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"Examining the Ecological Risk and Protective Factors of Substance Abuse and its Effects on Educational and Behavioural Outcomes among High School Learners: Implications for a School Based Intervention Model"

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ABSTRACT

This study was an exploration into the Ecological Risk and Protective Factors on Adolescent Substance Use and its Effects on Behavioural and Educational Outcomes. The data was gathered using a qualitative research approach. Focus groups were conducted with the assistance of a semi-structure interview guide to gather information on the research topic. The researcher used gatekeepers within Arcadia High School, Bonteheuwel High School and The College of Science and Technology school environments to gain access to participants. A non-probability sampling method was used to select 37 participants. Participants either identified as Coloured or Black, between the ages of 13 and 18 years old and were all high school students. The interviews were recorded, transcribed and Tesch was used to create a framework of analysis. The main assumptions of the study were as followed:

- Adolescent substance use is not only influenced by individual characteristics but also family, environmental and peer influences;
- Protective factors against adolescent substance use include strong familial bonds, positive peer influences and attachment to the schooling environment;
- Adolescent substance use has a negative effect on behavioural outcomes;
- Adolescent substance use has a negative effect on educational outcomes.

The findings of the study show that there were a number of factors that contributed towards the vulnerability of adolescents that ultimately resulted in them using substances. Environmental factors such as poverty played a crucial role in substance use behaviours. Similarly, family influences, such as parental substance abuse and lack of parent-child connection contributed towards adolescent socialization around substance use and substance- use behaviours. The predominant protective factor appeared to be the school environment. The school environment acted as a pseudo family for adolescents where they felt safe, protected and received positive emotions such as love and understanding.

The researcher recommends the development of a multi-level intervention approach that addresses the imbalances in the adolescents immediate and non-immediate environments that contribute to their substance use behaviours. This multi-level intervention strategy will run parallel to the Life Orientation programme and will focus on multiple levels of psychosocial intervention strategies that will assist adolescents in dealing with substance use.

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CHAPTER ONE:
INTRODUCTION

1.1. INTRODUCTION

This qualitative study explored the risk and protective factors of adolescent substance use and its effects on their behavioural and academic outcomes. This chapter presents a background of the problem, followed by the purpose of and rationale and significance of this study. The main research questions and objectives, clarification of the key conceptions used in the study and structure of the research repor9011t are also outlined in this chapter.

1.2. STATEMENT OF THE PROBLEM

According to Ellis, Stein, Thomas and Meintjies (2012), prior to 1994 in South Africa, illegal drugs like heroin and cocaine were not easily available. Post 1994, following its democracy and its reintegration into the global society, South Africa was being used for the purpose of illicit drug trading (Ellis et al, 2012). South Africa's physical location, penetrable borders and the ever-growing trade relations has made South Africa a rich ground for drug trafficking (Ellis et al, 2012).

As a result of the increase in drug trafficking, there was also an increase in drug use in South Africa (Ellis et al, 2012). Drug use in South Africa is compounded by the fact that South Africa has a strong gang culture (Carney, 2013). The gang culture in South Africa has a similar history to substance abuse in South Africa, in that both of these elements have been around for many decades (Carney, 2013). However, once South Africa reintegrated into global society the gang culture expanded into the drug trade, helping with the production, manufacturing and distribution of substances into South African communities (Carney, 2013).According to the United Nations Office on Drugs and Crime (Ellis et al, 2012), in 1997 the use of illegal substances was estimated to cost countries between 0.5 % and 1.3 % of the annual GDP. In South Africa, this amounted to between R2.4 and R6.3 billion (Ellis et al, 2012). Not only has substance abuse had a financial implication for the country, but also a devastating influence on individuals, communities and families (Ellis et al, 2012). Substance-abuse disorders have been identified by the National Drug Master Plan as fuelling a dysfunctional family life and are a problem extending across social, racial, cultural, language, religious and gender barriers and either directly, or indirectly affect the majority of South Africans (Ellis et al, 2012). The World Mental Health Survey confirmed that on an international level, South Africa has one of the

highest lifetime occurrences of substance-abuse disorders (Ellis et al, 2012). Given South Africa's history, not surprisingly, the substance most commonly used is alcohol (Ellis et al, 2012). There has also been an increase in the use of other substances such as methamphetamine and heroin (Ellis et al, 2012)

Substance abuse in South Africa is such an enormous problem that its effects on the individual, family and community are increasing on a daily basis. In South Africa, it is almost impossible not to be affected by substance abuse whether directly or indirectly. Substance use has been linked to crime, gangsterism, family dysfunction, domestic violence, unemployment, child abuse, neglect, and even the high-school dropout rate. Drugs and alcohol have infiltrated many communities across South Africa and children are exposed to this on a daily basis.

Substance use in adolescents is a prevalent and possibly dangerous activity, which increases the risks for addiction and abuse, as well as other negative physical and psychosocial outcomes in the long term (Bergen, Martin, Roeger and Allsion, 2005). Adolescence is a high-risk period for substance use (Carney, Myers, Louw, Lombard and Flisher, 2013). Research from around the world proposes that substance use often starts during the adolescent stage, between ages 14 and 15 years old (Visser and Routledge, 2007).

Adolescence serves as a time for teenagers to seek independence from the caretakers in addition to a time of increased risk-taking behaviours and unfortunately, increased mortality (Meghdadpour, Curtis, Pettifor and Macphail, 2012). With the age of substance use initiation becoming younger, there is a reason for great concern as early onset of adolescent substance use is associated with both a higher likelihood of substance use continuation and greater long-term harm and addiction (Bergen, Martin, Roeger and Allsion, 2005).

Although there are many external and internal factors that account for adolescent substance use, the prime reason appears to involve the fact that adolescence is a period of evolution, in which individuals show more impulsivity and reckless and non-conforming behaviours than during other developmental stages of their lives (Visser and Routledge, 2007). Many adolescents engage in substance- use activities despite the perceived risk, as substance use is often deemed acceptable amongst adolescent peer groups (Visser and Routledge, 2007). Risky adolescent behaviours are related to an increased risk for injury, interpersonal violence, crime, high-risk sexual behaviour, suicide, academic difficulties and school dropouts (Visser and Routledge, 2007). Among South African youth, ages 15-24, 50% report having consumed alcohol while 11-13% report having used illegal drugs (Meghdadpour et al, 2012). Although both males and females of all races drink alcohol, significantly more males (54%) consume

alcohol compared with females (45%) (Meghdadpour et al, 2012). White males are most likely to drink (Meghdadpour et al, 2012). However, culturally speaking, alcohol use has been known to be an entry point for black males into adulthood (Meghdadpour et al, 2012). When compared with males black females were least likely to consume alcohol, similar results were found for coloured and white females (Meghdadpour et al, 2012).

1.3. RATIONALE AND SIGNIFICANCE OF THE STUDY

A study that focuses on any aspect that places adolescents at risk for substance abuse is important and what is even more important, are the factors that protect them from substance abuse. Having information that is relevant, updated and specific to South Africa is so important and will influence South African intervention methods when dealing will adolescents who are at risk. Substance use in South Africa is a widely recognized problem, a problem that no longer only effects adults. The recognition of this has resulted in many intervention strategies being implemented by different agencies such as state departments, schools, churches and NGOs. However, substance abuse amongst adolescents continues. There are many reasons for this. First, let's consider that there hasn't been a significant amount of research done on youth substance abuse in a South African context. This has a number of implications, such as, the available statistics, figures and trends aren't relevant to what is currently happening in South African communities. Because of not having relevant recent research on adolescent substance-use, the intervention strategies that are being implemented are not successful. Adolescent substance use has evolved rapidly in recent years, yet intervention strategies have not. Similarly, substance abuse policies that have been introduced haven't been updated enough to handle the explosion of youth substance use that South Africa has experienced in the last couple of years. Substance use amongst adolescents in South Africa has evolved and moved at such a fast pace, that our policies and intervention strategies are simply not able to keep up.

This study serves to provide a critical view into adolescent substance use. The researcher seeks to explore risk and protective factors for adolescent substance use, and their perceived understanding of the effects of their substance use on their behavioural and educational outcomes. This information will provide insight into which pathways we should be taking to provide interventions that are specifically targeted at adolescents. We would hope that these targeted interventions prove more successful than the current generic interventions that have been put in place. The researcher hopes that the information gathered in this research study will provide new insights to assist in the development of a substance use curriculum that could be

integrated into the Life Orientation curriculum at a high-school level. Thereby reaching every single adolescent in South Africa who is currently enrolled at a high school, as Life Orientation is a compulsory subject for both public and private high schools.

1.4. RESEARCH TOPIC

Examining the Ecological Risk and Protective Factors of Substance Abuse and its Effects on Educational and Behavioural Outcomes among High School Learners: Implications for a School-Based Intervention Model. `

1.5. MAIN RESEARCH QUESTIONS

- What ecological factors place adolescents at risk of substance abuse?
- What ecological factors protect adolescents against substance abuse?
- What are the implications of adolescent substance use on educational outcomes?
- What are the implications of adolescent substance use on behavioural outcomes?

1.6. RESEARCH OBJECTIVES:

- To explore the ecological factors that place adolescents at risk of substance abuse;
- To explore what ecological factors protect adolescents against substance abuse;
- To examine the implications of adolescent substance use on educational outcomes;
- To examine the implications of adolescent substance use on behavioural outcomes.

1.7. MAIN ASSUMPTIONS

The main assumptions of the study were as followed:

- Adolescent substance use is not only influenced by individual characteristics but also family, environmental and peer influences;
- Protective factors against adolescent substance use include strong familial bonds, positive peer influences and attachment to the schooling environment;
- Adolescent substance use has a negative effect on behavioural outcomes;
- Adolescent substance use has a negative effect on educational outcomes.

1.8 CLARIFICATION OF TERMS

1.8.1. Adolescence

Adolescence is the life stage when youth begin to develop a stronger sense of self and start to direct their own lives and behaviour based on their beliefs about themselves (Schwartz, Coatsworth, Pantin, Prado, Sharp and Szapoocznik, 2006). Contextual domains such as family and school continue to exert strong influences on adolescent behaviour, and the peer domain becomes increasingly significant in adolescence (Schwartz et al, 2006).

1.8.2. Substances

Substances refer to chemical, psychoactive substances that are prone to be abused. These substances include tobacco, alcohol, over the counter drugs and prescription drugs (Prevention for and Treatment of Substance Abuse Act, 2008).

1.8.3. Substance abuse

Substance abuse refers to the improper, excessive, irresponsible or self-damaging use of addictive substances. The Diagnostic and Statistical Manual of Mental Disorders defines substance abuse as a maladaptive pattern of substance use leading to clinically significant impairment or distress, manifest by one or more of the following symptoms within a 12-month period: recurrent substance use in situations that cause physical danger to the user, or in the face of obvious impairment in school or work situations, or despite resulting social, interpersonal or legal problems (American Psychiatric Association, 2000).

1.8.4. Risk Factors

Risk factors can be defined as any event, condition or experience that increases the likelihood that a problem will be formed, maintained or exacerbated (Myers, 2013).

1.8.5. Protective Factors

Protective Factors can directly influence the likelihood that a problem will increase, or it can indirectly influence the problem by acting as a buffer against risk factors (Myers, 2013).

1.9. REFLEXIVITY

Reflexivity refers to "the ability to formulate an integrated understanding of one's own cognitive world, especially one's own influence or role in a set of human relations. It is a quality of metacognition, thinking about one's perception and ideas. These characteristics are related to the widely supported social-work qualities of empathy and self-awareness" (De Vos, 2005: 363).

In the qualitative research process, the personal biases of the researcher could influence the results or data of a research study. Therefore, the researcher has to be aware of these biases and detach herself from them before entering into the research process. In order to be unbiased when interviewing the participants, the researcher needs to be aware of her personal biases and opinion and pay careful attention not to influence each respondent's answers; the researcher needs to be mindful that each respondent's experiences may differ from her own.

The researcher found some of the stories shared by respondent's heart wrenching. The researcher found it extremely difficult to listen and remain partial as participants shared their stories of hardship. There were moments when the researcher had to consciously and intentionally remain in the role of a researcher and not switch to the role of a social worker. Some of the stories shared were so personal and so similar to those of her own family, they served as a painful reminder. However, the researcher left the focus groups feeling hopeful; hopeful in our youth's future and hopeful for change.

1.10. The Structure of the Research Report

Chapter One is an introductory chapter that clarifies the motivation for the study. An overview is given of the problem of adolescent substance abuse in South Africa and the effects of substance abuse on adolescent lives is given as a rationale for the study. This chapter outlines the aims of the study and provides an outline of the research questions and objectives for the study.

Chapter Two consists of a literature review that seeks to provide a theoretical framework for the investigation of the status of adolescent substance use, what serves as risk and protective factors and the effects of adolescent substance use on behavioural and educational outcomes. In addition, chapter two addresses the South -African policies that inform interventions regarding adolescent substance use.

Chapter Three examines the research methodology utilised to gather research for this study. This chapter outlines the research approach used, gives the reader an overview of the research

design and outlines the data collection and analysis processes. The constraints and limitations for the research were also discussed. A discussion on ethics in research concludes this chapter.

Chapter Four presents the findings of the research for the study. Qualitative findings are presented in a summarised format. Descriptive extracts from students and the researcher's observations are given to add further context to the findings. Additonally, chapter four entails an in-depth discussion of the findings. Selected student observations and research-field notes are extracted in this chapter to further clarify the core-research assumptions. An in-depth discussion of the findings leads to the drawing of a developing picture of the status of what influences adolescent substance use.

Chapter Five completes the study with recommendations for the successful and ideal implementation of substance use interventions for adolescents. Suggestions for further research are made and the study is concluded.

1.11. CONCLUSION

Chapter 1 addressed the background, rationale and significance of the research. It also discussed the research objectives and the main assumptions of the research. In the chapter, the main concepts were clarified, the ethical considerations for the study were discussed. The researcher also got the opportunity to discuss their experiences in the reflexivity section.

The next chapter will be addressing the literature on adolescent substance use, South African legislation surrounding adolescent substance use and various social theories that concern adolescent substance use.

CHAPTER TWO:
LITERATURE REVIEW

2.1. INTRODUCTION

This chapter will discuss a review of literature focusing on adolescent substance abuse in South Africa. The discussion will include the problem of substance abuse, the state of youth in South Africa, youth substance abuse in South Africa and ecological risk and protective factors.

2.2. REVIEW OF LITERATURE

2.2.1. The Problem of Substance Abuse

In his inaugural speech to Parliament in 1994, former President Nelson Mandela flagged alcohol and drug abuse as problems in South African communities that required urgent attention (Peltzer, Ramlagan, Johnson and Phaswana-Mafuya, 2010). By February of 1999, the South African Drug Advisory Board hailed an unacceptable increase in substance abuse, and its connected problems (Peltzer, Ramlagan, Johnson and Phaswana-Mafuya, 2010). According to the South African Drug Advisory Board, substance use and abuse in South Africa have been associated with a number of social ills such as an accelerant for criminal activity, poverty, reduced productivity, unemployment, dysfunctional family life, political instability, the escalation of chronic diseases, injury and premature death (Peltzer et al, 2010)

Since the beginning of its democracy, South Africa has been a nation moving towards change. However, this change has created political, economic, and social structures instabilities within South Africa making the country more vulnerable to drug use (Peltzer et al, 2010). The availability of substances and substance use likely linked with the pressure placed on social capital by quick modernization and a weakening in traditional social relationships and forms of family structures (Peltzer et al, 2010). Struggling with the social transformation of its society, South Africa has shown a slower than expected pace for the relocation of economic power throughout the society (Peltzer et al, 2010). This has several consequences for illicit drug availability, use and treatment (Peltzer et al, 2010). Further, South Africa is the most vastly urbanised country in sub-Saharan Africa and the only country in sub-Saharan African with over half of its population recorded as urban (UNODCCP, 1999). Gauteng and the Western Cape provinces report the largest percentage of urbanisation and have the highest rates of drug abuse (UNODCCP, 1999). Cities are characterised by high rates of urbanisation, limited employment opportunities, expansive informal sector exchange and, an erosion of traditional values and family cohesion (UNODCCP, 1999). Urbanisation of South African

cities have led to higher rates of job scarcities in the cities, which intensifies the social and economic pressures that reinforce both the illicit supply and demand for illegal substances, which the South African police force are unable to monitor, let alone efficiently control (UNODCCP, 1999). Prevalence rates for substance abuse in South Africa are extremely high, with recent estimates indicating that drug usage in South Africa is twice the global norm (Gopal and Collings, 2012). Geyer and Lombard (2014) summarised substance abuse trends in South Africa as the following: 2.15 million citizens are considered problem alcohol users. Between 20.1 and 34.9 million litres of alcohol are consumed per annum by South Africans (Geyer and Lombard, 2014). Multiple drug use abuse, especially amphetamines and cannabis, are reported in between 30-45% of specialist treatment admissions (Geyer and Lombard, 2014). Cannabis is the most used substance, with 3.2 million users followed by 0.32 million people who use amphetamines including ecstasy, methamphetamine and meth cathinone (Grey and Lombard, 2014).

Epidemiological studies conducted in South Africa focusing on substance abuse state that alcohol, marijuana, heroin and cocaine rate amongst the most common primary substances of abuse among patients at rehabilitation treatment centres in South Africa, with the abuse of methamphetamines being particularly high amongst youth in the Western Cape and "sugars" (a low quality heroin and cocaine mix) being the primary drug of abuse among Indian males in South Africa (Gopal and Collings, 2012).

Amidst the high levels of substance abuse, social ills have become more rampant and the social and economic cost of substance abuse in South Africa is estimated at 6.4% of the GDP which works out to approximately R136 380 million per annum (Greyer and Lombard, 2014).

Since the beginning of democracy and the opening of its borders, South Africa has seen an increase in the market for illicit drugs (Peltzer et al., 2010). The country's penetrable borders, especially with neighbouring countries such as Zimbabwe, the comparatively high levels of income received from the illicit trade, as well as established and deteriorating income inequalities all combine to make South Africa attractive to both local and global drug trading operations (Peltzer et al., 2010). When compared to other African countries, South Africa signifies the largest market for illicit drugs (Peltzer et al., 2010). A fast evolving social and economic climate combined with increased availability and the advancement of drugs and the demand for them, have all contributed to the always growing national problem of drug abuse (Peltzer et al., 2010). The intricacy of the problem of substance abuse has been compounded by the always changing patterns of drug abuse, supply, and distribution (Peltzer et al., 2010).

There has been an increase in social and economic ills which has resulted in certain populations, especially the youth, being more vulnerable to engage in drug use and drug related risk-taking behaviour (Peltzer, Ramlagan, Johnson and Phaswana-Mafuya, 2010). As a result, South Africa currently in the throws of experiencing the consequences of drug abuse and illegal drug trafficking, particularly: negative health effects, an escalation incidence of crimes and violence and corruption (Peltzer et al., 2010).

2.2.2. The State of Youth in South Africa

Youth go through many physical, emotional, cognitive and social transitions in their lifetime. The adolescent period is a time of developing one's self-esteem and inner capacity, which gives direction to their life (Byarugaba, 2014). In South Africa, youth are defined as persons in the age group 15 to 35 years. According to the 2013 United Nations Population Fund report, young people below the age of 35 years constitute for 77.6% of South Africa's total population (Byarugaba, 2014).

According to analysis of Census data, in 2011 close to 60% of youth live in income poverty (De Lannoy, Leibbrandt and Frame, 2016). Which translates to the following; 60% of South African youth resides in homes with a per capita monthly household income that falls below the Stats SA upper bound poverty line of R620 (De Lannoy, Leibbrandt and Frame, 2016). However, it is important to note that the scarcities experienced by young people are not simply about the lack of financial resources (De Lannoy, Leibbrandt and Frame, 2016).

Current literature on youth's experiences of poverty all agree that the money-metric measures that use income and consumption as substitutions for well-being fail to capture the many characteristics that constitute poverty (Hulme and Sheperd, 2003 as cited in De Lannoy, Leibrandt and Frame, 2016). A lack of financial resources is just one of the many difficulties associated with a poor person's experience of deprivation (De Lannoy, Leibbrandt and Frame, 2016). Poverty cannot be viewed purely from a financial aspect but is about deficiency in multiple dimensions of well-being, which includes low levels of education, poor nutrition and health, lack of employment, inadequate living standards, high exposure to violence and lastly low wages and income (De Lannoy, Leibbrandt and Frame, 2016). Despite the numerous risk factors experienced by South African youth, there has been some forward social progression among the previously disadvantaged population groups (De Lannoy, Leibbrandt and Frame, 2016). The National Income Dynamics Study found that the number of years of completed education has shown a drastic increase across the generations, shifting from three years for

grandparents, five to six years for parents and an average of 10 years for the current generation of youth (De Lannoy, Leibbrandt and Frame, 2016).

However, despite this upward trend in educational attainment, there has not been an increase employment or positive change in terms of the type of employment offered or taken up (De Lannoy, Leibbrandt and Frame, 2016). A wide variety of national policies that focus on youth development have specified the need for intervention in multiple spheres of young people's lives with a focus on economic inclusion and empowerment, education, skills and training, health and social cohesion (De Lannoy, Leibbrandt and Frame, 2016).

2.2.3. Adolescent Substance Abuse in South Africa

Research from around the world on adolescent substance use suggests that substance use often starts between the ages of 14 and 15 years old (Richter et al, 2006). According to the 2001 South Africa Census, young people ages 10-19 comprise 22% of the population (Lai, Graham, Smith, Caldwell, Bradley, Vergnani, Mathews and Wegner, 2013). Growing up in post-apartheid South Africa means that South African adolescents are being raised within constraints of massive political, economic, and social changes including racial discrimination and increasing violence (Lai et al., 2013). These constraints encourage a variety of risks for the development of adolescent substance use and deviant behaviours and compromises the public health of South Africa (Lai et al., 2013). A national survey of youth and young adults ages 15-24 years old in South Africa, states that 50% of youth have tried alcohol and over 10% have tried drugs in their lifetime (Lai, Graham, Smith, Caldwell, Bradley, Vergnani, Mathews and Wegner, 2013). Similarly, results from the 2008 National Youth Risk Behaviour Survey (NYRBS) conducted with grade 8-11 students indicated a lifetime substance use rate of 49.6% for alcohol, 29.5% for cigarettes, 12.7% for marijuana, 12.2% for inhalants and 6.6% for methamphetamines (Lai et al., 2013).

Although there appears to be many factors that explain adolescent substance use, the major reason seems to be centred around the fact that adolescence is a time of change in which adolescents become increasingly impulsive, reckless, and non-conforming, more than during other developmental stages of their lives (Visser and Routledge, 2007). Engaging in risky behaviours during adolescence are of great concern because they are associated with increased risk for injury, interpersonal violence, crime, high-risk sexual behaviour, suicide, academic difficulties and school drop-out (Visser and Routledge, 2007).

Substance use among children and adolescents up to the age of 18 years old can be seen as a form of abuse (Richter et al, 2006). There are three reasons for this: 1) adolescents are still growing and developing at this age and, as a result, their nervous systems may be especially vulnerable to the negative effects of substances (Richter et al, 2006), 2) the use of alcohol and cigarettes for adolescents in South Africa is still illegal and therefore adolescents may be exposed to possible issues with the law, at school, or with their families and 3) adolescent substance use is closely correlated with serious behavioural issues such as risky sexual behaviours, truancy, school dropout and delinquent involvement (Richter et al, 2006). For these reasons, all forms of adolescent substance use are legally defined as substance abuse (Richter et al, 2006).

Youth substance abuse has been known to have a number of damaging implications for the physical and mental health and well-being of South African youth (Parry, Myers, Morojele, Flisher, Bhana, Donson and Pluddemann, 2004). These implications include, an increased risk for involvement in car accidents, a heightened chance for engagement in high-risk sexual behaviour and an increased risk for suicidal ideation and adverse behaviours (Parry, Myers, Morojele, Flisher, Bhana, Donson and Pluddemann, 2004).

In addition to the increased possibility of physical risk, there has also been an association has between youth substance use and co-existing mental health disorders, such as conduct behavioural disorders and various mood disorders (Parry et al, 2004). In addition, adolescents who use substances and have co-existing illnesses have a greater chronic discourse, greater restrictions in universal role functioning, poorer health diagnoses and tend to be less receptive to treatment compared with adolescents who only present with single disorder cases (Beitman et al, 2001). Substance use among youth may also have a variety of hostile social consequences (Parry et al, 2004). Youth substance has closed linked with academic problems, a decrease in school grades, absenteeism, truancy and school drop-outs (Parry et al, 2004). Youth involvement in crime has also been linked to their substance use (Parry et al, 2004).

Research by Parry et al (2004) provides information about the extent and consequences of alcohol and other drug use by South African youth. Parry et al (2004) conducted research from January 1997- December 2001 and discovered the proportion of patients at specialised substance abuse treatment centres who were under the age of 20 years, increased from 5.5% to 24.1% in Cape Town and from 7% to 22% in Durban (Parry et al, 2004). They also discovered that marijuana presented as the most popular primary drug of choice for youth in substance abuse treatment centres (Parry et al, 2004). Methaqualone (Mandrax) was the second most

frequently reported primary substance abuse for youth in Cape Town (Parry et al, 2004). However, among youth in Durban alcohol was reported as the second most commonly reported primary substance of use (Parry et al, 2004).

Parry et al (2004) also discovered that from January 1999 – December 2001, of all patients seen at trauma units in state hospitals in Cape Town and Durban, 139 patients stated that they were younger than 20 years old. Between 1999 and 2001, 28.9% (Durban) to 31.8% (Cape Town) of youth treated at trauma units in state hospitals tested positive for being over the legal alcohol limit with breath tests, while 26.9% (Cape Town) to 44.4% (Durban) tested positive for marijuana (Parry et al, 2004). The research also showed that arrestees between the ages of 18 and 20 were most likely to test positive for an illicit substance (Parry et al, 2004).

Additional findings from this research project state that the use of substances by South African youth places a burden on the health, social welfare and criminal justice systems of the country (Parry et al, 2004). Since South African youth account for the largest portion of the population, there is cause for concern due to its potential impact on the socio-economic development of the country (Parry et al, 2004).

2.2.4. Ecological Risk and Protective Factors

Bronfenbrenner proposed an ecological systems' model of lifelong progressive accommodations individuals make to changing environments in which they develop (Eamon, 2001). He referred to the most recent conceptualization of his model as a bioecological paradigm, which rests on two main assumptions that can be investigated within a process-person-context-time model (Eamon, 2001).

First, Bronfenbrenner stated that human development transpires through a process of progressively more multifaceted mutual exchanges between active, evolving biopsychological human beings and the individuals, objects and symbols in their environment (Eamon, 2001). Further, if these connections are to be viewed as effective, they need to occur regularly over an extended period of time (Eamon, 2001). These multifaceted mutual interactions occur between parent and child and within peer, school, learning and recreational environment (Eamon, 2001). The second hypothesis addresses the efficiency of interactions (Eamon, 2001). Bronfenbrenner states that the effectiveness of the interactions between a child and its various systems is determined by the biopsychological characteristics of the individual, the immediate and distance environments in which the proximal processes occur, and the developmental outcome being examined (Eamon, 2001). Further, Bronfenbrenner conceptualizes ecological

environment, or the context in which human development occurs is a set of interrelated structures (Eamon, 2001). Developmental outcomes are influenced by interactions within the microsystem (Eamon, 2001). The remaining structures, in order of their respective relation to the microsystem include, mesosystems, exosystems, macrosystems and chronosystems (Eamon, 2001). The ecological perspective allows researchers to focus on adolescent risk and protective factors at an individual level and within their primary interpersonal environments (Dekovic, 1999).

Demographic Factors

There are many demographic factors, such as age, race, culture and sex, that act as risk factors for influencing adolescence substance consumption. Being in the adolescent stage itself is a risk factor. Adolescence marks a period of change from childhood into adulthood and this critical developmental stage is marked by several physical, psychological and social changes (Akanbi, Augustina, Theophilus, Muritala and Ajiboye, 2015). All of the developmental changes that adolescents experience prepare them to experiment with new boundaries and behaviours (Akanbi et al, 2015). Partaking in risk-taking behaviour assists adolescents in shaping their identities, testing their new decision-making skills and gaining peer acceptance and respect (Akanbi et al, 2015).

A study by Alhyas et al (2015) found that gender roles and gender-based expectations placed on adolescents are vital factors that contribute towards adolescent substance use. Cultural identity plays a vital role in the influence of adolescent substance use (Whitesell, Asdigian, Kaufman, Crow, Shangreau, Keane, Mousseau and Mitchell, 2014). Many researchers have argued that substance use problems among adolescents are closely linked to a detachment from their cultural heritage, the legacy of colonial policies, historical trauma and forced de-culturation (Whitesell, Asdigian, Kaufman, Crow, Shangreau, Keane, Mousseau and Mitchell, 2014). Also, cultural factors, such as what is culturally acceptable and the cultures perceptions on a phenomenon, are included as predictive factors in the link between exposure to stress and poor health outcomes, such as substance abuse (Whitesell et al, 2014).

Besides the social indicators, a study by Visser and Routledge (2007) reveals a strong correlation between psychological well-being and substance use. Adolescents who stated that they excessively used alcohol and drug use had considerably lower levels of psychological well-being (Visser and Routledge, 2007). Moreover, adolescents who reported using drugs

indicated that they had lower levels of life satisfaction than their peers who did not engage in substance use (Visser and Routledge, 2007).

The correlation between adolescent drug use and life satisfaction poses a problem given South Africa's high rate of child physical and sexual abuse, the criminal victimisation of children and school-based violence coupled with the high burden of childhood accidental injury, both within and outside the home (Kaminer and Eagle, 2010). Many South African youth are at risk of being exposed to various types of trauma across multiple spheres in their lives (Kaminer and Eagle, 2010). Children and adolescents residing in these circumstances experience trauma as a condition of day to day life and not a singular event (Kaminer and Eagle, 2010). Children and adolescents residing within a context of multiple and continuous trauma exposure poses a different set of psychological challenges, as compared to children and adolescents who are exposed to single traumas, or those experiencing ongoing abuse but only in one setting of their lives (Kaminer and Eagle, 2010). It is also worth noting that for many South African children, exposure to multiple traumas occurs within a broader resource context of poverty. Poverty is responsible for burdening the family structure, effecting parental coping strategies and limiting access to mental health facilities for children (Kaminer and Eagle, 2010). All of these factors further compound the effect of trauma exposure on a child's life (Kaminer and Eagle, 2010).

There are many studies that focus on the psychological effects of trauma exposure in youth, especially in developed countries. What makes South Africa unique in its trauma exposure research is that the research itself needs to take into account the effects of intergenerational trauma and historical trauma, specifically, the aftermath of apartheid. Apartheid was a systemised and institutionalised process of race-based discrimination, exploitation and oppression and left behind a society that 20 years later is still deeply traumatised (Adonis, 2016).

Historical trauma theory is a moderately new notion in public health research (Sotero, 2006). The foundation of this theory is that populations who were historically exposed to long-term mass trauma, like apartheid, display a higher prevalence of disease even several generations after the original trauma has taken place (Sotero, 2006). Historical theory includes and builds upon three theoretical frameworks in social epidemiology (Sotero, 2006). The first is psychosocial theory, which contributes disease to both physical and psychological stress stemming from the social environment (Sotero, 2006). The second theoretical framework is political/economic theory, which addresses the political, economic and structural determinants

of health and disease such as unjust power relations and class inequalities (Sotero, 2006). Finally, the third is social/ecological systems theory which recognises the multilevel dynamics and interdependencies of present/past, proximate/distal and life course factors in disease causation (Sotero, 2006).

Historical trauma theory is helpful in determining why certain populations experience higher burdens of disease, such as that caused by substance abuse, as it provides a macro-level framework for examining the life course of a population exposed to trauma at a particular point in time as compared with that of unexposed populations (Sotero, 2006). Research into historical trauma provides four distinct assumptions: 1) mass trauma is intentionally- and methodically-inflicted; 2) trauma is not limited to a single catastrophic event but can continue over extended periods of time; 3) trauma events echo throughout the population, creating a universal experience of trauma; and 4) the extent of the trauma experience derails the effected population from its natural, projected historical course ensuing in a legacy of physical, psychological, social and economic inequalities that continue across generations (Sotero, 2006). Interestingly, historical trauma theory also takes into account intergenerational transmission of historical trauma (Sotero, 2006).

The intergenerational exchange of historical trauma is defined as signifying the way in which the unsettled traumas of the past are unconsciously communicated from one generation to another and in the process, come to play an essential role in fuelling future conflicts (Adonis, 2016).

Adonis (2016) addresses the view of intergenerational trauma and the transgenerational transmission thereof in post-apartheid South Africa, by reporting on the findings of a qualitative study conducted with the children and grandchildren of victims of apartheid-era gross human rights violations. The study highlights the cumulative impact on family members of the dynamic interplay between past injustices inflicted on victims of gross human rights violations and on the current distressing contextual factors such as racism and poverty (Adonis, 2016). Furthermore, the study points to the potential for cumulative trauma of this nature to produce powerful feelings of anxiety, pain, anger and confusion in the offspring of victims (Adonis, 2016). Conceptually the analysis is framed by two interrelated theoretical models, the life course perspective and historical trauma theory. Adonis (2016) argues that both of these provide a useful insight into how life trajectories, of different generations of families emerging from a history of violence and trauma, are shaped. Further, the theories inform us that intergenerational transmission of trauma is a continuing developmental process, due to the

ways in which the lives of younger family members are interdependently intertwined, and jointly affected in multiple ways (Adonis, 2016).

Experiencing traumatic life events often results in hostile psychological symptoms, including intrusive cognitions, images, memories and emotions associated with the original trauma (Garland, Pettus-Davis and Howard, 2013). These post-traumatic symptoms may endorse maladaptive or self-destructive behaviours, including substance use (Garland, Pettus-Davis and Howard, 2013). Youth who experience traumatic events also have an increased risk of substance use (Garland et al, 2013). Although the casual instrument linking trauma, substance use and psychological symptoms remains uncertain, there is significant research that indicates psychoactive substances may be used to self-medicate the dysphoric mood, intrusive cognitions and somatic sequelae of trauma (Garland et al, 2013). The underlying reason for self-medication of trauma symptoms may involve positive feedback loops between stress appraisal, emotion dysregulation, physiological arousal, compulsive behaviour, and palliative coping with substances (Garland et al, 2013). Continued or repeated stress activation experienced when dealing with trauma exposure may lead to a chronic deviation of self-regulatory mechanisms from their normal mode of operation that leads to heightened stress sensitivity, vulnerability to future stressors and the almost inevitable development of mood disorders (Garland et al, 2013). Further, psychosocial stress and negative mood evoke craving and addiction-related cognitive biases towards drug-related cues, leading to increased motivation to acquire and consume drugs which is then sustained through negative reinforcement conditioning (Garland et al, 2013). Lastly, triggered by traumatic stress, the feedback loop between substance use and psychiatric symptomatology is self-perpetuating and may ultimately lead to the development of serious addictive behaviours and substance dependence (Garland et al, 2013).

The relationship between substance use and life satisfaction can be explained by Barlow and Durand's (1999) theory that individuals use substances as a means to cope and escape when life poses too many challenges (Visser and Routledge, 2007). This research shows that a measure of psychological well-being can be used to identify adolescents who may possibly be at the risk of abusing substances in a high-risk context (Visser and Routledge, 2007).

Peer Context

Peer influence peaks around ages 11-13 (Windle et al, 2008). During adolescents' peers, friends, and intimate partners stereotypically contribute much more to the development of the adolescent's beliefs, behaviours, choices of leisure activities and personal preferences (Windle et al, 2008). The influence peers have over preference can also extend to risky and antisocial behaviour (Windle et al, 2008). Youth in the early stages adolescents who have challenging relationships with their families are more likely to turn toward peers (Windle et al, 2008). Some youth are even willing to sacrifice positive activities and self attributes and aspects of their lives in order to be accepted by, and be popular with, peers (Windle et al, 2008).

The social acceptance of youth by their peers is highly valued, which may result in their caving to group pressure to use drugs and alcohol (Van Zyl, 2013). There is great respect shown for the opinions of members of their peer groups (Van Zyl, 2013). During adolescence, peers are viewed the main providers of support and they constitute the most prominent factor causing drug use amongst youth (Van Zyl, 2013). Peer pressure as a reason for drug use is also implied by Parry et al who found, with an accuracy of 88.9%, that youths who described life-time drunkenness were considerably more likely to have friends who used alcohol (Van Zyl, 2013). Adolescents were also found to be 3.6 times more likely to have used alcohol in the last month and to have been involved in binge drinking if they had friends who used alcohol (Van Zyl, 2013). Additionally, research has shown that adolescent initiation of alcohol use is done with their peer group (Van Zyl, 2013). Similarly, research undertaken by Neser et al amongst 2281 grades 7, 10 and 11 learners, revealed the tremendous effect of peer pressure on drug use; 91.4% of white learners, 77.5% of Indian learners and 59.1% of black learners who smoked tobacco attributed this behaviour to their friends' example (Van Zyl, 2013).

As stated in Devokic (1999), during adolescence as the adolescent's environment grows, so do the factors that affect adolescent adjustment. Because of the increase in adolescent independence and their interaction with others, influences outside the family, specifically of peers, become increasingly more important (Devokic, 1999). One aspect of peer relationships that has constantly been found as a influential forecaster of problematic behaviour, is the exposure to peers who model delinquent behaviours (Dekovic, 1999). Having deviant peers provides the individual with opportunities to partake in delinquent behaviour and offer the adolescent attitudes, motivations and rationalisations to support anti-social behaviour (Dekovic, 1999).

Peer influences play a fundamental part in the early development of adolescents and have a well-established influence on adolescent substance use (Whitesell et al, 2014). Having deviant peers poses a risk at any life stage but because of their comparative cognitive, emotional and physical immaturity, adolescents are more prone to peer influences (Whitesell et al, 2014). In addition, peer influence has been found to be a dangerous risk factor and forecaster of adolescent substance use, and this influence, both directly and indirectly, has been linked to both current and future substance use behaviours (Scull et al, 2010). Scull et al (2010), further states that peer influence on adolescent substance use can be applied in a number of ways. First, it is not uncommon for peers to influence one another through positive and negative peer pressure to use substances (Scull et al, 2010). Second, peers may influence one another indirectly through the observational learning process, these processes can be established by simply associating with peers who use illegal substances (Scull et al, 2010). Third, there is the belief that social norms regarding substance use are spread through relationships and friendships with peers who use illegal substances (Scull et al, 2010). When an adolescent associates' themselves with peers who use drugs, the likelihood of them initiating substance use increases dramatically (Scull et al, 2010). Friendship groups also share information, attitudes, values and norms regarding their substance use thus provide a social context where drug use is viewed as acceptable (Scull et al, 2010). In addition to the amount of time adolescents spend with peers, Kiesner, Poulin and Dishion (2010) state that the context in which peers spend time together may also moderate the potential for peer influence. However, if these peer groups spend most of their time together in a schooling environment, instead of on the street or in a park, then the possibility for peer influence on substance use is decreased (Kiesner et al, 2010).

Family Context

Of all the contexts in which potential risk and protection transpire, the family system is believed to be the most influential as it applies the most influence over the child's emotional, social, psychological and physical environment (Wright, Cullen and Miller, 2001). Family risk factors of continuing family tension and discord, parent substance abuse, parental non-directiveness, permissiveness and inadequate supervision and living in a neighbourhood that is considered to be unsafe, have been found to be particularly important in predicting adolescent substance use (Wright, Cullen and Miller, 2001).

Family Social Capital

Coleman (1990) states that social capital doesn't only focus on individual variables, like personality, but also on how the quality, content and structure of social relationships and how these variables influence the sharing of resources(financial and emotional), or capital, across familial generations that influence opportunities and life trajectories (Coleman, 1990). Social relations speak to the way in which social investment, from one generation to the next, is made or not made (Wright, Cullen and Miller, 2001). Further if the social interaction, between generations, are characterised by interdependence, they signify social and psychological capital that individuals can call on as they navigate through life's ebb and flow, as they work towards their life trajectories (Wright, Cullen and Miller, 2001). Relationships between generations with high levels of social capital are easily noticeable to individuals and assist in deepening role empathy and responsibilities to one another, and, in turn, strengthen the foundation for informal social control (Wright, Cullen and Miller, 2001).

Further, social capital theory informs that parents who offer social capital to their children are more likely to foster social bonds and prosocial learning (Wright, Cullen and Miller, 2001). Social capital nurtures informal control while also assisting in the development of conventional moral values and reducing the possibility of involvement with antisocial peers (Wright, Cullen and Miller, 2001). When families invest social capital in their children, they start developing a protective measure that steer children away from involvement with deviant behaviours (Wright, Cullen and Miller, 2001). Therefore, family cannot simply be viewed as a stationary or inactive in socialising a unit, but rather parents should be actively involved and engaged in directing youth away from deviant behaviour, such as substance use (Wright, Cullen and Miller, 2001).

Coleman (1990) recognizes the family system is a vital foundation where social capital is communicated from generation to generation. Coleman (1990) specifically references three instruments whereby families exchange capital: 1) parents investing time and effort in their children 2) parents and youth exhibiting affective ties with one another and 3) behaviours deemed acceptable and unacceptable are clearly expressed. In Addition, high levels of family bonding acts as a pathway through which effective socialization occurs (Wright, Cullen and Miller, 2001). The content of information exchanges during family socialization practices are also important, certain forms of social capital may actually contribute towards youth involvement in criminal activities, such as having rebellious values or deviant peers (Wright, Cullen and Miller, 2001). Coleman (1990) argues that parental involvement and investment of

time and effort in their children, the emotional bonds they develop and maintain, and the prosocial path they offer, positively influences the likelihood that the well-supported youth will not engage in delinquent behaviours, such as substance use (Wright, Cullen and Miller, 2001). The effects of high family social capital have multiple influences, in that the positive bond between a youth and a parent acts as one protective factor against delinquent behaviour and an additional protective factor against all future delinquent behaviour (Wright, Cullen and Miller, 2001). Therefore, it would make sense then that the more resources youth have to pull from, the lower the chance of them removing themselves from supportive relationships and systems (Wright, Cullen and Miller, 2001).

Family Stressors for Adolescent Substance Use

Since the 1970s, there has been an increasing body of research supporting both a direct and indirect influence of family factors on adolescent substance use (Vakalahi, 2002).

Many parents in South Africa face a considerable amount of challenges while trying to fulfil their tasks of parenting (Ward, Makusha and Bray, 2015). One of those challenges is poverty. Poverty places a huge financial strain on parents and places an increased pressure on parents they try to provide for and protect their children (Ward, Makusha and Bray, 2015). Additionally, poverty does not only have an economic influence on parenting but causes parents to be emotionally distant, harsh and inconsistent in their parenting practises (Ward, Makusha and Bray, 2015). Parents who identify as residing in poverty are less able to support their child's educational growth, as they are more likely to be poorly educated themselves (Ward, Makusha and Bray, 2015). Poverty also reduces the capacity of parents to offer suitable nutrition and access to capital on a consistent basis, which is an essential prerequisite for the child's healthy development (Ward, Makusha and Bray, 2015)

A study by Adlaf and Ivis (Vakalahi, 2002) state that the quantity of time adolescents' spent with their families, were indirectly associated with adolescent substance use and delinquent behaviour. It has been suggested that when an adolescent reaches reproductive maturity, an evolutionary adaptive mechanism is triggered, which encourages the need to separate from their biological families and steer towards peer groups. (Windle, Spear, Fuligni, Angold, Brown, Pine, Smith, Giedd and Dahl, 2008). This leads to an increase in emotional distancing between parent and child (Windle et al, 2008). During this time, adolescents pursue more social and emotional self-sufficiency and the chance for independent decision making for themselves (Windle et al, 2008). As a result of the adolescent spending less time with their

family and more time with their peers, time which is often unsupervised, the primary influence over social behaviours shifts from the family system to their friend system (Windle et al, 2008). In addition, the during this stage, the adolescent becomes more critical of their parents and their parenting practises because during this stage adolescents develop the ability to start thinking more abstractly (Windle et al, 2008).

Stephenson, Henry and Robinson (Vakalahi, 2002) found that a family's inner strength and capacity to deal with stress as a collective, was associated with a lower risk for adolescent substance use as a coping mechanism. However, family conflict was listed as a risk factor for adolescent substance use (Vakalahi, 2002). Additionally, families experiencing a crisis, such as financial distress, experience daily strain which results in parental mental anguish (Eamon, 2002). This in turn, weakens adolescent adjustment by disturbing nurturing parental involvement, and by triggering parent-adolescent conflict (Eamon, 2002).

The physical structure of a family will also influence the family's ability to adequately care for their children (Ward, Makusha and Bray, 2015). Children who reside in a single parent household face a greater risk for poor behavioural and educational outcomes (Ward, Makusha and Bray, 2015). As a result of single parents living in poverty and being stressed, they are more likely to be struggling with a number of socioeconomic issues (Ward, Makusha and Bray, 2015). Absent fathers also affect children's outcomes. There is a growing amount of evidence that suggests that fathers who are engaged and present play have a positive effect on children's behaviour (Ward, Makusha and Bray, 2015). Adolescents from non-intact families have an earlier age of initiation for alcohol use and use illicit drugs more frequently (Ledoux, Miller, Choquet and Plant, 2001). Adolescents from single parent families have lowest scores on the different aspects of psychological well-being such as mental health, psychological stress or suicidal thoughts (Ledoux, Miller, Choquet and Plant, 2001).

There is an overwhelming amount of reasons given for the fragmentation of families in South Africa. Ronel and Haimoff-Ayali (2010) found that when parents are addicted to substances, typically their substance use is associated with constant family conflicts, inadequate family management skills, poor family interconnection and other liabilities that ultimately place adolescents at risk. These families often live in poverty and adolescents have to cope with problematic circumstances including mental and physical illness, problems with the law and low academic success (Ronel and Haimoff-Ayali, 2010).

According to Brook et al (2006), there are two types of parental influences on adolescent substance use. The first is parental drug use (Brook et al, 2006). Studies have shown that

parental substance use serves as a behavioural model and can predict a child's future drug use (Brook et al, 2006). Similarly, Taylor (2010) states that there are empirical studies that provide strong support for the association between parental substance abuse and adolescent substance use behaviours. The initiation of drug use behaviours of children, who had either one or both parental figures abuses substances, has been understood to rise from a lack of positive parenting practises and from the disruptive nature of their family unit (Ronel and Haimoff-Ayali, 2010).

A study by Ghuman et al revealed that adolescents consider their parents and guardians as being the most influential people in their lives (Van Zyl, 2013). This view concurs with the findings that adolescents are 1.9 and 1.5 times more likely to have used alcohol and binged heavily if they have often witnessed their fathers being drunk (Van Zyl, 2013). The importance of parental influence on adolescent substance use was further discussed by Brook et al (2006) who stated that a mother's use of substances in terms of drinking, smoking tobacco and marijuana and a father's use of alcohol and marijuana had a significant influence on the regularity of their adolescent children's illicit substance use (Van Zyl, 2013). In addition, research has also indicated that imitating parental substance using behaviours was partly responsible for adolescent substance use amongst their peers (Van Zyl, 2013). Parental control, which is associated with the parent's knowledge of their children's activities, whereabouts and boundary-setting, is a significant predictor of lower levels of alcohol and tobacco use among adolescents' (Van Zyl, 2013).

Let's consider the second type of parental influence in the area of child rearing, which includes parental monitoring and the mutual attachment relationship between parent and child (Brooke et al, 2006). Parents exercise control through monitoring and supervision, factors that have proven to be protection against adolescent substance use (Brook et al, 2006). A healthy parent-child attachment relationship marked with affection and identification with the parents has also been found to predict less tobacco, alcohol and drug use amongst adolescents (Brook et al, 2006). According to the family-interactional perspective, intrapsychic distress and associating with drug-using peers is linked to the adolescent having a weak parent-child mutual attachment relation (Brooke et al, 2006). Intrapsychic distress and associating with drug-using peer, often predict drug use amongst adolescents (Brook et al, 2006). Having an attachment to his/her father plays a vital role in adolescent substance abuse, as the father's role is a key factor in the adolescent's decision to use and/or abuse drugs (Snell, Radosevich and Feit, 2014). If the father is a current substance abuser, he will model behaviours that the adolescent could learn from (Snell et al, 2014). However, if the father is not a substance user, the adolescent has

a better chance of forming a positive strong attachment which will serve as a protective factor against adolescent substance abuse (Snell et al, 2014). Farrel and White (1998 as cited in Kiesner et al, 2010) the influence of pressure peer on adolescent substance use is influenced by the family compositions, with peer influence on decision making being stronger for adolescents who resided with their single-parent biological mother, than for adolescents who had both biological mother and father residing in the home (Kiesner et al, 2010).

Despite adolescence constituting a period of augmented peer influence, parents still have a noteworthy effect on adolescent substance use (Scull, Kupersmidt, Parker, Elmore and Benson, 2010). In fact, parental practises have been found to moderate the relationship between peer pressure and drug use (Scull, Kupersmidt, Parker, Elmore and Benson, 2010). A study by Kung and Ferrel (2000 as cited in Scull et al, 2010) found that adolescents who experienced poor parenting practises were at greater risk for being influenced by their peers to initiate substance use, than adolescents who experienced higher quality parenting practises.

This is in line with the moderation model, which states that the consequence of one variable may depend on the level of a second variable in predicting individual escalation (Kiesner, Poulin and Dishion, 2010). Dishion et al (2004 as cited in Kiesner, Poulin and Dishion, 2010) supported this notion by highlighting that there was a noticeable link between delinquent peer involvement and changes in family organization practices when forecasting both antisocial behaviour in general and more specifically substance use. Further, Kiesner et al (2010) found that the influence of peer substance use on individual substance use during the adolescence period was affected by parenting style: Low levels of authoritative parenting were associated with highest levels of peer influence. In addition, high levels of parental monitoring decreased the chances for alcohol misuse among adolescents with deviant peers (Kiesner et al, 2010). Eamon (2002) states that parents who display an authoritarian parenting style, which is defined as punitive, subjective and high in control, results in children's behaviour being maladaptive.

Parent-conflict is also associated as a risk for adolescent substance use (Vakahali, 2002). Adolescents often use substances as a way to cope with conflict in the parent-child relationship (Vakahali, 2002). Family conflict is also a significant influencer for adolescent substance use; adolescents use substances as a way to cope with family conflict, dysfunction, disorganisation and parental rejection (Vakahali, 2002).

A study by Craig and Brown (Vakahali, 2002) found that adolescents with substance-using siblings began using substances at a younger age than those with non-drug using siblings.

Siblings are likely to have an important influence on the initial introduction to adolescent substance use (Bahr, Hoffman and Yang, 2014). Younger siblings often observe and model the behaviours of older siblings. Therefore, if the older sibling is a substance user, they provide a model for adolescents to imitate (Bahr, Hoffman and Yang, 2014). The role of the older siblings as natural leaders and helpers often have negative effects on younger adolescent siblings (Vakahali, 2002)

Environmental Context

Childhood Poverty

High levels of childhood deprivation still exist for many youths in South Africa. According to Statistics South Africa (2011), of South African youth under the age of 18 years old, 12% reside in informal housing, 38% did not have running water in their homes or within 200 meters of where they stayed, 49 % did not have a refrigerator and 61% did not have a flush toilet in their homes. Children are the adults of tomorrow and therefore their choices, opportunities and development as children will impact their functioning as adult citizens (Noble, Wright and Cluver, 2007). Moreover, children form an integral part of the continuation of intergenerational poverty (Noble, Wright and Cluver, 2007).

Similarly, Omotoso and Kock (2017) state that in South Africa, children constitute 37% of the South African population, with about 19 million young people between 0-17 years. There is widespread poverty and inequality among this age cohort, than any other age group, because they are usually the most vulnerable in their households and society at large (Omotoso and Kock, 2017). Between 1995 and 1999, it was estimated that the rate of child poverty in South Africa increased by 11%, while the rate of children living in dire poverty increased by 19.2% during the same period (Omotoso and Kock, 2017). In 2002, 11 million children were living in dire poverty and recent statistics show that 11.9 million children, about 64% of all children, live in income poverty (Omotoso and Kock, 2017).

Child poverty is typically defined as the number of children residing in homes where the household income falls below the minimum survival level or an equal poverty depth measure (Noble, Wright and Cluver, 2007).

The World Bank has accepted a complete concept and survival definition of poverty specifically for countries in developing nations (Noble, Wright and Cluver, 2007). However, this definition has faced worldwide criticism for its narrow approach, specifically in measuring child poverty (Noble, Wright and Cluver, 2007). Many definitions of poverty and child poverty

in South Africa have been based on the World Banks definition of poverty (Noble, Wright and Cluver, 2007). The problem with this definition however is that absolute poverty concepts are commonly defined solely by its reference to financial incomes (Noble, Wright and Cluver, 2007). However, a multidimensional definition of absolute poverty exists (Noble, Wright and Cluver, 2007). The multidimensional definition explains that poverty is a condition defined by the extreme deprivation of basic human needs, including food, safe drinking water, sanitation facilities, health, shelter, education and information (Noble, Wright and Cluver, 2007). This definition states that poverty depends not only on the deprivation of financial income but also on access to social services and availability of resources (Noble, Wright and Cluver, 2007). This multidimensionality is more often associated with concepts of relative poverty or deprivation (Noble, Wright and Cluver, 2007). Concepts of relative poverty specifically link poverty to the living standards of a specific group and not just financial income (Noble, Wright and Cluver, 2007). Therefore, Townsend (Noble, Wright and Cluver, 2007) identifies those who are poor as: individuals, families and groups whose resources are so far below those of the average family or individual that they are, in effect, excluded from participating in day to day society (Noble, Wright and Cluver, 2007).

These definitions of poverty are still problematic as they are not child-focused (Noble, Wright and Cluver, 2007). Recent studies on child poverty in South Africa recognise the need for wider, child-focused and child- participatory definitions of poverty (Noble, Wright and Cluver, 2007).

A child-focused and multidimensional model of child poverty for South Africa

The consequences of childhood poverty can be devastating. Research has found that children who live in poverty are at an increased risk for a wide variety of harmful consequences over the course of their lives (Moore et al, 2009). Adverse consequences are particularly associated with the experience of deep and long-term poverty throughout childhood (Moore et al, 2009). Poverty is strongly associated with influencing the child's social and emotional development (Moore et al, 2009). Children residing in poverty are at a greater risk of presenting with behavioural and emotional problems, such as disobedience, impulsiveness and difficulty getting along with peers (Moore et al, 2009).

Children who experience the effects of poverty exhibit fewer positive behaviours than their non-impoverished peers (Moore et al, 2009). Experiencing long-term poverty influences the child's internal feelings of anxiety, unhappiness and dependence (Moore et al, 2009). There

are two schools of thought on why poverty influences a child's social, emotional and behavioural outcomes (Moore et al, 2006). First, poor children live in homes where they experience less parental supervision and more parental distress, as they are more likely to be raised by a single parent (Moore et al, 2009). There is also an element of instability and children who experience more unsettled lives are more likely to have negative social and emotional outcomes than children who have more stable home environments (Moore et al, 2009). Second, children who grow up in impoverished conditions are less likely to be exposed to positive social norms in their lives and neighbourhoods (Moore et al, 2009). For example, children who grow up in areas of high poverty are exposed to violence regularly (Moore et al, 2009). This exposure puts the child at greater risk for psychosocial difficulties, such as internalised behaviours like anxiety and depression and external behaviours, such as substance use (Moore et al, 2009).

Poor children also do not have the buffers in their lives that would in normal conditions serve as protective factors against negative influences (Moore et al, 2009). This may be because poverty appears to have a debilitating effect on the family's ability to achieve social control and subsequently, increases the likelihood of adolescent delinquency (Moore et al, 2009).

Pearlin (Eamon, 2001) states that stressors can be defined as life circumstances that give rise to stress. He also differentiates between stressors that are separate life events and chronic strains, which are more enduring or recurrent life problems, such as struggling to meet daily subsistence needs (Eamon, 2001). Chronic strains associated with the inability to adequately fulfil family role obligations can be particularly stressful and are believed to account for depression in parents experiencing economic hardship (Eamon, 2001). Chronic strains also force readjustment of behaviour repeatedly (Eamon, 2001). Persistent poverty, for example, requires daily adjustments and compromises as parents strive to meet the needs of their families (Eamon, 2001). Chronic poverty may also have a strong influence on children's adjustment because multiple life stressors have cumulative effects (Eamon, 2001). Individuals use an assortment of coping behaviours to prevent, avoid or contend with the emotional distress caused by life events and chronic stress. Coping behaviours include obtaining social resources, drawing on psychological resources and engaging in specific responses (Eamon, 2001). Economic deprivation, however, constricts and destroys coping behaviours. Having insufficient resources to assist in resolving common events can overwhelm the individual's capacity to cope (Eamon, 2001). The reduced coping capacity of individuals create a sense of powerlessness, which further corrodes self-esteem and a sense of mastery, control and personal

efficacy, making it less likely that individuals are able to participate in active problem-solving (Eamon, 2001). Poverty is also linked to lower levels of social support (Eamon, 2001)

Environmental Stressors for Adolescent Substance Use

According to Brook et al (2006), it is becoming increasingly more evident that environmental stressors have adverse consequences for families and children. Eamon (2002) states that neighbourhood environments that are marred by criminal and gang activity, violence and high populations of poor families are also associated with youth anti-social behaviours. Additionally, children from low-income neighbourhoods have an increased risk for exposure to low-quality living conditions, high-crime neighbourhoods, exposure to community violence, stressful life experiences and pro-aggressive beliefs that mediate the relation between economic disadvantage and child deviant behaviours (Eamon, 2002).

There are also numerous forms of environmental stressors that intensify the chances of adolescent substance use, such as violent victimisation, low socio-economic status, substance availability and school-based stressors (Brooke, Rubenstone, Zhang, Morojele and Brook, 2011). Previous research suggests that neighbourhood adversities often co-exist, such that inhabitants of underprivileged communities are often exposed to several environmental stressors at the same time (Brook et al, 2011). Furthermore, research states that the impact of sociological forces on youth smoking behaviour may be intermediated through antisocial adult behaviour, subjective adult norms and community affirmation (Van Zyl, 2013). Adult antisocial behaviour refers to adults use or selling of illicit drugs and subjective adult norms refers to adults condoning the use of marijuana and agreeing to their adolescent children's alcohol and cigarette consumption (Van Zyl, 2013). A significant correlation between drug use and community tolerance was shown by Parry et al who indicated the link between adolescents who had been drunk, and communities where alcohol could be easily obtained, and where police failed to respond to adolescent illegal use of substances (Van Zyl, 2013). Community research undertaken in Cape Town indicated that Xhosa and Afrikaans speaking community members blamed community tolerance of adolescent substance use for the widespread selling and using of substances in their communities (Van Zyl, 2013).

Everyday South Africans are exposed to a number of different environmental stressors, including; a) significant social changes associated with the transition from apartheid to equality, b) violence and crime, c) high rates of unemployment, d) technological changes and e) an ever-worsening AIDS epidemic (Brook et al, 2006). Also, changes in demographics,

economic and political factors, as well as the production, distribution and marketing of drugs have all contributed to adolescent substance use (Brook et al, 2006)

A study conducted by Alhyas, Ozaibi, Elrabi, El-Kashef, Wanigartne, Almarzougi, Alhosani and Al Ghaferi (2015) on adolescent substance use found that environment played a major role in adolescent substance use and it contributed towards the accessibility of substances. Majority of the participants in Alhyas et al (2015) study stated that substances were widely available in their communities and very affordable. Participants further stated that substances were easily available from boyfriends/girlfriends, friends, nightclubs and parties and were given for free to first time users (Alhyas et al, 2015). Some participants even stated that they could purchase substances on their school premises (Alhyas et al, 2015). These results were mirrored in a study by Morejele who revealed that adolescents considered the accessibility of drugs as a reason for drug abuse amongst their age cohort (Van Zyl, 2013). It was shown that secondary school learners, aged 14-16 years old, could obtain their liquor directly from legal public outlets and shebeens (Van Zyl, 2013). Easy access to drugs was also reported as a compounding factor to adolescent substance use (Van Zyl, 2013).

Ecological factors that protect adolescents against substance abuse

Protective factors are viewed personal, social and institutional resources that build capability, encourage successful development and thus, decrease the likelihood of involvement in delinquent behaviours (Dekovic, 1999). It's also worth noting that protective factors are only valuable in conditions where risk is apparent and provide no advantage in low-risk environment (Dekovic, 1999). Thus, protective factors can be viewed as moderators in situation where risks are present (Dekovic, 1999). As they moderate the relationship between risk and involvement delinquent behaviours (Dekovic, 1999). According to the ecological approach risk factors, such as family and environment, do not automatically mean an adolescent will develop a substance use problem (Haimoff-Ayali, 2010). However, risk factors do disrupt a child's development in the world and have some influence on the direction of the development of substance use behaviours (Haimoff-Ayali, 2010). Research has shown that exposure to a pathogenic factor often has a negative influence (Haimoff-Ayali, 2010). However, there are people who when faced with a risk factor, develop a coping mechanism in which the pathogenic risk factor is seen only as a challenge, rather than a debilitating influence (Haimoff-Ayali, 2010). In this situation, where the adolescent gives new direction and meaning to the negative circumstance, such as parental substance use, the pathogenic factor becomes a salutogenic one (Haimoff-

Ayali, 2010). Which can be used to improve the personal well-being of the Adolescent (Haimoff-Ayali, 2010). The aptitude to fight the influence of the risk factors can explained by the exposure to other conditions that serve as protective factors for the adolescent (Haimoff-Ayali, 2010). Taylor (2010) found that protective factors that assist in adolescent substance use can be categorised into three categories; a) individual characteristics b) positive family and c) community bonding and healthy beliefs and clear standards. Individual characteristics include resiliency factors, positive social skills and the appropriate use of cognitive processes (Taylor, 2010).

Protective factors anchored in the self and peers

A review of literature on resilience studies by Theron and Theron (2010) found that 17 out of 23 articles related to resilience in South Africa agreed that resilience was encouraged by individual factors. These were specifically, personality traits, including goal achievement orientation, empathy, optimism, autonomy, conservatism, conscientiousness and the ability to self-regulate (Haimoff- Ayali, 2010).

In the case of adolescence and drug use, personal protective factors include a positive orientation, high intelligence, a resilient nature, realistic views of their environment and a strong faith (Haimoff-Ayali, 2010). These factors, along with others, may help adolescents to resist the effects of their personal vulnerabilities and various social and environment risk factors (Haimoff-Ayali, 2010).

Patrick, Palen, Caldwel, Gleeson, Smith and Wegner (2010) suggest that there are four domains of motivation that adolescents use so not to engage in substance abuse. These are physical and behavioural consequences, ethical objections, social disapproval and incompatible activities and goals (Patrick et al, 2010).

Physical and behavioural consequences may include being arrested, embarrassment or even experiencing a hangover (Patrick et al, 2010). Adolescents who think that substance use will have negative effects on their bodies or minds, will be less likely to use substances (Patrick et al, 2010). Ethical objections for an adolescent may be based on their religious beliefs or personal morals about the appropriateness of using substances (Patrick et al, 2010). Social disapproval of behaviour serves as a big motivator for adolescents as peer groups have a major influence on an adolescent's life. Peers can have a pro-social influence and can encourage one another to avoid substance use (Patrick et al, 2010). Following unsuited activities and goals are an additional reason adolescent report not using substances (Patrick et al, 2010). When

researching reasons for substance use avoidance, McIntosh et al (2005 as cited in Patrick et al, 2010) found that some youth reported that they avoided substance use because it would negatively impact on their sporting and academic abilities, and their future goals, such as getting a good job.

Adolescents' who have a peer group that comprises of friends who accept traditional behaviours, appears to be particularly important for regulating the impact of peers who have assumed risk behaviours (Cattelino, Glowacz, Born, Testa, Bina and Calandri, 2014). This highlights the value of adolescents having a peer support network that includes a number of individuals with a variation of behaviours and actions (Cattelino, Glowacz, Born, Testa, Bina and Calandri, 2014). The importance of a mixed social network, referring to risk behaviours and conventional behaviours, has been recently pointed out by Mathys et al, who experimentally tested the effects of group composition on deviant talk interaction processes among homogeneous and heterogeneous groups (Cattelino, Glowacz, Born, Testa, Bina and Calandri, 2014). The results showed less antisocial talk within the mixed group (Cattelino, Glowacz, Born, Testa, Bina and Calandri, 2014). This finding suggests that mixed peer networks are not only better than delinquent peer networks, but are better than any other type of network, including a network with only well-adapted peers (Cattelino, Glowacz, Born, Testa, Bina and Calandri, 2014).

Protective factors embedded in families and community

Positive family and community bonding have also been shown to decrease the incidence of substance use among adolescents who are attached to positive families, friends, schools and communities (Taylor, 2010). Many adolescents, despite living in low socio-economic conditions, thrive because they have bonded with strong positive role models (Taylor, 2010). In addition, when clear rules and boundaries are set to deter substance use, adolescents are more likely to follow them (Taylor, 2010). The National Institute on Drug Abuse (Taylor, 2010), agrees that protective factors that stop the initiation of adolescent substance use include strong and positive bonds within a pro-social family, parental monitoring, clear rules of conduct that are consistently enforced within the family, involvement of parents in the lives of their children, success in school performance, strong bonds with other pro-social peers and institutions, and the adoption of conventional norms about drug use.

Resilience and families as protective factors have been closely monitored by researchers.

Parental involvement in an adolescent's life has been positively associated with less engagement in risk behaviours (Patrick et al, 2010). As stated in the problem behaviour theory, when an adolescent is aware that important people in his/her life disapprove of behaviours, such as substance use, s/he may be more likely to disapprove of and avoid these behaviours him/herself (Patrick et al, 2010). Although both parents are shown as encouraging an adolescent's resilience against substance use, Theron and Theron (2007) report that protective maternal figures play a specifically vital role; they provided a buffer against risk factors, and are often seen a pillar of strength offering a sense of security and encouraging their children towards self-actualisation. Additionally, parents encourage resilience when they, themselves cope well with trauma and when they embody strengths and positive qualities worth emulating (Theron and Theron, 2007).

Resilience against substance use is encouraged by protective factors embedded within the community. A review of literature by Theron and Theron (2007) found that the community resource most emphasised as a protective factor for youths was in fact the school environment. Within the school environment, teachers who were supportive, fair, non-discriminatory, motivating, inspiring role models, encouraging, helpful and caring were highlighted explicitly as protective factors (Theron and Theron, 2007). Additionally, schools empowered youth towards resilience when they provided youth with a safe space in which they felt secure or in which they could openly communicate about their lives (Theron and Theron, 2007). It is also worthwhile noting that well-resourced schools that maintained academic excellence, encouraged meaningful afterschool activity, and that had a life-skills curriculum, were all perceived to have encouraged resilience (Theron and Theron, 2007).

Moreover, community support was often cited as a resilience-promoting factor. Community support related to communities that 1) were populated by adults who could be respected and who supported youth success, 2) provided opportunities for therapy and bereavement counselling, 3) encouraged the experiences of active support from peers and teachers, promoted the sharing of expertise, food, clothing, financial resources and advice and lastly, 4) motivated for community mobilisation and community synergy to limit crime and violence (Theron and Theron, 2007). In addition, communities encouraged resilience when they provided youth with opportunities to enjoy or participate in activities that allowed them to sustain a sense of competence, or when they could provide youth with access to recreational resources (Theron and Theron, 2007).

The school environment is often an overlooked system when addressing adolescent substance use. A review by Wall and Kohl (2007) indicates that higher levels of academic achievement are associated with lower levels of substance use. Higher academic success was associated with less marijuana and alcohol use for the 231 youth participants in the Washington State Adolescent Foster Care Survey (Wall and Kohl, 2007). Furthermore, in a study of at-risk youth, it was found that higher reading achievement was associated with less drug use in boys. What's more, higher school performance decreased the chance of substance use initiation (Huizinga, Loeber & Thornberry, 1995 as cited in Wall and Kohl, 2007). School involvement and enjoyment of school activities also appears to protect against substance use initiation. Higher school commitment has resulted in lower alcohol and marijuana use (Wall and Kohl, 2007). Similarly, Razzino et al (2004) state that in a study of 600 youths aged between 12 and 17 years old, school engagement is associated with decreased alcohol and drug use (Wall and Kohl, 2007).

A positive attachment toward school can be considered a protective factor because it represents positive involvement with a traditional social institution and commitment (Cattelino, Glowacz, Born, Testa, Bina and Calandri, 2014). Adolescents with a strong connection to the school environment are able to better create a strong personal identity through dedication and commitment to their school, and therefore do not exhibit the need to seek out alternative or insincere ways of encouraging adulthood or feeling successful (Cattelino, Glowacz, Born, Testa, Bina and Calandri, 2014). Youth are less likely to engage in substance use behaviours when they show high levels of success motivation and optimistic attitudes and report having an interest in school, and have high academic values for themselves (Bryant, Schulenberg, O'Malley, Bachman and Johnston, 2003). Having a high academic goal, such as planning to graduate from university, is a protective factor associated with less substance use among adolescents (Bryant, Schulenberg, O'Malley, Bachman and Johnston, 2003). Adolescent school beliefs and motivation, including their perceptions of school importance, value of school experiences, academic self-efficacy school bonding and university plans, appear to be strongly associated with concurrent substance use (Bryant, Schulenberg, O'Malley, Bachman and Johnston, 2003). Additionally, positive attitudes towards academics are particularly protective against substance use for high-achieving students compared with low-achieving students, indicating an interactive effect of achievement (Bryant, Schulenberg, O'Malley, Bachman and Johnston, 2003). It is likely that the combination of high achievement, high motivation, and

positive attitudes that protects against increases in substance use over time (Bryant, Schulenberg, O'Malley, Bachman and Johnston, 2003).

Implications of adolescent substance use on educational outcomes

Adolescence is a period where critical development takes place, in which youth experience the chance to develop an identity as academically skilled, socially cohesive and committed to learning (Wang and Fredricks, 2014). This is also a period in which adolescents are more prone to a deterioration in school motivation and achievement and increase delinquent behaviours, such as using substances (Wang and Fredricks, 2014). High- school education is an important factor of how successfully this change is circumnavigated (Lynskey and Hall, 2000). Active engagement in secondary school promotes the skills, competencies and values that allow adolescents to successfully transition into adulthood (Lynskey and Hall, 2000). Unfortunately, evidence suggests that adolescents become increasingly disengaged as they progress through secondary school (Wang and Fredricks, 2014).

There have been many cross-sectional surveys that have examined the connection between cannabis use and a variety of measures of educational attainment and commitment among school children and youth (Lynskey and Hall, 2000). Studies have shown that increased levels of cannabis use have been linked to a lower grade point average, less satisfaction in school, negative attitudes towards school and poor school performance (Lynskey and Hall, 2000). Kandel et al (as cited in Lynskey and Hall, 2000) find that early cannabis use encourages anti-conventional behaviours including employment problems and difficulties in interpersonal relationships.

Failure to engage in school may lead adolescents to seek solace in problem behaviours, such as substance abuse and to associate with delinquent friends, which may in turn exacerbate their alienation from school (Bachman, O'Malley, Schulenberg, Johnson, Freedman-Doan and Messersmith, 2008). Problem behaviours, such as substance abuse, and association with negative peers, often result in negative interpersonal interactions with teachers and parents, which further aggravate their disengagement from school (Bachman et al, 2008). Over time, the interplay between school disengagement and substance use may accumulatively and reciprocally shape the development of youth identity and influence an adolescent's decision to drop out school (Wang and Fredricks, 2014). It is thought that cannabis use is a consequence of poor educational attainment. Poor educational performance can be viewed as a risk factor for cannabis use and misuse (Lynskey and Hall, 2000).

From the human ecological perspective, an adolescent's problem behaviours and attitudes are linked across multiple developmental contexts including family, school and peer settings (Bryant, Schulenberg, O'Malley, Bachman and Johnston, 2003). Problem behaviour theory suggests that school-related behaviours such as acting out or skipping classes are likely to be related to problem behaviours in other contexts such as using substances or other delinquent acts (Bryant, Schulenberg, O'Malley, Bachman and Johnston, 2003). When students are not behaviourally or psychologically engaged in the classroom, they tend to cut class, fail to finish their schoolwork and misbehave (Bryant, Schulenberg, O'Malley, Bachman and Johnston, 2003).

Interestingly, there have been several studies that link school connectedness to a reduction in delinquent behaviour and drug and alcohol use among adolescents. Adolescents who are attached and emotionally connected to school show less risky behaviour because they generally strive to meet society's expectations and are more likely to form supportive relationships with teachers and peers (Wang and Fredricks, 2014).

Implications of adolescent substance use on behavioural outcomes

During adolescence, a heightened sense of grandiosity and immunity merges with a more limited capacity to anticipate immediate danger and to foresee long-term negative consequences (Tucker, Ellickson, Collins and Klein, 2006). As a result, an adolescent's potential to partake in risky behaviour suddenly escalates as s/he experiences advances in his/her physical maturity, heightened sex drive, increased intellectual abilities, opportunities to earn money and the increase in their mobility (Tucker, Ellickson, Collins and Klein, 2006). However, these advances come with a number of side effects such as increased experimentation, involvement in sexual activity and the use of alcohol and drugs (Tucker et al, 2006).

Adolescents who engage in substance use are more likely than their peers who abstain from substance use, to experience psychosocial and behavioural problems, such as delinquency, early sexual activity, strained family bonds and poor academic performance (Tucker et al, 2006). According to Masitsa (2007), substance use amongst learners often leads to a number of disciplinary issues such as absenteeism, attending school while under the influence of substances, being in possession of substances at school, selling substances at school, being in possession of weapons at school and becoming involved in theft or violence (Masitsa, 2007). Adolescents often display a number of anti-social behaviours such as, truancy,

neglecting their studies, learning difficulties and ultimately, dropping out of school. All of these misdemeanours culminate in poor academic performance by the learners (Masitsa, 2007). Conduct problems such as violent behaviours, theft and property damage tend to be more prevalent when youth are using alcohol or

The use of tobacco, alcohol, marijuana, or hard drugs by 12 to 18-year olds are predictive of theft and violent behaviour (Wall and Kohl, 2007).

Many studies have found that there is a positive correlation between adolescent aggressiveness and substance use. Aggressiveness in adolescents who use substances has been associated with one of the individual factors that contribute to anti-social behaviours (Amoateng, Barber and Erikson, 2006). Similarly, Maslowsky, Schulenberg and Zucker (2014) state that conduct problems such as rule breaking, aggressive and delinquent behaviours are strongly associated with adolescent substance abuse. Other than antisocial behaviours, a study by Brooke et al (2006) found that adolescents who use substances also regularly engage in risky sexual behaviours. The study found that adolescents considered drugs to be associated with sexual behaviour primarily due to their psychopharmacological effects. The adolescents stated that drug use led to sexual arousal and that drug use impaired their judgement and caused the engagement in risky sexual behaviours (Brooke et al, 2006).

Little empirical research or surveillance data exists on delinquent behaviours among South Africa adolescents (Lai, Graham, Smith, Caldwell, Bradley, Vergnani, Mathews and Wegner, 2013). The results of the 2008 National Youth Risk Behavioural Survey indicated that 21% of South African adolescents reported getting into a physical fight at school over the previous 6 months (Lai, Graham, Smith, Caldwell, Bradley, Vergnani, Mathews and Wegner, 2013). Considerably more South African males reported carrying weapons and being involved in a physical altercation in the past month (Lai, Graham, Smith, Caldwell, Bradley, Vergnani, Mathews and Wegner, 2013). Some research has also suggested that substance use co-occurs with delinquency among South African adolescents because substance use and delinquency appear to share the same risk factors (Lai, Graham, Smith, Caldwell, Bradley, Vergnani, Mathews and Wegner, 2013).

2.2.5. Life Skills Training

Research regarding the etiology and prevention of substance misuse has led to the development of pro-active interventions that are theory-based and effective (Botvin and Griffin, 2014). Both locally and internationally, considerable efforts have been made to reduce the use of alcohol, tobacco and illicit drugs (Botvin, Griffin, Paul and Macauley, 2003). These efforts have taken the form of new policy initiatives, media campaigns, law enforcement involvement, treatment and prevention strategies (Botvin, Griffin, Paul and Macauley, 2003). A particular area of interest and focus has been prevention interventions designed for implementation in schools (Botvin, Griffin, Paul and Macauley, 2003). These approaches are specifically aimed at targeting middle and junior high schools and utilise classroom-based interventions (Botvin, Griffin, Paul and Macauley, 2003). School settings have proven to be excellent environments for both the implementation and testing of substance abuse prevention interventions, as they offer efficient access to large numbers of youth during the years that many initiate substance use behaviours (Botvin, Griffin, Paul and Macauley, 2003).

Research over the past twenty years has led to an increased understanding of the risk and protective factors related to substance use initiation and to the development of more complete theoretical formulations of the etiology of substance use, specifically among adolescents (Botvin, Griffin, Paul and Macauley, 2003). This research has produced new information regarding the factors promoting and sustaining substance use as well as information concerning its developmental course (Botvin, Griffin, Paul and Macauley, 2003). The data collected from this research is relevant as it provides critical information and guidance regarding the nature and timing of potentially effective preventive interventions (Botvin, Griffin, Paul and Macauley, 2003). Research regarding the etiologic factors of substance use has emphasized the importance of a range of interpersonal and intra-personal factors for promoting and sustaining tobacco, alcohol and illicit drug-use (Botvin, Griffin, Paul and Macauley, 2003). As a result, the focus of prevention approaches has shifted from primary emphasis on knowledge concerning the adverse consequences of substance use, towards a focus on social and psychological factors (Botvin, Griffin, Paul and Macauley, 2003). Additionally, research concerning the developmental progression of substances indicates that substance use proceeds in a stage-like sequence from the use of legal substances, such as alcohol and tobacco, to the use of illegal substances, such as marijuana (Botvin, Griffin, Paul and Macauley, 2003). Therefore, many preventative intervention programmes have targeted alcohol and tobacco, the two substances identified as occurring at the beginning of the progression (Botvin, Griffin, Paul

and Macauley, 2003). The assumption behind this prevention approach is that, if successful, this approach will not only minimize the initiation of substance use but also disturb its developmental progression (Botvin, Griffin, Paul and Macauley, 2003). Substance use research suggests that the most effective prevention approaches target individuals during the beginning of adolescence, a time known for increased risk for a variety of risky behaviours (Botvin, Griffin, Paul and Macauley, 2003). These approaches also emphasis the teaching of social resistance skills either alone or in combination with the teaching of personal self-management skills or general interpersonal skills (Botvin, Griffin, Paul and Macauley, 2003).

One of the approaches that has received extensive attention in recent years, Life Skills Training (LST), targets key etiologic factors using a conceptual framework derived from social learning theory and problem behaviour theory (Botvin and Griffin, 2014). Life skills were defined by the World Health Organisation as skills and competencies that enable child and adolescents to deal adequately with their daily hardships and their developmental health (Wenzel, Weichold and Silbereisen, 2009). According to social learning theory, learning occurs within a social context as a result of a process of observation, imitation and modelling (Botvin and Griffin, 2014). Problem behaviour theory is an extension of social learning theory to adolescent problem behaviours (Botvin and Griffin, 2014). Social factors and the modelling of substance use and other health risk behaviours by peers and high-status role models are powerful influences moulding the lives of children and adolescents (Botvin and Griffin, 2014).

The LST program was initially developed as a smoking prevention program for junior high school students (Botvin, Griffin, Paul and Macauley, 2003). LST has been extensively tested in a number of randomized trials and found effective when implemented under different delivery conditions, by different program providers, with different age groups and with different populations (Botvin and Griffin, 2014). Additionally, follow-up studies provide proof that LST has long-term effectiveness and financially cost considerably less than previous intervention strategies (Botvin and Griffin, 2014). Finally, LST offers the potential of reducing other health risk behaviours and fostering academic success (Botvin and Griffin, 2014).

According to Botvin and Griffin (2004), The LST prevention program consists of three major components, personal self-management skills, social skills and drug-related information and skills (Botvin and Griffin, 2004). The personal management skills component is designed to influence a broad array of self-management skills (Botvin and Griffin, 2004). To achieve this, the personal skills component contains material to foster the development of decision-making

and problem-solving, teaches skills for identifying, analysing and resisting media influences and provides students with self-control skills for coping with anxiety and anger/frustration (Botvin and Griffin, 2004). Furthermore, students are encouraged to design a self-improvement plan in which they select something about themselves that they would like to improve or change (Botvin and Griffin, 2004). Students learn how to set realistic goals and sub-goals, evaluate and record their progress and how to handle success and failure (Botvin and Griffin, 2004). One of the main goals in teaching these basic principles of personal behaviour change and self-improvement is to increase individual self-esteem (Botvin and Griffin, 2004).

The social skills component is designed to improve several important interpersonal skills in order to enhance general social competence such as how to overcome shyness, how to give and receive compliments, how to initiate social interactions, in addition to learning skills related to romantic relationships and both verbal and non-verbal assertiveness (Botvin and Griffin, 2004). Lastly, the drug-related information and skills component is designed to have an impact on knowledge and attitudes concerning drug-use, normative expectations and skills for resisting drug use influences from peers and the media (Botvin and Griffin, 2004). Similar to many substance abuse intervention programmes, this material focuses on teaching social resistance skills (Botvin and Griffin, 2004). This component of the LST programme includes a focus on the short-term consequences of substance use, knowledge about the extent of drug use about adolescents and adults alike, in order to rectify normative expectations about drug use, information about the declining social acceptability of tobacco and other drug use, information and class exercises demonstrating the immediate physiological effects of substance use and techniques for resisting peer and media pressures (Botvin and Griffin, 2004).

LST programmes are also mostly implemented in a school context and thereby aimed at the general enrichment of schools, which is one of the most important developmental contexts for children and adolescents (Wenzel, Weichold and Silbereisen, 2009). LST programmes also include components focusing specifically on aspects of the school context, such as testing strategies and school bonding (Wenzel, Weichold and Silbereisen, 2009). Moreover, the interactive teaching methods used in LSTs provide contact and communication opportunities for students and teachers and allow for feedback from teachers or students to be received in a non-threatening environment (Wenzel, Weichold and Silbereisen, 2009). Therefore, a well implemented LST should contribute to the development of positive attitudes toward school, teachers, and classmates and should support involvement in, and bonding to school (Wenzel, Weichold and Silbereisen, 2009).

In South Africa, the Life Skills approach forms part of a obligatory school subject called Life Orientation, which aims prepares youth to live evocatively and effectively in an ever evolving society (Lai, Graham, Smith, Caldwell, Bradley, Vergnani, Mathews and Wegner, 2013). Life Orientation is aimed at emerging and engaging learners in personal, psychological, neuro-cognitive, motor, physical, moral, physical, cultural and socio-economic areas in order for learners to attain their full potential in the new democracy (Jacobs, 2011). The Life Orientation programme was also developed to promote social justice, human rights, inclusiveness and a healthy environment (Jacobs, 2011). According to the Department of Education (2002), specific outcomes for Life Orientation programme show the potential for Life Orientation to be an empowering learning area such that learners should be able to:

- Develop an understanding of who they are and accept themselves as exceptional and worthy individuals
- Utilise life skills and demonstrate attitudes and values that progress relationships
- Respect the rights of people to hold personal beliefs and values
- Demonstrate value and respect for human rights
- Practise acquired life and decision-making skills
- Assess career and other opportunities and set goals that will allow students to live up to their full potential and talents
- Demonstrate values and attitudes necessary for a healthy and balanced lifestyle
- Evaluate and participate in activities that demonstrate effective human movement and development

Life Orientation is intrinsically responsive to urgent concerns such as the health, environmental and safety issues to which students are exposed, the HIV/AIDS pandemic and youth risk-behaviours (Department of Education, 2002).

Even though Life Orientation appears promising in theory, it has become apparent that there are many problems in the practical implementation thereof (Jacobs, 2011). A study by Jacobs (2011) aimed to determine the perceptions of learners regarding their experience of Life Orientation, found that there appeared to be a clear discrepancy between theory and practice. Jacobs (2011) states that the National Curriculum Statement clearly envisions a learner who will acquire actual skills, attitudes, knowledge and values in Life Orientation in order to develop his or her full potential in a holistic manner. In addition, the same learner would make the correct choices regarding his or her own health and environment (Jacobs, 2011). Life Orientation was specifically developed to assist students face and cope with problems such as

substance abuse, AIDS, peer pressure, STDs as well as societal issues and problems associated with career choices, work ethic, productivity, crime and corruption (Jacobs, 2011). The National Curriculum Statement asserts that students are expected to be able to solve or at least manage these problems in a constructive manner (Jacobs, 2011). However, results from the study clearly reveal that this isn't the case as students state that they believe the Life Orientation curriculum doesn't achieve these aims (Jacobs, 2011). Jacobs (2011) states that another important finding from the research is that there appears to be evidence that Life Orientation as a subject doesn't lead to much improvement in the change of attitudes and behaviours of students. The Life Orientation curriculum appears to be overly optimistic and dismissive of the harsh realities in schools and among young people (Jacobs, 2011). Additionally, a study by Prinsloo (2007) aimed at determining and understanding the experiences and perspectives of Life Orientation teachers, found teachers felt that the effects of the Life Orientation teaching didn't last. The teachers expressed that they felt they weren't adequately trained in the Life Orientation curriculum and given the fact that often teachers have to teach Life Orientation without receiving any or very little training, the effectiveness of the programme becomes questionable (Prinsloo, 2007).

2.3. THEORETICAL FRAMEWORK

This section will present two theories used as a framework of analysis for this study. The theories include the Eco-developmental theory and The Stress Coping Model. A theoretical framework diagram giving a brief description of the interplay between these two models will be presented in Diagram 1. Each model will be summarized, and the main characteristics unpacked. This will be followed by a description of the interplay between the two models.

2.3.1. Ecodevelopmental Theory

The Ecodevelopmental Theory is a theoretical model that describes the interconnections between various causes of risk and protective factors in an adolescent's life (Pantin, Schwartz, Sullivan, Prado and Szapocznik, 2004). The Ecodevelopmental theory comprises three principal integrated elements: social-ecological theory, developmental theory and social interaction theory (Pantin et al, 2004).

The first element of the Ecodevelopmental theory is drawn from Bronfenbrenner's work on the social ecology of human development (Pantin et al, 2004). Bronfenner has organised the

several influences on adolescent development according to important social settings, namely: the macrosystems, exosystem, mesosystems and microsystems (Pantin et al, 2004).

The first of the social systems domain is the microsystem. Microsystems are the most important for the developing child. These are the setting in which the child participates directly. The most prominent microsystems for a child include the family, school, peer group and their neighbouring community (Szaponznik et al, 1999). Important features of microsystems are within-system reciprocal relationships between the child and spheres within the microsystem (Szaponznik et al, 1999). These relationships become increasingly greater in number and complexity as the child develops. This provides the child with a richer context for enhanced development (Szaponznik et al, 1999).

The mesosystem speaks to relations between the microsystems but doesn't include the child directly and are considered to indirectly influence development (Szaponznik et al, 1999). The richness of mesosystems is evident by the number and quality of the connections among the microsystems they consist of (Szaponznik et al, 1999). The primary principle of the mesosystemic functioning is that the stronger and more complementary the links between the systems, the more positive the influence of the mesosystem on the child's development (Szaponznik et al, 1999). In contrast, mesosystems that contain fewer relationships that are hostile, increase the child's risk for maladaptive development (Szapocznik et al, 1999).

Exosystems are systems that are entirely independent of the child (Szaponznik et al, 1999). However, these systems influence the child indirectly through their influence on mesosystemic relationships and through their influence on the functioning of individuals within the child's microsystems (Szaponznik et al, 1999).

Macrosystems are society's broad ideological and cultural patterns (Szaponznik et al, 1999). They are cultural blueprints that influence the development of the ecosystems. The political, social and cultural ideologies shape individual development by enriching or impoverishing a child's microsystems, mesosystems and exosystems (Szaponznik et al, 1999). Macrosystems place a big emphasis on social norms. These norms include social norms about drug use and parenting styles. Culture also represents an important macrosystemic influence (Szaponznik et al, 1999).

The second element of the Ecodevelopmental Theory is a developmental viewpoint that highlights the changing nature of youth across time as a function not only of the adolescent's current social context, but also of changing conditions in the social context throughout the

child's life (Pantin et al, 2004). Therefore, the developmental perspective refers to a complex set of features that materialize over time within the child and in the child's social ecosystems. In addition, it refers to the nature of the interactions within and among these systems as they change and influence each other over time (Szaponznik et al, 1999). Thus, it is impossible to separate the child's individual development from the influences of a developing ecosystem that contains the child (Szaponznik et al, 1999). Similarly, it is impossible to separate the development of any single system, such as the family, from the changing reciprocal interactions in the ecosystem of the family (Szaponznik et al, 1999).

The last element of the Ecodevelopmental Theory is social interactions. Interactions refer to the patterns of relationships and direct transactions among individuals within and across the different domains and levels of social ecology (Szaponznik et al, 1999). Through these transactions, the nature of the ecosystems and the individuals within the systems are changed in ways that reflect the flexibility of the processes that influence Ecodevelopmental trajectories (Szaponznik et al, 1999). It is assumed that risk and protective factors are expressed in patterns of relationships and direct transactions between individuals within and across the different contextual levels of the social ecology (Pantin et al, 2004). Placing an emphasis on interactions is consistent with a holistic view of development, where individual functioning and development are proposed to be a reciprocal process of continuous interaction between an individual and their environment (Szaponznik et al, 1999).

2.3.2. Stress-Coping Model

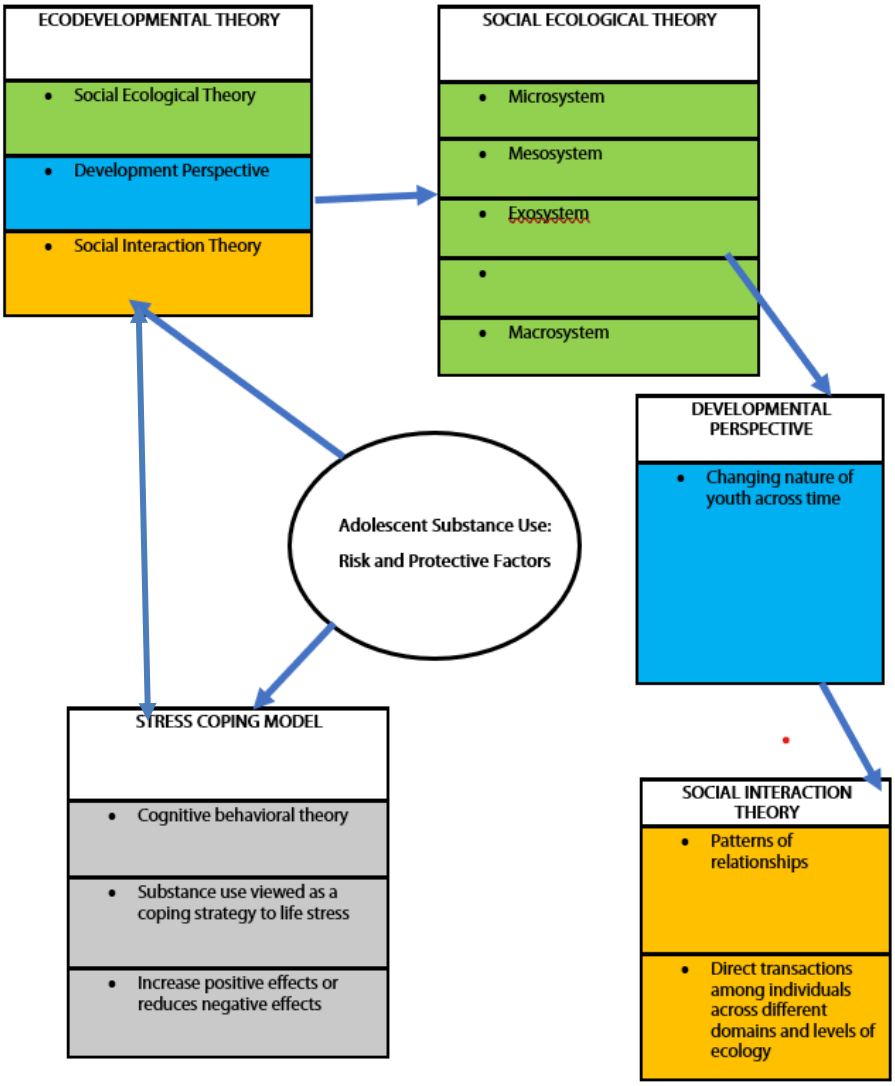
One of the most common cognitive-behavioural theories of the addiction process is the stress-coping model (Wills and Hirky, 1996 as cited in Wagner, Myers and McIninch, 1999). In the stress-coping model, substance use is viewed as a coping response to life stress that can function to reduce negative affect or increase positive affect (Wagner, Myer and McIninch, 1999)

Stress refers to the difficulties or strains that people encounter throughout life, and coping refers to the behavioural or cognitive responses that people use to manage stress (Lazarus and Folkman, 1984 as cited in Wagner, Myer and McIninch, 1999). The stress-coping model of addiction also assumes stress-buffering effects, consistent with the general stress-coping literature (Wagner, Myer and McInich, 1999). Specifically, coping mechanisms relevant to well-being should be most strongly related to outcomes at high levels of stress and less related to outcomes at lower levels of stress (Wagner, Myer and McIninch, 1999). The stress-coping

model also assumes a distinction between stress-coping skills, which are responses intended to deal with general life stress, and temptation-coping skills, which are coping responses specific to situations in which there are temptations for substance use (Wagner, Myer and McIninch, 1999).

Stress-coping skills are pertinent for dealing with overall life stress, and the aim of stress-coping is to sustain physical and psychological well-being (Wagner, Myer and McIninch, 1991). According to Lazarus et al (Lazarus and Folkman, 1984; Monet and Lazarus, 1991 as cited in Wagner, Myer and McIninch, 1999), the typology of stress-coping distinguishes between problem-focused coping strategies, which are aimed at altering or eliminating a stressor, and emotion-focused coping strategies, which are focused on handling emotional states related to or resulting from the problem. Problem-focused coping responses may be of greater advantage in situations where a stressor is manageable and an individual has adequate resources to dedicate towards the resolution of the problem, whereas emotion-focused coping strategies might be more effective when stressors are outside one's personal control and must be tolerated (Wagner, Myer and McIninch, 1999). Despite the situational specificity of the effectiveness of problem-focused and emotion-focused coping, a common finding in the substance-use literature has been that individuals who regularly use problem-focused stress-coping strategies are less likely to develop and more likely to overcome substance use problems than the individuals who routinely use emotion-focused stress-coping strategies (Wagner, Myer and McIninch, 1999). Literature has also found that adolescents who characteristically employ emotion-focused relief-orientated coping strategies are at greatest risk for developing substance use (Wagner, Myer and McIninch, 1999).

Diagram 1: Theoretical Framework Interplay



2.3.3. Interplay between the theories in the study

This current study examined the risk and protective factors for adolescent substance use and the effects on behavioural and educational outcomes. To understand the examined phenomenon, it was critical that the researcher understood the impact of the adolescent's immediate systems and how these systems influence their attitudes and belief systems around substance use. The researcher understands that in order to address adolescent substance use holistically one needs to examine all aspects of their lives. The Ecodevelopmental theory allows us to address an adolescent as an individual but also as a part of many different systems.

This framework also allows us to address how these system in an adolescent's life interplay and influence one another. The systems around the adolescent, such as the family system and environment, often come with a set of cultures, traditions, values, beliefs and attitudes around substance use. These are assimilated by the adolescent and therefore, depending on the view of the wider system, can either serve as risk or protective factors for adolescent substance use.

The Ecodevelopmental theory focuses on the different environments around the adolescent. The Stress Coping Model allowed for this research to closely examine the quality of those environments, which was imperative for the research as the research sample focused particularly on adolescents who resided in lower socio-economic environments. Residing in a lower socio-economic environment comes with its own set of challenges. The challenges extend not only to the microsystem, which directly influence the adolescent, but also the mesosystem, exosystem and macrosystem, all of which have indirect influences on the adolescent. This raised the question of whether adolescent substance use was a coping mechanism for stressors experienced in these systems. The researcher was interested in the interplay with stress-coping and adolescent substance use.

2.4. POLICIES AND LEGISLATION

2.4.1. National Drug Master Plan 2013-2017

The National Drug Master Plan (NDMP) 2013-2017 is a policy, specifically a Green Paper, developed by the Central Drug Authority (CDA) with a vision of a drug-free society and a mission to implement holistic and cost effective strategies, to reduce the supply and demand of drugs and to reduce the harm associated with substance use, abuse and dependency in South Africa (National Drug Master Plan, 2013).

The National Drug Master Plan is a document covering all national concerns regarding drug control, summarising national policies and defining priorities and allocating responsibilities for drug control efforts (National Drug Master Plan, 2013). The NDMP serves to provide stakeholders with a blueprint for preventing and reducing alcohol and substance abuse as well as the associated social and economic consequences on South African society (National Drug Master Plan, 2013).

The core outcomes of the five year NDMP are: to reduce the bio-socio-economic impact of substance abuse and related illnesses on South African society, to enable all South African citizens to deal with problems related to substance abuse within communities, provide recreational facilities and diversion programmes to prevent vulnerable populations from

becoming substance dependent, to develop and implement multi-disciplinary and multi-model protocols and practises for integrated diagnosis and treatment of substance dependence along with co-occurring disorders and more importantly, the funding for such diagnosis and the treatment thereof. Lastly, the NDMP wants the enforcement of laws and policies that facilitate the effective governance of the alcohol and drug chain supply (National Drug Master Plan, 2013).

2.4.2. National Youth Policy (2015-2020)

The National Youth Policy (NYP) for 2015-2020 is developed for all young people in South Africa, with a focus on redressing the wrongs of the past and addressing the specific challenges and immediate needs of the country's youth. The NYP 2020 builds on South's Africa's first NYP, which was in place between 2009 and 2014. The NYP 2020 improves upon and updates the previous policy by addressing the new challenges that South African youth face. The NYP aims at creating an environment for young people to grow and thrive in, an environment where the South African youth can reach their full potential (National Youth Policy, 2015).

The NYP 2020 defines young people as individuals that fall between the ages of 14 to 35 years old. The NYP further states that there are a number of issues in South African society that hampers the youth from reaching their full potential. These include: unemployment and joblessness, a high drop-out rate and inadequate skills development, an inadequate framework for youth work, poor health, a high HIV/AID prevalence and high rates of violence and substance abuse. Furthermore, the youth face a lack of access to sporting and cultural opportunities, and social cohesion. These issues are amplified for youth with disabilities (National Youth Policy, 2015).

The NYP 2020 plans to address the above-mentioned issues by introducing a number of policy proposals. The first of these proposals looks at addressing youth participation in South Africa's economy. The NYP 2020 states that measures should be implemented in two phases, one short term and one long term, to support youth absorption into employment. The short-term proposal looks at providing interventions that will assist unemployed youth and poor young people with an income and opportunities for community service and engagement (National Youth Policy, 2015). The NYP 2020 also looks at providing work exposure for youth and developing and supporting existing youth-owned businesses and cooperatives. These programmes to support young people should focus on enterprise education and training, business development, mentoring, funding and finance, access to markets and affordable well-located premises to conduct their businesses (National Youth Policy, 2015). The NYP 2020

also places a strong emphasis on supporting healthy lifestyles of South African youth. According to the NYP 2020, sexual and reproductive health and rights of the youth should be supported by both schools and the family to enable youth to have access to necessary information, to seek health care when necessary, and to practise positive behaviours (National Youth Policy, 2015). Substance abuse falls under the NYP 2020's healthy lifestyles banner. The NYP reiterates the importance of combating substance abuse among youth and states that in order to deal with the challenge of substance abuse and related illnesses affecting South African's, especially the youth, information on the effects of substance abuse should be made available and appropriate government departments should implement effective substance abuse prevention programmes (National Youth Policy, 2015).The NYP 2020 sets out specific instructions for combating substance abuse amongst youth: a) The Departments of Cooperative Governance and Traditional Affairs; Sport and Recreation and Public Works should develop recreational facilities and diversion programs that prevent people from becoming substance abusers, b) The South African Police Service should prioritize reducing the availability of illegal drugs and also ensure that alcohol should not be sold in proximity to schools and other facilities frequented by young people, c) Information on the adverse effects of substance use and risks of addiction should accompany alcohol adverts on television, d) The Department of Health should develop and implement protocols and practices for integrated diagnosis and treatment of substance dependence and co-occurring disorders, e) Laws and policies to facilitate effective governance of alcohol and drug supply chain need to be harmonized and enforced, f) Municipality by-laws dealing with restricting access to alcohol should be strictly enforced and lastly, g) Jobs relating to combating substance abuse should be created (National Youth Policy, 2015).

2.4.3. Prevention of and Treatment for Substance Abuse Act (No. 70 of 2008)

The aim of the Prevention of and Treatment for Substance Abuse Act (2008) is to offer a thorough response to the fight of substance abuse in South Africa by focusing on procedures aimed at demand and harm reduction through prevention, early intervention, treatment and re-integration programmes (Prevention of and Treatment for Substance Abuse Act, 2008).

In Addition, the Act provides an outline on guidelines for the treatment of children and youth in substance abuse treatment centres, stipulates for the registration and establishment of treatment centres and halfway houses and allows for the development of minimum norms and standards to regulate both inpatient and outpatient treatment (Prevention of and Treatment for Substance Abuse Act, 2008).

The Act also outlines the responsibilities and powers of the Central Drug Authority (CDA). The CDA is made up of representatives from numerous departments and sectors in government and it's functions include, but are not limited to, overseeing and monitoring the implementation of the National Drug Master Plan, facilitating the management of strategic projects, encouraging government departments and private institutions to compile plans, and ensuring the development of effective strategies on prevention, early intervention, reintegration and aftercare services, and the prevention of HIV infection and other medical consequences linked to substance abuse (Prevention of and Treatment for Substance Abuse Act, 2008)

The researcher believes that the lack of clarification and contradictory information in South Africa's policies and legislation will further increase the problem of adolescent substance use. Policies and legislation should be clear and precise and work together instead of contradicting one another. Until such a time, successfully combating substance use and abuse in South Africa, with not only short-term success but long term as well, will not take place. Also, South Africa does not have a stand-alone substance use/abuse policy that is specific to citizens under the age of 18. This hypothetical policy's sole purpose should be dealing with youth substance use and abuse, the consequences thereof and resources for government implemented interventions. With the increase in substance use by citizens under the age of 18, this is extremely problematic. Also, the policies that do exist focus a lot on prevention and eliminating demand and supply of illegal substances but what about the youth who are already using or addicted to substances? The current policies that exist do not make appropriate provision for these youth. In addition, the current policies have very little interrelatedness. This fragmentation and a lack of co-ordination between various government and non-government has hindered the development and implementation of an intelligible and effective approach to youth development. Sadly, existing policies do little to try to change that fragmentation and have no dedicated measures in place to try to monitor progress on the delivery of its goals and objectives.

The lack of policies has a number of serious implications for the prevention and treatment of adolescent substance use and abuse. Are minors to be treated as adults when treating their substance addictions? Are minors allowed to be referred to the same inpatient facilities as adults? Does the South African government make resources available that cater to treating substance use/abuse of minors? What are the rights of the school when a minor is caught using substances or in the possession of substances on school premises? Without the

appropriate legislation, these questions all go unanswered. Without the proper legislation and policies there are no clear guidelines, there is no plan and therefore there will no, or little lowering of the substance use amongst South Africa's youth.

2.5. CONCLUSION

The literature review addressed the issue of the ecological risk and protective factors that influence adolescent substance use. This chapter also addressed adolescent substance use and its effect on behavioural and educational outcomes. The problem context and significance of the study were discussed, as was the theoretical model, (the Ecodevelopmental Theory) pertaining to the risk and protective factors in adolescent substance use. This review also addressed policies and legislation relating to substance abuse in South Africa.

CHAPTER THREE
METHODOLOGY

3.1. INTRODUCTION

This chapter outlines the methodological approach employed in the study. The use of an exploratory qualitative research design to understand the ecological risk and protective factors for adolescent substance use and its effects on behavioural and academic outcomes is explained. This is followed by a discussion on how the participants were selected through making contact with gate keepers in the school community, and the design of the interview instrument to elicit the perceptions of adolescents on risk and factors for substance use and its effects on behavioural and academic outcomes. The data collection apparatus and data collection procedure employed are also discussed at length. The approach used to analyse the data, data verification, the ethical considerations, limitations of the research as well as reflexivity are also described.

3.2. RESEARCH DESIGN

Burns and Grove (2003:195) define a research design as "a blueprint for conducting a study with maximum control over factors that may interfere with the validity of the findings". Simply put, a research design is a set of guidelines that a researcher follows to address the research problem. The research study was exploratory in nature and will use a qualitative research design method.

A qualitative research design is an approach to social research that attempts to study human action and experiences from an insiders' perspective. This is done in order to gauge the meanings and understanding that individuals attach to their own experiences (De Vos et al, 2011). In addition, qualitative research is mostly associated with words, language and experiences as opposed to measures, statistics and numerical figures. It seeks to capture the subjective meaning of people's words and behaviours in their natural environments (De Vos et al, 2011).

A qualitative research design was used in this study as it was an excellent way for the researcher to address the research topic. Risk and protective factors around adolescent substance use and its effects on behavioural and academic outcomes, are subjective and individual dependant. The qualitative research design allowed the researcher to capture the nuances and dynamics around the research topic in a way that a quantitative design would not allow. Further, the qualitative research design afforded the researcher the opportunity to capture the intricacies of

individual experience and outcomes. Lastly, the study employed a qualitative research approach as the research questions were best answered by the way of attitudinal data. The researcher aimed for participants to be allowed to present their own interpretations of their situations rather than having her (the researcher) make conclusions based on quantitative data.

3.3. POPULATION AND SAMPLING

3.3.1. Study Population

Burns and Grove (2003) describe a study population as all the elements that meet the criteria for inclusion. The population for this study was comprised of 37 high school learners from Cape Town, South Africa. Three high schools have been used in this study namely: Bonteheuwel High School, Arcadia High School and College of Science and Technology. These high school are situated in lower socio-economic prominently Black and Coloured areas, namely, Bonteheuwel and Khayelitsha. A majority of the study population indicated that they reside in these areas as well. These areas have been identified as hot spots for crime, gangsterism and substance abuse and use amongst community members across all ages. These facts rendered it a suitable environment in which to conduct this research.

According to Arendse and Patel (2014), Bonteheuwel was built as a new township to alleviate housing shortages for the coloured population after the forced removals in the 1960s. The population is comprised of predominantly poor Coloured Afrikaans-speaking residents. An increased need for housing resulted in the increase of backyard-dwelling living becoming a reality for many residents. The 2011 census states that the community has a population of 32 977 residents with a monthly income of R3200 or less for 50% of households. The community of Bonteheuwel has an average household size of 4,65. As the township expanded rapidly, so did crime, poverty, and environmental degradation (Arendse and Patel, 2014).

Khayelitsha is a sprawling township located some 35 kilometres from the city centre. It consists of informal (shanty town) and formal brick housing (Nleya and Thompson, 2009). With its foundation in apartheid planning, Khayelitsha retains a marginalised and racial character to this day (Nleya and Thompson, 2009). Khayelitsha is an island of surplus labour and poverty; through its residents, it remains more connected to the rural Eastern Cape Province than the city within which its located (Nleya and Thompson, 2009). Khayelitsha provides one of the most violent settings in urban South Africa as shown by the crime stats of 2007/2008. The crime stats indicate that Khayelitsha ranks among the top areas in South Africa for murder, rape and aggravated robbery, which tend to be concentrated in the so-called black mega-

township (Nleya and Thompson, 2009). The causes of crime and violence in townships are many and often varied. The underlying factors of violent crimes in Khayelitsha have been traced to poverty, transience of the population and historical lack of effective policing (Du Toit and Neves, 2007 as cited in Nleya and Thompson, 2009).

3.3.2. Sampling technique, Sample Characteristics and Sampling Procedure

For the purpose of this study, the researcher used a non-probability sampling technique. In non-probability sampling, researchers use their judgement to select the subjects to be included in the study based on their knowledge of the research topic (Babbie and Mouton, 2001).

A purposive sampling method was utilised by the researcher. According to Babbie and Mouton (2001), purposive sampling uses the judgment of an expert in selecting cases, or it selects cases with a specific purpose in mind. This type of sampling is used in exploratory research or in field research (Babbie and Mouton, 2001). Purposive sampling is somewhat less costly, more readily accessible, more convenient and selects only those individuals deemed relevant to research design (Babbie and Mouton, 2001). The researcher chose the participants from her own judgment, having kept in mind the purpose of the study. The researcher also chose to use a purposive sampling method as it allowed her to utilise a small subset of learners, who met the initial criteria, from the larger population of the school environment.

The researcher acquired ethics clearance from the Department of Ethics at the University of Cape Town, as well as a permit from the Department of Education in the Western Cape to access the three schools (Annexure 2). When the researcher made contact with the principals of the schools, clearance and permits, in addition to the research proposal, were submitted for consideration. Upon approval and admission into the respective schools, learners who had agreed to participate in the research study were given consent forms to be signed by their respective parents or guardians, to confirm their child's participation in the study (Annexure 3).

The researcher made use of gate keepers within the school community, such as principals and life orientation teachers, who were knowledgeable about the participants, in order to gain access to participants. The researcher targeted youth between the ages of 13 to 18 years old, who were currently in grades 8 to 12. There was no gender, race, socio economic background or academic performance restrictions for participants.

The researcher was hoping to get a sample size of between 30 and 50 participants, as a sample size of this nature was suitable for an explorative study. Given it was an academic

setting, there were time constraints, and having to compete with classroom schedules and exam times, the researcher was only able to access 37 participants.

The sample consisted of 11 black African and 26 Coloured male and female youth. Twenty-three of the grades 8 to 12 participants were female and 14 were male.

3.4. DATA COLLECTION

3.4.1. Data Collection Approach

Given the topic and objectives of the study, the researcher conducted focus groups with the 37 selected learners. To assist with the conversation in the focus groups, the researcher used a semi-structured interview guide. This allowed for more flexibility between the researcher and participants and allowed for constant and consistent communication between them, as well as among the participants themselves as the researcher was interviewing more than one person at a time. Focus group interviews are a good way of generating data as it allows the researcher to have face-to-face interaction with his/her respondents (Babbie and Mouton, 2001). Interviews with the focus groups required the researcher to be on site, which also eliminates many problems that can be experienced when conducting research, such as miscommunication or the participants misunderstanding the questions. In addition to assisting with eliminating misunderstanding and miscommunication, being on site provides the researcher with an opportunity to probe and discuss answers that might need to be clarified, or have respondents expand on answers that the researcher finds intriguing and vital to the research (Babbie and Mouton, 2001). The presence of the researcher also proved to be beneficial in creating rapport with the participants and assisting with their comfortability.

3.4.2. Data Collection Instrument

Qualitative researchers emphasize collecting in-depth information with a relatively few individuals or within a very limited setting (Babbie and Mouton, 2001). To collect in-depth information, the researcher used a semi-structured interview schedule with open-ended questions organised under the six categories discussed in the conceptual framework. A semi-structured interview schedule was used as a guide to achieve detailed responses from participants. According to De Vos (2005), a semi-structured interview is a set of "predetermined questions on an interview schedule, but the interview will be guided by the schedule rather than be dictated by it" (De Vos, et al., 2005: 296).

The questions asked were focused around the research objectives in determining adolescents' views around their substance use and its effects on their behavioural and academic outcomes. The questions were structured in a way that would help the researcher gather information on adolescent substance use trends. Using a semi-structured interview guide acts us a guideline while not limiting the researcher. This proved to be helpful as it allowed the researcher flexibility to step away from the interview guide and probe for more information to answers given.

3.4.3. Data Collection Apparatus

In addition to the semi-structured interview schedule, a digital recorder was used to record the focus groups. Permission was sought and granted before each focus group for the use of the digital recorder. A tape recorder was additionally used as it allowed for a much fuller record of notes to be taken during the focus group interview session(s). Using a tape recorder allowed the researcher to be present and concentrate on exploring the topic and being more attentive on the interview proceedings and allowed the researcher to note any non-verbal cues (De Vos, 2005). Using a digital recorder during the focus group session(s) also allowed for the free flow of information without any interruptions.

3.4.4. Data Collection Procedure

Through utilising gate keepers within the school communities, the researcher conducted the focus groups in a private space on the school premises. Due to time constraints and competing with classroom schedules and academic testing, the researcher was only allowed to meet with each focus group once. Each focus group had a minimum of 10 participants and the maximum was 17 participants. The focus groups were conducted in English, but participants were allowed to respondent in the language they were most comfortable with. The focus groups each lasted about 90 minutes. The researcher would have preferred to have the focus group sessions last longer or be allowed to have more than one focus group per school. Unfortunately, this was not possible as it would have required the participants to miss more classroom time.

3.5. DATA ANALYSIS

Data analysis is "the process of bringing order, structure and meaning to the mass of collected data" (De Vos, 2005: 333). The qualitative data collected was analysed according to Tesch's approach as cited in De Vos (2005).

- Step 1: The researcher transcribed the three focus groups from the digital recorder verbatim, while also translating the necessary information into English. The researcher then read through each transcription thoroughly.
- Step 2: While analysing the data, the researcher began to label the notes, keeping in mind the research objectives. The researcher also made notes on the prominent and common ideas as they emerged from the transcripts.
- Step 3: The researcher then grouped labels under main themes and categories of that theme.
- Step 4: The researcher then began grouping together the common elements from all the interview transcriptions. The researcher spent time arranging and rearranging the common ideas into meaningful themes and categories. The themes and categories were abbreviated as codes and were written next to narratives and colour coded to help the identification process.
- Step 5: The themes were named using the research questions as a guide. Related themes and categories were then grouped together under the different headings.
- Step 6: The schema was then used as a framework for discussing the analysis as it provided a great deal of information and the researcher spent some time determining the relevant themes. Actual quotes were used in the discussion to illustrate the themes and categories.
- Step 7: After this, a framework of analysis was developed using the themes and categories that emerged from this process. To provide a critical analysis, the researcher then compared the research findings with other studies in the literature review.

3.6. ETHICAL CONSIDERATIONS

Ethical considerations have to be taken into account when doing research. As researchers, we are responsible for the mental and physical safety of our participants. There are a number of ethical considerations that are put in place to assure that harm is minimised for participants of research studies, which include: avoidance of harm, informed consent, deception of respondents, confidentiality, cooperation with contributors, accuracy of report findings, competence of the researcher and debriefing (De Vos, 2005). From the beginning the researcher ensured that ethical considerations would be incorporated in the process of conducting this research. Ethical clearance was obtained from the Department of Social Development at the University of Cape Town. The researcher incorporated the following ethical considerations into her researcher:

3.6.1. Avoidance of harm

De Vos (2005) explains that it is the duty of the researcher to avoid all harm, whether it is physical discomfort, emotional distress or embarrassment. With the nature of the research question, it is the researcher's responsibility to ensure that participants have a level of comfortability. However, this opens up the possibility that participants may divulge very personal information. If this does occur, it's the researcher's duty to contain the participants until the end of the interview (De Vos, 2005).

To abide with the ethical considerations, the participants were informed about the research process and the possible impact of the research. Participants were also informed that their participation was voluntary and that they could, at any stage, choose to no longer participate without any consequence. A position of transparency was taken by the researcher to avoid harming the participants in any way. The researcher took time after each focus group to debrief with the participants, ensuring they didn't feel uncontained after sharing such sensitive information.

3.6.2. Informed consent

Before a study can commence, the researcher needs to get direct consent from the participants (De Vos, 2005). At the stage of informed consent, researchers have to practise complete transparency in order to avoid the deception of participants. This also allows the participants to make an informed decision about whether or not they would like to participate in the research study (De Vos, 2005). A participant's participation in the study has to be voluntary; no participant may be forced, threatened, deceived or coerced into participating in the study (Babbie and Mouton, 2001).

As the research was conducted in schools, the researcher received written consent from the Department of Education to conduct research with students. As some of the participants were under the legal age to give consent to partake in the research study, the researcher obtained consent to interview the learners from both the school as well as the parent/guardians of the learner, and lastly from the learners themselves. The researcher also informed the participants that they were allowed to withdraw from the study at any stage, with no consequence to them.

3.6.3. Deception of Participants

Deception occurs when there is an active misrepresentation of information about the study (De Vos, 2005). However, in this study complete transparency was practised in order to reassure

the participants that they would not be deceived about the goals and objectives of the study. There were no additional research objectives other than what was stipulated, in the consent form, and presented to the participants.

3.6.4. Confidentiality

Participant privacy and identity should be of utmost importance to the researcher and should be protected by the researchers (Babbie and Mouton, 2001). The researcher contracted around confidentiality and the importance of confidentiality between researcher and participants. Along with confidentiality, the researcher discussed privacy. The participants were constantly reassured of their anonymity and that no violation of their privacy would occur. Participants in the study were given the option of using aliases or not using their names at all and were informed that their names would not be used in the transcription of what was discussed in the focus group.

3.6.5. Debriefing

Once the focus group had ended, an opportunity was provided for the participants to share their experiences and feelings. This allowed reasonable steps to be taken by the researcher to correct any misconceptions that participants may have had and minimize the risk of harm. Time was set aside at the end of each focus group for researcher and participants to reflect on the experience. Participants were given the opportunity to discuss any issues that may have arisen for them. The participants were reminded of the confidentiality agreement discussed at the beginning of the interview. De Vos (2005) states that debriefing awards the researcher an opportunity to rectify any misconceptions the participants may have.

3.6.6. Co-operation with other stakeholders

Full ethical clearance was obtained from the Department of Social Development, along with the Western Cape Education Department. The participants were informed that the research was for the completion of the researcher's master's thesis and that information gathered would be used to compile a report which would be shared.

3.7. DATA VERIFICATION

3.7.1. Credibility

Credibility concentrates on whether the inquiry was conducted in such a manner that ensures the subject was accurately described and identified (De Vos, 2005). Before the data collection commenced, the researcher conducted thorough research on the thesis topic. This research focused not only on international data but also South African literature regarding adolescent substance abuse and use. From the research gathered, the researcher composed a literature review and a theoretical framework from which to work while conducting this research.

3.7.2. Transferability

Transferability has the "burden of demonstrating the applicability of one set of findings to another context rest more with the investigator that would make the transfer rather than the original investigator" (De Vos, 2005: 246). To ensure transferability, the researcher addressed numerous theoretical concepts and models that complimented the research. The original theoretical concepts and models were referred to when developing the research, as this helped define the theoretical boundaries of the research.

3.7.3. Dependability

Dependability refers to the "researchers attempt to account for changing conditions in the phenomenon chosen for study as well as changes in the design created by an increasingly refined understanding of the setting" (De Vos, 2005: 346). Babble and Mouton (2007) simplify the explanation and explain it as follows; dependability provides the understanding that if the study were to be done again with the same or similar participants, in the same or similar context, the findings of the research should be similar. The researcher has presented a clear and comprehensive table of participants, with a break down of race, gender, age, grade and area of residence.

3.7.4. Conformability

Conformability is the last construct. This looks at whether or not the results of the study, will be confirmed by another study (De Vos, 2005). It's imperative the findings are not affected by any bias of the researcher. It is the researcher's responsibility to screen every level of the research for possible bias. The researcher was aware of (1) data overloading, which refers to missing the important information and putting a bigger emphasis on some data thereby skewing

the findings; (2) unreliability of respondents; (3) over or under accommodation of research that questions the research assumptions; (4) co-occurrences mistaken for casual relationships; and (5) selectivity or over-confidence in some data when trying to confirm a finding (De Vos, 2005).

3.8. LIMITATIONS

This section will discuss the limitations of this study in relation to the research design, sampling, data collection, data analysis and the researcher herself.

Using the explanatory design provides its own set of limitations. This design can be very lengthy and time consuming and the researcher will need to practise time management skills in order to ensure that s/he successfully completes the collection and analysis of data (Creswell and Plano-Clark, 2011). The qualitative research design allows for the collection of in-depth information. However, the information is based on the interpretations of a relatively small sample of participants. Therefore, the findings from these samplings cannot be generalised because of how small the sample is. The qualitative research design also encourages that a relationship develops between the researcher and participants and that this relationship will be mutually beneficial. Because this relationship is encouraged, qualitative researchers do not remain indifferent to the lives of participants. This relationship allows for its own limitations as the researcher's own biases and subjective opinions may influence the interview process, the opinions of participants and the research findings. For this research study, purposive sampling was used, which in itself is limiting, as members have to meet a predetermined criterion, restricting who was allowed to partake in the study (De Vos, 2005)

The semi-structured interview has a set of predetermined questions, which could possibly influence the data collected, as the researchers are aware of the amount of questions and their time limitations.

As the researcher analysing data collected, biases may arise. The researcher may have certain expectations when reporting the findings; these expectations could bias how responses are interpreted or cause the researcher to only interpret certain participants' responses. However, it's the job of the supervisor to pay careful attention to the transcription of the data collected, which can avoid these biases.

Some participants were Afrikaans and IsiXhosa-speaking which presented a challenge. Even though the researcher speaks and understands Afrikaans it isn't her first language as it was for some participants. It was somewhat challenging to understand certain phrases and terms used

by participants, especially those unfamiliar to the researcher. The researcher is completely unfamiliar with IsiXhosa. The researcher had to be aware of the fact that she would have participants who spoke IsiXhosa as a first language. The researcher had to ensure that the IsiXhosa-speaking participants were comfortable answering questions in a language that was not their native tongue. For the most part participants of the groups all answered in English but when needed, the researcher asked group members to translate from isiXhosa to English. The researcher also ensured that she reflected frequently to ensure that what she understood was what the participants meant. The language barrier could easily have influenced the tone of the interview and information shared and content obtained. The researcher was unfamiliar with some of the terms and would have to stop and get clarification from the participants, and at times this was disruptive. However, it was required, for example, she discovered that the names of substances used in communities changed constantly and that names for the same substance was different depending on whether the participants resided in a predominately Coloured or Black community.

Because the participants were all scholars, getting access to them proved to be challenging. The researcher had to work within the respective schools' timetables. The researcher often only had a limit amount of time to conduct the focus groups, as learners could not be out of the classroom for too long for fear of missing important academic time. The limited access and time constraints had an effect on the focus groups as the researcher felt that the participants were rushing through their responses. In turn, this affected the researcher's ability to comprehensively expand on the data she was receiving. Furthermore, the researcher would have liked to have had smaller numbers of participants in the focus groups, which would have allowed for more detailed responses. Because of restricted time allocations given by the respective schools, the researcher was only allowed to have one focus group at each school with all of the participants. Not all of the participants were comfortable sharing their experiences in such a big group. Smaller groups would have allowed participants a feeling of comfortability. The researcher's own work commitments also played a role in her accessibility to participants, as her work schedule often clashed with the schedule provided by the respective schools.

This chapter explained the research design, sampling method, data collection approach, data collection instrument, data collection tool, and data analysis and data verification. This chapter also discussed the limitations in relation to the methodology.

3.9. CONCLUSION

In conclusion, this research proposal discussed the concept of risk and protective factors in adolescent substance use. It also discussed literature around substance abuse and family functioning. This research proposal also addressed the methodology, data verification, limitations to the study, ethical considerations and lastly, reflexivity.

CHAPTER FOUR:

DISCUSSION OF FINDINGS

4.1. INTRODUCTION

This chapter presents findings from the qualitative interviews with 37 high school learners to explore the Ecological Risk and Protective Factors of Substance Abuse and its Effects on Educational and Behavioural Outcomes among High School Learners. Firstly, the profile of the participants will be presented and discussed. A framework for the discussion of the findings will then be presented (Table 4). This will be followed by a detailed discussion of the findings.

4.2. PROFILE OF PARTICIPANTS

Table 1: Demographic Characteristics of the Participants

VARIABLE	NUMBER	PERCENTAGE
SCHOOL 1: BONTEHEUWEL HIGH SCHOOL		
Number of Participants	12	100%
Average Age:	16	
Gender:		
Male:	2	17%
Female:	10	83%
Race:		
Black:	1	8%
Coloured:	11	92%
Grade:		
8:	7	58%
9:	0	0%
10:	0	0%
11:	1	8%
12:	4	33%
SCHOOL 2: ARCADIA HIGH SCHOOL		
Number of Participants	15	100%
Average Age:	17	
Gender:		
Male:	7	47%
Female:	8	53%
Race:		
Black:	0	0%
Coloured:	15	100%
Grade:		
8:	2	13%
9:	0	0%
10:	3	20%
11:	4	27%
12:	6	40%
SCHOOL 3: COLLEGE OF SCIENCE AND TECHNOLOGY		
Number of Participants	10	100%
Average Age:	15	
Gender:		
Male:	5	50%
Female:	5	50%

Race:		
Black:	10	100%
Coloured:	0	0%
Grade:		
8:	0	0%
9:	0	0%
10:	8	80%
11:	2	20%
12:	0	0%
SAMPLE SIZE: 37		

Table 1 above presents the demographic profile of the participants

Bonteheuwel High School: The sample consists of 12 participants in grades 8-12 with an average age of 16 years old. Of the 12 participants, 2 self-identify as male and 10 self-identify as female. Eleven of the twelve participants indicated that they were coloured, and one respondent identified as black. Most of the participants indicated that they resided in the area that the school was situated in, one participant stayed in Delft and one stayed in Manenberg. All the areas identified by participants are well-known coloured communities situated on the Cape Flats. Unfortunately, these areas are infamous for high levels of poverty, unemployment, gangsterism, substance abuse and crime (Arendse and Patel, 2014)

Arcadia High School*:* The sample consists of 15 participants in grades 8-12, with an average age of 17 years old. Of the 15 participants, the gender difference is split almost equally with seven participants identifying as male and eight identifying as female. All 15 participants stated that they were coloured. The participants resided in a number of different areas. However, all of these areas share many similarities, such as being predominantly coloured lower socio-economic areas on the Cape Flats. These areas are also plagued with similar issues to those mentioned on the Cape Flats such as, high levels of substance use and abuse, crime, gangsterism and unemployment.

College of Science and Technology (COSAT) based in Khayelitsha**:** The sample consists of 10 participants in grades 10 and 11, with an average age of 15 years old. Of the 10 participants, the gender difference is split equally with five participants identifying as male and five identifying as female. All 10 participants stated that they were black. The participants all resided in Khayelitsha. Khayelitsha is a prominently black township situated on the outskirts of Cape Town (Nleya and Thompson, 2009). Participants indicated that, similarly to the coloured areas mentioned, Khayelitsha is plagued by a number of negative elements such as a very high crime rate, excessive substance use and high levels of poverty.

4.3. DISCUSSION OF FINDINGS

Table 2: Framework for Analysis

THEMES	CATEGORIES	SUBCATEGORIES
Environmental risk factors that influence adolescent substance use	Environmental Stressors	• Gangsterism • Substance abuse • Crime • Accessibility of substances
	Low Socio-Economic Communities	• Poverty
Family risk factors that influence adolescent substance use	Parental substance use	• Violence • Family roles • Single parent household
	Parental involvement	• Communication • Lack of supervision
	Parent-child relationships	• Parent-child attachment
	Family conflict	• Coping mechanism
Bio-genetic risk factors that influence adolescent substance use	Adolescent life stage	• Choices • Risky choices
	Peer influences	• Peer pressure
	Life stress	• Coping mechanisms
Effects of adolescent substance use on educational and behavioural outcomes	Negative effects	• Academic failure • Neglecting studies • Decline in academics • Changes in behaviour
	Positive effects	• School attachment • Role of teachers
Protective factors against adolescent substance use	Community	• Environment
	Family	• Family structure

4.3.1. Environmental Risk Factors of Adolescent Substance Use

Environmental Stressors

The consequences of childhood poverty can be devastating. Research has found that children raised in poverty are at increased risk for a wide variety of negative outcomes over the course of their lives (Moore et al., 2009). Negative outcomes are particularly associated with deep and long-term poverty experienced in childhood. Poverty is strongly associated with a child's social and emotional development (Moore et al., 2009). Children in poverty have a greater risk of displaying behavioural and emotional problems, such as disobedience, impulsiveness and difficulty getting along with peers (Moore et al., 2009).

Children who live in poverty display fewer positive behaviours than their non-impoverished peers. Long-term poverty is associated with children's inner feelings of anxiety, unhappiness and dependence (Moore et al., 2009). There are two schools of thought on why poverty influences a child's social, emotional and behavioural outcomes. First, poor children are most likely to be raised by a single parent and therefore live in homes where there is less parental supervision and more parental distress (Moore et al., 2009). There is also an element of instability and children who experience more unsettled lives are more likely to have negative social and emotional outcomes than children who have more stable home environments (Moore et al., 2009). Second, children who grow up in impoverished conditions are less likely to be exposed to positive social norms in their lives and neighbourhoods. For example, children who grow up in areas of high poverty are exposed to violence regularly (Moore et al., 2009). This exposure puts the child at greater risk for psychosocial difficulties, such as internalised behaviours, such as anxiety and depression and external behaviours, such as substance use (Moore et al., 2009).

In order to get a better understanding of the circumstance's participants lived in, they were asked to describe their home environment. Despite the participants residing in many different areas across Cape Town, with a deliberate selection across black and coloured areas, there were stark similarities in how they described their respective areas. Participants reported that not only did they reside in unsafe environments that caused them to live in fear, as well as restricted their movement, but also environments where they experienced the daily stressors of crime, gangsterism and substance use. Many participants described their home environments as

poverty stricken, with high high-school dropout rates and unemployment. According to Brook et al (2006), it is becoming increasingly more evident that environmental stressors have adverse consequences for families and children. Eamon (2002) states that neighbourhood environments that are characterised by criminal and gang activity, violence and concentrations of poor families, are also associated with youth anti-social behaviours. Additionally, children from low-income neighbourhoods have an increased risk for exposure to low-quality living conditions, high-crime neighbourhoods, exposure to community violence, stressful life experiences and pro-aggressive beliefs that mediate the relation between economic disadvantage and child deviant behaviours (Eamon, 2002).

> *It's a fact, that Site C is the highest crime area. It has a high death rate; many people are killed in Khayelitsha. Living in Site C is not a good experience for me because you will see someone getting killed in front of you and it's not a big deal lately. You will see someone being robbed and you wouldn't be shocked. You can see someone getting drunk and sleeping in the street and it wouldn't bother you because you are immune to it. You are used to people getting drunk.* (Learner, COSAT)

> *I feel safe in my home, but we live next to a drug den and there are gangsters. So, I feel safe at my house but then I think, how long before they run into our house or start shooting or jump over into our property. They can do anything to use because we are just females in our house.*
> (Learner, Bonteheuwel High School)

> *There are no morals. People are dying it's so unsafe. You can't even walk. They hung a boy on the train lines* (Learner, Arcadia High School)

> *Even my cousin was shot in a crossfire. She went to the shop and then they started shooting. Her mother and father just left, and they started shooting and she had to lay flat on the ground and she did not even know she was shot in the arm.*
> (Learner, Arcadia High School)

> *You can't even go to the library or anything like that. Even in the morning when you are on your way to school, they start shooting* (Learner, Arcadia High School)

Participants from both areas reported that in their communities they had easy access to substances. Substances were readily available from illegal businesses (drug dealers), as well as legal establishments (liquor stores) which didn't adhere to the legal age restrictions. Accessibility to substances was a prominent theme in the data collected. Participants recalled being able to purchase substances on every corner and having illegal shebeens in close proximity to their homes. Shockingly, the participants stated that not only were they able to purchase any kind of substance in their respective communities, but also on their school

premises. Accessibility to substances played an influential role in each participant's substance use.

> *If you go to a shebeen nowadays in Bonteheuwel, they don't ask you where is your ID and if you go to a merchant, they just sell it because they don't care. They are going to make money out of us. Here in Bonteheuwel it's usually the teenagers that go buy wine and drugs, everything* (Learner, Bonteheuwel High School)

> *Yes, everywhere. Every corner. Everywhere you go. Even on the school. There are more shebeen's then churches in our communities. There are more merchant then churches* (Learner, Arcadia High School)

The participants also reported that their environments, despite the many social ills, had a strong sense of community. The participants described how the community members took care of one another and that just because the environment was toxic, didn't mean there weren't any good people living in their environments, and that positivity, upliftment, development and a sense of comradery was still possible in their communities. Participants also explained how their communities served as a mirror of what behaviour to steer away from.

> *One good thing, the fact that it's an advantage, because it trains you as a young person on how to live. You literally can see someone go from the top right to the bottom. You can see where they went wrong and see them go down. That's can experience because you can see that if I do this, this is where I will end up because I have living proof. There is living proof everywhere in Khayelitscha. You have living proof of being a drop out, of being a gangster, of being a drunk. You have living proof of going to school. You have living proof of everything you do* (Learner, COSAT)

> *People say Bonte-Evil, they speak that over our community. So now people who don't come from Bonteheuwel have that perception of Bonteheuwel. But our community is not bad because there are good things that come from Bonteheuwel*
> (Learner, Bonteheuwel High School)

The researcher assumed that the environment would play a vital role in adolescent substance use. However, the magnitude of the environmental influence was severely underestimated. Participants described how dangerous their environments were, how they faced many social ills growing up in these environments and all the challenges they faced consistently on a daily basis. Research suggests that neighbourhood adversities often co-exist, such that residents of disadvantaged neighbourhoods are often exposed to several environmental stressors (Brook et al, 2011). The research found that all participants were exposed to multiple environmental risks compounding the effects thereof. In addition, although they were able to acknowledge that

there were positive aspects to living in their communities, the negative influences were very hard to ignore, and the cons far outweighed the pro's.

The accessibility to substances was alarming. Participants indicated that they could procure substances very easily. Those substances were available to them at any stage and they could even purchase drugs on school premises. This is in line with a study conducted by Al Ghaferi (2015, as cited in Alhyas et al, 2015). The study states that the environments adolescents reside in influence their substance use as they contribute towards the accessibility of substances.
Some participants expressed that substance use was a choice and that they were mature enough to know the difference between right and wrong. At what point do we acknowledge that even the ability to tell right from wrong is influenced by experience and perception, especially if substances constantly surround you? Unfortunately, as mentioned before, residing in a low-income area does influence your socialisation around substance use, and this is very closely linked to initial substance use.

Of great concern to the researcher is the prevalence of trauma and re-traumatisation that adolescents who live in low-income neighbourhood experience. It has long been established that trauma has a devastating effect on the human psyche. Trauma coupled with the inability to successfully navigate stressful situations, is a downside of the adolescent life stage, will ultimately influence adolescent substance use. Exposure to traumatic life events often results in hostile psychological symptoms, including intrusive cognitions, images, memories and emotions associated with the original trauma (Garland et al., 2013). These post-traumatic symptoms may promote maladaptive or self-destructive behaviours, including substance use (Garland et al., 2013). Individuals exposed to trauma are especially at-risk for developing substance-use disorders (Garland et al., 2013). - Although the casual mechanisms linking trauma, substance use and psychological symptoms remain uncertain, there is significant research that indicates psychoactive substances may be used to self-medicate the dysphoric mood, intrusive cognitions and somatic sequelae of trauma (Garland et al, 2013). The risk chain underlying self-medication of trauma symptoms may involve positive feedback loops between stress appraisal, emotion dysregulation, physiological arousal, compulsive behaviour and palliative coping with substances (Garland et al., 2013). Continued or repeated stress activation subsequent to trauma exposure may lead to a chronic deviation of self-regulatory mechanisms from their normal mode of operation that leads to heightened stress sensitivity, vulnerability to

future stressors and the almost inevitable development of mood disorders (Garland et al., 2013). Furthermore, psychosocial stress and negative mood evoke craving and addiction-related cognitive biases towards drug-related cues, leading to increased motivation to acquire and consume drugs which is then sustained through negative reinforcement conditioning (Garland et al., 2013). Lastly, triggered by traumatic stress, the feedback loop between substance use and psychiatric symptomatology is self-perpetuating and may ultimately lead to the development of serious addictive behaviours and substance dependence (Garland et al., 2013).

Every single one of the environmental risk factors, expressed both in the literature review and in data gathered for this research, is comprised of characteristics associated with poverty e.g. low income-households, high unemployment, poor parental practices, high exposure to violence, trauma, poor coping skills, lack of adequate resources etc. The exposure to these multiple risks factors in the community environments are consistent and escalate as the community continues to deteriorate. Essentially, in the researcher's opinion, this makes poverty the gateway to adolescent substance use especially in lower socio-economic environments.

4.3.2. Family risk factors that influence adolescent substance use

Coleman (1990) states that the family is vital organization through which social capital is transferred. Coleman (1990) specifically mentions three mechanisms through which families transmit capital: 1) through time and effort invested by parents 2) through affective ties between parents and youth and 3) through clearly expressed guidelines concerning behaviours considered acceptable and unacceptable. Strong family attachment acts as a channel through which effective socialization occurs (Wright, Cullen and Miller, 2001). The content of family socialization practices is also important, certain forms of capital may actually facilitate criminal involvement, such as having antisocial values or delinquent peers (Wright, Cullen and Miller, 2001). However, parents can shape the youths' moral reserves against deviant behaviour by listing clear rules forbidding actions that they deem as possibly harmful. Coleman (1990) argues that parental involvement and investment of time and effort, the affective bonds they produce and uphold, and the prosocial direction they offer, will most likely, change the likelihood that the well-supported youth will partake in deviant behaviours, such a substance use. The effects of high family social capital are cumulative, in that, the attachment between a youth and a parent serves as one protective factor against deviant behaviour and an additional

protective factor against future delinquent behaviour (Wright, Cullen and Miller, 2001). The more resources youth have to pull from, the lower the possibility that they are to remove themselves from supportive relationships and systems. (Wright, Cullen and Miller, 2001)
The participants mentioned a number of different family risk factors: parenting styles versus adolescent life stage, family structure, home environments, parental role reversal and parental substance use. The participants shared experiences pertaining to familial risk factors. First, the participants stated that parenting styles often clashed with their life stage. Adolescence is a time of exploring and seeking independence this often entails separating from parents and attaching to peers. Participants in this study stated that they felt restricted by their parents parenting style, this caused frustration and strain amongst family members. Another common theme was family structure, with many participants stating that they were from single-parent households which is often a single income household.

> *My daddy is not someone who is open minded, so you can't just speak to him about anything. Like with your friends, where you can speak to them about anything. When it comes to him, you can't have an open conversation with him about anything. He was born in the Apartheid era so when you speak to him about stuff that is modern, he doesn't understand. He has a different mind-set, in answering certain questions that you ask him (Arcadia High School)*

> *They want to know everything. Where I am going? Who I am with? But I know that I am being safe. I am being myself. I don't like people who are overprotective like my daddy. They need to let me be myself* (Bonteheuwel High School)

> *Miss I have this, where my daddy works away and then he will come and he lives by his friend and he will smoke buttons every day and we will go to him and he is dikgeroek (high) and he will just give you money (Arcadia High School)*

The lack of parental-child connection in the adolescent stage, acts as risk factor for adolescent substance use, because this disconnect means that social capital in not being successfully transferred from parent to child. Social capital is important at this stage in an adolescent's life as parental opinions around substance use is often a mediating factor for adolescent substance use. Adolescent socialization around opinions of substance use is heavily influenced by parental opinions of substance use. The researcher determined that this socialization can both positively or negatively influence adolescent substance use behaviours and that the transmission of social capital can also be a double-edged sword. For example, if a parent used

substances it was more likely that the adolescent had more lenient views around the consumption of substances. Unfortunately, the data gathered in this research showed that many participants had a parent who used or abused substances. These substances included alcohol, marijuana, mandrax and the highly addictive, methamphetamine. There was an overwhelming amount of data collected on parental substance abuse and the effects thereof.

> *My mother was on drugs and because of it my mother and father aren't together anymore and because I am the oldest, everyone depended on me. It got to that level where she started hallucinating and got sick. I couldn't sleep, I couldn't eat. People phone me, I don't know them, I have to go and fetch her. At school I can't focus, I can't do my work. I have to go fetch her, I must walk and get her at the train station or someone's house and then she came to the house and I had to ask my father if we can take her. Just to help her and at night she will wake me and tell me, look here look who's here? I can't sleep because I'm worried, I have to look after her. I can't leave her alone, I can't let her go to the bathroom alone. Because when I look for her, she is busy doing something to herself. She influenced me so much. She told me something and I started believing her. I believed her, this is true man. Everyone gave up, even my boyfriend didn't support me. But I didn't give up man. My father, everyone. They will say don't look for her, or no we aren't going with you. I walked alone, I didn't care what people said. Or maybe I walk in the road and people are laughing. They will say hey kyk hoe lyk die vrou" but I didn't care because she is still my mother* (Learner, Arcadia High School)

> (Referring to father) *When he drinks, he drinks to a point. He starts drinking Friday, because it's Friday. He has lots of people that he owes but he will take that money and go party. Then people come to the door and say Jou pa skuld my geld (Your father owes me money). But he then just got paid. Next month that same people come again. Its two months already. But we didn't see any of that money and I ask where does that money go? Because it doesn't come to us and it doesn't go to the people that he owes. Dit gat na die wyn toe (The money goes to purchasing alcohol). Opposite us is a house where he sits, now they like, they will tell him "he is a pak hoender, vat dit soelank" (Here is a packet of chicken) just so that he can entertain them with his money. But they wont help him when he needs to pay, Hy moet dit alleen betaal but soelank hy hulle can entertain, worrie hulle nie (He must pay it alone but they don't care, as long as he can entertain them). He goes to his friend, but every beer he takes he must pay for when he gets paid, that money sometimes comes to R3000. Then I ask daddy what is this, its biere geld. They say they his friend, they drink together but he must pay for everything. What kind of friend is that? My daddy is alone, he is a single parent. But they don't worry about him, soelank hulle kos het in hulle huis. Hulle worrie nie or ons nie (They don't worry about him, as long as they have food in their homes, they don't worry about us).* (Learner, Arcadia High School)

Ronel and Haimoff-Ayali (2010) found that when parents are addicted to substances characteristically there are numerous conflicts, such as: meagre family management skills, weak family cohesion and other vulnerabilities that place adolescents at risk. These families

often live in poverty and adolescents have to cope with difficult circumstances including mental and physical illness, problems with the law and low scholastic achievement (Ronel and Haimoff-Ayali, 2010). The data shows that parental substance abuse is possibly the most damaging family risk factor for adolescent substance use as it invites numerous compounding issues into the family system. Participants stated that as a result of parental substance use, they experienced several issues in their home, such as being witness to domestic violence, food scarcity, financial issues, lack of safety in the home environment, divorce/separation, emotionally absent parents, emotional stress and trauma, and , parent-child role reversal and a change in family dynamics. Below is a list of effects parental substance use had on family as mentioned by participants:

> *So my father, instead of smoking he could have been with us because he is never with us. He will rather sit with his friend's whole day. Hy is soos Father Christmas, hy koop vir almal buttons (He is like father Christmas, buying everyone buttons). Miss, I was so embarrassed one day when someone told me how my daddy can smoke* (Learner, Arcadia High School)

> (Referring to father) *When he is drunk, he is down to earth. He is talking and sweet. But when he isn't drunk, he shows the other side of him, he is grumpy and always angry. And I don't get why he does that all the time. I prefer it when he is drunk all day'* (Learner, COSAT)

> *It has a very negative side because my sister's children are being neglected and sometimes it's frustrating to see how the children are growing up. It's very sad* (Learner, Bonteheuwel High School)

> *My father he was working nights in the week and then on weekends he is off and that's when he drinks. He will come home and there is chaos, he will beat my mother and we must watch. It affected us because when he is sober, he is alright. He is talking and he is fine but when he is drunk. Its chaos. Because of that, they separated* (Learner, COSAT)

> *And when they tik and take, you are afraid because you don't know what to expect. One minute they are normal and the next moment they want to attack you. And you can't say anything wrong because they are starting jumping. I don't like being around them because you don't know what to expect* (Learner, Arcadia High School)

> (Referring to mother) *She lives in Heideveld with her boyfriend. She went to rehab for 3 or 4 months. But it went so far that she ended up in Valkenberg, Christmas. I had to go and visit her there. And then she came back, everything was fine, she lived by us. Until she decided she was going back to her boyfriend. He is also on drugs and she used to come to our house every day to see what the kids are doing but now it looks like*

> *she is on that stuff again. I don't ask her but sometimes she will be honest and tell me. But I don't see her so much anymore. But she told me, this drugs have touched her brain. She is always sick. She used to come to the house but she don't come anymore. Then she said it's because she got sick but I think she is using again and she doesn't want me to know. And if she comes and she is under the influence she will know that I know she is still doing it* (Learner, Arcadia High School)

It is clear that parent/familial substance use has a devastating effect on family members of the different households. Participants stated that their family's substance use affected virtually every aspect of their lives. Parental/familial substance use negatively affected how the family functioned. Participants reported broken communication patterns, lack of interaction and involvement, clear instances of role reversals, financial instability and, in many cases, substance use was directly related to single-parent households. All of this information is consistent with existing literature on the effects of parental substance abuse.

Assessing the patterns of family functioning described by the participants, it isn't surprising that so many adolescents use substances. The participants were exposed to substance use and its effects every day. This information supports the available literature. Studies have shown that there is a link between parental substance use and adolescent substance use. From previous literature, it is understood that adolescents who are exposed to substances by family members are more at risk to using substances themselves. Studies have shown that parental substance use serves as a behavioural model and predicts the child's drug use. Therefore, parental substance use is hypothesised to be closely linked to the adolescent's own drug use (Brook et al, 2006). Similarly, Taylor (2010) stated that there are empirical studies that provide strong support for the association between parental substance abuse and adolescent substance use behaviours. Dishon et al (1988 as cited in Taylor, 2010) argued that parental substance use is related to early adolescent substance experimentation. The development of drug use behaviours, of children who had either one or both parents using substances, has been understood to arise from poor parenting qualities exhibited by their parents and from the nature of the family unit (Ronel and Haimoff-Ayali, 2010).

It is no surprise that so many adolescents feel justified in using substances as their perceptions around the morality of substance use is formed and influenced by individuals who are already using substances. In these households, being told not to use substances by a parent or guardian

is a matter of "do as I say and not as I do". This is not a very effective method as adolescents tend to learn from what they see and not from what they are told.

A parent-child mutual attachment relationship marked by affection and identification with the parents has also been found to predict less tobacco, alcohol and drug use amongst adolescents (Brook et al, 2006). According to the family-interactional perspective, a weak parent-child mutual attachment relation can be linked to intrapsychic distress and drug-using peers, both of which predict drug use amongst adolescents (Brook et al, 2006). The adolescent having an attachment to their father plays a vital role in adolescent substance abuse, as the father's role is a key factor in the adolescent's decision to use and/or abuse drugs (Snell, Radosevich and Feit, 2014). Fathers can serve as both risk and protective factors relating to adolescent substance abuse. If the father is a current substance abuser, he will model behaviours that the adolescent could learn from (Snell et al., 2014). However, if the father is not a substance user, the adolescent has a better chance of forming a positive strong attachment which will serve as a protective factor against adolescent substance abuse (Snell et al., 2014). Farrel and White (1998 as cited in Kiesner et al, 2010) state that the effects of peer pressure for drug use were moderated by family constitutions, with peer influence being stronger for adolescents who were living without their biological father, than for adolescents whose biological fathers were living in the home.

Although adolescence constitutes a time of increased peer influence, parents still have a significant effect on adolescent substance use. In fact, parenting practices have been found to moderate the relationship between peer pressure and drug use (Scull, Kupersmidt, Parker, Elmore and Benson, 2010). A study by Kung and Ferrel (2000 as cited in Scull et al, 2010) found that the relationship between peer influence and drug use was stronger for adolescents who experienced low quality parenting compared to adolescents who experience high quality parenting. This is in line with the moderation model, which states that the effect of one variable may depend on the level of a second in predicting individual escalation (Kiesner, Poulin and Dishion, 2010). Dishion et al (2004 as cited in Kiesner, Poulin and Dishion, 2010) supported this idea by showing that there was a significant link between delinquent peer involvement and changes in family management practices when predicting - antisocial behaviour, such as substance use. Further, Kiesner et al (2010) found that the effects of peer drug use on individual drug use during adolescence was moderated by parenting style. Low levels of authoritative

parenting were associated with high levels of peer influence. In addition, high levels of monitoring by parents decreased the slope for alcohol misuse among adolescents with deviant peers (Kiesner et al, 2010). Eamon (2002) states that parents who display an authoritarian parenting style, which is described as harsh, arbitrary and high in control, results in children's behaviour that is maladaptive.

Ironically, as a result of the poor parent-child connection, caused by parental substance use, adolescents used substances in order to cope with the dysfunctional family functioning. Moreover, dysfunctional family functioning resulted in adolescents forming closer bonds with their peers. This can prove to be problematic as Kung and Ferrel (2000 as cited in Scull et al, 2010) found; the relationship between peer influence and drug use was stronger for adolescents who experienced low quality parenting. It is clear from the participants' responses, that it is almost impossible to be unscathed, whether directly or indirectly, by a family member's substance use.

4.3.3. Biogenetic risk factors that influence adolescent substance use.

To address the biogenetic risk factors of adolescent substance use, the researcher focused on the individual, with specific emphasis placed on usage, choices and individual influences.

The majority of the participants across all schools, regardless of race, gender, environment and age group, indicated that they currently use substances or have used substances in the past. From the responses it appears as though the most common substances used are alcohol and marijuana. The participants who admitted to using stated that they used regularly, indicating that they consumed alcohol on the weekends. The most common reason for using substances was reported as a coping mechanism and assisted the participants with problem solving. One of the most common cognitive-behavioural theories of the addiction process is the stress-coping model (Wills and Hirky, 1996 as cited in Wagner, Myers and McIninch, 1999). According to the stress-coping model, substance use is viewed as a coping response to life stress that can function to reduce the negative affect or increase positive affect (Wagner, Myer and McIninch, 1999)

Stress refers to the problems or strains that people encounter throughout life, and coping refers to the behavioural or cognitive responses that people use to manage stress (Lazarus and Folkman, 1984 as cited in Wagner, Myer and McIninch, 1999). The stress-coping model of addiction also assumes stress-buffering effects consistent with the general stress-coping literature. Specifically, coping mechanisms relevant to well-being should be most strongly

related to outcomes at high levels of stress and less related to outcomes at lower levels of stress (Wagner, Myer and McIninch, 1999). The stress-coping model also assumes a distinction between stress-coping skills, which are responses intended to deal with general life stress, and temptation-coping skills, which are coping responses specific to situations in which there are temptations for substance use (Wagner, Myer and McIninch, 1999). Stress-coping skills are relevant for coping with general life stress, and the goal of stress-coping skills is to maintain physical and psychological well-being. According to Lazarus et al (Lazarus and Folkman, 1984; Monet and Lazarus, 1991 as cited in Wagner, Myer and McIninch, 1999, the) typology of stress-coping distinguishes between problem-focused coping strategies, which are focused on changing or removing a stressor, and emotion-focused coping strategies, which are directed at managing affective states associated with, or resulting from the problem. Problem-focused coping responses may be of greater benefit in situations where a stressor is controllable and an individual has adequate resources to dedicate towards the resolution of the problem, whereas emotion-focused coping strategies might be more effective when stressors are outside one's personal control and must be tolerated (Wagner, Myer and McIninch, 1999). Despite the situational specificity of the effectiveness of problem-focused and emotion-focused coping, a common finding in the substance use literature has been that individuals who regularly use problem-focused stress-coping strategies are less likely to develop and more likely to overcome substance use problems, than the individuals who routinely use emotion-focused stress-coping strategies (Wagner, Myer and McIninch, 1999). Literature has also found that adolescents who characteristically employ emotion-focused relief-orientated coping strategies are at greatest risk for developing substance use behaviour (Wagner, Myer and McIninch, 1999).

The participants stated they when they used, they felt less stressed and better equipped to deal with their daily stressors. Participants also stated that using substances helped deal with symptoms associated with depression and anxiety, such as insomnia and feeling low/down.

> (Referring to why adolescents use drugs) *Finding comfort in the substance. When you smoke then you feel fine. But when the substance is out of your system you feel down again and then you like no, I must smoke again* (Learner, Bonteheuwel High School)
>
> *Some just want to feel happy and they use it for that. Like dagga makes you sleep. But like the MD it makes you happy, you just feel happy. You want to do anything. You want to catch on nonsense. But the first thing I started smoking it just made me sleep* (Learner, Arcadia High School)

Not me personally but my friends like if they stressed and they know they can't afford this or they can't do that. Then they use drugs to fall back on. If they do it, like smoke weed or tik, then they fine. It's like their problems are solved (Learner, Bonteheuwel High School)

It's not like I am escaping the moment. I know that I have to deal with this. I know I have too, I just don't want to have to deal with it while I am grumpy. I want to be more calm and deal with it when I am calm (Learner, COSAT)

If there is a conversation that I don't want to listen to and I walk away. And I go to my friends, I know we going to have a drink. When I drink and come home, my mother would shout and shout. I won't liste n to her. We are losing that respect at home. But when it comes to me personally, I drifted away from everyone at home. I am in my own world. I am on cloud nine (Learner, COSAT)

This information raised an important question for the researcher. Is substance use indicative of the adolescent life stage, in that, they seem to be at a stage of indulging in risk taking behaviours? The researcher wonders whether for many of the adolescents growing up in the poorer areas, that is, the so-called black and coloured areas, that it might be easier for them to access these risky substances to help them 'feel better', than it would be to access therapeutic help. It is the researcher's opinion that adolescent substance use needs to be viewed in context. It is clear, however, that substance use serves a purpose and that purpose is a coping mechanism to be able to function in a situation that is abnormal. It is not normal for a child to be exposed to the amount of risk factors that adolescents in lower socio-economic environments are exposed to. The behaviours explained by the participants are so closely linked to symptoms associated with mental-health disorders, such as anxiety and depression. However, these mental- health disorders will most likely go undiagnosed and therefore, untreated, which will result in substance use continuing to be used as a coping mechanism.

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Peer influences play a pivotal role in the early maturation of adolescents and have a well-documented influence on adolescent substance use. Deviant peers pose a risk at any age, but because of their relative cognitive, emotional and physical immaturity, adolescents are more susceptible to peer influences (Whitesell et al, 2014). In addition, peer influence has been found to be a potent risk factor and predictor of adolescent substance use, and this influence, both directly and indirectly has been associated with both current and future substance use behaviours (Scull et al, 2010). The instrument of peer influence on substance use can be exerted in a number of ways. For example, peers may influence one another through positive and negative peer pressure to use substances (Scull et al, 2010). A second method of, peers possibly influencing one another is indirectly, through observational learning processes that are manifested by simply associating with valued peers who use illegal substances (Scull et al,

2010). A third method of influence involves the belief that social norms regarding substance use are transmitted through relationships with valued peers who use illegal substances (Scull et al, 2010). When adolescents associate with peers who use drugs, they are much more likely to initiate using substances themselves (Scull et al, 2010). Peer groups also share information, attitudes, values and norms about drug use thus providing a social context for drug use (Scull et al, 2010). In addition to the amount of time adolescents spend with peers, Kiesner, Poulin and Dishion (2010) state that the context in which peers spend time together may also moderate the potential for peer influence. Kiesner et al (2010) state that a youth may have delinquent friends and may engage in substance use activities with these peers. However, if these individuals spend most of their time together at school rather than of on the street or in a park, then the potential for peer influence on substance use is decreased.

Many of this study's participants stated that they use substances with their peer groups. The participants also described how having deviant peers allowed them to continue their substance use, as deviant peers provided access to substances, and also supported anti-social behaviours. This inevitable made it easier for various participants to continue their substance use. The responses of participants seemed to indicate that adolescent substance use was simply associated with the respondent's life stage. Participants indicated they started using substances as a way of experimenting with new experiences.

> *If my friends have miss, I'm going to use. And I will go. I will leave my work, put my books down and go. We all put money together, a R5 or whatever and we go buy* (Learner, Arcadia High School)

> *Because sometimes peer pressure. When your friends do that, then they tell you "why must you be boring" then that makes you feel like okay, I will do it for the sake of my friends and stuff* (Learner, Bonteheuwel High School)

> *Yes, everyone in my road smokes. All my friends smoke. My cousins, everyone. Its erg, almal rook dagga* (Learner, Arcadia High School)

> *We will drink and smoke together. There are so many things. Sometimes we are wild, sometimes we will go to church together. We will go and have some booze together. There are so many things* (Learner, COSAT)

> *But like you know you mustn't do it. You know it's wrong but now they say try it and afterwards, you try it and you feel lekker. Then you want to feel like that again and then you use something stronger because that high goes away* (Learner, Bonteheuwel High School)

> *Sometimes, your friends influence you to do wrong stuff. They want you to do drugs and wrong stuff.* (Learner, Arcadia High School)

The data collected indicates that the participants were aware of the effects of their substance use on themselves, their families and their educational outcomes. However, despite this awareness they continued their usage.

> *It does affect my father, like me, when I'm drunk and I don't come home. He is always very worried because I don't have a phone, so I can't message them to say I'm sleeping over. So, he worries about where I am during the night. Like even though he knows where I am because I only go with my sisters because they are older than me. But still he worries because its late night and we are on the road and anything can happen. Knowing about people getting raped, but they worried about what time you getting back. That's always a problem* (Learner, Arcadia High School)

> *When you young you get drunk very quickly. But also, like us that have younger siblings because we drink, they also start drinking at a younger age because they see what you do. So, it's not only you that's affected but your younger siblings also because they see what you are doing. So, they think it's right what you are doing. They see oh my sisters smoking a cigarette, oh my sisters smoking weed so I can also try it. I can also smoke it and they after that they become more professional at smoking it then what you are"* (Learner, Arcadia High School)

> *Mostly, laaities that are drinking under the age of 18, they are more susceptible. They get drunker, they are more vulnerable to sex, it makes them vulnerable to people throwing something into their glass, and anything can go wrong man* (Learner, Arcadia High School)

The continued use of substances despite the awareness of consequences, is indicative of two things: First, that adolescent substance use is no longer recreational and can be viewed as an addiction. Second, the perception that the pros of using substances, such as coping with the extreme daily life stress, simply outweigh the cons. As a result, the discontinuation of substance use does not appear worth it.

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Stressful experiences are associated with increased susceptibility to substance use and misuse. The effects of stressful life experiences are considerably more potent for adolescents because they have not matured cognitively, emotionally and socially (Whitesell et al, 2014). The role of stress in the development of substance use amongst adolescents has received a lot of attention given the high levels of exposure to stressful events and trauma-related adolescent

experience (Whitesell et al, 2014). Stress has been clearly associated with the greater risk for initiation and escalation of substance use amongst adolescents (Whitesell et al, 2014). Similarly, Dhami (2009) reported a significant association between higher life stress and an accelerated substance use trajectory for adolescents.

Because of the life stage that adolescents find themselves in, peer influences play a vital role in how adolescents make their choices. Peer influence has proven to be a powerful influencer of adolescent substance abuse. As stated in Devokic (1999), during adolescence as the adolescent's environment grows, so do the factors that affect adolescent adjustment. Because of the increase in adolescent independence and their interaction with others, influences outside the family, specifically of peers, become increasingly more important. One aspect of peer relationships that has consistently been found as a powerful predictor of problem behaviour is the exposure to peers who model deviant behaviours. Deviant peers provide opportunities to engage in problem behaviour and provide the adolescent with attitudes, motivations and rationalisations to support anti-social behaviour (Dekovic, 1999). This was made clear from the participants. Having deviant peers further influenced their substance use as it provided constant access to substances and a support of anti-behaviours.

From the responses, it is clear that adolescents are aware of the negative effects of substance use. They have a clear understanding of the consequences of their substance use, yet they still use substances. The researcher feels that there is value in acknowledging their reasons for use. It appears as though for the majority; substance use is a clear coping mechanism. If one looks at the environment these participants are growing up in and the families they are growing up with, it's evident that they are using substances to survive. Substance use appears to have become a method of coping within a crumbling system. It is an escape from the daily traumas. It appears that the participants are constantly being exposed to frequent and ongoing trauma. They are always in crisis mode, which results in them using substances to function within their families and communities. This justifies their use, despite knowing the very real consequences of substance use. Adolescent substance use appears to be a means to an end, and the end result is simply to survive.

4.3.4. The effects of adolescent substance use on educational and behavioural outcomes.

Adolescents who engage in substance use are more likely than their peers, who abstain from substance use, to experience psychosocial and behavioural problems, such as delinquency, early sexual activity, strained family bonds and poor academic performance (Tucker, Ellickson, Collins and Klein, 2006). According to Masitsa (2007) substance use amongst learners often leads to a number of disciplinary issues such as absenteeism, attending school while under the influence of substances, being in possession of substances at school, selling substances at school, being in possession of weapons at school and becoming involved in theft or violence. Adolescents often display a number of anti-social behaviours such as, truancy, neglecting their studies, presenting with learning difficulties and ultimately dropping out of school. All of these misdemeanours culminate in poor academic performance by the learners (Masitsa, 2007). Conduct problems such as violent behaviours, theft and property damage tend to be more prevalent when youth are using alcohol or drugs. The use of tobacco, alcohol, marijuana, or hard drugs by 12 to 18-year olds were predictively led to theft and violent behaviour (Wall and Kohl, 2007).

Many studies have found that there is a positive correlation between adolescent aggressiveness and substance use. Aggressiveness in adolescents who use substances has been associated with one of the individual factors that contribute to anti-social behaviours (Amoateng, Barber and Erikson, 2006). Similarly, Maslowsky, Schulenberg and Zucker (2014) state that conduct problems such as rule breaking, aggressive and delinquent behaviours are strongly associated with adolescent substance abuse. Little empirical research or surveillance data exists on delinquent behaviours among South Africa adolescents (Lai, Graham, Smith, Caldwell, Bradley, Vergnani, Mathews and Wegner, 2013). The results of the 2008 NYRBS indicate that 21% of South African adolescents reported getting into a physical fight at school in the previous 6 months (Lai, Graham, Smith, Caldwell, Bradley, Vergnani, Mathews and Wegner, 2013). Considerably more South African males reported carrying weapons carrying weapons and being involved in a physical altercation in the previous month (Lai, Graham, Smith, Caldwell, Bradley, Vergnani, Mathews and Wegner, 2013). Some research has also suggested that substance use co-occurs with delinquency among South African adolescents because substance use and delinquency appear to share the same risk factors (Lai, Graham, Smith, Caldwell, Bradley, Vergnani, Mathews and Wegner, 2013).

The participants all stated that in one way or another their substance use had negatively impacted on their lives. Their substance use had impacted on their day to day lives, family lives and their experiences within the school environment. The participants mentioned that their substance use has made them lazy, aggressive, and even physically violent. The participants stated that their academic life has also been negatively affected. Learners reported truancy such as absenteeism and disruptive behaviour, attending school under the influence of alcohol, and in one extreme, even expulsion.

> *If I drink alcohol angry, I become calm. If I drank it calm, I don't fear anything. If you stand in front of me and you want to fight, we are going to fight. It exaggerates any feeling that I am having* (Learner, COSAT)

> *Yes, badly. You become disruptive in class. Your attitude changes towards everyone. Like if you smoke weed, then of course your attitude is going to change because you now feel lekker and all that. Now you want to vertel (say) everything* (Learner, Bonteheuwel High School)

> *I got expelled. Even though others only got community service. They said I didn't show any sympathy because I didn't smoke at school, I smoked at home not at school. Why must I feel sympathy? I was a rebel"* (Learner, Arcadia High School)

> *So from my side, I use it now like a look of time. I can see on my marks that it came very down. Like the June exams, I didn't focus and pay attention. I was like whatever, it's just writing and stuff* (Learner, Bonteheuwel High School)

> *I had a bad experience once, I drank on a Thursday because I was like, Friday is a short day and it was Jameson. We had three bottles. I woke up, I felt okay. I had a cigarette and a coke and came to school and that coke and cigarette made me drunk again. I had to go to the principal's office. I thought, what these people don't think of me, ek kom soema dronk skool toe (I come to school drunk)"* (Learner, Arcadia High School)

The participants reported three outcomes that the researcher was surprised by: The first was the number of them who reported that not only did they use substances while studying and completing school work, but that they intentionally used substances because being under the influence of certain substances, such as marijuana, actually helped them study. One respondent stated that while under the influence of marijuana, they felt calmer and therefore they could focus better.

> *I study high* (under the influence). *It helps me focus. It's been 5 years, and I don't study sober. When I smoke it's like I am going to study now. I'm going focus. And I get good grades. But I can't write exams geroek. It helps me study and focus. And now I am worried because my teacher wants me to come and sleep by her during the exams and there is no smoking on her premises, so what will I do* (Learner, Arcadia High School)

The participants exhibited a positive attachment to their schools and teachers. They felt that school provided them with a safe environment where they could escape their home environments, and actually felt affirmed. The school environment and connection to teachers serves as a protective factor for majority of the participants. Theron and Theron (2007) found that the community resource most emphasised as a protective factor for youths was in fact the school environment. Within the school environment, teachers who were supportive, fair, non-discriminatory, motivating, inspiring role models, encouraging, helpful and caring, were highlighted explicitly as protective factors (Theron and Theron, 2007). Additionally, schools empowered youth towards resilience when they provided youth with a safe space in which they felt secure or in which they could openly communicate about their lives (Theron and Theron, 2007). It is also worthwhile noting schools that were well resourced, maintained academic excellence, encouraged meaningful after-school activity and that had a life skills curriculum were all perceived to have encouraged resilience (Theron and Theron, 2007).

> *When I'm at home, I don't like touching my books. But when I'm at school I am out of the streets. Where there is gangsterism and all of that. Especially at COSAT, we leave school at 4:15pm. It's already late, so you can't do a lot of things. Even wrong things, because it's already late so there is only a limited amount of time. You can't do anything with that limited about of time. Here at school we have a study period, which leads me to do my work. At home I don't want to touch my books, so I don't focus on my books and future* (Learner, COSAT)

> *Positive for me, sometimes at school you get love, you get comfort. There are many other surrounding things that come together and for me for instance, I get much love at school.* (Learner, Bonteheuwel High School)

> *The things that we do is wrong, it's not that she is scolding us for nothing. She is helping us to get us away from those things and we are not realising that what she is doing is the right thing. We think that she is the monster, but it is because she wants us to achieve something with our lives. She wants us to see that the area we come live in, she wants us to get out of this. She also told us that she didn't have a perfect life. She also struggled, she didn't start on top. She comes from the bottom; she also had to start at the bottom. That's why I think she is an eye opener for me because the things that she has been through, they stuff that she has got through to where she is now. It's not about us doing what we want, we also have to make sacrifices.* (Learner, Arcadia High School)

> *I get much love from my educators. My history teacher, LO, my geography sir. It feels so nice to know that there are people that care for you* (Learner, Bonteheuwel High School)

> *If you don't have school today* (if you do not matriculate)*, then you can't get a job. You can go nowhere. You must have an education. Education is the key to success* (Learner, Bonteheuwel High School)

However, despite the positive attached to their school environments and their teachers, the participants continued to use substances. The participants showed awareness and understanding of how their substance use could negatively impact on their educational outcomes but continued their substance use anyway. Lastly, the school environment serves as both a protective factor and a risk factor for adolescent substance use. The participants reported that the pressure to excel at their academics contributed to their substance use. There was an inability to cope with their workloads and expectations around performance. This caused further stress on an already fragile structure and simply led to the continued use of substances.

> *All the work, it's very stressful. For me, myself, it was very hard to come where I am today and I'm very proud where I am today. About school, it's always getting my mind off some stuff at home and to ease my mind (*Learner, Bonteheuwel High School)

> *I got expelled in grade 9, for behaviour. Ek het uitgeraffel (I became unravelled), then I was home for like a whole 5 or 6 months. No school wanted to accept me. In that time, I got lazy, I would go sit by my friends and smoke every day. Then my daddy was like jy gat a fokal wert wees (You aren't going to worth anything), but he tells you that just so that she can show him that it is not. So, he actually pushed me a lot. Then I went back and did my grade 9 over in Hermanus, my daddy decided we had to go there. It was tough there Miss, I had to hike to school, back and then we moved back to Cape Town, and I did grade 10 and 11 this side. But here if you don't pay school fees you can't come to school and my daddy decided that he didn't want to work anymore, he was just at home smoking every day. Then for weeks, I can't come to school. I do not know how I passed grade 10. I will go back and then hear I am writing and things like that. Grade 11 the same thing, I was home 28 days one term. It was hectic. I passed anyway. I enrolled myself at this school for this year. I was not going to stay out of school for my Matric and I couldn't rely on my daddy. I begged Ms Nassen, just give me a chance. So I am loving school* (Learner, Arcadia High School).

The data collected correlates with previous literature on the subject, stating that adolescence is a period in which adolescents are more prone to decline in academic motivation and achievement and increase delinquent behaviours, such as using substances. Cannabis use is often initiated during adolescence, an important time of transition between childhood and adulthood (Lynskey and Hall, 2000). High-school education is an important determinant of

how successfully this transition is navigated (Lynskey and Hall, 2000). There have been many cross-sectional surveys that have examined the connection between cannabis use and a variety of measures of educational attainment and commitment among school children and youth (Lynskey and Hall, 2000).

According to Lynskey and Hall (2000) increased levels of cannabis use have been linked to a lower grade point average, less satisfaction in school, negative attitudes towards school and poor school performance (Lynskey and Hall, 2000). The data collected in this study differs from previous literature in this regard. The researcher discovered a high connectedness to the school environment despite their substance use.

The available literature states that failure to engage in school may lead adolescents to seek solace in problem behaviours, such as substance abuse and associating with delinquent friends, which may in turn, exacerbate their sense of alienation from school (Bachman, O'Malley, Schulenberg, Johnsin, Freedman-Doan and Messersmith, 2008). The researcher found this to be only partly true. The failure to achieve academically, did not necessary mean that the participants were not engaging in school. The participants reported having positive experiences and relationships at school. The participants reported that the academic pressures to excel, specifically, is what exacerbated the risks towards substance use.

Addressing adolescent substance use within a school setting has been a particular area of interest in recent years as the school setting provides a guaranteed audience. One of the approaches that has received extensive attention in recent years, Life Skills Training (LST), targets key etiologic factors using a conceptual framework derived from social learning theory and problem behaviour theory (Botvin and Griffin, 2014). Life skills are defined by the World Health Organisation as skills and competencies that enable child and adolescents to deal adequately with their daily hardships and their developmental health (Wenzel, Weichold and Silbereisen, 2009). According to Botvin and
Griffin (2004), The LST prevention program consists of three major components Personal self-management skills, social skills and drug-related information and skills (Botvin and Griffin, 2004). The personal management skills component of the LST program is designed to influence a broad array of self-management skills (Botvin and Griffin, 2004). To achieve this, the personal skills component contains material to foster the development of decision-making and

problem-solving, teaches skills for identifying, analysing and resisting media influences, and provides students with self-control skills for coping with anxiety and anger/frustration (Botvin and Griffin, 2004). Furthermore, students are encouraged to design a self-improvement plan in which they select something about themselves that they would like to improve or change (Botvin and Griffin, 2004). Students learn how to set realistic goals and sub-goals, evaluate and record their progress and how to handle success and failure (Botvin and Griffin, 2004). One of the main goals in teaching these basic principles of personal behaviour change and self-improvement is to increase individual self-esteem (Botvin and Griffin, 2004).

The social skills' component is designed to improve several important interpersonal skills in order to enhance general social competence (Botvin and Griffin, 2004). This social skills' component contains material designed to help students improve general interpersonal skills such as how to overcome shyness, how to give and receive compliments, how to initiate social interactions, in addition to learning skills related to romantic relationships and both verbal and non-verbal assertiveness (Botvin and Griffin, 2004). Lastly, the drug-related information and skills' components are designed to have an impact on knowledge and attitudes concerning drug-use, normative expectations and skills for resisting drug-use influences from peers and the media (Botvin and Griffin, 2004). Similar to many substance abuse intervention programmes, this material focuses on teaching social resistance skills (Botvin and Griffin, 2004). This component of the LST programme includes a focus on the short-term consequences of substance use and knowledge about the extent of drug use about adolescents and adults alike. The idea to rectify normative expectations about drug use is multiple: to provide information about the declining social acceptability of tobacco and other drug use, provide information and class exercises demonstrating the immediate physiological effects of substance use and techniques for resisting peer and media pressures (Botvin and Griffin, 2004).

LST programmes are mostly implemented in a school context and thereby also aim towards the general enrichment of the school, one of the most important developmental contexts for children and adolescents (Wenzel, Weichold and Silbereisen, 2009). LST programmes also include components focusing specifically on aspects of the school context, such as testing strategies and school bonding (Wenzel, Weichold and Silbereisen, 2009). Moreover, the interactive teaching methods used in LSTs provide contact and communication opportunities for students and teachers and allow for feedback from teachers or students to be received in a non-threatening environment (Wenzel, Weichold and Silbereisen, 2009). Therefore, a well

implemented LST should contribute to the development of positive attitudes toward school, teachers, and classmates and should support involvement in and bonding to school (Wenzel, Weichold and Silbereisen, 2009).

4.3.5. Protective factors against adolescent substance use.

Participants were asked one simple question about protective factors. They were simply asked what would stop or prevent them from using substances. There was an overwhelming response that shared two common threads; environment and family. The participants mentioned that residing in communities and environments that were safe and had fewer social ills, such as substance abuse, would serve them greatly. Residing in environments with such easy accessibility to substances makes adolescent substance use almost inevitable.

The participants mentioned many family factors that would serve as protective factors but most common was parental involvement in their lives, having parents who did not use/abuse substances and lastly having a traditional nuclear family where both parents were present and actively involved in their lives. Positive family and community bonding have also shown to decrease the incidence of substance use among adolescents who are attached to positive families, friends, schools and communities. These adolescents, despite living in low socio-economic conditions, thrive because they have bonded with strong positive role models. In addition, when clear rules and boundaries are set to deter substance use, adolescents are more likely to follow them (Taylor, 2010). The National Institute on Drug Abuse (2002 as cited in Taylor, 2010), agrees that factors that prevent the onset of adolescent substance use, include strong and positive bonds within a pro-social family, parental monitoring, clear rules of conduct that are consistently enforced within the family, involvement of parents in the lives of their children, success in school performance, strong bonds with other pro-social peers and institutions, and the adoption of conventional norms about drug use.

Resilience and families as protective factors have been closely monitored by researchers. Parental involvement in an adolescent's life has been positively associated with less engagement in risk behaviours. As stated in the problem behaviour theory, when an adolescent is aware that important people in their lives disapprove of behaviours, such as substance use, they may be more likely to disapprove of and avoid these behaviours themselves (Patrick et al, 2010). Although both parents were thought to encourage resilience against substance use,

Theron and Theron (2007) report that protective maternal figures play a vital role as they provide a buffer against risk factors and are often seen a pillar of strength offering a sense of security and encouraging their children towards self-actualisation. Additionally, parents encouraged resilience when they coped well with trauma and when they embodied strengths and positive qualities worth emulating (Theron and Theron, 2007).

> *"We lived in Goodwood at a time and it was a nice environment. My mommy and daddy was there. Happy family miss. Just that happy family, everyone supporting one another"* (Learner, Arcadia High School)

> *"If you are in an environment where there is weed. Then you aren't going to smoke weed"* (Learner, Arcadia High School)

> *"Like a mommy and daddy that sets an example miss. Like that is what will make you happy. Then you will also want to be the best. Like if your parents are nonchalant then you also don't care. I go to my daddy dik geroek (under the influence), he doesn't even know I'm dik geroek (under the influence) because he is also geroek (Under the influence). That's what I think miss. I am not scared if they see I'm geroek, I don't care. It will be lekker if you can come home and your lunch is waiting for you, you sit with your books and your daddy is there. I think a father is very important. To have a daddy that is going to tell you that isn't right, you know man"* (Learner, Arcadia High School)

> *"Some children turn to alcohol and drugs because they have an absent father or mother or like teenage pregnancy, the boyfriend runs away because he finds out you pregnant. Now you don't have money and stuff. And all this influences. If you have both your parents supporting you and loving you then there is a very little chance of you going to the bad side. If you have both parents, you will probably succeed in life and stuff like that and you won't use. I think we should have a law, if you make a girl pregnant, you should get married to her and stay with her"* (Learner, Bonteheuwel High School)

Out of the 37 participants of the focus groups not one mentioned choices or friends when asked about protective factors. However, almost all of them stated family and community as vital. The magnitude of the impact the community and family have on adolescent substance use is blatantly obvious. The sad reality is that adolescents have absolutely no control over these two spheres. They can control what choices they make, they have the ability to say yes or no, they have control over who they choose as friends but sadly, they have no control over the ills of their communities or the functioning of their families. The irony of this is that the very same spheres that contribute to their substance use are usually the same spheres that can prevent them from using in the first place.

Positive family and community bonding have also shown to decrease the incidence of substance use among adolescents who are attached to positive families, friends, schools and communities. Despite living in low socio-economic conditions, these adolescents thrive because they have bonded with strong positive role models. In addition, when clear rules and boundaries are set to deter substance use, adolescents are more likely to follow them (Taylor, 2010). The National Institute on Drug Abuse (2002 as cited in Taylor, 2010), agrees that factors that prevent the onset of adolescent substance use include strong and positive bonds within a prosocial family, parental monitoring, clear rules of conduct that are consistently enforced within the family, involvement of parents in the lives of their children, success in school performance, strong bonds with other prosocial peers and institutions, and the adoption of conventional norms about drug use.

4.3. CONCLUSION

This chapter presented and discussed the research findings of the study. The framework of analysis and a profile of the participants were provided to contextualise the in-depth discussion of the findings.

CHAPTER 5: CONCLUSION AND RECOMMENDATIONS

5.1. INTRODUCTION

Chapter Five presents the main conclusions of the study as well as recommendations from the researcher. Furthermore, recommendations are made to address the problem of adolescent substance use.

5.2. KEY FINDINGS AND CONCLUSIONS

The main conclusions that follow are based on the research objectives.

5.2.1. The ecological factors that place adolescents at risk of substance use

The Ecodevelopmental Theory is a conceptual model that describes the interconnections among various sources of risk and protective factors in the lives of adolescents (Pantin et al., 2004). Adolescent substance use is as a result of a number of contributing factors which are known as the micro, meso, exo and macro systems associated with the individual. This study addressed individual, familial, peer and environmental risk factors associated with adolescent substance use. The data gathered in the research closely relates to previous studies and literature on the research topic.

Individual risk factors were related to the adolescent life stage. Although numerous factors account for adolescent substance use, the predominant reason seems to involve the fact that adolescence is a period of transition, a time during which individuals appear to be more impulsive, reckless and non-conforming than during other developmental stages of their lives. Many adolescents engage in substance use activities despite the perceived risk, as substance use is often deemed acceptable amongst adolescent peer groups. Interestingly, and perhaps something that needs to be explored in future research, was the clear link between adolescent substance use and coping with adverse life experiences. Participants in the study stated that they used substances to deal with the stress and pressure they felt in their day to day lives. This was not a surprise when comparing their life stress in relation to their exposure of risk factors. Every respondent stated that they were exposed to multiple risk factors associated with adolescent substance use. The research clearly shows that adolescents who reside in lower socio-economic environments are more frequently exposed to risk factors than their peers who reside in middle and upper socio-economic environments. The research also shows that

adolescents do not have the ability to positively cope with regular exposure to life stress. Adolescents are vulnerable as a result of their life stage and are therefore more susceptible to risk factors that could influence substance use.

Family is an important system in the adolescent's life as it provides social capital for the adolescent. Human development occurs through processes of progressively more complex reciprocal interactions between active, evolving biopsychological human beings and the individuals, objects and symbols in their environment. If these interactions are to be considered effective, they need to occur consistently over a prolonged period of time. Interactions occur between parent and child and within peer, school, learning and recreational activities. These interactions are the mechanisms by which genetic potential for effective psychological functioning is realised. The second assumption in the human development theory addresses the effectiveness of these interactions. Bronfenbrenner states that the effectiveness of these interactions between systems is determined by the biopsychological characteristics of the individual, the immediate and distance environments in which the proximal processes occur, and the developmental outcome being examined.

There is a vast amount of existing research that addresses family influences on adolescent substance use. This research shows that there has not been a shift in trends found in previous literature pertaining to adolescent substance use and family influences. Participants stated that their relationship with their parents, connection to their home environment and parental substance use all impacted on how they viewed substance use, as well as their own substance use. Sadly, there was an overwhelming amount of data gathered from participants on their parent substance use. According to the participants their parental substance use was associated with adolescent socialization around substance use behaviours, poor parent-child connection, poor monitoring, easy access to substances, role-reversal, financial problems, food scarcity and absent parents. Previous literature on the topic outlines that there are two types of parental influences on adolescent substance use. The first is parental drug use, which includes parental smoking, alcohol and marijuana use. Studies have shown that parental substance use serves as a behavioural model and predicts a child's drug use. Therefore, parental substance use is hypothesised to be closely linked to the adolescent's own drug use. Similarly, there are empirical studies that provide strong support for the association between parental substance abuse and adolescent substance use behaviours. Parental substance use is related to early adolescent substance experimentation. The development of drug use behaviours of children

who have either one or both parents using substances, has been understood to arise from poor-parenting qualities exhibited by their parents and from the nature of the family unit.
It is the researcher's opinion, from the data gathered, that environmental factors played the biggest role in adolescent substance use for this group of participants. The participants were predominately from Bonteheuwel and Khayelitsha on the Cape Flats. These low socio-economic communities are rife with social ill associated with poverty. These communities are well known to be associated with high crime rates, gangsterism, high unemployment, substance use, overcrowding, poor infrastructure and poor service delivery. These characteristics of an environment are crucial in the socialization of adolescent substance use and a critical contributing risk factor. Adolescents who reside in poverty-stricken areas are exposed to multiple risk factors throughout the daily existence. This exposure coupled with the adolescent life stage, is a recipe for disaster. Adolescents are unable to cope with the trauma associated with living in these communities. Poverty is not just a risk factor but an extremely dangerous risk factor as it is comprised of numerous components, which results in the exposure to numerous risk factors all at once.

During the stage of adolescence as the adolescent's environment grows, so does the factors that affect adolescent adjustment. Because of the increase in adolescent independence and their interaction with others, influences outside the family, specifically peers, become increasingly more important. One aspect of peer relationships that has consistently been found to be a powerful predictor of problem behaviour, is the exposure to peers who model deviant behaviours. The association with deviant peers provides opportunities for the adolescent to engage in problem behaviour and provide the adolescent with attitudes, motivations and rationalisations to support anti-social behaviour. From the data gathered, the peer influence on adolescent substance use is very cut and dry. There were two clear outcomes: Adolescents who associated with peers who didn't use substances, were less influenced to use substances. Associating with peers who did not use substances also meant that the adolescent had less accessibility and access to substances. However, adolescents who associated with deviant peers were most likely to use substances as they had support for their anti-social behaviours, and more opportunities to engage in substance-use behaviours.

5.2.2. The ecological factors protect that adolescents against substance use

Factors preventing the onset of adolescent substance use include strong and positive bonds within a pro-social family, parental monitoring, clear rules of conduct that are consistently enforced within the family, involvement of parents in the lives of their children, success in school performance, strong bonds with other pro-social peers and institutions, and the adoption of conventional norms about drug use. The strongest connection that the research found as a protective factor was linked to the school community.

Resilience against substance use is encouraged by protective factors embedded within the community. The community resource most emphasised as a protective factor for youth is in fact the school environment. Within the school environment, teachers who are supportive, fair, non-discriminatory, motivating, inspiring role models, encouraging, helpful and caring are highlighted explicitly as protective factors. Additionally, schools empower youth towards resilience as they provide youth with a safe space in which they can feel secure or in which they can openly communicate about their lives.

Participants across schools, gender, age, race and communities all stated that school played a vital role in their attitudes and behaviours around substance use. The school environment, with its teachers, acted as a pseudo family. Participants stated that they felt safe at school. That the teachers provided them with attention, love and care. These are often emotions they did not experience in their real home environments. School acted as a buffer against the outside environment and for the most part, provided a sense of security for a few hours a day. Additionally, school provided a sense of consistency and stability for the participants. Unfortunately, the school environment is not immune to the social issues that plagues the areas they are situated in. Schools are under-resourced and cannot provide the same experience for every learner. Some participants stated that they did not think school was a protective factor because illegal substances were regularly available on the school premises.

5.2.3. The implications of adolescent substance use on educational outcomes

Adolescence is a critical developmental period in which adolescents experience the opportunity to self-construct an identity as academically capable, socially integrated and committed to learning. This is also a period in which adolescents are more prone to decline in academic motivation and achievement and increase delinquent behaviours, such as using substances.

Substance use, in some cases, had a devastating effect on academic outcomes. A number of participants reported their substance use had extremely negative effects on their academic careers. Participants stated they had experienced severe consequences such as being expelled for their substance use.

Interestingly, some participants stated that their substance use did not hamper their academic performance but instead helped it. A number of participants stated that they used marijuana while studying as it helped calm them, which allowed for a more impactful study session. This however contradicts existing information on marijuana use and educational outcomes. There have been many cross-sectional surveys that have examined the connection between cannabis use and a variety of measures of educational attainment and commitment among school children and youth. However, the researcher acknowledges that the view of substance use as assisting in academic outcomes may just be the rationalisation of substance use behaviours.

5.2.4. The implications of adolescent substance use on behavioural outcomes

Adolescents who engage in substance use are more likely than their peers, who abstain from substance use, to experience psychosocial and behavioural problems such as delinquency, early sexual activity, strained family bonds and poor academic performance. Substance use amongst learners often leads to a number of disciplinary issues such as absenteeism, attending school while under the influence of substances, being in possession of substances at school, selling substances at school, being in possession of weapons at school and becoming involved in theft or violence. Adolescents often display a number of anti-social behaviours such as, truancy, neglecting their studies, presenting with learning difficulties and ultimately dropping out of school. All these misdemeanours culminate in poor academic performance by the learners. Conduct problems such as violent behaviours, theft and property damage tend to be more prevalent when youth are using alcohol or drugs.

As stated in existing literature on adolescent substance use, there were a number of behavioural outcomes associated with a respondent's substance us, such as: truancy in school, creating conflict within the family, experiencing trouble with the law, decreased motivation and displaying aggressive behaviours. However, despite the evidence of the effects of their substance use effects their behaviours, there was a continued pattern of substance use. This will need to be closely addressed when applying interventions, as the motivation to abstain from substances needs to be stronger than the perceived satisfaction received from substance use.

5.3. Recommendations:

5.3.1. Intervention Strategies

In order to address the age-old issue of adolescent substance use, the researcher suggests the implementation of a holistic multi-level intervention strategy that focuses on demand reduction, and that will take place within the school environment. From the data gathered, it is clear to see that there is not just one underlying factor that influences adolescent substance use. In order to successfully address adolescent substance use, interventions need to effectively address all risk and protective factors at the individual, family and community level.

Figure 3 outlines an intervention strategy that aims to reduce the demand for adolescent substance use by strengthening the ecological systems that the adolescent forms part. This involves introducing an intervention to enhance capacity and human development. The researcher suggests that this intervention strategy take place within the school environment for two reasons: First, the school environment is already seen as a protective space, thereby reducing any resistant to intervention strategies and second, refers to the element of accessibility. In South Africa, it is compulsory for every child up until the age of 16 years old to attend school. This, in fact, makes the school environment the quickest way to reach the most participants. In addition to access, there is a commonality among all school-going children, whether they are at a private school or public school; every single child has to partake in Life Orientation as a subject. Therefore, only one additional curriculum needs to be developed, however it will still have a far-reaching affect.

The multi-level intervention strategy addresses three key factors in adolescent substance use.

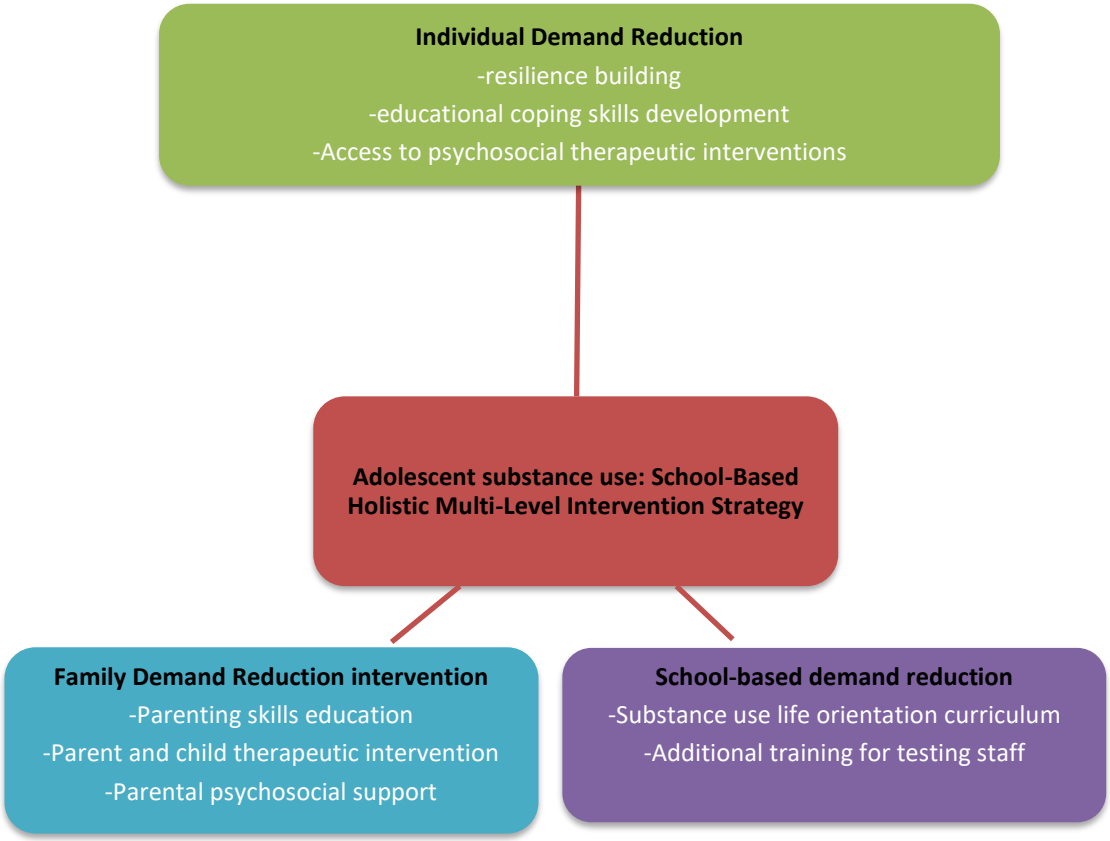

Figure 3: Adolescent Substance Use: School-Based Holistic Multi-Level Intervention Strategy developed by the researcher.

Individual Demand Reduction

This level of intervention will focus specifically on developing individual strengths in an adolescent. Through the research it was discovered that so many factors influence adolescent substance use, factors that are out of their control, such as poverty, access to substances in the community and parental substance use. The researcher recommends that in order to buffer the effects of risk factors, especially those that cannot be controlled by the adolescent, there needs to be a strong emphasis on educational coping skills' development. One way is through stress tolerance training, which strengths the adolescent's ability to withstand aversive physical and emotional stimuli. In addition to developing coping skills, another important area of focus should be on resilience building. This will assist the adolescent in coping with the constant life stress that s/he experience, which will reduce the impact of the multi-exposure risk factors. Lastly, the compounding effects of repeated trauma, can only effectively be addressed through psychosocial therapeutic interventions. These interventions include regular one-on-one

therapeutic sessions with a social worker/school counsellor and regular group therapy with their peers.

Family Demand Reduction

Family-centred intervention is a viable strategy for reducing risk in adolescents. More specifically, family-centre intervention supports parent/guardian behavioural management skills and building strong parent-child relationships to reduce problem behaviour and substance use during adolescence. There are four intervention practices at this stage: First, developing positive social capital that can be transferred from parent to child, through parenting skills' development and education. The lack of parenting skills, as such communications skills, often causes a disconnect between adolescent and parent which allows the adolescent to attach to deviant peers. Strengthening the bond between parent and child will ultimately result in better parent-child relationships, parent-child communication, monitoring of the adolescent and stronger connection between the adolescent and his/her home environment. Second, it is vital that the parents themselves receive psychosocial intervention such as counselling. It's important to be cognisant of the fact that parents stay in communities with high social ills and these too effect their psychological well-being. These psychosocial intervention sessions will also assist in addressing parental substance abuse and appropriate interventions. In order to development an effective parent-child bond, the researcher suggests that parent-child therapy sessions be integrated into the intervention process. This third practice will allow for a safe space to address internal and external conflicts, and assist in skills development to appropriately address conflicts in the home. Lastly, home visits will take place at the family residence for assessment of home circumstances but also for monitoring and evaluation processes.

School-based demand reduction

The development of a Substance Use Curriculum that will run parallel to the current Life Orientation Curriculum is imperative. Currently, the Life Orientation Curriculum barely addresses youth substance use and abuse. The researcher intends to develop a substance use curriculum that is both educational and informative and also assists in the development of demand-reduction strategies. This curriculum will be characterised by three intervention strategies, specifically: 1) Social- resistance skills training which is designed with the goal of increasing adolescents' awareness of the various social influences that support substance use and teaching specific skills for effectively resisting both peer and media pressures to use

substances (Griffin and Botvin, 2010) 2) Normative Education which include content and activities to correct inaccurate perceptions regarding high prevalence of substance use (Griffin and Botvin, 2010) and 3) Competence-Enhancement Programmes which are important in recognising social learning processes that are important in the development of adolescent substance use. This programme is essential as it states that youth with poor personal and social skills are more susceptible to influences that promote drug use (Griffin and Botvin, 2010). Teaching staff will need to be adequately trained in order to effectively teach the curriculum.

5.3.2. Recommendations for Government and Regulatory Intervention

The South African Government needs to:

- Commit a sustained political, social, health and education commitment to investing in demand-reduction programmes that will contribute towards reducing public health problems, improving individual well-being, promoting social and economic integration, reinforcing family systems and making communities safer.
- Improve living conditions and community safety through an amalgamation of more effective policing, infrastructural improvement and encouraging participatory approaches like community policing for other community-based organisations, such as neighbourhood watches.
- Ensure effective liaison between government agencies with one common goal in mind, -reducing the demand for substances.
- Establish and maintain a substance-abuse information system which will support the implementation, evaluation and on-going development of substance abuse intervention.
- Provide sufficient funding for research, development of new intervention programmes and evaluate and monitor existing intervention programmes.

5.4. Conclusion

This Chapter presented the main conclusions of the study as well as the recommendations for future interventions. This information served as a conclusion to this dissertation.

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ANNEXURE 1

Examining the Ecological Risk and Protective Factors of Substance Abuse and its Effects on Educational and Behavioural Outcomes among High School Learners: Implications for a School Based Intervention Model

Cape Town High School Youth Survey: Part 2-Focus Group.

Important information:

Thank you for agreeing to participate in part 2 of my research study. Today we will be conducting a focus group. The focus group gives me an opportunity to discuss the questionnaire in more detail. This is an opportunity for you to voice your opinions as freely and as honestly as you would like.

Your participation is voluntary and you may exist the focus group at any stage. You do not need to answer any questions that you are not comfortable with. There are no right or wrong answers. Your answers will be kept strictly confidential. I will be using my cell phone as a tape recorder to ensure that what is said in today's focus group is documented accurately and honestly.

1.1.Group Rules:

Rules will be discussed in the group, with the participants. (Make a note about confidentiality among group members)

2. **Demographics:** (do a round robin in the group, introductions)
   - 2.1. How old are you?
   - 2.2. What grade are you?
   - 2.3. What race do you identify with?
   - 2.4. What gender do you identify with?
   - 2.5. What area do you stay in?

3. **Family:**
   - 3.1. How many people live in your house?
   - 3.2. How many family members are employed?
   - 3.3. How would you describe your relationship with your family?
     [Probe family functioning, communication, involvement, family support]
   - 3.4. Does anyone in your family use alcohol?

If yes, who?

3.5. Does it affect life in the family?

If so, in what ways?

3.6. Does anyone in your family use drugs?

If yes, who?

3.7. What kind of drugs do they mostly use?

3.8. Does anyone in your family abuse alcohol?

3.9. Does their alcohol and drug use, affect the way your family functions?

If so, in what ways?

4. <u>School:</u>

4.1.Do you enjoy being in school?

If yes, what do you enjoy about school?

If, No why not?

4.2.Does school play a positive or negative role in your life?

If positive, how so?

If negative, how so?

4.3.Do the teachers at your school play a positive or negative role in your life?

4.4.Do you feel an attachment to your school?

4.5.Do you feel there is value in attaining an education?

If yes, what value?

If no, why not?

5. <u>Community:</u>

5.1.Describe the community you live in?

5.2. If there are problems in your community, what kind?

5.3. If there are positive aspect of your community, what are they?

5.4. Do you feel that your community influences you?

If yes, how?

If not, why not?

5.5. In your communities, are drugs easily available to you?

5.6. In your communities, is alcohol easily available to you?

6. **<u>Self:</u>**

6.1. How many of you have used drugs before?

6.2. How many of you have used alcohol before?

6.3. How/Why did you start using/experimenting with substances?

6.4.What specific substances do/have you use?

Why those specific substances?

6.5. Are substances easily available to adolescents?

Where did you get substances from?

6.6. Do you think adolescent substance use is influenced by friends?

If yes, in what ways?

If no, why not?

6.7. Do you think adolescent substance use is influenced by the communities they stay in?

If yes, how?

If no, why not?

6.8. Do you think adolescent substance use is influenced by their families?

If yes, how?

If no, what else influences adolescent substance use?

6.9. Would you say your substance use affected your behaviour?

If so, in what ways?

6.10.Would you say your substance use affects your academic performance?

If so, in what way?

6.11.What do you think places adolescents at risk of using substances?

6.12.What do you think would protect adolescents from using substances?

ANNEXURE 2

Directorate: Research

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tel: +27 021 467 9272
Fax: 0865902282
Private Bag x9114, Cape Town, 8000
wced.wcape.gov.za

REFERENCE: 20161006 – 4819
ENQUIRIES: Dr A.T Wyngaard

Ms Janine Welby-Solomon
10 Lepanto Close
Strandfontein
7785

Dear Ms Janine Welby-Solomon

RESEARCH PROPOSAL: EXAMINING THE ECOLOGICAL RISK AND PROTECTIVE FACTORS OF SUBSTANCE ABUSE AND ITS EFFECTS ON EDUCATIONAL AND BEHAVIOURAL OUTCOMES AMONG HIGH SCHOOL LEARNERS: IMPLICATIONS FOR A SCHOOL BASED INTERVENTION MODEL

Your application to conduct the above-mentioned research in schools in the Western Cape has been approved subject to the following conditions:

1. Principals, educators and learners are under no obligation to assist you in your investigation.
2. Principals, educators, learners and schools should not be identifiable in any way from the results of the investigation.
3. You make all the arrangements concerning your investigation.
4. Educators' programmes are not to be interrupted.
5. The Study is to be conducted from **23 January 2017 till 30 May 2017**
6. No research can be conducted during the fourth term as schools are preparing and finalizing syllabi for examinations (October to December).
7. Should you wish to extend the period of your survey, please contact Dr A.T Wyngaard at the contact numbers above quoting the reference number?
8. A photocopy of this letter is submitted to the principal where the intended research is to be conducted.
9. Your research will be limited to the list of schools as forwarded to the Western Cape Education Department.
10. A brief summary of the content, findings and recommendations is provided to the Director: Research Services.
11. The Department receives a copy of the completed report/dissertation/thesis addressed to:

    The Director: Research Services
    Western Cape Education Department
    Private Bag X9114
    CAPE TOWN
    8000

We wish you success in your research.

Kind regards.
Signed: Dr Audrey T Wyngaard
Directorate: Research
DATE: 06 October 2016

13 February 2017

REQUEST FOR PERMISSION TO CONDUCT RESEARCH

To Whom it May Concern

My name is Janine Welby-Solomon and I am a social work student at the University of Cape Town. The research I wish to conduct for my Master's Dissertation involves "**Examining the Ecological Risk and Protective Factors of Substance Abuse and its Effects on Educational and Behavioural Outcomes among High School Learners**". This project will be conducted under the supervision of Dr Khosi Kubeka (UCT, South Africa).

I am hereby seeking your consent to utilise 50 of the learners in your school (if possible, 10 from each grade) for a questionnaire focusing on their experiences of substance use. Thereafter, I will select 10 learners to partake in a focus group.

I have provided you with a copy of my dissertation proposal which includes copies of the measure and consent and assent forms to be used in the research process, as well as a copy of the approval letter which I received from the Western Cape Education Department.

Upon completion of the study, I undertake to provide the University of Cape Town with a bound copy of the full research report. If you require any further information, please do not hesitate to contact me on 074 215 0884 or Welbysolomonjanine@gmail.com.

Thank you for your time and consideration in this matter.

Yours sincerely,

Janine Welby-Solomon
University of Cape Town

ANNEXURE 3

Consent Form for Parents or Guardians

Permission for Research with Children

Dear **Parent(s) or Guardian(s**):

I am writing to ask your permission for your child to participate in a University of Cape Town research project on **Examining the Ecological Risk and Protective Factors of Substance Abuse and it's Effects on Educational and Behavioral Outcomes among High School Learners.**

We are interested in identifying the factors that place South African youth at risk for substance use. We are also interested in identifying what factors act as a protective measures for adolescents against substance use. We by no means are implying that your child uses substances, we are only interested in their experience.

The project in which your child has been invited to participate is expected to be an enjoyable experience and will require your child to complete a quick questionnaire and participate in a short focus group. The researcher will ensure that this is as disruption as possible on your child's academics. However, the decision about participation is yours.

All children's performances are considered confidential and individual children's results will not be shared with school staff. However, information based on the results of the group of participants will be provided. Only children who have parental permission, and who themselves agree to participate, will be involved in the study. Also, children or parents may withdraw their permission at any time during the study without penalty by indicating this decision to the researcher. There are no known or anticipated risks to participation in this study. I would like to assure you that this study has been reviewed and approved by the Research Ethics Review Board at the University of Cape Town. In addition, it has the support of the principal at your child's school and the Western Cape Education Department. However, the final decision about the participation is yours. We would appreciate it if you would permit your child to participate in this project, as we believe it will contribute to furthering our knowledge of **adolescent substance abuse in South Africa**. Please complete the attached permission form, whether or not you give permission for your child to participate, and return it to the school.

Thank you in advance for your interest and support of this project.

Sincerely,

Janine Welby-Solomon

Master's Student

University of Cape Town

Consent Form – Child

I have read the information letter concerning the research project entitled **Examining the Ecological Risk and Protective Factors of Substance Abuse and its Effects on Educational and Behavioural Outcomes among High School Learners** conducted by **Janine Welby-Solomon** of the Department of **Social Development** at the University of Cape Town.

I acknowledge that all information gathered on this project will be used for research purposes only and will be considered confidential. I am aware that permission may be withdrawn at any time without penalty by advising the researchers.

I realize that this project has been reviewed by and approved by the Research Ethics Review Board at the University of Cape Town, and that I may contact this office if I have any comments or concerns about my son or daughter's involvement in the study.

If I have any questions about the study I can feel free to call the researcher **Janine Welby-Solomon on 021 704 9440**

☐ Yes – I would like my child to participate in this study

☐ No – I would not like my child to participate in this study.

Child's Name **(please print)** _____

Child's Birth Date _____ Gender of Child ____ Male ____ Female

Parent or Guardian Signature _____ Date _____

Researcher's Signature _____ Date _____