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THE ASSOCIATION OF ADOLESCENT SMOKING WITH STRESS AND COPING IN PRETORIA HIGH SCHOOLS: A QUALITATIVE STUDY

Oscar Reno O'Hara

MPH RESEARCH REPORT

A research report submitted to the Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, in partial fulfilment of the requirements for the degree of Master of Public Health (Health Policy and Management).

Johannesburg,

2008.

DECLARATION

I declare that this research report is my own unaided work. It is being submitted for the degree of Master of Public Health at the University of the Witwatersrand, Johannesburg. It has not been submitted for any other degree at Wits, nor at any other university, before. I have not fabricated data or falsified results and no portions or elements of another person's work have been taken as my own. Credits accurately reflect the individuals, organizations and/or institutions concerned.



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16th September

……..day of……..2008

DEDICATION

To all the youth and the children of the universe…preserve and celebrate your natural gift of youthfulness, strength and good health. As the days unfold on your life's journey, remember that the world is waiting for you to bring fourth all that you are, in the way that only you can. You hold the key to your own destiny and you hold a promise for a healthier generation and planet- a better future for yourself and your own children.

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ABSTRACT

Adolescent substance use is associated with a number of pressing problems on the public health agenda, including an increased risk of contracting sexually transmitted diseases, teenage pregnancy, violence-related injuries, depression, homicide, sexual assault, and accidental death. Teenage substance use remains high in South Africa, with a prevalence of smoking and alcohol binge-drinking estimated at 18.5% and 23% respectively. A previous quantitative cross-sectional analysis of data from a study cohort from which this study's sample was drawn, demonstrated an association between adolescents' sense of coherence (SOC) – a measure of coping ability – and smoking. The current study, using a qualitative approach, thus sought to gain more insight into adolescent substance use, particularly smoking, and to better understand how it may relate to coping. A mixed method sampling strategy was used in selecting 22 research participants between the ages of 16 and 19 in two high schools in Pretoria. They were then interviewed individually by an interviewer blinded to their SOC level and substance use status as documented in the quantitative survey in which this study builds on. The interviews were transcribed in full and a content analysis strategy was used in the analysis of the data. The results obtained were then merged with participants' substance use status and SOC levels.

Of the 22 participants, 6 had strong SOC and had never used substances; 8 had weak SOC and were current substance users. The other 8 also had weak SOC but were not current substance users. Further analysis of the results showed that adolescents' substance use is associated with stress and coping as they (substance users) reported using substances in attempting to manage stressful life events. Of the 8 current substance users, 7 reported avoidance-oriented (disengagement) coping styles. Five of the 7 reported load imbalance such as academic and social pressures and distress (e.g. schoolwork overload, peer demands, and family problems) as a reason for using substances. The non-substance using adolescents with weak SOC reported strong social support, especially family and peer support in coping with life stressors. Hence, substances were more likely to make up for compromised coping where contextual-level risk factors (demands/stressors) exceeded coping resources such as social support. Also, of the 8 substance users- in addition to stress related reasons for using substances- 4 reported sensation seeking, whilst 2 reported curiosity/experimentation- which are all non-stress related.

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Furthermore, although family and peer support were observed to be complementary in most cases, the reliance on peers for support was stronger amongst those whom family support was considered weak, which presented the context for social/peer pressure and vulnerability to substance use. The study findings suggest family support as a moderator of the influence of the adolescents' inability to cope with stress (or have low SOC) on smoking behaviour.

On the other hand, a close relationship was observed between strong SOC and using engagement coping responses and reporting family and school support as sources of support. Notably, all the participants with strong SOC reported that they had never used substances despite being equally affected by life stressors.

The implications of the findings are also discussed, especially as related to enhancing SOC. More practically, in addition to providing life skills training to educate adolescents about substance use, school-based programmes could incorporate the notion of stress and coping in helping adolescents to develop desirable and effective coping strategies to deal with social demands as well as adopting advantageous lifestyles to meet their needs for stimulation and adventure (sensation seeking and experimentation). On the whole, the enhancement of social support and adolescents' connectedness to various social systems may be the key to substance use prevention among South African adolescents.

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ACKNOWLEDGMENTS

I wish to express my gratitude to the following individuals and institutions who have contributed, directly or indirectly, to the success of this research project:

Dr. Ayo-Yusuf from the faculty of health sciences, University of Pretoria, for offering professional guidance as well as practical assistance throughout the research process;

All participating schools for their co-operation in data collection and all learners who took part in the one-on-one interviews;

Gauteng Department of Education (GDE), for assistance in the authorisation of the research project.

The Wits School of Public Health for offering guidance during the formative stage (protocol review and recommendations) of the research.

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CHAPTER ONE

This chapter covers 3 areas, viz.: 1) Introduction, 2) Literature review, and 3) Aims of the study. Firstly, a broad introduction is given which looks at the background information on substance use, particularly smoking, among adolescents. The introduction presents a statement of substance use as a public health problem and also justifies the study in the light of gaps in research looking at smoking in the context of coping with stressful life events amongst adolescents. Secondly, the chapter looks at the published literature on substance use amongst adolescents, especially smoking in the context of coping. Key concepts are discussed and the literature is reviewed in relation to the theoretical perspectives informing the study. The chapter ends with the aims and objectives of the study.

1.1 Introduction

1.1.1 Background information

Huge advancements in health, education, and technology have taken place in recent years, putting today's youth in a better position to achieve a bright future than ever before. Such developments have ensured a well-educated, healthier and more informed younger generation. From a human capital and health point of view, this is very encouraging. Indeed, the Human Science Research Council (2005:4) notes that "Y*oung people of today are the best educated in human history and advancements in health, technology and greater access to health care mean that many more children are able to enter youth healthier than ever before*."

A bright future on the one hand and a gloomy one on the other, because substance use amongst adolescents causes much uncertainty about the future of South Africa. Recent media reports (Mail & Guardian, 2007) about substance use induced violence (including fatal incidents) in high schools across the country are particularly worrying.

South African adolescents might experience the use of substances in a unique manner due to factors such as rapid socio-economic changes in recent years following the end of the apartheid era (Rocha-Silva, de Miranda, and Erasmus, 1996). As revealed in a previous National Youth Study in South Africa - in terms of the behavioural correlates of substance abuse- "*when a country is experiencing general and drastic socio-economic changes, as is the case in South Africa at present, these frequently*

reverberate within the sphere of alcohol and drug intake" (Rocha-Silva et al., 1996:3). These authors also reported that a substantial number of the youth cited coping with personal, social, and interpersonal situations as their main reasons for smoking, drinking and using other substances.

Moreover, substances mostly used by adolescents tend to be socially acceptable and easily accessible in South Africa. The Centre for Alcohol and Drug Studies (CADS) (2005) reported that substances like alcohol, dagga, tobacco and snuff are socially acceptable in some South African communities because cultural and/or religious rituals and beliefs require that some of these substances are present and in use.

1.1.2 Statement of the problem

From a global point of view, it has been suggested that young people use substances more than before and from a much younger age, putting their health at greater risk for diseases of lifestyle (World Health Report, 2000). The use of alcohol and illicit drugs was estimated to contribute 9.8% of the total global burden of disease for people aged 15-29 years in the year 2000 (Toumbourou, Stockwell, Neighbors, Marlatt et al., 2007). The majority of substance-using adolescents fall within that age range.

Adolescent substance use is consistently associated with escalating problems. Adolescents presenting to drug treatment centres are increasingly more severely delinquent and drug involved; deviant peer involvement is becoming more dangerous; schools are unable to cope- while classroom sizes are increasing and the distance between parents and teachers is widening; and drug trafficking is exploding, reaching youths earlier (Szapocznik and Williams, 2000). Again, higher levels of adolescent substance use are associated with a number of pressing problems on the public health agenda, including an increased risk of contracting sexually transmitted diseases, teenage pregnancy, violence-related injuries, depression, homicide, sexual assault, and accidental death (Sage and Suzuki, 2006). In addition to acute effects and disorders, substance use in adolescents can harm the healthy development of the body and brain (Toumbourou et al., 2007).

Looking at Africa, the Commonwealth Secretariat (2006) indicated, in its youth strategy document, that Africa is nowhere near achieving the goal of ensuring a healthy and productive life for all (towards sustainable development) because diseases of lifestyle, due to alcohol and tobacco use, exacerbate Africa's huge burden of disease.

And with regard to South Africa, this country has seen an alarming increase in the number of young people who use substances, most of whom are of school-going age (Reddy, Panday, Swart, Jinabhai et al., 2003). Rates of problem drinking, often accompanied by heavy smoking, among South African youth have been suggested to be increasing rapidly (Department of Health, 2001-2002).

Furthermore, substance use is associated with an increase in risky sexual behaviours in the African region- a precursor for the HIV infection (Morojele, Kachienga, Nkoko, Moshia et al., 2004). South Africa has one of the highest HIV prevalence rates in the world (Commonwealth Secretariat, 2006). The misuse of alcohol is increasingly being recognized as a key determinant of sexual risk behaviour, and consequently, an indirect contributor to HIV transmission in sub-Saharan countries (Morojele et al., 2004). The Commonwealth Secretariat (2006) points out that adolescents and young adults face unique health challenges in that regard because of the frightening figures that 65% of all new HIV infections are in that age group (15-29 years).

Alcohol and drug induced violence is also becoming rife in Gauteng (Pretoria and Johannesburg) high schools. In response, the Gauteng Department of Safety and Security made school safety the main focus from 2005 onwards in trying to cub the proliferation of drugs in schools (Gauteng Provincial Government Newsletter, 2005). However, substance-induced violence in high schools has shown a significant increase between 2005 and 2007 and school principals are pleading for help (Mail & Guardian, 2007).

1.1.3 Justification for the study

Causes of lifestyle diseases are responsible for 58.4% of morbidity and 68.4% of mortality globally and many of these- smoking, risky sexual behaviour, and alcohol and drug dependency - have their roots in adolescence (WHO, 1998). More recently, Sage and Suzuki (2006) have also stressed that most of a person's long-term health behaviours are formed during adolescence. Thus preventing risky behaviour and promoting healthy choices among adolescents can yield positive health outcomes, not just during adolescence, but also during adulthood.

Looking at South Africa, in 1999 adolescent smokers seemed to be above the global average at 23% compared to 20% but dropped to 18.5% in 2002 (Swart, Reddy,

Panday, Philip et al., 2004). However, this is still a very high prevalence rate and more efforts are needed in promoting healthy behaviours among adolescents.

Although numerous studies highlight the problem of smoking amongst adolescents and even document the risk factors, there is a paucity of studies that have focused on 'non-use' of substances and the factors responsible, i.e. protective factors as opposed to risk factors. Studies taking this approach have looked at 'Sense of Coherence' (SOC), a central construct of the 'salutogenic theory' (Antonovsky, 1987). The theory posits that those with strong SOC are better able to cope with stress, and thus maintain health. Therefore, it may be useful to explore the coping strategies used by non-smoking adolescents compared to the ones used by adolescent smokers. It may yield greater benefits as it orientates research towards adolescents' strengths rather than weaknesses. Lindstrom and Eriksson (2005) point out that it may be more important to focus on peoples' resources and capacity to create health than the classic focus on risks, ill health and disease.

Furthermore, studies looking at SOC and smoking amongst adolescents using a qualitative approach are rare. Not only is research in SOC at an infancy stage, studies have often taken a quantitative approach and most of these are conducted amongst adults. The limited information available on SOC and smoking among adolescents (e.g., Glanz, Maskarinec, and Carlin, 2005; Ayo-Yusuf and Severson, 2004) generally uses quantitative methods. Taking a qualitative approach may make it possible to elicit experience, understandings and meanings from the participants', rather than the researchers', point of view (Chamberlain, 1999). Adopting a qualitative approach may also make it possible to obtain rich, detailed descriptions of the social world (social context) of teenage participants as opposed to simply documenting the extent of the problem (Nichter, Quintero, Nichter, Mock et al., 2004).

1.2 Literature Review

1.2.1 Discussion of key concepts and theories

Sense of Coherence (SOC)

The capacity to understand a situation and be motivated to cope, and believe that resources to cope are available, forms the concept of Sense of Coherence (Lindstrom and Eriksson, 2005). These resources for coping can be termed general resistance resources (GRR) and can be found both in the immediate and distant environment of

every person and can be of material or non-material quality (Lindstrom and Eriksson, 2005). These include social support (from friends, parents, school, church, community etc), self-efficacy, self-esteem, intelligence, preventive health orientation, and even money.

Hence, by definition, SOC is a concept which explains the relationship between GRR (a mediating and pressure-blocking factor) and physical, mental and psychosocial health when coping with stressful life events (Antonovsky 1987). This makes SOC not a personality trait, but a global orientation associated with good health. Antonovsky is generally acknowledged as the founder of the 'Salutogenic theory' and he coined the concept of Sense of Coherence (Antonovsky, 1987).

Recently it has also been suggested that SOC has a unique relation to overall health and wellbeing (Richardson and Ratner, 2005). Thus, it appears that research interest in that direction is long overdue. Antonovsky (1979; 1987) suggested that the stronger the SOC of a person is; the more likely he or she is to cope successfully with life stressors. This theorist also pointed out that SOC contributes to good health because elevated SOC enables individuals to view (perceive) stressors/stressful life events as less stressful, hence the negative consequences of a stressor would be minimised. Antonovsky also believed that a person's SOC increases the degree to which tension states are perceived as comprehensible (cognitive coping), manageable (behavioural coping: availability and utilisation of resources for successful coping), and meaningful (motivational coping: finding meaning in a situation and then moving to a health promoting direction) (Antonovsky, 1979; 1987).

Using Antonovsky's theoretical concepts and assumptions on comprehensibility, manageability and meaningfulness, Sagy and Antonovsky (2000) pointed out to four types of life experiences that might influence the development of SOC:

1. Consistency- clear messages and structure and order in one's social settings during the course of growing up provide the basis for a comprehensible life experience.
2. Load balance- appropriate demands (good load balance) on one's resources (e.g. physical, emotional, intellectual, family, and community resources) during the course of growing up provides the basis for a manageable life experience.

3. Participation in shaping outcomes- being offered the opportunity to shape one's fate during the course of growing up provides the basis for a meaningful life experience.
4. Emotional closeness- feeling consistent emotional bonds and sense of belonging in one's social groups during the course of growing up provides the basis for a meaningful life experience.

Bearing in mind that adolescents are still developing and acquiring coping and life skills and competencies, SOC seems a valuable concept to explore in them, especially within the school environment where they spend most of their time. Understanding factors that are associated with elevated or weakened adaptive coping abilities or SOC or that lead to maladaptive coping strategies, might contribute in designing youth-centred health promotion programmes in schools. These programmes could be incorporated into existing life skills training programmes such as the current life orientation syllabus.

Coping

The concept of coping refers to an individual's efforts to master demands (conditions of harm, threat or challenge) that are appraised (or perceived) as exceeding or taxing his or her resources (Monat and Lazarus, 1991). It is important to note that coping implies actively doing something about demanding situations. This is evident in Mohino, Kirchner and Forns (2004: 11) who define coping as *"constantly changing cognitive and/or behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of a person."*

Different theorists have come up with different types of coping and this research drew from Lararus and Folkman's (1984) ways of coping as well as Wills' (1992) stress-coping model. Amongst other ways of coping, Lararus and Folkman (1984) looked at confrontational coping (being actively engaged in changing a situation), distancing (detaching oneself from a situation), self-controlling (regulating one's emotions or behaviour), seeking social support, accepting responsibility, escape-avoidance (attempting to escape or avoid the situation), 'planful' problem-solving, and positive reappraisal (a focus on personal growth). Linked to that, coping strategies can be categorised using Wills' (1992) major proposition of stress-coping model; active coping (e.g. problem-solving) and avoidant coping (e.g. disengagement). Beyond just

generalised coping, Wills' stress-coping model highlights an association between coping and substance use and/or non-use. Wills' (1992) emphasis is that coping is a response to stress or demanding life events and active coping decreases the likelihood of substance use whereas avoidant coping is a risk factor for substance use and abuse.

Stressors

One theoretical model widely applied in the field of stress studies is the psychological perspective (Finkelstein, Kubzansky, Capitman, and Goodman, 2007). This perspective focuses on individuals' subjective evaluation of their abilities to cope with demands (Finkelstein et al., 2007). In line with that focus, this study looked at stressors as environmental events or conditions that place demands on adolescents. Thus "stress" points to the adolescents' appraisal of these environmental conditions as threatening or taxing their psychological resources. Cognitive appraisal of environmental conditions implies an evaluative process that reflects the person's subjective interpretation of events (Lazarus and Folkman, 1984). Hence, it is possible that, given the same stressor, some adolescents might find it motivational and others might find it stressful. Whilst primary appraisal looks at evaluating the extent to which an event is threatening, secondary appraisal entails evaluation of possible coping processes (Lazarus and Folkman, 1984).

Smoking

Smoking, in relation to substance use has not always been clearly defined. Instead, definitions often rely on making extrapolations from 'substance abuse.' The standard definition of substance abuse is "*use of alcohol and drugs associated with failure to fulfil major role obligations, use in situations in which it is physically hazardous, and leads to legal problems and recurrent social and interpersonal problems*" (American Psychiatric Association, 2000: 198). Although this definition highlights the problems associated with substance use in general, this study sought to provide an in-depth understanding of the problem from adolescents who clearly use substances, hence the focus was on smoking and/or alcohol use.

In the context of the current study, substance user is any one who reports tobacco smoking and/or alcohol use in the past month. Quantification (amount) was not a primary concern for someone to be considered a substance user. That is because any amount used, no matter how small, is detrimental to health (Warren, Riley, Munafo,

Neville et al., 2000). Furthermore, drinking any amount of alcohol at the age of most of the participating adolescents would constitute under-age drinking.

The problem of smoking is a cause for great concern from a public health point of view, as indicated in the global statistics from the World Health Organisation (WHO, 1998; 2002; Warren et al., 2000) outlined in table 1 below.

Table 1: Smoking statistics in relation to adolescent health

Global Trend	Issues related to Adolescents	Health Concerns
Smoking related-diseases kill one in 10 adults globally, or cause four million deaths. By 2030, if current trends continue, smoking will kill one in six people	3 out of 5 young people who experiment with tobacco will become addicted, leading to daily smoking into adulthood. Half of these will die prematurely and the majority of them will suffer needlessly as a result of their nicotine addiction	Smoking is the single largest preventable cause of disease and premature death. It is a prime factor in heart disease, stroke and chronic lung disease. It can cause cancer of the lungs, larynx, oesophagus, mouth, and bladder, and contributes to cancer of the cervix, pancreas, and kidneys.
Every eight seconds, someone dies from tobacco use	Between 80,000 and 100,000 children worldwide start smoking daily and about one in 5 adolescents is a current smoker	Half of long-term smokers will die from tobacco. Every cigarette smoked cuts at least five minutes of life on average - about the time taken to smoke it
Smoking is on the rise in the developing world but falling in developed nations. South Africa is part of the developing world.	Young people face the challenge of adopting healthy behaviours as they move towards adulthood, given that approximately 7 out of 10 premature deaths among adults are associated with behaviours initiated during adolescence.	More than 4,000 toxic or carcinogenic chemicals have been found in tobacco smoke.
In the developing world, tobacco consumption is rising by 3.4% per year.	Research has shown that young people who choose not to smoke before the age of 20 are not likely to start smoking as adults	At least a quarter of all deaths from heart diseases and about three-quarters of the world's chronic bronchitis are related to smoking.
About 15 billion cigarettes are sold daily - or 10 million every minute	Evidence shows that around 50% of those who start smoking in adolescent years go on to smoke for 15 to 20 years.	

Unfortunately, despite the seriousness of the problem, WHO (1998) reports that adolescents who choose to smoke and use other tobacco products may not understand the nature of addiction or appreciate the long-term consequences of their behaviour. That means that what begins as an effortless habit more often than not evolves into a daily dependence on tobacco products to satisfy the craving for nicotine. More recently, Hoffman, Sussman, Unger, and Valente (2006) have suggested that smoking (even

experimenting with cigarettes) has a bigger impact on long-term substance use behaviour than use of (or experimenting with) other drugs. That implies that the prevention of the onset of smoking at an early age in effect reduces and/or prevents smoking and use of other substances at all ages.

Developmental Psychology

Eric Eriksson's psychosocial stages of human development categorise adolescence and young adulthood under the stage called '*identity versus role confusion'* (Erikson, 1968). Almost forty years ago, his book 'Identity, Youth and Crisis' was published with the general view that young people have to accomplish major tasks or resolve developmental crises in order to emerge as healthy young adults (Erikson, 1968). Some of these tasks include dealing with self-esteem issues which are often resolved through peer association or group membership even if it means group participation in risk behaviours (Hook, 2002). Hence, within this developmental perspective, adolescence is viewed as a time in which risk-taking behaviours are adopted in order to gain group acceptance through communal participation in group activities (Hook, 2002).

Accomplishing developmental tasks (for adolescents) is often associated with risks. As pointed out by Plant and Plant (1992: 115), "*mastery needs are frequently met by experimentation, which often involves testing limits and taking risks*." Mastery is expected to boost self-confidence and overall self-esteem. On the other hand, substances are known to boost self-confidence, not through mastery of the experience, but just by their psychological effect in ensuring lack of inhibition. Although offering a useful understanding of observable behaviours amongst adolescents, the developmental perspective offers limited explanations. For instance, it seems to complicate the task of understanding whether substances constitute 'a risk' that would be attractive to adolescents or 'a solution' during threatening live events.

Hence, Wyn and White (1997) argue that the developmental perspective fails to clarify other possibilities. For instance, more than just having a flair for risk-taking or taking risks as an inevitable part of growing up, adolescents' behaviour might, in fact, be a response (or coping strategy) to complex situations (Wyn and White, 1997). In other words, adolescents might engage in smoking to cope with stressful life events rather than merely 'taking risks.' Therefore, the distinction between smokers and non-smokers could be explained by the coping means applied by adolescents.

Furthermore, the developmental paradigm does not explain much about young people who attain mastery through risk-free behaviours, i.e. without the use of substances. Attainment of mastery without elevated risk has been linked to ego strength, which is the personal power and ability to resolve crises and deal with opposing forces of personal, social and moral values, biological needs, and social reality (Freud, 1982). However, with his deep interest in individual psychopathology, Freud (1982) did not explore the coping properties possessed by his patients with stronger ego strengths.

Therefore, the association of smoking with stress and coping amongst adolescents needs deeper probing because it does not seem sufficient to say that smoking is motivated by the need to attain personal identity. Moreover, there is also the possibility that making healthy or unhealthy choices might not be a simple decision for adolescents to make. That is because adolescents exist in a wider sphere of social influence or social environments that might represent stress or coping opportunities (or constraints). Such social environments are best conceptualised by systems theories.

Systems theories

A system is an organized whole that is comprised of parts that are interdependent or interrelated (Szapocznik and Williams, 2000). Systems theories focus mainly on relationships and social interactions. Generally, systems theories capitalise on concepts such as interdependency, behavioural interplays or transactions within and between systems and subsystems, systemic leadership (structure), developmental appropriateness, and conflict vs. mutuality/support (Szapocznik and Williams, 2000). To organise the social context of the adolescents, this study draws on Bronfenbrenner's social ecological developmental theory (Bronfenbrenner, 1977; 1979; 1986) with the basic assumption that people do not exist in social isolation but in a wider sphere of social influence. The primary social contexts for adolescent development (i.e., family, school, peer, and neighborhood) are thought to be nested within each other like a set of Russian dolls (Bronfenbrenner, 1979).

Although the systems perspective emphasises interpersonal social contexts, it also recognises the importance of intra-personal characteristics (e.g., genetic and biological organization). These intra-personal characteristics are viewed as nested within the individual, who is nested in the family, peer group, school- and all of these, in turn,

might be nested within the neighbourhood and larger social processes such as cultures and political processes.

The current study also recognises the concepts of micro-, meso-, exo- and macrosystems described by Bronfenbrenner (1977; 1979; 1986). Microsystems are the settings in which a young person directly participates. Mesosystems do not contain the young person, and refer to the relationship between members of different microsystems of the same young person. Exosystems are those extrafamilial support systems, such as parents' close friends and parents' place of work, that affect family members. It is through their impact on family members that exosystemic interactions have an impact on the young person. Individual, family, school, peer, and neighbourhoods are influenced by society's broad ideological and cultural patterns and "blueprints," which Bronfenbrenner called macrosystems. Exposure to these macro-level social processes shapes individual development by enriching or impoverishing an individual's microsystems, mesosystems, and exosystems.

Hence, prosocial outcomes are expected of young people who have supportive and multi-stranded (i.e., many connections that are mutually supportive) prosocial contexts within and across family, school, neighbourhood. On the other hand, poorer, problematic outcomes are expected of young people whose social contexts lack sufficient interconnectedness.

The family setting can be expected to play a central role in the socialization of young people. This role can either be positive (protection against risk factors) or negative (become a stressful environment for young people). Research demonstrates that family relations are predictors of substance use/abuse and related antisocial behaviours in young people (Szapocznik and Williams, 2000; Nation and Heflinger, 2006). Fortunately, Szapocznik and Williams (2000) point out that research also suggests that adolescent drug use/abuse and behavioural problems can change as a result of changes in the family relations. Most importantly, the systems theory seems to suggest that interventions aimed at changing family patterns of interaction represent a strategic point of entry to target interactions within or between systems in the family's social ecology that are unsuccessful at achieving the goals of the family or its individual members (Szapocznik and Williams, 2000).

For example, in Szapocznik and Williams' (2000) research, where the intervention involved boosting family involvement in young people's social worlds (or lack thereof), results showed that parental involvement were at very low levels at baseline. Parents receiving the experimental intervention, compared to controls, demonstrated increased parental involvement, and further analysis revealed that significantly fewer adolescent behavioural problems were reported by parents and youths in the preventive intervention condition than in the no intervention control. Hence, Szapocznik and Williams (2000) concluded that parental involvement in families was efficacious in preventing behaviour problems.

More recent studies, e.g., Matjasko, Grunden, and Ernst (2007), have also concluded that even short-term change in family involvement and processes is a significant source of risk for some adolescents. Similarly, Roche, Ensminger, and Cherlin (2007) reported a strong association between lack of parental involvement and problematic youth outcomes, especially in higher risk neighbourhoods. This could have wide implications in intervention programmes targeted at substance using youths.

However, the issue with family intervention is that adolescents spend most of their time at school or with friends. Hence, with the advent of the adolescent drug epidemic of the 1970s, the vast majority of counsellors who worked with substance using youths reported that although they preferred to use family therapy, they were not able to bring whole families into treatment (Szapocznik and Williams, 2000). In response, another model (One Person Family Therapy) was developed aimed at changing maladaptive family interactions and symptomatic adolescent behaviour without requiring the presence of the whole family in treatment sessions (Szapocznik and Williams, 2000). The goal of One Person Family Therapy is to change the drug abusing adolescent's participation in maladaptive family interactions that include him/her.

The efficacy of One Person Family Therapy was tested with drug-abusing adolescents. The results showed that One Person Therapy was efficacious in significantly reducing youth drug use and behaviour problems as well as improving family functioning, and researchers came to the following conclusion: 'It appears that an individual modality conceptualized in family terms, can bring about improvements in family functioning; whereas an individual modality conceptualized in individual terms can result in deterioration of family functioning' (Szapocznik and Williams, 2000). The significance

of this is that adolescents spend most of their time in the school environment, rather than at home, and the above authors suggest that intervention in the school context can yield positive results.

Adolescents also interact with their peers in the school environment. Peer influence has been shown to be a significant predictor of adolescents' substance use (Hoffman et al., 2006). However, from a coping point of view, the onset of substance use is expected to be directly associated with stressors and peers serving as a form of maintenance or providing reinforcement and a safe environment for the continuation of the use. According to Hoffman et al. (2006), adolescents start smoking possibly due to stress (among other things) and select friends who match their smoking status or increase their smoking status to match that of their peers.

Hence this study employed a wider contextual focus, beyond the family, and became equally concerned with the impact of other systems (e.g., school, peers, and community) on adolescents' influences when it comes to life stressors, coping and substance use. In general, various aspects of an adolescent's social ecology influence antisocial and drug abusing developmental trajectories (Szapocznik and Williams, 2000).

1.2.2 Other relevant theoretical approaches

Theory of reasoned action

First postulated by Fishbein (1980), the theory of reasoned action asserts that attitudes and beliefs on a specific conduct/behaviour (e.g. smoking) and its social consequence predict intentions to engage in that action (e.g. smoking). For instance, assuming that smoking could yield social consequences such as greater popularity/more friends, more attractiveness to the opposite sex, and greater approval (and being liked more) by best friend, the intention to smoke would be greater. Hence, this theory also assumes that individuals are rational in their decision-making (Ross and Deverell, 2004). This theory has some explanatory value on adolescent smoking behaviour. For instance, a longitudinal study found a very strong association between a more positive view of the consequences of smoking and later smoking behaviour (Bauman, Fisher, Bryan, and Chemoweth, 1984; Chassin, Presson, Sherman, Corty et al., 1984).

However, such findings seem inconclusive when looking at smoking initiation as well

as the broader social context. In his study, Chassin et al. (1984) commented that the theory of reasoned action was weaker in explaining the context of smoking (smoking in relation to people's real lives situations) as that might explain smoking initiation better. Also, with massive global anti-smoking campaigns, it is generally accepted (even by smokers) that smoking is bad. Yet, social disapproval does not always lead to adoption of socially accepted (non-smoking) behaviours (Collins, Sussman, and Rauch, 1987). This variance could be explained by Bandura's social cognitive theory.

Social learning (cognitive) theory

The social learning theory (Bandura, 1977), later called social cognitive theory (Bandura, 1986), postulates that observed actions and the context in which they occur interact with each other to predict behaviour. Bandura's theory departs from his concept of reciprocal determinism: 1) person variables (beliefs and values that determine how a situation is analysed and which behaviour chosen), 2) situation variables (settings in which a person behaves), and 3) behaviour; which continuously interact with one another (Bandura, 1986). At the heart of this theory is the notion of observational learning (people learn what they see). To learn (to smoke), the stimuli must be prevalent and distinctive (especially as portrayed by highly influential people or models), and the behaviour (e.g. smoking) must have the potential to yield something valuable under existing circumstances, otherwise it would be avoided. Accordingly, the theory's position with regard to engaging in negative behaviour (e.g. smoking) with full awareness of environmental (social) consequences is that environmental consequences become less important when the anticipated benefit of the behaviour is greater. Similarly, acquired lessons are only translated into action when there is an incentive to do so

Based on these assumptions, in their school-based study, Poulsen, Osler, Roberts, Due et al. (2002) stated that daily smokers reported seeing a lot of learners and teachers smoking on the school premises; leading to environmental influence by promoting an atmosphere of tolerance towards smoking. Conversely, even in an intolerant environment, some adolescents might still smoke if they perceive the benefits to be greater than the social consequences (Bandura, 1986). Also, by inference, it appears that adolescents who have a lot of smoking friends initially see them as "models," learn the behaviour and translate it into action if it has value to them. Thus, environmental influence (which include models, significant others etc) might have greater value than

peer pressure in explaining adolescent smoking because pressure and coercion do not constitute learning. In their study Urberg, Shyu, and Liang (1990) tested this view and reported that environmental influences were more strongly associated with smoking than direct pressure.

This theory offers alternative explanations for adolescent smoking, particularly as it can also account for the more subtle factors such as experimentation, curiosity, sensation seeking etc. Curiosity and experimentation can be seen as part of the learning process- the latter implying direct learning and the former meaning implicit learning. Sensation seeking could be regarded as an embedded need that smoking fulfills; it drives the learning process and ensures translation into practice. For instance, studies looking into the structure of the 'teenage brain (e.g. Wallis, 2004: pp46-53) based on fMRI (functional Magnetic Resonance Imaging) state that:

> *During adolescence, hormones are especially active in the brain's emotional centre- the limbic system- and that creates a flood of emotions and teens are forced to seek out situations where they can allow their emotions and passions to run wild- they are actively looking for experiences to create intense feelings.*

Thus, pleasure seeking (hedonism) might be a highly motivating factor for learning and practicing smoking as, even when knowing that smoking is bad, most high-risk behaviour is pleasant and pleasurable at the time of occurrence (Weiten, 1998).

However, this theory seems to have significantly minimised the importance of the larger social environment. It only looks at the environment in terms of how it modifies behaviour with regard to reward and punishment. It does not take it into account that social distress is an environmental factor that adolescents would make great efforts to avoid. Whilst this theory states that people are motivated to act in ways that allow them to avoid things they dislike (Bandura, 1986), it does not consider the possible value of smoking in coping with (avoiding) environmental distress. It pays a lot of attention to observable human behaviour and minimises human experiences that could actually explain the root cause.

1.2.3 Association of smoking with stress and coping

The preceding review has highlighted that stress is associated with threatening situations or conditions. That triggers a coping response to alleviate the threat. In that instance, smoking has been shown to be an attractive route to take amongst adolescents

as this offers some kind of escape from threat. Toumbourou et al. (2007) have suggested that in most communities, a substantial minority of adolescents show consistent substance use as well as heavy and harmful patterns of illicit drug use that seem to be motivated by escaping distress and that are difficult to change via normative interventions.

In summary, the literature upholds the notion of a relationship between stressful life events, poor coping abilities and substance use. Reviews of the psychosocial risk factors of adolescent substance use suggest that the highest risks can be summarized as: 1) psychological functioning (poor coping abilities), 2) family environment, 3) peer relationships, and 4) stressful life events (Nation and Heflinger, 2006). That suggests that both developmental and ecological theories have a synergistic effect in explaining stress and coping. The current study would then propose an ecological-developmental perspective. In short, adolescents' stressful life events - which are part of normal development (and resultant coping mechanisms) - are mediated by the reciprocal interactions among them (adolescents) and their ecosystem (i.e., family, peer and school) (Szapocznik and Williams, 2000).

The current study hypothesizes a link between adolescents' perceived stressors, smoking and the use of personal and environmental resources in coping. Hence, this research strived towards a better understanding of the association between SOC (as a measure of the ability to apply resources to cope successfully) and smoking. Developing such an understanding might provide useful insight to the usefulness of enhancing adolescents' coping skills as an intervention for substance use prevention. Pincus and Friedman (2004) point out that having a repertoire of coping skills at an early age can be a buffer or moderator of the effects of negative life stress on the development of psychological maladjustment, especially during adolescence when stressors are expected to escalate.

1.3 Study aims and objectives

1.3.1 Broad aim/goal:

- To explore and describe what smoking means to adolescents; in particular, to provide a better understanding of smoking within adolescents' social contexts in relation to stress and coping.

1.3.2 Specific objectives:

- To explore the relationship between adolescent smoking and sense of coherence (SOC) and other psychosocial factors related to their social environment.
- To analyse the implications of these with respect to schools' health policies, in relation to the life orientation programme in schools.

CHAPTER TWO: METHODOLOGY

2.1 Study design

This study, in acknowledging the inadequacy of quantitative approaches in fully understanding substance use amongst adolescents, took a qualitative approach. One-on-one interviews were conducted and the adolescents themselves participated directly in the research in ensuring that the themes emerging were not simply a reflection of an agenda imposed by the researcher. The interview context also facilitated broader communication patterns or deeper interaction that included non-verbal communication, which, although a vital form of communication, gets lost during quantitative research.

Against that backdrop, based on a previous quantitative survey, the current study applied a two-stage random theory-based purposeful sampling strategy (Creswell, 2002; Onwuegbuzie and Leech, 2007) (see figure 1 below). This sampling framework was designed with the aim of expanding the salutogenesis theory. The mixed method approach was achieved by building upon existing quantitative data obtained from the same study cohort over a three-year period (see figure1). This provided a unique opportunity to generate in-depth understanding of the nature of the relationship (and complex dynamics) between substance use and sense of coherence (SOC) amongst adolescents.

Hence, the study design can be described as exploratory or naturalistic (Neale and Liebert, 1986). In line with exploratory research designs (Neale and Liebert, 1986) this was a qualitative study carried out with the intention of emphasizing the importance of the social context for understanding the social world of adolescents as well as allowing for the gathering of a large amount of information in a few cases and going into greater depth and getting more details in these cases.

2.2 Selection of study sites and sampling strategy

Figure 1 (below) illustrates the study site selection and sampling strategy. Similar to the study by Kuuppelomak and Utriainen (2003) the reference values used for SOC strength was drawn from Antonovsky's scale. On the scale from 1 to 7, a mean score of 1-2.33 corresponds to a weak SOC, 2.34-4.66, a moderate SOC and 4.67-7.00, a strong SOC. On the basis that this was a follow-up study of adolescents from 3 junior secondary schools, the selection of the two high schools in Pretoria was justifiable as

that is where the largest number of subjects from the first study could be traced. The research plan was to have 20-24 research participants chosen with close reference to the sampling framework below (figure 1). Most qualitative studies (e.g. Tilleczek, 2006; Rodham, Brewer, Mistral, and Stallard, 2006) have used the range of 20-24 research participants to ensure that data is small enough to be manageable but also big enough to be representative. That was also informed by the rationale that interviewing would continue up to a point where no new information could be elicited; i.e. until the data collection process reaches saturation (Onwuegbuzie and Leech, 2007).

Figure 1: Participants selected to represent identified group variables of interest.

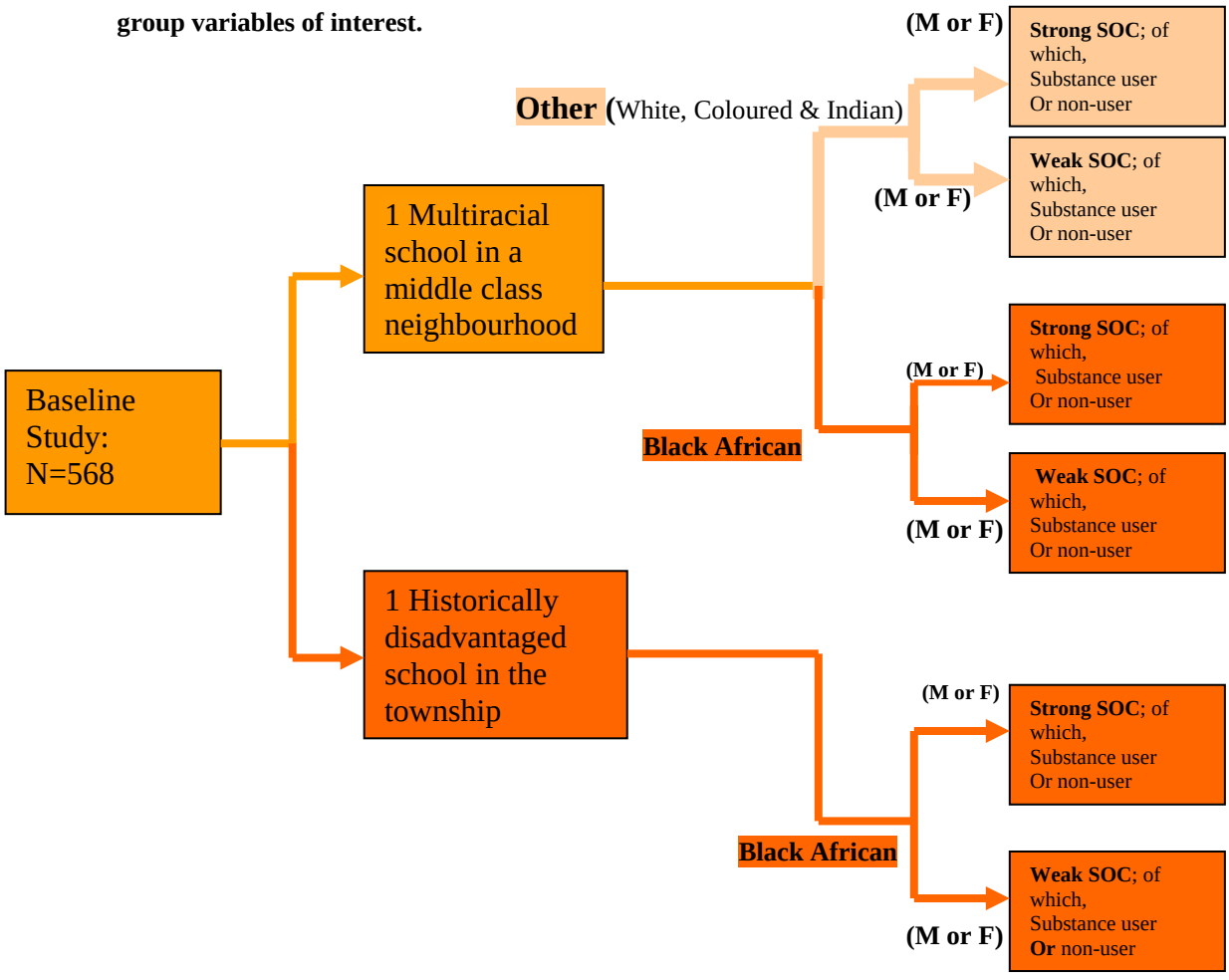


Figure 1 shows that a two-stage random theory-based purposeful sampling strategy was used to produce maximum variation (Creswell, 2002; Onwuegbuzie and Leech, 2007) among selected eligible adolescents based on the specific variables of interest - weak/strong SOC and substance use/non-use.

The first stage involved stratification of participants into groups and sub-groups of interest as identified from the baseline quantitative study on which this one builds (see

Figure 1). The primary investigator for the quantitative study played a role in the stratification of participants into the sub-groups taking into account the variables of interest from the study population of 568. That resulted to 54 potential interviewees from the multiracial school and 31 potential participants from the second school. At the second stage, the potential participants were assigned numbers and a table of random numbers used to select 24 participants, 12 from each school. The random sampling procedure was used to ensure that each had an equal chance of being selected for interview. The list of those selected was presented to the researcher without any information on substance use status and SOC level. Interviewees were all between the ages of 16 and 19 and in grade 11. Bearing in mind the ethical considerations -see section 2.8 below- participants were approached individually and agreed to participate. All 12 participants were interviewed from the multi-racial school and 10 from the other school, i.e. after the 22nd interview, no new information was elicited and it was concluded that the interview process had reached saturation.

However, in order to limit interviewer bias, as cited above, the interviewer was blinded to the profiles of the interviewees with respect to SOC level/strength and substance use status as determined by the quantitative study until the initial data analysis was completed. The interviewer, however, sought to collect information on current substance use status from the participants and recorded such. After the initial data analysis, results on substance use revealed that it (substance use status) had not changed. Hence, substance use status in subsequent chapters refers to both previous (quantitative study) and current use (qualitative study).

The interviews were conducted in spare offices at the schools' premises. Each interview lasted for 40 minutes (on average) and this fitted well with the schools' timetables and took into account concentration abilities of the interviewees and the need to engage each interviewee to saturation whereby no new information was anticipated should interviewing continue (Onwuegbuzie and Leech, 2007). Follow-up interviews were also conducted with 3 participants in order to get more clarification and detailed information. Repeat interviews are useful as they can influence the rapport developed between the researcher and participants and affect the richness of data obtained (Tong, Sainsbury, and Craig, 2007). The rationale for the use of interviews and split social classes is as follows:

Interviews

The decision to employ interviews as a means for collecting the data was made because interviews allowed the participants to determine the flow of communication and let their perceptions of the association of substance use, stress and coping emerge naturally in the course of the conversation with the researcher. This is an important point because one of the key criticisms levelled at previous work focusing on adolescent risk-taking is that surveys and questionnaires have often asked closed questions which lead the participants to respond in a certain way. Again, one-on-one interviews eliminate the potential risk of group influence that may modify responses.

Split social classes in different contexts

To the extent that SOC concerns itself with the belief that resources for coping are available, there may be differences in perceived internal and/or external resources available at different school localities. Hence, variations (if any) in SOC and coping strategies in the different school contexts would be useful in eliciting a rich context-specific meaning of life. Thus, this study also included the dimension of school location, which may also be a proxy for socio-economic status.

2.3 Other relevant methodologies

Despite this study's preference for one-on-one interviews, it is worth noting that this choice was not made lightly as there are several other approaches to qualitative research that the research might have used. These include:

- **Grounded theory**- a general qualitative method where theoretical ideas (concepts, models, and formal theories) evolve during the actual research through continuous interplay between systematic data analysis and collection (Strauss and Corbin, 1994). This approach was not relevant in the current study as the concepts about SOC and coping have already been developed and this research sought to extend their applicability.
- **Ethnography**- the capture of the lived experience of others through 'being with them' in understanding their social and cultural way of life (Fetterman, 1985). This method was not relevant here as the current study hypothesized that substance use is not merely 'a way of life' but occurs in the context of coping. However, Ethnography might be useful where research involves adolescents from heavy substance using cultural groups where it might be viewed from the perspective of social (cognitive) learning theory as discussed earlier on.

- **Participatory action research**- a three-pronged qualitative research activity involving 1) social investigation with the full active participation of the research participants in the entire research process, 2) an educational process of mobilisation for change, and 3) action taken for development (Bhana, 1999). This could have been an appropriate approach if this research was explicitly aimed at policy reform and programme implementation and time and resources were not an obstacle.
- **Focus group research**- this involves group discussions as opposed to on-on-one interviews. This approach could be the first point of exploring the issue in general and it can be followed by one-on-one interviews to gain deeper understanding. Apart from ethical considerations such as confidentiality, this research favoured one-on-one interviews rather than focus group discussions in order to get individual and diverse views as opposed to views mediated by 'group conformity.'

2.4 Brief description of context/setting

The research took place in two high schools in Pretoria North. The multi-racial school is located in an affluent middle-class suburb and is one of those previously classified as "model-C schools" in South Africa. Hence, it is well resourced. The other school is located in Soshanguve township. This community is known to have all the South African ethnic groups, except whites. Crime tends to be high in most South African townships as a lot of black young people (a group most represented in South African prisons) are unemployed (Fagan, 2004). A report by Judge Fagan (inspecting judge on correctional services) revealed that prisons are now overcrowded by young people who committed crimes due to the stress of unemployment (Fagan, 2004). Fifty percent of cases were aggressive crimes largely engendered by poverty and joblessness and the frustrations that they cause for young people. From an ecological point of view, that presents a huge risk for young people in schools situated in townships.

2.5 Measurement tool

A semi-structured interview guide was used as a framework for data gathering (see appendix A) to ensure that important aspects of the key concepts are addressed. The interview guide (appendix A) was developed by putting together probing phrases that reflected Antonovsky's Orientation to Life Questionnaire, short form (SOC-13) which includes 13 items. It also included probes on coping strategies. The tool was piloted on

three of the young people drawn from the study population. The interview guide was used with the 3 to simulate the planned interviews and determine if the items made sense to them. This was also done to see if it produced the desired responses in exploring the different components of the sense of coherence construct. Generally, there appeared to be no need to refine the tool. However, general logistical issues were considered, e.g. the interviewer ensured that the interview space was safe and sound for private talk at both schools. The participants of the pilot study were not part of the final study. During the actual interview session, the items in the guide were introduced in a non-directive way to enrich communication.

2.6 Quality control

The quality of data in the study was ensured by the use of data and methodological triangulation (Terre Blanche and Durrheim, 1999). As such, the investigator was blinded to the substance use and SOC status of interviewees during the data collection and initial analysis stages. Later on, the interviewer then matched SOC and substance use information from both the quantitative and qualitative studies to see if there were any disagreements in what the subjects reported in both the quantitative and qualitative research. The principle of congruence (Terre Blanche and Durrheim, 1999) was also applied whereby the researcher became very alert to issues pertaining to internal consistency during data analysis. The principle of plenitude or the degree to which the explanations are complete (Terre Blanche and Durrheim, 1999) was also applied in incorporating as many aspects of the interviewees' social lives as possible. The researcher was also aware of researcher effects (Breakwell, Hammond, and Five-Schaw, 1995) but used these to the advantage of the investigation. Key to these is that the interviewer who was a 27 year old male quickly established rapport with the learners and dressed to look as close as possible to prevailing young people's dress codes rather than "power dressing." All that ensured that the adolescents felt comfortable to talk about anything. According to Breakwell et al. (1995), people engage in more self-disclosure to an interviewer who they think is similar to them. At the same time, interviewer effects were controlled by ensuring that one investigator conducted all interviews. That was done to help in holding constant the stimulus provided by the interviewer (Breakwell et al., 1995). All these measures sought to ensure credibility for the research process.

2.7 Data analysis and management

The tape-recorded interviews were transcribed in full and the data analysed according to emerging themes (see appendix B). This involved identifying the categories which illuminate the data and developing these categories into a general analytic framework with relevance outside the specific setting (Rodham et al., 2006). How adolescents perceive coping in relation to substance use or non-use, within the context of their coping resources, was investigated in detail.

An iterative process of coding was undertaken (appendix B). Initial analysis identified discrete themes or concepts, their properties and dimensions (open coding) (Pidgeon, 1996). The concepts considered to be similar in nature or related in meaning were then grouped into more abstract categories (axial coding) (Pidgeon, 1996). These categories were then confirmed and further elaborated by additional analysis, and any relationships between them, as well as limits to their applicability were investigated. This coding process lead to the formation of hypotheses, which were then related back to the data. During each stage of the analysis the researcher recorded thoughts and hypotheses about the process. That helped to further refine the themes. The sub-concepts and sub-categories were then reassembled to form four unifying categories as well as key concepts within each of the four categories. The four unifying categories are as follows: 1. Life stressors; 2. Coping strategies; 3. Reasons for not using substances (or wanting to stop); and 4. Reasons for using substances (see Appendix B).

Following the data clearing and interpretation stage, the results were presented to a few of the research participants so that they could provide feedback. That was crucial because obtaining feedback from participants on the research findings is thought to add validity to the researcher's interpretations by ensuring that the participants' own meanings and perspectives are represented and not curtailed by the researcher's own agenda and knowledge (Tong et al., 2007).

Although computer packages are available for analyzing qualitative data, the investigator did not rely on any of these as the study sought to immerse the researcher in the data and, as such, provide a more in-depth understanding. This is thought to produce better analysis (Pidgeon, 1996).

2.8 Ethical Considerations

2.8.1 Informed consent and voluntary participation

Active, written consent was obtained from the parents and learners. Participants were informed verbally and in writing that participation would be voluntary and information given would be kept strictly confidential. They were also informed that they could withdraw from the study at any time if they wished to, and non-participation would not lead to any negative consequences. Before each interview, the researcher outlined the purpose and expected benefits of the exercise to the participant and also sought permission to tape record the session. As all of the participants were above 16 years, they then signed consent forms. The parents of the participants consented to the base-line quantitative study. They were also informed about the nature of the follow-up study so that they would consent again.

2.8.2 Confidentiality:

Confidentiality of each participant was protected by ensuring that, save the researcher, no other person (including teachers) was involved in the interviews. Also, results are presented in such a manner that no participant is identifiable by anyone.

2.8.3 Institutional approval:

Letters were sent to the relevant schools in order to get cooperation from the principals and teachers and permission was granted. Approval for conducting the study was also granted by the Gauteng Department of Education as well as the University of the Witwatersrand's Research Ethics Committee (reference number R14/49).

2.8.4 Minimising invasiveness:

The researcher interfered with the participants or their milieu only to the extent that was warranted by the research design.

2.8.5 Responsibility of researcher:

The researcher conducted the research with due concern for the dignity and welfare of the participants. The research process did not involve any harm to the participants. However, some interviews pointed to emotionally distressing situations in the lives of interviewees. These study participants were debriefed and/or referred for professional help. Also, the researcher provided them with a resource list of relevant professional organisations/institutions they could contact if necessary.

CHAPTER THREE: RESULTS

This project was aimed at exploring adolescents' experiences of substance use, especially smoking, and to attempt to better understand it within the context of coping abilities. The adolescents' life experiences and coping attempts were explored in detail through a qualitative research orientation. The adolescents either applied successful coping means to deal with stressors or adopted palliative means, mainly smoking and/or use of other substances. Certain coping strategies such as escape-avoidance appear to be strongly associated with smoking. Low SOC was also strongly associated with smoking and/or drinking as a means of coping.

This study provides some evidence to suggest that substance use, especially smoking, amongst adolescents occurs within the context of coping. This chapter discusses these key findings and also looks at the major implications of the findings in relation to schools' educational curriculum (Life Orientation).

3.1 General characteristics of study sample

Following the research plan, the desired number of study participants was successfully traced from the baseline quantitative study it extended from. Looking at table 2 below, one or two comments deserve a mention in relation to family structure and SOC. Of all six participants with strong SOC, only one has a nuclear family. Again, of all the 6 participants with strong SOC, only 2 are from the suburb school, previously know as "model C school"- characterised by a good supply of resources compared to schools located in townships. Through observation and scanning the environment at both schools, the researcher can state that such disparities are still evident. Therefore, perceived lack of (or limited) material resources in relation to school location does not seem to be associated with strong or weak SOC.

Looking at table 2, it can also be noted that of the 6 adolescents with strong SOC, 3 are males and 3 are females. That would suggest that there is no association between gender and the development of SOC. Furthermore, 15 of the 22 were black Africans, thus the sample is fairly representative of the cultural diversity in the region. The general characteristics of the research participants are presented below (Table 2).

Table 2: General characteristics of research sample in relation to SOC

Respondent	Gender	Race/ethnicity	Family structure	School Location	SOC
1	Female	Black	**Traditional/nuclear:** Mother, father & child(ren)	Township	Weak
2	Male	Black	**Alternative/Non-nuclear:** Single parent/female headed family	Township	Strong
3	Male	Black	**Alternative/Non-nuclear:** Single parent/female headed family	Township	Weak
4	Female	Black	**Alternative/Non-nuclear:** Lives with relative (aunt)	Township	Strong
5	Female	Black	**Traditional/nuclear:** Mother, father & child(ren)	Township	Weak
6	Male	Black	**Alternative/Non-nuclear:** Single parent/female headed family	Township	Strong
7	Female	Black	**Alternative/Non-nuclear:** Female-headed	Township	Weak
8	Male	Black	**Traditional/nuclear:** Mother, father & child(ren)	Township	Weak
9	Female	Black	**Alternative/Non-nuclear:** Orphaned/Lives with relative (aunt)	Township	Strong
10	Female	Black	**Traditional/nuclear:** Mother, father & child(ren)	Township	Weak
11	Female	Coloured	**Alternative/Non-nuclear:** Forster parent/guardian	Suburb	Weak
12.	Female	White	**Traditional/nuclear:** Mother, father & child(ren)	Suburb	Weak

Strong SOC

Weak SOC

Table 2 Continues

Respondant	Gender	Race/ethnicity	Family structure	School Location	SOC
13.	Male	Coloured	**Alternative/Non-nuclear:** Single parent/female headed family	Suburb	Weak
14.	Female	White	**Alternative/Non-nuclear:** Single parent/female headed family/divorced mother	Suburb	Weak
15.	Female	White	**Alternative/Non-nuclear:** mother and stepfather	Suburb	Strong
16.	Female	Indian	**Traditional/nuclear:** Mother, father & child(ren)	Suburb	Weak
17.	Male	Black	**Traditional/nuclear:** Mother, father & child(ren)	Suburb	Weak
18.	Male	White	**Traditional/nuclear:** Mother, father & child(ren)	Suburb	Strong
19.	Female	Black	**Traditional/nuclear:** Mother, father & child(ren)	Suburb	Weak
20.	Male	Black	**Alternative/Non-nuclear:** Single parent/female headed family	Suburb	Weak
21.	Male	Black	**Traditional/nuclear:** Mother, father & child(ren)	Suburb	Weak
22.	Female	Black	**Traditional/nuclear:** Mother, father & child(ren)	Suburb	Weak
TOTAL: n….. 22	Male…… 9 Female...13	Black……..15 White……...4 Coloured……..2 Indian……...1	Nuclear family……11 Non-nuclear family…….11	Suburb school...……...12 Township school……..10	Weak SOC...16 Strong SOC...6

3.2 Main findings

Following a process of coding and thematic analysis (see appendix B) the main findings of the study are presented in tables 3 and 4 below. Table 3 shows that microsystems (settings where the adolescents directly participate) and exosystems (extrafamilial support systems) provide protection against life stressors. That can be seen from the direct association between coping strategies used (e.g. seeking social support from parent/guardian) and reasons for not using substances (e.g. family support). On the other hand, where stressors are found in the family environment, the family often played no supportive role and/or contributed directly or indirectly to the reasons for smoking and/or using other substances. In that instance there was a strong association between substance use and personal and family problems.

Table 4 (below) shows that there seem to be specific factors that contribute to the use or non-use of substances. Most notably, table 4 also shows that there are specific coping strategies that appear to be very effective in dealing with problems/stressors; hence they were associated with not smoking or using substance. For example, 'planful' problem-solving and positive reappraisal were reported mainly by non-smokers/non- substance users whilst escape-avoidance and seeking support only from peers were more commonly reported by smokers/substance users.

It is also worth noting that escape-avoidance, which is linked to disengagement coping, was reported more often by smokers/substance users. As indicated in table 4, there was an inverse relationship observed between engagement coping and smoking/substance use as well as disengagement coping and non-smoking/non-use of substances. Moreover, the association between escape-avoidance, as a coping strategy, and smoking/substance use was suggestive of the use of substances in the context of coping. Hence, the results in table 3 are further analysed in table 4 to ascertain if substance users would be represented more on coping strategies that are associated with substance use such as escape-avoidance coping. As table 4 shows, almost all substance users can be seen as using disengagement coping styles like escape-avoidance and that seems to be associated with their inability to adopt a balanced lifestyle.

Table 3: Frequencies of responses related to life experiences of participants themselves and/or reported experiences of their peers

Life Stressors (N=22)		**Coping strategy used (N=22)**		**Reasons for not using substances or wanting to stop (N=22)**		**Reasons for using (starting using) substances (N=22)**	
Academic pressure/demands	12/22	Escape-Avoidance	17/22	Family support	16/22	Peer influence	17/22
Career decision	6/22	Seeking social support mainly from:		Peer support	11/22	Seek experiences for intense feeling (sensation seeking)	10/22
Boredom &/or loneliness	6/22	**Parent/guardian**	16/22	Drugs do not work	10/22		
Family disintegration due to separation, divorce, death etc	4/22	**Peers**	16/22	Need for autonomy/uniqueness	9/22	Family problems	9/22
		School environment	10/22	Expectations to be good &/or need for self-advancement/improvement	7/22	Personal problems	8/22
Limited decision latitude	4/22	**Spiritual Support**	4/22	Community concern	5/22	Family influence (household member use)	6/22
Peer Pressure	4/22	**Sibling**	3/2	Involved in sporting activities	4/22		
Crime	3/22	**Therapy/Counselling**	2/22	Setting boundaries	2/22	Curiosity/experimentation	6/22
Parental poverty	3/22	Positive reappraisal	10/22	Using is stupid/not cool	1/22	Load imbalance (e.g. academic & social demands/pressure)	5/22
Parental fighting	3/22	'Planful' problem-solving	7/22				
Family resentment	3/22	Confrontational	6/22				
Death of significant care-giver (mother &/or other)	2/22	Recreational/Relaxation	4/22				
Unstructured life activities	1/22	Distancing	4/22				
		Accepting Responsibility	3/22				
		Self-controlling	3/22				
		Aggression	2/22				

***Table 4: Frequency distribution of responses related to most reported personal experiences of smokers versus non-smokers**

Life Stressors	S (N=8)	N/S (N=14)
Academic pressure/demands	3/8	8/14
Career decision	0	6/14
Boredom &/or loneliness	4/8	1/14
Family disintegration due to separation, divorce, death etc	0	4/14
Limited decision latitude	2/8	2/14
Peer Pressure	3/8	0
Crime	0	3/14
Death of significant care-giver (mother &/or other)	1/8	1/14
Family resentment	2/8	1/14

Coping strategy used	S (N=8)	N/S (N=14)
Escape-Avoidance	7/8	0
Seeking social support mainly from:		
Parent/guardian	4/8	12/14
Peers	6/8	8/14
School environment	4/8	6/14
Spiritual Support	4/8	0
Positive reappraisal	3/8	9/14
'Planful' problem-solving	0	7/14
Confrontational	0	6/14
Recreational/Relaxation	1/8	3/14
Distancing	1/8	3/14
Accepting Responsibility	1/8	2/14
Self-controlling	2/8	1/14

Reasons for not using substances or wanting to stop	S (N=8)	N/S (N=14)
Family support	4/8	12/14
Peer support	3/8	8/14
Drugs do not work	5/8	0
Need for autonomy/uniqueness	2/8	7/14
Expectations to be good &/or need for self-advancement/ improvement	3/8	4/14
Community concern	1/8	4/14
Involved in sporting activities	3/8	1/14
Setting boundaries	2/8	0

Reasons for using/starting using substances	S (N=8)	N/S (N=14)
Load imbalance (academic & social demands/pressure)	5/8	……
Sensation seeking	4/8	……
Family Problems	3/8	……
Peer influence	3/8	……
Household member use	2/8	……
Personal Problems	2/8	……
Curiosity/ Experimentation	2/8	……

Applies mostly to non-smokers Applies mostly to smokers S = Smoker N/S = Non-Smoker

* **NB:** Figures in Table 4 represent research participants (only) and excludes instances where they were referring to their peers. Accounts about the latter were taken into consideration in Appendix B & Table 3 in order to get the total picture. However, they (participants' peers) were excluded in Table 4 in order to present a picture of the direct (actual) participants). Hence, figures in Tables 3 should not be expected to correspond with those in table 4.

3.3 In-depth analysis of main findings

3.3.1 Overview of stressors

Looking at tables 3 and 4 above, it appears that, in general, school demands as well as career decision-making ranked highest amongst life stressors. The following is indicative:

> *"Young people have fear of failure or maybe fear of the future… of what might happen in the future. Things like failing an exam or not making it in life."* **(Suburb white male, strong SOC)**

> *"I don't know what I want to study…I think that is the problem…finding out what I want."* **(Suburb coloured female, weak SOC)**

> *"I'm really scared of next year. All these things that have to happen when I'm in matric you know… And I don't even know what I'm going to do after next year…. It is the fear of the unknown and I'm scared that my dreams will probably not come true."* **(Suburb white female, strong SOC)**

However, it is worth noting that the results also indicate that, although it may be said that the school environment is fraught with huge demands that are very stressful for the adolescents, some of them, especially those with strong SOC, do not always regard these stressors from a fatalistic point of view. The following is indicative:

> *"Maybe school is a challenge but I think that it is a good challenge because it is preparing me for the future."* **(Township black male; strong SOC)**

> *"Life can be uncertain at times but it is better to take it as a challenge and learn from it rather than allow future uncertainties to destroy your whole future."* **(Suburb white male, strong SOC)**

> *"In a way stress and pressure actually drive me. But, in fact, I think fear drives me. I find the thrill out of fear as well."* **(Suburb white female, strong SOC)**

Boredom and/or loneliness were also reported as very stressful by a considerable number of interviewees, particularly among substance users- irrespective of social class. The following is indicative:

"I find life boring… except when I'm with my friends. Smoking makes me feel confident and it keeps me busy when I have nothing to do." **(Suburb black male; weak SOC)**

"If I don't have the money (for gambling), then I will have nothing to do when my friends are gambling...I think that once I get bored or I'm alone I will start to think about smoking." **(Township black male; weak SOC)**

A fair number of learners also reported several stressors operating in the family environment. These are family disintegration (due to separation, divorce, death etc), parental poverty, family resentment, and parental fighting. Some learners report such family problems in ways that point to 'family crises' because of strained relations and constant fighting. The following is indicative:

"It's like my mother and father are always fighting. It's something between them and I don't really know about it. But it stresses me." **(Township black male; strong SOC)**

Amongst these family stressors is the revelation that some learners are stressed by family resentment. The following is indicative:

"Family problems...I feel very angry with my family because it is like I'm not accepted at home. I feel angry and let down. There's nothing that I can say that makes me feel happy about my family. My father used to hate me when I was young…I think that a bit of love from someone makes a difference." **(Suburb black male; weak SOC)**

These statements seem to suggest that the family has a central role to play in contributing towards making young people less stressed.

3.3.2 Substance use/non-use, SOC and coping

The association between Substance use (non-use), SOC and coping is summarised in table 5 below. Subsequent to that the relationships between weak SOC and substance use as well as strong SOC and non-use of substances are further explored.

Table 5: Relationship between Substance Use/Non-Use, Coping and SOC

Respondent	Main Stressor/Problem	Main Coping Strategy Used	Substance Use Status	SOC
1	1. Parental Poverty 2. Crime	1. Positive Reappraisal 2. Seeking Social Support: parental, school & peer	Non-User	Weak
2	Academic pressure/demands	1. Positive reappraisal 2. Seeking Social Support: Parental & School	Non-User	Strong
3	1. Peer Pressure 2. Boredom &/or Loneliness	1. Seeking Social Support: Parental, Peer 2. Escape-Avoidance	User	Weak
4	1. Academic pressure/demands 2. Career Decision	1. Seeking Social Support: Parental & School 2. 'Planful' Problem-Solving	Non-User	Strong
5	1. Academic demands 2. Family Resentment	1. Seeking Social Support: School & Peer Support 2. Distancing	Non-User	Weak
6	1. Academic pressure/demands 2. Parental Fighting	1. Seeking Social Support: parental & school 2. Confrontational	Non-User	Strong
7	1. Family Disintegration 2. Boredom &/or Loneliness	1. Seeking Social Support: Sibling & Peer Support 2. Confrontational	Non-User	Weak
8	1. Academic pressure/demands 2. Career Decision	1. Seeking Social Support: Parental & Sibling 2. Distancing	Non-User	Weak
9	Family Disintegration	1. Seeking Social Support: Peer & family Support 2. Accepting responsibility	Non-User	Strong
10	Academic pressure/demands	1. Seeking Social Support: Parental & Peer 2. Confrontational	Non-User	Weak
11	1. Career Decision 2. Limited decision latitude	1. Positive reappraisal 2. Seeking Social Support: Family & Peer Support	Non-User	Weak
12	1. Academic pressure/demands 2. Unstructured Life Activities	1. Seeking Social Support: Peer & Spiritual 2. Escape-Avoidance	User	Weak
13	1. Academic demands 2. Peer pressure	1. Seeking Social Support: Parental & Peer 2. Self-Controlling	User	Weak
14	1. Academic pressure/demands	1. Seeking Social Support: Parental Support 2. Positive reappraisal	Non-User	Weak
15	Career Decision	1. Seeking Social Support: Parental & Peer 2. Confrontational	Non-User	Strong
16	1. Limited Decision Latitude 2. Peer pressure	Escape-Avoidance	User	Weak
17	1. Family resentment 2. Loneliness &/or Boredom	1. Aggression 2. Escape-Avoidance	User	Weak
18	Career decision	1. Seeking Social Support: Parental Support 2. Positive reappraisal	Non-User	Strong
19	Academic pressure/demands	Seeking Social Support: Parental & School	User	Weak
20	Family resentment	1. Seeking Social Support: School Support 2. Escape-Avoidance	User	Weak
21	Boredom &/or Loneliness	Escape-Avoidance	User	Weak
22	1. Academic pressure/demands 2. Career Decision	Seeking Social Support: Parental & Peer support	Non-User	Weak

STRONG SOC (n=6) WEAK SOC (n= 16)

Substance use in relation to coping and strong SOC

In table 5 it can be noted that there is a category of adolescents with strong SOC who also do not use substances. For these adolescents the findings also suggest that they have a particular way of coping with demands which does not include applying coping

strategies that are related to substance use. More strikingly, they seem to use engagement coping such as problem-focused coping strategies and also hold a positive outlook on life.

All respondents with strong SOC reported not using (not ever used) substances. The adolescents with strong SOC hold a very optimistic view of life even though they are aware of (and equally affected by) challenges/stressors encountered by other young people. Table 5 shows that the adolescents with strong SOC tended to apply mainly engagement coping strategies such as positive reappraisal, 'planful' problem solving, seeking (appropriate/effective) social support and recreational/relaxation. The following is indicative:

> *"I'm not scared of the future; I'm just excited… There are bad things or discouragements that will happen in life but it is better to focus on the positive side- even the positive side of bad things, if you know what I mean...."* **(Suburb white male; strong SOC; non-user)**

The above extract (as well as table 5) show that adolescents with strong SOC employed positive reappraisal coping strategies that enabled them not to see every life event as stressful. On top of that, they also recognized and made use of support structures around them, especially social support.

It is also important to note that the adolescents with strong SOC reported less stress, but this was not related to fewer demands (e.g. schoolwork and developmental challenges) on them. The adolescents with strong SOC also reported numerous stressors and it must be borne in mind that some of them come from the township where resources in the community and at schools may be limited. That suggests that they cope better because of strong SOC rather than because they have fewer stressors (or more resources than the others).

The following is indicative:

> *"I'm doing well in all my subjects but sometimes there are no books here in the library and I have to buy my own books. It's not that there are no resources but there is a limit to the resources that the school can have for everyone… I try and I don't think that I can be a failure or I can allow situations to disturb me at school."* **(Township black male; strong SOC; non-user)**

"I work hard and do well here at school; I also do a lot of other things. I'm a member of the Learners Representative Council (LRC), I'm also involved in some organisations and still I have a lot of friends and make time for them and enjoy being with them as much as I enjoy all the other things that I do." **(Township black female; strong SOC; non-user)**

The findings in the current study reveal that the adolescents with strong SOC use mainly adaptive coping strategies which also include seeking social support in various settings: peer support, family support, sibling support, spiritual support, school support, and professional support (counselling/therapy). Although social support seemed to play a central role for the majority of the youth (including those with weak SOC), the distinguishing factor between the two groups is that those with strong SOC appeared to be proactive and flexible in their use of coping resources.

Generally, the approach of those with a strong SOC in dealing with problems is engagement coping, with both problem-focused (e.g. 'planful' problem-solving) as well as emotionally-focused (e.g. positive-reappraisal) dimensions. For example, if a parent dies they would first come to terms with that situation and then move on to look for alternative, relevant support structures. To illustrate this, a participant (see respondent no. 9, table 5) who has strong SOC, was orphaned in recent years but expressed a positive coping response to move on despite her stressful life events, she used the resources around her to get support and cope better.

"I feel happy… I don't have problems. I get my strength from my home- from my aunt. My aunt was there to support me. She supported me like her own child." **(Township black female; strong SOC; non-user)**

Substance use/non-use in relation to coping and weak SOC

Table 5 shows that seeking social support as a way of coping has a very high to moderate applicability for adolescents who are faced with challenges. The majority of the adolescents reported parental support as a protective factor against a number of stressors and challenges. That is irrespective of SOC level and substance use status. Most importantly, seeking parental (family) support was also consistent with the reasons given by adolescents with weak SOC for not using substances (See table 5). This suggests that the family is regarded as a major source of support in many young people's lives.

The following is indicative:

"My mother is there for me and I feel better that she is supportive." **(Township black female; weak SOC; non-user)**

"My mother supports me in everything I do. She's a single parent but she gives equal attention to her work and her family." **(Township black male; strong SOC; non-user)**

"If the parent is stronger and helps the child through everything, then the child will be okay." **(Suburb white female; weak SOC; non-user)**

It is also crucial to note that the adolescents do not perceive family support as support coming from mother and father. Instead, family support seems to mean support from a significant caregiver, often the mother or a "mother replacement" such as an aunt or guardian. However, there also seems to be a strong indication that mothers hold an important role in protecting adolescents from substance use or misuse. The following is indicative:

"When I go partying with my friends I sit down and think what will happen afterwards or what if my mother comes here and finds me drunk. Before I do anything I have to think about my mother." **(Suburb coloured male; weak SOC; user)**

"I love my mother…she is the most important person in my life and I do not want to disappoint her." **(Township black male; weak SOC; user)**

Contrary to family support and substance non-use, adolescents who reported limited or no family support reported using substances. They indicated that their use of substances is closely related to their stresses at home.

The following is indicative:

"I tried smoking, alcohol, pills and tried to kill myself. I thought that drinking or taking drugs would help me but it didn't … I will be angry with my father forever and I cannot forget the pain I went through. Everyday was more of a challenge when I was young. I use drugs, alcohol and all that if I'm going through a tough time. I do not just use it." **(Suburb black male; weak SOC; user)**

"I smoke to make myself feel happy maybe… or feel good. My family makes me feel very angry and frustrated but I just tell myself that there's nothing I can do about it." **(Suburb Indian female; weak SOC; user)**

In other instances, family-related stressors are associated with unstructured life activities which seem too overwhelming for the adolescents.
The following is indicative:

> *"Yeah, it's very hard…I sleep a few hours and before I'm ready to wake up it's already morning and I have to go to school... Like yesterday I got home at about six o'clock and my mom and dad told me we all had to go out and we would be back before nine o'clock, he said, but we were back very late, after eleven or about twelve and I couldn't fall asleep after that…ooh I just wanted to die, everything just gets packed-up together and you don't know what to do…. Sometimes every time I get a new school project I just think, "Can't I just get out of school and just finish my life?"* **(Suburb white female; weak SOC; user)**

Another observation from respondents with weak SOC is that, despite reporting family support, some are still smokers (whilst also trying to quit). Some did not even report any family-related stressors. Their substance use seems to be related to peer influence rather than family-related stressors. The following is indicative:

> *"I smoke…I went to a party over the weekend with my friends. And there was a lot of alcohol. My friends got drunk and I also got a little bit drunk… I have a lot of friends and I can't be alone…they all want to be with me and I want to be with them."* **(Township black make; weak SOC; user)**

Half (8 of the 16) of respondents with weak SOC in this study reported peer support as one of their main coping strategies (see table 5 above). Also, looking at peer support separately, of the 10 participants that reported peers as their main source of support, 8 have weak SOC (see table 5).

In light of the above analysis, another point that seems pertinent from the results of the current study is that the adolescents who had progressed from smoking (use of "soft drugs") to the use of other substances ("hard drugs") either have many friends who are substance users and/or have major family problems or weak family support. Hence, they reported peer pressure or lack of family support (e.g. family resentment) as life stressors and made use of substances to cope with these stressors. The following is indicative:

> *"…I had a lot of friends and they say let's smoke weed, let's drink…I drank a lot at some point. And they would say let's try weed…then it's the whole*

thing…it's cat[2]*, it's tik*[3]*, it's weed and all that…"* **(Suburb white female; weak SOC; user)**

"I sometimes feel that my father doesn't love me...he's got hateful feelings in his heart. But I told myself that there's nothing I can do with it. Even my mother is not completely supportive… I'm not sure how to put it. She supports me but not very supportive in a way that I'd love. There's a gap somewhere; I can feel it but it is difficult for me to tell my mother that I don't feel completely happy." **(Suburb black male; weak SOC; user)**

It is also vital to note that a significant number of substance users (4/8) reported, over and above environment related stressors, sensation seeking as a reason why they use substances. The following is indicative:

"I like the thrill that is involved in going out because I like socialising. And if the smoking does happen, its sort of fun by then...doing something that is sort of hidden or not allowed" **(Suburb white female; weak SOC; user)**

"I like going out with my friends. We went out this past weekend and I got very drunk...drinking is for getting drunk. May be it is not good but to tell you the truth I like the whole thing...it is fun being out there and doing something" **(Township black male; weak SOC; user)**

Another non-stress related reason for starting using substances is curiosity or experimentation. The following is indicative:

"I started smoking just for the feel of it…it's better to find out for yourself rather than being told how it feels like." **(Suburb black female; weak SOC; user)**

"Some people do it because they want to know how it feels like when they see someone else doing it at home, friends, relative, soccer star, actors and more." **(Suburb Black male; weak SOC; user)**

All participants reporting non-stress related reasons for using substances also had a weak SOC.

[2] A highly addictive drug which is a cheap substitute for cocaine and heroin -made from mixing methcathenone, hydrochloric acid, petroleum ether, acetone and caustic soda.
[3] Methamphetamine is part of the amphetamine group of drugs presenting short and long-term health and social hazards.

3.3.3 Coping in relation to the school environment

As pointed out earlier on, a considerable number of adolescents appraised the school environment as very stressful- exacerbated by the close link between school achievement and future success. At the same time, it is worth noting that the school environment seems to be viewed as stressful and challenging but not a 'bad,' place altogether. In other words it is generally perceived as a 'necessary' environment to be if one is to succeed in future.

The school environment was cited by a majority of the learners as one of their support systems. They reported positive outcomes for the school environment as it offered them the opportunity to engage in various activities. These included engaging in sports and recreational activities, which they said helped them to de-stress.

More importantly, the school environment was reported as offering relief from family stressors (or a preferable place than home) amongst the interviewees who reported family resentment.

The following is indicative:

> *"It is much better at school because I know I'm not at home and I'm not going to see my father. I also started doing other things that made me to feel less angry. I play rugby here at school and things started to improve since I started playing. And I think that playing rugby is a stress reliever for me… I try to work very hard at school, which is why I managed to even be in grade 11 now. I do that to prove to my father that I'm not "stupid" the way he thinks that I am."* **(Suburb black male; weak SOC; user)**

Hence, the school environment has some of the resources that adolescents need for coping with challenges. The learners seem to feel a sense of belonging and experience positive outcomes when the need for belonging and connection to others is satisfied. Some of the interviewees also found schoolwork to be a positive challenge because it was in line with their need for self-advancement/improvement.

The following is indicative:

> *"School is a challenge but it is a good challenge because it prepares me for the future…I can be very angry with myself (if I were to start using substances)… I don't want to break my future."* **(Township black male; strong SOC; non-user)**

These findings seem to bear major implications for schools' life skills training such as the life orientation programmes and other youth intervention programmes. The adolescents seem to hold a positive attitude about schooling and they might even actively engage in programmes that are aimed at offering them more support.
The following is indicative:

> *"I think we need more support from families and schools because that is where we spend a lot of time. Schools have a role to play in ensuring that young people do not start using substances."* **(Suburb white male; strong SOC; non-user)**

> *"Sometimes I sit in class and look at that learner and say, "oh God, he's not coping, he's not participating in class." And I'll think about all the family problems… he'll also start drinking if there's no one to listen to his problems. We need support… in schools, in churches and everywhere. But not everyone goes to church, so it would be better to advise and encourage young people here at school."* **(Suburb black female; weak SOC; user)**

The results also show that adolescents who use substances are actually highly motivated to quit smoking and/or using other substances. They feel that quitting would enable them to cope much better with their demands. This shows that schools need to play a bigger role in helping current substance users to quit. The following is indicative:

> *"I thought…'this isn't getting me anywhere' and then…yeah, I just stopped the other drugs and I'm trying to quit the smoking now because, actually now I cope much better and I feel a little better about myself and the way I cope with situations and schoolwork. I also think its better for me to do that whilst I'm still here at school because once people leave school they never think about quitting drugs or they find it difficult by then.* **(Suburb white female; weak SOC; user)**

This suggests that schools are well placed to play a bigger supportive role in young people's lives in terms of helping them to cope better or develop successful coping strategies.

CHAPTER FOUR: DISCUSSION

Chapter three looked at the relationship between substance use (and non-use), coping and SOC. The current chapter further discuses these relationships, depicted in figure 2 below.

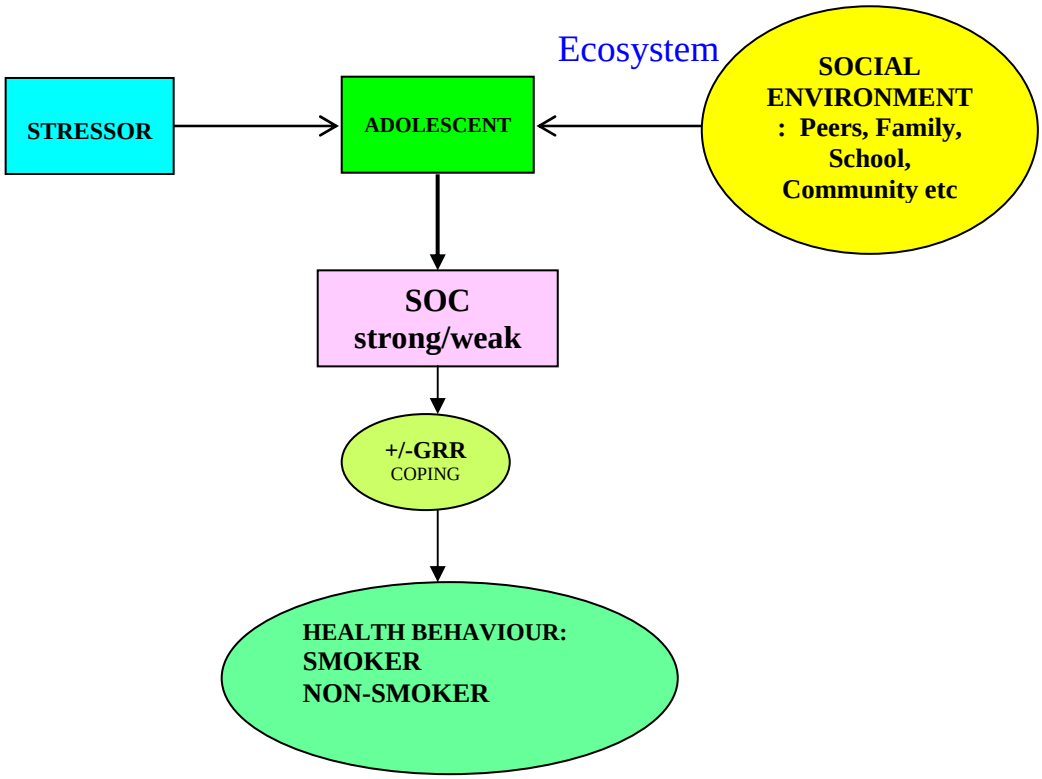
4.1 General characteristics of study sample

The results showed that of all six participants with strong SOC, only one has a nuclear family. This would suggest that there is no association between having a nuclear family and strong SOC. However, even though of the 16 participants with weak SOC, 10 have a nuclear family, there is no sufficient evidence to suggest that there is an association between having a nuclear family and weak SOC. On the other hand, these results seem to suggest that non-nuclear family settings do not disadvantage adolescents from developing strong SOC.

4.2 Association of smoking with stress and coping

The study findings are further represented in figure 2.

Figure 2: Association of smoking with stress and coping



Drawing from the literature review in chapter one and analysis of results in chapter three, figure 2 shows that all adolescents have demands or stressors in their lives but they also have potential coping resources in the ecosystem which includes them and their environment. Their ability to recognise (or not recognise) and use these coping resources (which is mediated by their SOC) will determine their coping outcome or health behaviour. These associations between health behaviour (substance use/non-use), coping and SOC are further discussed below.

4.3 Substance non-use in relation to coping and strong SOC

The results showed that adolescents with strong SOC coped better than those with weak SOC. This is consistent with Antonovsky's salutogenic theory (based on SOC) of health promotion (Lindstrom and Eriksson, 2005). Antonovsky's central construct was that people who have strong SOC would have the ability to assess and understand any situation they're in, find meaning to move in a health-promoting direction, and also have the capacity to do so. Hence the application of the three central concepts; comprehensibility, meaningfulness, and manageability in the salutogenic theory (Lindstrom and Erikson, 2005).

On the whole, the adolescents with strong SOC all seemed to be resilient and unyielding in stressful situations. In sum, it can be suggested that they possess the personal and environmental (psychosocial) resources that enable them to have a different perspective of life. The 'salutogenic theory' refers to such resources as general resistance resources (GRRs) which include material as well as non-material factors in the person as well as their immediate environment, such as coping strategy, knowledge/intelligence, social support, commitment, flexibility, religion/philosophy etc (Lindstrom and Erikson, 2005). They are also able to recognise and make use of these resources. In support of this view, Lindstrom and Eriksson (2005) argue that it is not only what resources are available that is important but also the ability to use and re-use them for the intended purpose.

Previous research has also supported the above arguments. In their scientific investigation on SOC as a moderator of the effects of stressful life events on health, Richardson and Ratner (2005) reported that for people with strong SOC, there is no significant impact on health following the experience of a recent stressful life event. On the other hand, for people with weak SOC, the experience of a recent stressful life event was associated with a decline in health. These authors concluded that the

experience of a recent stressful life event seems to be completely mitigated or tempered in people with strong SOC.

Hence, many authors have also reported on the link between strong SOC and good health. On the whole, Antonovsky's SOC concept has affinities with other salutogenic concepts, e.g. self-efficacy, and hardiness (Antonovsky, 1979; 1987). Therefore, the stronger the SOC of a person is; the more likely he or she is to cope successfully with life stressors (Axelsson, Andersson, Håkansson, and Ejlertsson, 2005). Consistent with Antonovsky's salutogenic theory (1979;1987), the findings in this study, also suggest that strong SOC contributes to non-use of substances since individuals with strong SOC perceived stressors to be less stressful, thus minimising the negative health consequences of a stressful life.

The study findings also confirm more recent findings by Finkelstein et al. (2007), demonstrating that strong SOC, which is linked to holding a very positive outlook on life, is associated with engagement coping such as 'planful' problem solving coping strategies. As also observed in the current study, Finkelstein et al. (2007) reported a weak correlation between disengagement (escape-avoidance coping) and optimism, i.e. higher optimism was associated with a positive reappraisal of major life events.

However, Richardson and Ratner (2005) noted that although strong SOC buffered the negative impact of a recent stressful life event on health, it did not seem to be associated with the number of medical visits. The plausible explanation they offered for this observation is that seeking social support (professional support) is also a positive sign of being able to manage one's situation. Therefore, seeking the services of a physician or therapist can be viewed as adaptive coping (Richardson and Ratner, 2005). It is important to note that a few of the adolescents in the current study also expressed positive views about seeking therapeutic support as a form of coping.

Consequently, it seems that the adolescents with strong SOC seek out available resources (support systems) during challenging times and are very flexible in that regard. They have the cognitive ability to decide what to do ('planful' problem solving) and, through positive reappraisal coping, they do not see challenging life events as the end of everything. This is evident when looking at the fact that all the adolescents in this study reported one or more stressors/life challenges but those with strong SOC seemed very successful at coping with these.

4.4 Substance use/non-use in relation to coping and weak SOC

Despite the argument that adolescents with weak SOC have limited coping abilities- hence are more likely to use substances- the results showed that the majority of adolescents with weak SOC are not current substance users. The plausible explanation for that, as the results show, is that they have very strong positive family support. In line with these findings, research looking at smoking amongst adolescents in South Africa also reported that learners who had not tried smoking credited their parents for that decision (Neser, van der Merve, and Ovens, 2003). More recently, in looking at psychosocial factors that predicted smoking amongst high school youth in South Africa, Brook et al. (2006) reported that parental protective factors such as showing affection and spending quality time with adolescents reduced the odds of them becoming regular smokers.

Another observation from the study results is that adolescents who have more peers and weak SOC tended to be substance users. Drawing from theoretical explanations (e.g. Hoffman et al., 2006) it may be that their substance use is linked to peer influence. Neser et al.'s (2003) findings that smokers (especially concurrent tobacco and dagga smokers) cited their friends as the reason for smoking, also highlights the power of peer influence, in general, but such peer influence would be expected to be even more pronounced for adolescents with weak SOC and weak family support. On the same note, Avenevoli and Merikangas (2003:13) concluded that *"peer substance use is consistently predictive of the initiation, experimentation, current use and ever use of substances in adolescents, especially cigarette smoking."*

Therefore, it seems possible that peer association of adolescents with weak SOC would most likely lead to substance use. It may be that weak SOC manifests itself by predisposing these adolescents to lower self-efficacy in stressful, routine and social situations. Panday et al. (2007) previously demonstrated the significant influence of self-efficacy on smoking prevalence and smoking cessation among South African youths.

Moreover, in looking at factors associated with alcohol use amongst high school adolescents in Taiwan, Yeh (2006) found that the use of substances- particularly problem drinking- amongst young people increased 2.89-fold amongst the youth whose peers drank frequently. Similarly, peer influence significantly increased the odds of becoming a regular substance user in South African youth (Brook, Morojele, Brook,

Zhang et al., 2006). This further supports the findings in the current study as there appears to be a strong association between peer association and substance use. Adolescents who reported boredom are particularly at risk as "being bored" predicts having more friends, which in turn predicts more peer pressure- both as a stressor and reason for using substances.

On the other hand, peers can also influence adolescents not to use substances. This view is supported by the study results that showed that peer support (for non-use of substances) was indicated by many as reasons for not using substances- or for wanting to stop among current users. On the whole, it seems that seeking social support- especially family and peer support- is a moderator of life stressors and a potent protector against stressful conditions in life (Axelsson et al., 2005).

The current study findings are consistent with the view that young people perceive family and friends as the primary providers of social support. It is, therefore, not surprising that the adolescents who reported (perceived) negative (or lack of) family support (e.g. family resentment etc) are substance users. Hence, these findings also show strong effects of adverse family circumstances on substance use amongst adolescents.

From the foregoing, it seems possible that adolescents with weak SOC have compromised coping abilities and are likely to use substances to avoid stressful life events, academic and social demands. It is therefore conceivable that adolescents use substances in the context of coping when everything else has failed (or social systems have failed them). On the other hand, it can be argued that some of these individuals do have support structures that they can exploit as a form of coping but, as they have weak SOC, do not do so. As Lindstrom and Eriksson (2005) pointed out, the important thing is the ability to use and re-use resources for the intended purpose. Instead, adolescents with weak SOC use unsuccessful coping methods such as escape-avoidance, distancing, aggression etc which appear to be linked to coping by means of substance use.

The finding that substances are used in the context of coping may not come as a huge surprise. Forerunners of the theory of coping, most notably Kahn, Wolfe, Quinn, and Rosenthal (1964: 385), who seemed to be many years ahead of their time, noted, emphatically, that:

> *The concept of coping is defined by the behaviours subsumed under it, not by the success of these behaviours. It may prove profitable to concentrate upon those behaviours which are intended to cope with stress but which fail to do so in the long-term. It is often in the situation of failure that the ramifications of a particular coping mechanism or defence can be seen most vividly*.

That suggests that substance use is a behaviour adopted in the context of coping (with stress), irrespective of the success or failure of that behaviour.

Resent research (e.g. Sage and Suzuki, 2006) has supported this view that substances are used in the context of coping, especially to cope with context-specific (family and school) stressors. Consistent with systems theories, Sage and Suzuki (2006) reported that exposure to contextual-level risk factors (stressors) increased the probability of regular use of substances by 11 percentage points among adolescents and reduced the probability of abstention by 62 percentage points. Adolescents who were in the low-risk category at the contextual level (i.e., had better coping abilities) had probabilities of substance use of only 0.5 percent points, compared to 51.4 percent points among adolescents with limited social support (Sage and Suzuki, 2006).

However, there are adolescents who might use substances even if all seems well, i.e. there are no significant environmental stressors. As this study suggests, their reasons for using substances might be other factors not related to stress such as curiosity, experimentation and sensation seeking. Such circumstances might be explained by social cognitive theories (Bandura, 1986) as well as their predisposition to risk-taking, e.g. pleasure seeking (Weiten, 1998). In spite of this, adolescents who fall in those categories in this study also reported context-specific stressors such as academic demands and peer pressure. Also, all the adolescents who cited non stress-related reasons for using substances in this study have weak SOC. Hence, the value of applying systems theories in understanding adolescent behaviour lies in the possibility to explore the situation in its entirety.

Moreover, in looking at the differences in coping styles between adolescents with weak SOC and those with strong SOC it might seem logical to say that raising SOC for those with weak SOC is the solution. According to Antonovsky (1979, 1987), SOC should have reached a near plateau by early twenties so that by age 30 it is assumed to be a relatively stable dispositional orientation. Previous studies (e.g. Feldt, Leskinen, and

Kinnunen, 2005) have confirmed these assumptions as test-retest stability coefficients have been shown to range from 0.67 to 0.82 in adults- with less SOC stability for individuals under the age of 30.

Although this suggests that SOC can be taken as a stable disposition, knowledge about its development (before the age of 30 years) is still vague. Even in referring to the life experiences (consistency, load balance, participation in shaping outcomes, and emotional closeness) that might be worth looking at in attempting to raise/strengthen SOC, empirical research is still scarce (Sagy and Antonovsky, 2000). It has not yet been established if these life experiences would most definitely yield strong SOC. Sagy and Antonovsky (2000) concluded that it is still unclear if these life experiences represent a cause-effect mechanism. That is something that still needs to be explored.

4.5 Coping in relation to the school environment

School related stressors were ranked the highest among life stressors. Considering that these adolescents are in the penultimate year of high school, this finding should not come as a surprise. That is because, typically, these adolescents will have to accomplish multiple tasks (e.g. completing schooling and choosing a career path) before they can become successful or fully functional young adults. Understandably, these are huge tasks that can invoke fears about the future because failure at school or a wrong career decision would translate into a gloomy future. Hence, there seemed to be a common theme about fear, anxiety and uncertainty about the near future when these adolescents have to leave school.

Consistent with previous findings in high schools, e.g. Rodham et al. (2006), the adolescents generally spoke about the changes they were facing in their lives. The issue of change or transition was challenging for the adolescents for two main reasons: firstly it pervaded all areas of their life and secondly, the demands and expectations brought about by the changes pull them out of situations/environments in which they feel confident (their comfort zone) and require them to adapt to new demands (Rodham et al., 2006). In particular, they feel that as they are about to move out of high school and towards young adulthood, their levels of responsibility and autonomy are shifting.

On top of that, it can be hypothesised that the school provides adolescents with the need for belonging and connection to others and if that need is frustrated the learners will experience negative outcomes such as emotional distress, psychopathology, and

increased stress and health problems. Hence, as all the adolescents are towards the end of their high school years, they feel very anxious about their comfort zone being challenged.

On the other hand, the school environment is not always fraught with negative sentiments as adolescents are aware that chances of living a successful life in future depend largely on doing well at school. Hence, there seems to be an association between coping successfully with school demands and 'positive reappraisal' of the school environment (holding a positive outlook about schooling despite the challenges it presents). That would explain why the adolescents who spoke positively about schooling are not substance users.

Furthermore, the reported school support suggests that academic functioning is facilitated by a perceived sense of belonging, support and acceptance from important peers in the school context as well as teachers. Out of the school environment also occurs self-advancement or educational aspiration which is an ideal most of the adolescents hold. That ideal seems crucial to keep adolescents focused and stay clear of substance use. Similarly, Knyazev (2004) reported that educational aspiration could be considered as a positive protective factor for substance use.

That suggests that schools can play a major role in supporting adolescents. Although the findings in this study seem to emphasize the family as the bedrock of child and youth development, adolescents spend most of their time at school. Again, where the family fails in its protection role, adolescents draw on the resources that the school provides in helping them to cope with family stressors

Even though schools seem to offer support with the life orientation programme currently in place, the adolescents felt that they needed more. There still seems to be a gap between what the schools offer and the needs of the adolescents. This study has established that adolescents' needs go far beyond the classroom and the school can potentially play a synergistic role in meeting needs that sometimes go unmet in other contexts like the community and family environment.

Hence the challenge seems to lie at helping adolescents to develop desirable coping skills in the school environment to ensure that they cope more effectively with stressful life events. The use of substances in the context of coping has been reported as an ineffective coping strategy. That is a view also held by all the participants in the current

study who are current substance users. The view expressed by the current cohort of adolescents that substances do not actually help adolescents, is consistent with previous research findings among young people elsewhere in South Africa (Panday et al., 2007).

The implication of these findings is that substance use prevention programmes that include enhancing decision-making and coping skills hold promise in South Africa. Indeed, school-based substance use prevention programmes focusing on social coping skills, resistance skills and general life skills have been shown to significantly reduce substance use amongst adolescents in the United States (Botvin, Batson, Witts-Vitale, Baker et al., 1989). Furthermore, research looking at teaching coping skills to school children produced desirable results elsewhere (Pincus and Friedman, 2004). In their study, Pincus and Friedman (2004) taught school children problem-focused coping skills to deal with academic demands as well as emotional-focused skills to deal with emotional regulation. Later the study group out-performed the control group in coping with various life situations (Pincus and Friedman, 2004).

Finally, although South Africa has made initiatives at the macro (policy) level, e.g. restricting alcohol (and prohibiting tobacco) advertisements, introducing warning labels on containers, and instituting a coherent liquor outlet policy at provincial level (Parry, 2005), much more needs to be done in the prevention of substance use in schools, especially in looking at smoking in relation to stress and coping. This will ensure that the focus is not only on the prevalence of substance use and abuse on the older population and completely neglecting the younger generation where the problem often begins. There is a need to take a step back and look at the beginning of substance use (smoking) among adolescents. Such efforts, especially focusing on problem areas at all levels of the social environment/ecosystem could yield better benefits in influencing social systems affecting adolescents. In their work involving the evaluation of effects of youth development programmes in schools, Durlak, Taylor, Kawashima, Pachan et al. (2007) favoured the ecological perspective by concluding that attempts to change social systems affecting children and adolescents can be successful.

4.6 Study Limitations and Strengths

Limitations

In considering the findings of this study, it is pertinent to note that this was a cross-sectional study due to the limited time frame within which it had to be completed. Also,

for the same reason, the study settings/sample had to be selected in order to take into account time limitations. That implies cautious generalisability whilst it also calls for follow-up studies (triangulation).

Strengths

A key strength of the study is that it demonstrated that the approach of employing qualitative methods in exploring adolescents' perception of substance use was a successful and valuable method of accessing the social world of the adolescents, their perceptions and the context of their comments.

CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

This study aimed to fill an important gap in the existing literature by adopting a qualitative approach designed to explore substance use, especially smoking, within the context of coping with stress, as perceived by adolescents.

The study drew largely from ecological and developmental theories that suggest that the probability of substance use is an increasing function of the number of psychosocial factors to which adolescents are exposed. That proposition was investigated in relation to the concept of sense of coherence with respect to stress and coping in adolescents. The findings showed that adolescents with varying psychosocial factors impinging on them, are equally affected by stressors but do not cope with these in similar ways. Social relationships/interactions in different contexts (peer, home, school etc) help adolescents to cope better (or worse). In other words, exposure to particular psychosocial factors at each ecological level increased (or reduced) the probability of abstaining from smoking. The results led to the following conclusions:

- Social support from social contexts (family, peers, school etc) play a moderating role in substance use amongst adolescents by rendering the effects of stressful life events less intense, hence making them less likely to start using substance as a means of coping.
- SOC plays a mediating role in substance use among adolescents. In other words strong SOC has a connection with effective coping, rather than with substance use per se, which reduces the likelihood of substance use as a means of coping.
- Adolescents use substances in the context of coping, i.e. to cope with stressful life situations. Hence if the social support and/or SOC are weak, adolescents are more likely to use substances as stressful life events escalate during adolescence.
- Adolescents, generally, have the perception that coping by means of substances is not an effective strategy for dealing with problems - and some of them talk from direct substance use experience. This implies that adolescents who use substances as a means of coping would prefer an effective/alternative way of coping rather than substance use.
- Adolescents spend most of their time at schools. Even though not limited to the school context, their stressors (e.g. academic demands and career choice challenges as well as peer pressure), which lead to substance use as a means of

coping, take place at school. Hence schools represent a strategic point for substance use prevention

In summary, the study findings suggest that the use of substances among adolescents occurs, largely, in the context of coping with stressful life situations. As such, even if given the information and made aware of the problems associated with substance use, adolescents might still continue using substances. Information seems insufficient on its own to prevent initiation of substance use. This research demonstrates evidence that prevention programmes may need to begin during adolescence and be intensified during the final years of high school because that is where the need for coping with academic demands, choosing a career, peer pressure and developmental demands escalates.

From a public health perspective, we are beginning to see the major proximal influences to substance use amongst adolescents in a manner that has potential for prevention/intervention and health benefits.

5.2 Recommendations

On the basis of this study, there is some evidence to suggest that school-based prevention programmes may have some efficacy if based on a systems perspective. That means that programmes could take place in schools but should take into account all the other contexts that enhance or compromise adolescents' coping abilities. For example, parents could perhaps be actively involved in the school environment. In other words, a first step to improve parent–child, parent–school, and parent–peer relations is to enhance parental involvement and investment in the lives of adolescents in the school environment where they spend most of their time.

School-based intervention programmes might look at addressing coping competence; especially stress management components to improve the adolescents' ability to cope effectively in stressful and social situations. On the whole, primary and secondary prevention interventions should be organized around the goal of changing social systems by strengthening parenting functions as well as parental relations with the child, school, and peers. Attempts to change social systems affecting children and adolescents can be successful. Tertiary prevention should look at substance using adolescents and recognize the fact that the use of substances is not an aberration but an

attempt to cope with life stressors. Hence, smoking should be a telling sign of underlying personal and/or social problems.

At a practical level the content and implementation strategy of school-based programmes might also need to be revisited to explicitly incorporate the notion of life stressors and coping. Adolescents can be taught specific problem-focused skills to enhance coping with academic demands, as well as teaching them emotion-focused skills such as cognitive restructuring or emotional regulation to deal with more uncontrollable stressors. Moreover, it might prove beneficial to ensure the active participation of adolescents in intervention programmes. These could be in the form of peer groups in the school environment. An important consideration is to involve adolescents more in changing their own behaviour or behaviours of their peers as their active participation might add meaning to what they are involved in.

Also, it should be kept in mind that adolescents who seemingly have no problems or peer pressure but still smoke, might actually be bored. Hence, recreational facilities should be provided, especially in township schools where resources have traditionally been limited. Apart from relieving boredom, the adolescents in this study also pointed out that recreational activities help them in dealing with negative affect in instances where there are family problems.

Raising SOC in adolescents is another strong recommendation. This study was not evaluating intervention programmes based on elevating sense of coherence in adolescents but, taken as a whole, the results of this study suggest that future researchers need to look at interventions to raise or strengthen SOC in children and adolescents so that they could cope better with stressful life events. This would not only help adolescents to adopt “smoke-free” coping styles but could generally help them in making healthy choices beyond merely coping with a specific problem. For instance, the results also suggested that some adolescents are driven to smoking by factors not necessarily related to problems or stress, e.g. curiosity and sensation seeking. But with a stronger SOC they would “comprehend” or make sense of their situations (and choices) and have the ability to make the right decision, i.e. chose a healthier option to satisfy a need, which would otherwise have been addressed by smoking.

However, as discussed earlier, it is still too early to say precisely how such a recommendation might be put into practice in terms of the actual intervention

programmes needed. This is a call for further research in that regard in order to shed more light on the factors and life experiences responsible for the development and/or strengthening of SOC among adolescents. It would be particularly useful to explore further the hypothesized factors that may be relevant to SOC development during adolescents, namely consistency in life experiences, load balance, emotional closeness, and participation in decision-making or shaping outcomes.

Additionally, future studies might look at better understanding the relationship between SOC in relation to peer influence as well as various pathways of adolescent risk behaviour. Lastly, on the basis that this study was conducted primarily for the requirements of a master's degree, further research using a controlled follow-up approach would help in improving confidence in generalising the findings of this study to other contexts.

REFERENCE LIST

American Psychiatric Association (2000). Diagnostic and statistical manual of mental disorders (4th Ed.). Washington, DC: American Psychiatric Association.

Antonovsky, A. (1987). Unravelling the mystery of health: how people manage stress and stay well. San Francisco: Jossey-Bass.

Antonovsky, A. (1979). Health, stress and coping: new perspectives on mental and physical well-being. San Francisco: Jossey-Bass.

Avenevoli, S. and Merikangas, K.R. (2003). Familial influence on adolescence smoking. Addiction, 98: 1-20.

Axelsson, L., Andersson, I., Håkansson, A. and Ejlertsson, G. (2005). Work ethics and general work attitudes in adolescents are related to quality of life, sense of coherence and subjective health- a Swedish questionnaire study. BMC Public Health, 5: 103.

Ayo-Yusuf, O.A. and Severson, H.H. (2004). Sense of coherence in relation to tobacco and alcohol use in a sample of adolescents in Pretoria. In South African community epidemiology network on drug use (SACENDU): monitoring alcohol and drug trends, phase 16. Cape Town: MRC.

Bandura, A. (1986). Social foundations of thought and action. Englewood Cliffs, NJ: Prentice-Hall.

Bandura, A. (1977). Social learning theory. New York: General Learning Press.

Bauman, K.E., Fisher, L.A., Bryan, E.S., and Chemoweth, R.L. (1984). Antecedents, subjective expected utility, and behaviour: a panel study of adolescent cigarette smoking. Addictive Behaviour, 18: 121-136.

Bhana, A. (1999). Participatory action research: a practical guide for realistic radicals. In M. Terre Blanche and K. Durrheim (Eds.). Research in practice: applied methods for the social sciences. Cape Town: UCT Press.

Botvin, G.J., Batson, H.W., Witts-Vitale, V., Baker, E. and Dusenbury, L. (1989). A psychosocial approach to smoking prevention for urban black youth. Public Health Rep. 1989 Nov–Dec, 104: 573–582.

Breakwell, G.M., Hammond, S. and Fife-Schow, C. (1995). Research methods in Psychology. London: Sage.

Bronfenbrenner, U. (1986). Ecology of the family as a context of human development: research perspective. Dev. Psycol., 22: 723-742.

Bronfenbrenner, U. (1979). The ecology of human development. Cambridge: Havard University Press.

Bronfenbrenner, U. (1977). Towards experimental ecology of human development. American Psychologist, 32: 513-531.

Brook, J.S., Morojele, N.K., Brook, D.W., Zhang, C. and Whiteman, M. (2006). Personal, interpersonal, and cultural predictors of stages of cigarette smoking among adolescents in Johannesburg, South Africa. Tobacco Control, 15: 48-53.

Centre for Alcohol and Drug Studies (2005). Teacher training manual. Unpublished alcohol and drug information manual from the South African National Council on Alcohol and Drug Dependency.

Chamberlain, K. (1999). Using grounded theory in health Psychology. In M. Murray, and K. Chamberlain (Eds.), Qualitative health Psychology: theories and methods. London: Sage.

Chassin, L., Presson, C., Sherman, S., Corty, E., and Olshavsky, R. (1984). Predicting the onset of cigarette smoking in adolescents: a longitudinal study. Journal of Applied Social Psychology, 14: 224-243.

Collins, L., Sussman, S., and Rauch, J. (1987. Psychosocial predictors of young adolescent cigarette smoking: a sixteen month, three-wave longitudinal study. Journal of Applied Social Psychology, 17: 554-573.

Commonwealth Secretariat (2006). Commonwealth youth programme strategic plan. London: Commowealth.

Cressswell, J.W. (2002). Educational research: planning, conducting, and evaluating quantitative and qualitative research. New Jersey: Pearson Education.

Department of Health (2001-2002). South African demographic and health survey. Pretoria: National Department of Health.

Durlak, J.A., Taylor, R.D., Kawashima, K., Pachan, M.K., Dupre, E.P., Celio, C.I. et al. (2007). Effects of positive youth development programmes on school, family, and community systems. American Journal of Community Psychology, 39: 269-287.

Erikson, E.H. (1968). Identity, youth and crisis. New York: Norton.

Fagan, J. (2004). 'Arrest flows to jails,' urges top judge. In The Citizen, 6 July 2004, pp1-2.

Feldt, T., Leskinen, E., and Kinnune, U. (2005). Structural invariance and stability of sense of coherence: a longitudinal analysis of two groups with different employment experiences. Work and Stress, 19: 68-83.

Fetterman, D.M. (1985). Ethnography: step by step. California: Sage.

Finkelstein, D.M., Kubzansky, L.D., Capitman, J. and Goodman, E. (2007). Socioeconomic differences in dolescent Stress: the role of psychological resources. Journal of Adolescent Health, 40: 127-134.

Fishbein, M. (1980). A theory of reasoned action: some applications and implications. In Howe, Jr., H.E., Page, M.M., Sherif, C.W. (eds.). Nebraska symposium on motivation, 1970. Lincoln, NE: University of Nebraska Press.

Freud, S. (1982). Introductory lectures on psychoanalysis. London: Hogarth Press.

Gauteng Provincial Government (2005). Gauteng News. Newsletter of the Gauteng provincial government, June 2005, p. 3.

Glanz, K., Maskarinec, G. and Carlin, L. (2005). Ethnicity, sense of coherence, and tobacco use among adolescents. Ann Behav Med., 29: 192-199.

Hoffman, B.R., Sussman, S., Unger, J.B. and Valente, T.W. (2006). Peer influence on adolescent cigarette smoking: A theoretical review of the literature. Substance Use and Misuse, 41: 103-155.

Hook, D. (2002). Erikson's psychosocial stages of development. In D. Hook, J. Watts and K. Cockcroft (eds.). Developmental Psychology. Cape Town: UCT Press.

Human Science Research Council (2005). Draft Pan-African youth charter and the status of youth in Africa. Durban: HSRC.

Kahn, R., Wolfe, R., Quinn, J. and Rosenthal, R. (1964). Organisational stress: studies in role conflict and ambiguity. New York: Wiley.

Knyazev, G.G. (2004). Behavioural activation as predictor of substance use: Mediating and moderating role of attitudes and social relationships. Drug and Alcohol Dependence, 75: 309-321.

Kuuppelomaki, M. Utriainen, P. (2003). A 3 year follow-up study of health care students' sense of coherence and related smoking, drinking and physical exercise factors. Int J Nurs stud, 40: 383-388.

Lazarus, R. and Folkman, S. (1984). Stress, appraisal and coping. New York: Springer.

Lindstrom, B. and Eriksson, M. (2005). Salutogenesis. J Epidemiol Community Health, 59: 440-442.

Mail & Guardian (2007). "Do something about school violence," principal pleads. Mail & Guardian online, Johannesburg. Retrieved 17/08/07 from: http://www.mg.co.za/articlePage.aspx

Matjasko, J.L., Grunden, L.N., and Ernst, J.L. (2007). Structural and dynamic process family risk factors: consequences for holistic adolescent functioning. Journal of Marriage and Family, 69: 654-675.

Mohino, S., Kirchner, T. and Forns, M. (2004). Coping strategies in young male prisoners. Journal of Youth and Adolescence, 33: 41-49.

Monat, A. and Lazarus, R. (1991). Stress and coping: an anthology. New York: Columbia University Press.

Morojele, N.K., Kachienga, M.A, Nkoko, M.A, Moshia, K.M., Mokoko, E., Parry, C.D.H. et al. (2004). Perceived effects of alcohol use on sexual encounters among adults in South Africa. African Journal of Drug and Alcohol Studies, 3: 1-20.

Nation, M. and Heflinger, C.A. (2006). Risk factors for serious alcohol and drug use: the role of psychosocial variables in predicting the frequency of substance use among adolescents. The American Journal of Drug and Alcohol Abuse, 32: 415-433.
Neale, J. and Liebert, R. (1986). Science and behaviour: An introduction to methods of research (3rd ed.). New Jersey: Prentice Hall.

Neser, J., van der Merwe, E. and Ovens, M. (2003). Learners' views on the use of dagga. Acta Criminologica, 16: 151-164.

Nichter, M., Quintero, G., Nichter, M., Mock, J. and Shakib, S. (2004). Qualitative research: Contributions to the study of drug use, drug abuse, and drug use(r)-related interventions. Substance Use & Misuse, 39: 1907-1969.

Onwuegbuzie, A.J., and Leech, N.L. (2007). A call for qualitative power analysis. Quality & Quantity, 41: 105-121.

Panday, S., Reddy, S.P., Ruiter, R.A.C., Bergstrom, R.E. and de Vries, H. (2007). Determinants of smoking among adolescents in the Southern Cape-Karoo region, South Africa. Health Promotion International, 22: 207-218.

Parry, C.D.H. (2005). Substance abuse intervention in South Africa. World Psychiatry, 4: 34-35.

Pidgeon, N. (1996). Grounded theory: theoretical background. In J.E. Richardson (Ed.). Handbook of qualitative research methods for Psychology and the Social Sciences. Leicester: BPS Publishers.

Pincus, D.B. and Friedman, A.G. (2004). Improving children's coping with everyday stress: transporting treatment interventions to the school setting. Clinical Child and Family Psychology Review, 7: 223-240.

Plant, M. and Plant, M. (1992). Risk-takers: alcohol, drugs, sex and youth. New York: Tavistock.

Poulsen, L., Osler, M., Roberts, C., Due, P., Damsgaard, M., and Holstein, B. (2002). Exposure to teacher smoking and adolescent smoking behaviour: analysis of cross sectional data from Denmark. Tobacco Control, 11: 246-251.

Reddy, S.P., Panday, S., Swart, D., Jinabhai, C.C., Amosun, S.L., James, S. et al. (2003). Umthente uhlaba usamila- the South African youth behaviour survey 2002. Cape Town: South African Medical Research Council.

Richardson, C. and Ratner, P. (2005). Sense of coherence as a moderator of the effect of stressful life events on health. J. Epidemiol Community Health, 59: 979-984.

Rocha-Silva, L., de Miranda, S. and Erasmus, R. (1996). Alcohol, tobacco, and other drug use among black youth. Pretoria: HSRC Publishers.

Roche, K.M., Ensminger, M.E. and Cherlin, A.J. (2007). Variations in parenting and adolescent outcomes among African American and Latino families living in low-income, urban areas. Journal of Family Issues, 28: 882.

Rodham, K., Brewer, H., Mistral, W. and Stallard, P. (2006). Adolescents' perception of risk and challenge: a qualitative study. Journal of Adolescence, 29: 261–272.

Ross, E. and Deverell, A. (2004). Psychosocial approaches to health, illness and disability: a reader for health care professionals. Pretoria: Van Schaik.

Sage, A.J. and Suzuki, C. (2006). Risk factors for alcohol use among male adolescents and emerging adults in Haiti. Journal of Adolescence, 29: 241–260.

Sagy, S. and Antonovsky, H. (2000). The development of the sense of coherence: a retrospective study of early life experiences in the family. Journal of ageing and human development, 51: 155-166.

Strauss, A.L. and Corbin, J. (1994). Grounded theory methodology: an overview. In N. Denzin and Y. Lincoln (Eds.). Handbook of qualitative research. California: Sage.

Swart, D., Reddy, S.P., Panday, S., Philip, J.L., Naidoo, N. and Ngobeni, N. (2004). The 2002 global youth tobacco survey (GYTS): The 2nd GYTS in South Africa (SA) – a comparison between GYTS (SA) 1999 and GYTS (SA) 2002. Cape Town: South African Medical Research Council.

Szapocznik, J. and Williams, R.A. (2000). Brief strategic family therapy: Research and practice in adolescent behaviour problems and drug abuse. Clinical Child & Family Psychology Review, 3: 117-134.

Terre Blanche, M. and Durheim, K. (Eds.). (1999). Research in practice: applied methods for the Social Sciences. Cape Town: UCT Press.

Tilleczek, K.C. and Hine, D.W. (2006). The meaning of smoking as health and social risk in adolescence. Journal of Adolescence, 29: 273-287.

Tong, A., Sainsbury, P. and Craig, J. (2007). Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. International Journal for Quality in Health Care, 19: 349-357.

Toumbourou, J., Stockwell, T., Neighbors, C., Marlatt, G., Sturge, J. and Rehm, J. (2007). Interventions to reduce harm associated with adolescent substance use. The Lancet, 369: 1391-1402.

Urberg, K., Shyu, S., and Liang, J. (1990). Peer influence in adolescent cigarette smoking. Addictive Behaviours, 15: 247-255.

Wallis, C. (2004). What makes teens tick? Time Magazine, 163: 56-65.

Warren, C.W., Riley, L., Munafo, M., Neville, N. and Griffiths, S. (2000). Tobacco use by youth: a surveillance report from the global youth tobacco survey project. Bulletin of the World Health Organisation, 78: 868-876.

Weiten, W. (1989). Themes and variations (4th ed.). Pacific Grove: Brookes/Cole.

Wills, T.A. (Chair) (1992, April). Research program for a stress-coping model of adolescent substance use. Symposium presented at the meeting of the Eastern Psychological Association, Boston.

World Health Organization (2002). Fact sheets: smoking statistics, May 28. Geneva: WHO.

World Health Organisation (1998). The second decade: improving adolescent health and development. Geneva: WHO

World Health Report 2000. Health systems: improving performance. Ch 1, pg1-19. Geneva: WHO.

Wyn, J. and White, R. (1997). Rethinking youth. London: Sage.

Yeh, M.Y., (2006). Factors associated with alcohol consumption, problem drinking, and related consequences among high school students in Taiwan. Psychiatry and Clinical Neuroscience, 60: 46-54.

Appendix A: Interview Guide

NB: There is no chronology in the way that the items are presented and the guide is not meant to be followed rigidly, e.g., suppose the interviewee states (without being asked) that she/he feels awful or excited, there won't be a need to ask "how do you feel about yourself", instead a follow-up probe will be a replacement, e.g. "has something contributed to the way you feel?" Remember, also that SOC & coping overlap. The guide aims to:

- Ensure that important aspects of the research are covered.
- Re-focus the flow of discussion.
- Explore SOC & coping in relation to social interaction and social support
- Explore SOC & coping in relation to substance use/non-use

Probing Phrases

□How do you feel about yourself at this present moment? (SOC- meaningfulness)

□Where do you see yourself in the next 12 months (your Matric year) or after school? (SOC- Comprehensibility)

□How do you feel when you think of your everyday activities at home, school, community etc? (SOC- meaningfulness) &/or (SOC- Comprehensibility)

◙Do your feelings have anything to do with your community, family, school or friends in relation to …(Coping &/or SOC- manageability)

Individual (stressors): Financial,
Discrimination,
Family problems (break-up, abuse/violence, conflicts)
Peer pressure,
Loneliness,
School-related issues
ETC

Neighbourhood: Poverty,
Crime & violence,
HIV/AIDS/Death
ETC

……Appendix A continues next page

◙How, if at all, have you dealt with or are you dealing with the above challenges? (Coping &/or SOC- manageability)

◙Given your thoughts and feelings, would you say you are able to easily cope without problems? …(Engagement or disengagement Coping &/or SOC- manageability)

◙Let us list all the possible things that come to our minds when we think about drinking or smoking. (Engagement or disengagement Coping/Substance use)

◙Have you ever experimented with cigarettes or alcohol or dagga? (Engagement or disengagement Coping/Substance use)

◙What does it mean to you that you smoke or drink OR your best friend/boyfriend drinks or smokes OR any other person you know? (SOC- Comprehensibility)

◙Has use of substances helped you or someone you know, to cope better…if so, in what way? (Engagement or disengagement Coping/Substance use)

◙/□What has been your experience when your peers/friends let you down? (SOC- manageability)

◙What if the person that let you down/disappointed you is one of your parents…would you have reacted differently? (SOC- manageability)

◙/□What was your experience, if ever, asking a girl (being asked by a guy) out for the first time? (SOC- manageability)

◙Has anyone disappointing you determined the decisions you make? Please tell me more about those decisions? (SOC- Comprehensibility)

◙Have you had any life experiences that changed (or influenced) the way you relate to people…if so, what was it? SOC- Comprehensibility)

◙Who do you or others you know use drugs or drink with? (Engagement or disengagement Coping/Substance use)

◙Do you think that there are people or places that you can easily go to in order to get support if you have personal problems? Who and/or where do you or would you go? (Engagement or disengagement Coping/ SOC- manageability)

……..Appendix A continues next page

◙/□Do you think that there is a difference in the way you see yourself at home, and your community and the way you see yourself behave at school?…why? SOC- Comprehensibility)

◙Do your feelings have anything to do with your community, family, school or friends? (SOC- Comprehensibility)

◙Do you think hanging-out with your peers help you to cope better? If so, how? (Engagement or disengagement Coping/ SOC- manageability)

◙What can you regard as a meaningful or happy life at this point in your life? (SOC- meaningfulness)

□/◙How do you feel about your future? (SOC- Meaningfulness)

◙What makes you feel the way you do about your future? (SOC- comprehensibility)

■What are the things around you that help you (or can still help you) to cope better? (Coping/ SOC- manageability)

■What, ideally, would you like to see happening around you that can make you (or others) cope better in the school environment and in the neighbourhood where you live? (Coping/ SOC- manageability)

Legend

□ Can be used as an opening statement

◙ Can be used in the middle of discussion

■ Can be used for concluding remarks

Comprehensibility = seeks to get a general view of cognitive appraisal of the present/ most recent/anticipated situation

Meaningfulness = seeks to get a view of degree of satisfaction, resolve or meaning in present/most recent/anticipated situation

Manageability = seeks to determine availability of support systems & ability to recognise and use these.

Coping = seeks to elicit response/understanding on coping styles and their link to stressors/ social systems, SOC and substance use

Appendix B: Data Analysis/Coding

Themes and sub-themes emerging from responses related to life experiences of participants themselves and/or reported experiences of their peers

Life Stressors (**NB**: *figures denote interview number/interviewee.)*	**Coping strategy used** (**NB**: *figures denote interview number/interviewee.)*	**Reasons for not using substances or wanting to stop** (**NB**: *figures denote interview number/interviewee.)*	**Reasons for using (starting using) substances** (**NB**: *figures denote interview number/interviewee.)*
Academic pressure/demands Self: 2,4,5,6,8,10,12,13,14,19,22 Referring to their peers: 15 **Total: (11+1)= 12**	***Positive reappraisal*** self 1, 2,8,11,12,14,15,18,19,20 **Total: 10**	***Peer support*** self 1,2,3,5,9,10,11,13,15,20,22 **Total: 11**	***Family problems*** Self: 16,17,20 Referring to their peers: 7,10,12,14,15,18 **Total: (3+6)= 9**
Career decision: ***uncertainty/confusion*** Self: 4,8,11,15,22 Referring to their peers: 15 **Total: (5+1)= 6**	***Planful problem-solving/cognitive*** ***(goal setting, time management)*** self 1,4,11,14,15,18,22 **Total: 7**	***Using is stupid/*** ***not cool*** Self: 8 **Total: 1**	***Personal problems (life demands)*** Self: 3,17 Referring to their peers: 7,11,12,14,15,18 **Total: (2+6)= 8**
Unstructured life activities Self: 12 **Total: 1**	***Confrontational*** Self: 6,7,8,10,14,15 **Total: 6**	***Family support*** Self: 1,2,3,4,6,8,9,10,11,13,14,15,16,18, 19,22 **Total: 16**	***Peer pressure*** Self: 3,12,21 Referring to their peers: 1,2,6,7,8,9,13,14,15,16,17,18,19, 22 **Total: (3+14) = 17**

Continuation of Appendix B: Data Analysis/Coding

Life Stressors (**NB**: *figures denote interview number/interviewee.)*	**Coping strategy used** (**NB**: *figures denote interview number/interviewee.)*	**Reasons for not using substances or wanting to stop** (**NB**: *figures denote interview number/interviewee.)*	**Reasons for using (starting using) substances** (**NB**: *figures denote interview number/interviewee.)*
Family disintegration due to separation, divorce etc Self: 7,9,11 Referring to others: 15 **Total: (3;1)= 4**	***Seeking social support:*** ***Peer support*** Self: 1,2,3,5,6,7,9,10,12,13,15,16,20,22 **Total: 14**	***Setting boundaries*** Self: 13,20 **Total: 2**	***Seeking experiences to create intense feeling (sensation seeking)*** Self: 3,12,17,21 Referring to others: 1,2,5,6,18,22 **Total: (5+6)= 10**
Peer pressure Self: 3,12,16 Referring to others: 15 **Total: (3;1)= 4**	***Seeking social support:*** ***Parental support*** Self: 1,2,3,4,6,8,9,10,11,13,14,15,16,18,19,22 **Total: 16**	***Need for autonomy/uniqueness*** Self: 2,9,10,14,15,17,18,19,22 **Total: 9**	***Family&/or sibling influence*** Self: 12, 21 Referring to others: 1,2,18,22 **Total: (2+4)= 6**
Parental/family poverty Self: 1 Referring to others: 7;12 **Total: (1+2)= 3**	**Seeking social support:** **Sibling support** Self: 7;8 Referring to others: 15 **Total: (2+1)= 3**	***Involved in sporting activities*** Self: 3,17,18,21 **Total: 4**	***Curiosity/Experimentation*** Self: 16,19 Referring to others: 5,10,17,18 **Total: (2+4)= 6**

Continuation of Appendix B: Data Analysis/Coding

Life Stressors (**NB**: *figures denote interview number/interviewee.)*	**Coping strategy used** (**NB**: *figures denote interview number/interviewee.)*	**Reasons for not using substances or wanting to stop** (**NB**: *figures denote interview number/interviewee.)*	**Reasons for using (starting using) substances** (**NB**: *figures denote interview number/interviewee.)*
Family resentment Self: 5;17,20 **Total: 3**	***Seeking social support:*** ***Spiritual support*** Self: 3,7,12,19 **Total: 4**	***Expectations to be good &/or need for self-advancement/improvement*** Self: 1,2,3,4,6,12,20 **Total: 7**	***Load imbalance (e.g. academic & social demands/pressure)*** Self: 3,12,13,16,19 **Total: 5**
Limited decision latitude (family deciding for him/her) Self: 3,6;11,16 **Total: 4**	***Seeking social support:*** ***School support*** Self: 1,2,3,4,5,6,717,19,20 **Total: 10**	***Community concern/involvement*** Self: 2,4,12,15,22 **Total: 5**	
Crime Self: 1,5,8 **Total: 3**	***Recreational/Relaxation*** Self: 2,3,8,15 **Total: 4**		

Continuation of Appendix B: Data Analysis/Coding

Life Stressors (**NB**: *figures denote interview number/interviewee.)*	**Coping strategy used** (**NB**: *figures denote interview number/interviewee.)*	**Reasons for not using substances or wanting to stop** (**NB**: *figures denote interview number/interviewee.)*	**Reasons for using (starting using) substances**
Boredom &/or loneliness self 3,7;16;17,21 Referring to others 4 **Total: (5+1)= 6**	***Aggression*** Self: 8,17 **Total: 2**	***Drugs do not work*** Self: 3,12,16,17,20 Referring to others 1,4,6,7,10 **Total: (5+5)= 10**	
Parental fighting self 6 Referring to others 7;12 **Total: (1+2)= 3**	***Accepting Responsibility*** Self: 1,9;12 **Total: 3**		
	Self-controlling Self: 6,13,20 **Total: 3**		

Continuation of Appendix B: Data Analysis/Coding

Life Stressors (**NB**: *figures denote interview number/interviewee.)*	**Coping strategy used** (**NB**: *figures denote interview number/interviewee.)*	**Reasons for not using substances or wanting to stop** (**NB**: *figures denote interview number/interviewee.)*	**Reasons for using (starting using) substances**
	Distancing Self: 5,6,8,17 **Total: 4**		
Death of significant care-giver (mother &/or other) Self 3·7 **Total: 2**	***Seeking social support:*** ***Counselling/therapy*** Self: 12 Referring to others 7 **Total: (1+1)= 2**		
	Escape-Avoidance Self: 3;12;13;16;17;20;21 Referring to others 1;4;6;7;9;10;11;14;19;22 **Total: (7+10)= 17**		

Appendix C: Ethics clearance certificate

Note Change in title (see appendix E)

UNIVERSITY OF THE WITWATERSRAND. JOHANNESBURG

Division of the Deputy Registrar (Research)

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)
R 14/49 O'Hara

CLEARANCE CERTIFICATE	**PROTOCOL NUMBER M070115**
PROJECT	Perceptions of Substance Use among High School Youth in Pretoria: A Qualitative Study
INVESTIGATORS	Mr. OR O'Hara
DEPARTMENT	School of Public Health
DA TE CONSIDERED	07.01.26
DECISION OF THE COMMITTEE*	APPROVED UNCONDITIONALLY

Unless otherwise specified this ethical clearance is valid for 5 years and may be renewed upon application.

- **Date** 07.03.19 **CHAIRPERSON**……
(Professors PE Cleaton-Jones, A Dhai, M Vorster, C Feldman, A Woodiwiss)

*Guidelines for written 'informed consent' attached where applicable

cc: Supervisor: Dr OA Ayo-Yusuf
……
……
DECLARATION OF INVESTIGATOR(S)

To be completed in duplicate and ONE COPY returned to the Secretary at Room 10005, 10th Floor, Senate House, University.
I/We fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee. **I agree to a completion of a yearly progress report.**

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES

Appendix D: Institutional Approval

Umnyango WezeMfundo Lefapha la Thuto

Department of Education Department van Onderwys

Date:	09 January 2007
Name of Researcher:	O'Hara Oscar:-Reno
Address of Researcher:	23 Empress Street
	Kensington
	Johannesburg 2094
Telephone Number:	(011) 6147137
Fax Number:	N/A
Research Topic:	Perceptions of substance use amongst high school youth in Pretoria: A qualitative study
Number and type of schools:	2 Secondary Schools
District/s/HO	Tshwane North

Re: Approval in Respect of Request to Conduct Research

This letter serves to indicate that approval is hereby granted to the above-mentioned researcher to proceed with research in respect of the study indicated above. The onus rests with the researcher to negotiate appropriate and relevant time schedules with the school/s and/or offices involved to conduct the research. A separate copy of this letter must be presented to both the School (both Principal and SGB) and the District/Head Office Senior Manager confirming that permission has been granted for the research to be conducted.

Permission has been granted to proceed with the above study subject to the conditions listed below being met, and may be withdrawn should any of these conditions be flouted:

1. *The District/Head Office Senior Manager/s concerned must be presented with a copy* of *this letter that would indicate that the said researcher/s has/have been granted permission from the Gauteng Department* of *Education* to *conduct the research study.*
2. *The District/Head Office Senior Manager/s must be approached separately, and in writing, for permission* to *involve District/Head Office Officials in the project.*
3. *A copy* of *this letter must be forwarded* to *the school principal and the chairperson* of *the School Governing Body (SGB) that would indicate that the researcher/s have been granted permission from the Gauteng Department* of *Education* to *conduct the research study .*

Director: Knowledge Management and Research
Room 525, 111 Commissioner Street, Johannesburg, 2001 P.O.Box 7710, Johannesburg, 2000
Tel: (011) 355-0488 Fax: (011) 355-0286

Continues Next Page

Note Change in title (see appendix E)

4. *A letter / document that outlines the purpose of the research and the anticipated outcomes of such research must be made available to the principals, SGBs and District/Head Office Senior Managers of the schools and districts/offices concerned, respectively.*
5. *The Researcher will make every effort obtain the goodwill and co-operation of all the GDE officials, principals, and chairpersons of the SGBs, teachers and learners involved. Persons who offer their co-operation will not receive additional remuneration from the Department while those that opt not to participate will not be penalised in any way.*
6. *Research may only be conducted after school hours so that the normal school programme is not interrupted. The Principal (if at a school) and/or senior Manager (if at a district/head office) must be consulted about an appropriate time when the researcher/s may carry out their research at the sites that they manage.*
7. *Research may only commence from the second week of February and must be concluded before the beginning of the last quarter of the academic year.*
8. *Items 6 and 7 will not apply to any research effort being undertaken on behalf of the GDE. Such research will have been commissioned and be paid for by the Gauteng Department of Education.*
9. *It is the researcher's responsibility to obtain written parental consent of all learners that are expected to participate in the study.*
10. *The researcher is responsible for supplying and utilising his/her own research resources, such as stationery, photocopies, transport, faxes and telephones and should not depend on the goodwill of the institutions and/or the offices visited for supplying such resources.*
11. *The names of the GDE officials, schools, principals, parents, teachers and learners that participate in the study may not appear in the research report without the written consent of each of these individuals and/or organisations.*
12. *On completion of the study the researcher must supply the Senior Manager: Strategic Policy Development, Management & Research Coordination with one Hard Cover bound and one Ring bound copy of the final, approved research report. The researcher would also provide the said manager with an electronic copy of the research abstract/summary and/or annotation.*
13. *The researcher may be expected to provide short presentations on the purpose, findings and recommendations of his/her research to both GDE officials and the schools concerned.*
14. *Should the researcher have been involved with research at a school and/or a district/head office level, the Senior Manager concerned must also be supplied with a brief summary of the purpose, findings and recommendations of the research study.*

The Gauteng Department of Education wishes you well in this important undertaking and looks forward to examining the findings of your research study.

Kind regards

ALBERT CHANEE

ACTING DIVISIONAL MANAGER: OFSTED

The contents of this letter has been read and understood by the researcher.

Signature of Researcher:

Date: *09/01/2007*

REITUMETSE HIGH SCHOOL

(GAUTENG DEPARTMENT OF EDUCATION) Reg. No.: 241174

Private Bag X79, Soshanguve, 0152, Tel. 012 799-4483, Fax: (012) 797-3612

Enquiries: Mrs. M. D Makate Mrs T.M Maphopha

Ref O.R O'Hara

P.O. Box 187

Wits

2050

05 March 2007

PERMISSION: RESEARCH PROJECT

Permission has been granted to the above mentioned student to carry out a research project entitled:
Perceptions of Substance Use amongst High School Youth in Pretoria: A Qualitative Study.

He will be collecting data between the periods of March to June 2007. He will also be working closely with our Life Orientation Department with respect to the expected benefit of the research outcomes.

Yours faithfully

PRINCIPAL

REITUMETSE HIGH SCHOOL
(GAUTENG DEPARTMENT OF EDUCATION)
Reg No 241174
2007 -03- 05
PRIVATE BAG X 79
SOSHANGUVE 0152
TEL 012 799 4483 FAX 012 797 3612

Note Change in title (see appendix E)

HoERSKOOL STAATSPRESIDENT C.R. SWART

Tel 333-3112
333003764
FAKS: 333-4470
FAX

e-·pos: admin@crawart.co.za
www.crswart.co.za

COLLINSLAAN / AVE
MOREGLOED
PRETORIA
0188

28 February 07

TO WHOM IT MAY CONCERN

I hereby grant permission for O.R O'HARA to carry out a research project entitled; PERCEPTIONS OF SUBSTANCE USE AMONGST HIGH SCHOOL YOUTH IN PRETORIA: A QUALITATIVE STUDY.

Yours faithfully

C DEDNAM
PRINCIPAL

HOËRSKOOL
STAATSPRESIDENT C.R. SWART
POSBUS 31154
TOTIUSDAL, 0134
TEL : (012) 333 3712

Note Change in title (see appendix E)

Faculty of Health Sciences Medical School, 7 York Road, Parktown, 2193
Fax: (011) 717-2119/ Tel: (011)717-2075/6

Reference: Mrs. Alison Mclean E-mail: mcleanam@health.wits.ac.za
25 January 2007
Person No: 0102240M

Mr. O.R O'Hara
23 Empress Street
Kensington
2094

South Africa

Dear Mr. O'Hara

Master of Public Health - Health Policy and Management Approval of Change in Title

We have pleasure in advising that your application for change in title to ***The association of adolescent smoking with stress and coping in Pretoria high schools: A qualitative study*** has been approved. Please note that any amendments to this title have to be endorsed by the Faculty's higher degrees committee and formally approved.

Yours sincerely

Mrs. Sandra Benn
Faculty Registrar
Faculty of Health Sciences