanting to use illicit substances) increases the drug problem in Chatsworth?

The availability of illicit substances (number of drug dealers near or in your area)	Demand of illicit substances (number of people wanting to use illicit substances)	Other
--	---	-------

11. Is it possible to make Chatsworth a drug free community?

Yes	No	Maybe some time in the future	Uncertain / don't know
-----	----	-------------------------------	------------------------

12. Do you think that having more visible police vehicles patrolling your area will help decrease the number of drug dealers or the availability of illicit substances in your area?

Yes	No	I feel that the police are involved with the drug peddlers
-----	----	--

13. What kind of improvements do you feel can be made to Chatsworth?

I feel that it is fine the way it is	The roads can be improved	The buildings can be improved	The medical facilities can be improved	Other
--------------------------------------	---------------------------	-------------------------------	--	-------

14. When people describe Chatsworth as being 'Notoriously known for drug related problems' do you feel that it is a fair statement?

Yes	No	Not Sure
-----	----	----------

15. What is the most commonly used drug in your unit?

Sugars	Dagga	Ecstasy	Cocaine	Buttons	Other	Don't know
--------	-------	---------	---------	---------	-------	------------

Section B

16. Do you feel like you belong to your community, that you are a part of something bigger?

Yes	No	Sometimes
-----	----	-----------

17. Do you have a strong relationship with your family?

Yes	No	Sometimes
-----	----	-----------

18. Where do you spend most of your time during the week?

At work	At campus	At home	At school	Other
---------	-----------	---------	-----------	-------

19. If you are currently employed, do you enjoy your job?

Yes I enjoy my job	No, I don't enjoy my job	I don't have a job	I am still in school/campus, I don't have a job
--------------------	--------------------------	--------------------	---

20. If you are currently studying, do you enjoy what you are studying?

Yes, I enjoy what I study	No, I do not enjoy it	I am not studying
---------------------------	-----------------------	-------------------

21. Are you a part of any community organisation?

Youth groups	Temple	Mosque	Church	Other	None
--------------	--------	--------	--------	-------	------

22. Do you have friends that use illicit substances?

Yes	No
-----	----

23. Do any of your family members use illicit substances?

Yes	No
-----	----

24. Does someone (Family or Friends) you know personally, sell illicit substances?

No, No one I know personally	Yes, a friend	Yes, a family member (Relative)
------------------------------	---------------	---------------------------------

25. Do you feel pressured by your friends into doing something you do not always want to do?

Never	Sometimes	Often	I don't know
-------	-----------	-------	--------------

26. If you are in a romantic relationship (Married or dating someone), are you happy with your current relationship?

Yes	No	I am not sure	Not in a relationship
-----	----	---------------	-----------------------

27. If you are in a relationship, how would you describe your current relationship, which option would best describe it?

Fulfilling & encouraging	Draining & exhausting	Satisfactory	Not in a relationship
--------------------------	-----------------------	--------------	-----------------------

28. If you are in a relationship, do you and your partner fight?

All the time	Seldom	Often	Only when necessary	Not in a relationship
--------------	--------	-------	---------------------	-----------------------

29. If you are in a relationship, does your partner use any of the items listed below?

Cigarettes	Alcohol	Other illicit substances	None	Not in a relationship
------------	---------	--------------------------	------	-----------------------

30. Have you experimented with illicit substances?

Once	More than once	Often	Never
------	----------------	-------	-------

31. Do you make friends easily?

Yes	No	I don't know
-----	----	--------------

32. Do you communicate well with your family, would you speak to them if you had a problem?

Yes	No	Depends on what the problem is	I would prefer speaking to my friends
-----	----	--------------------------------	---------------------------------------

33. Are currently content with the way your life is going or do you feel lost at times?

Yes, I have direction	No, I am very lost	I am still discovering who I am
-----------------------	--------------------	---------------------------------

34. Do your friends and family describe you as a confident person?

Yes	No	I don't think so	Sometimes	I Don't know
-----	----	------------------	-----------	--------------

35. Do you feel like you are a confident person?

Yes	No
-----	----

36. Do you sometimes feel worth little?

Never	Sometimes	All the time	When things go wrong
-------	-----------	--------------	----------------------

37. Does your current situation overwhelm you?

Yes	No	I am managing my current situation
-----	----	------------------------------------

38. How well do you handle stress?

I handle it well	I handle it okay	I do not handle it well	I don't know
------------------	------------------	-------------------------	--------------

39. Have you ever taken illicit substances to cope with stress?

Never	Once	Sometimes	Yes, it's how I manage my stress
-------	------	-----------	----------------------------------

40. Have you ever taken illicit substances to make yourself feel happier or forget your current situation?

Yes	No	Sometimes	All the time
-----	----	-----------	--------------

41. Do you sometimes feel like there isn't anything worth living for?

Yes	Sometimes	No	Never
-----	-----------	----	-------

42. Have you been medically identified to experience any one of the options listed below:

Anxiety	Severe mood changes	Depression	Attention problems	None
---------	---------------------	------------	--------------------	------

43. 43. Has anyone in your family been medically identified to experience any one of the options listed below:

Anxiety	Severe mood changes	Depression	Attention problems	None
---------	---------------------	------------	--------------------	------

44. What do you think is the most common reason for people deciding to use illicit substances?

Stress	Boredom	Experimentation	To escape	Peer pressure	Family strain	Financial strain
--------	---------	-----------------	-----------	---------------	---------------	------------------

45. Which drug do you think is the most used in Chatsworth?

Sugars	Dagga	Ecstasy	Cocaine	Buttons	Codeine	CAT
--------	-------	---------	---------	---------	---------	-----

46. Have you used illicit substances that weren't required for medical reasons?

Yes	No
-----	----

47. Do you find yourself getting bored easily?

Yes I get bored really fast	No, I always find something to do	I have a lot of free time
-----------------------------	-----------------------------------	---------------------------

APENDIX 6

It is noted that the percent accuracy has increased to 87.1% in the classification table. That is, the inclusion of the variables has made the model more accurate. This means that the model gives an accurate prediction 87.1% in relation to drug taking behaviour.

Classification Table ^a					
Observed			Predicted		
			Do you use illicit substances other than those required for medical reasons?		Percentage Correct
			Yes	No	
Step 1	Do you use illicit substances other than those required for medical reasons?	Yes	17	6	73.9
		No	2	37	94.9
Overall Percentage					87.1