EXPERIENCES OF INTERPERSONAL RELATIONSHIPS, STRESS AND COPING AMONGST ADOLESCENTS WHO REPORT SUBSTANCE USE

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Abstract

Introduction: Adolescence, a critical developmental period, requires a certain level of adjustment and may negatively impact youth psychosocial development. Unsurprisingly, adolescent substance use continues to be a major public global health concern. Additionally, some adolescents are immersed in various interpersonal relationships and exposed to various stressors daily, which may affect their psychological well-being and developmental trajectories. This research aimed to explore the experiences of interpersonal relationships, stress and coping, and determine substance use patterns, symptoms of two common mental disorders (depression and generalized anxiety) amongst adolescents who report using substances (legal and illegal) in low-income communities in South Africa by employing Bronfenbrenner's bio-ecological theory and the person-process-context-time model as a theoretical lens.

Method: This study employed a qualitative dominant mixed-method design. The sample was drawn from three low-income communities in the provinces of Gauteng, KwaZulu-Natal, and Northern Cape, South Africa. The inclusion criteria comprised: adolescents between the ages of 12 to 17 years at risk of or currently using substances as well as voluntary participation. The sample comprised 37 adolescents in Phase 1 and 8 adolescents in Phase 2. Data collection comprised focus group discussions and in-depth individual interviews, as well as self-report screening tools (for substance use, symptoms of depression and generalized anxiety) and EcoMaps. The analysis comprised thematic analysis and interpretive phenomenological analysis as well as frequency tables and cross-tabulations.

Findings: The patterns of substance use and symptoms of common mental disorders show that most of the participants (87.5%) reported a lifetime prevalence (i.e., ever used alcohol and 62.5% ever used tobacco). Regarding the overall severity of reported symptoms, 12.5% reported moderate symptoms of depression and generalized anxiety; and 37.5% of adolescents reported mild symptoms of depression and 50.0% reported mild symptoms of generalized anxiety. The majority of adolescents (75.0%) who reported mild symptoms of depression and moderate-to-severe symptoms of generalized anxiety required brief intervention for tobacco use. Half (50.0%) of those who reported mild depressive symptoms and 83.0% of those who reported moderate and severe symptoms of anxiety required brief intervention for alcohol.

Three key themes delineate perceived contributory factors of adolescent substance use initiationin their communities, which resonate with the contextual systems of Bronfenbrenner's bio-ecological theory. The first relates to the developing person, namely, *individual-level factors* including the perceived 'healing' effects of substances such as cannabis and cocaine; the need to experiment with substances and seek out novel experiences; and using substances as an alternative coping mechanism. The second pertainsto *familial*

functioning and home stressors that was found to be a dominant microsystem for adolescents. The third theme is *community and environmental factors* - an amalgamation of micro- and macro-system factors such as peer influence and pressure; harmful and irresponsible adult behaviour; and the normalization of substance use behaviours.

Three themes emerged in the exploration of adolescents' lived experiences of interpersonal relationships, stress and coping, namely, *experiences of familial relations and friendships*, *life disruptions and everyday stressors and coping mechanisms*. These themes which are interrelated as accounts from adolescents' experiences of interpersonal relationships were also linked to their day-to-day stressors and the ways they cope.

Conclusions: Broad conclusions derived from the outcome of this study: (1) many aetiologic factors contribute to substance use disorders and (2) some factors contribute to onset more than others. This research offers a wealth of empirical evidence to substantiate Bronfenbrenner's person-process-context-time model, a model generally overlooked. The family and household environments, as conceptualized by Bronfenbrenner, has also been found to be key contexts for *proximal processes* to influence adolescent development, but these may not necessarily be regarded as proximal processes as the processes negatively influence the development of adolescents when considering their substance use, overall mental well-being, and their chronic exposure to stressors.

Plagiarism Declaration

I declare that "*Experiences of interpersonal relationships, stress and coping amongst adolescents who report substance use*" is my own work. It was not submitted before for any degree or examination in any other university and that all the sources used or quoted have been indicated and acknowledged ascomplete references.

Gadija Khan

2022

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List of Abbreviations

CMDs	Common mental disorders
FGDs	Focus Group Discussions
ESPAD	European School Survey Project on Alcohol and Other Drugs
PPCT model	Person-Process-Context-Time model
SACENDU	South African Community Epidemiology Network on Drug Use
YRBS	Youth Risk Behaviour Survey

Chapter 1: Introduction

1.1. Introduction

It is widely recognised that the context and contextual factors are significant and influential in adolescent substance use. This research aimed to explore the experiences of interpersonal relationships, stress and coping, and determine substance use patterns, symptoms of two common mental disorders (depression and generalized anxiety) amongst adolescents who report using substances (legal and illegal) in low-income communities in South Africa by employing Bronfenbrenner's bio-ecological theory and the person-process-context-time model as a theoretical lens. The utilization of a bio-ecological theory that allowed for an understanding of the interconnectedness and complexity of phenomena and processes that relate to adolescent substance use and adolescents lived experiences of interpersonal relationships. The research offers a systematic analysis of different levels, processes and contexts of influence for adolescent substance use. The unique contribution of this research study is that adds to our knowledge of substance use among South African adolescents, particularly those residing within low-income communities in the Northern Cape, Gauteng and KwaZulu-Natal provinces. The research also adds to the body of knowledge by elucidating the lived experiences of adolescents in terms of interpersonal relations e.g., family composition and stressors which are ever evolving in a 'new' democratic country such as South Africa. The use of EcoMaps to delineate key interpersonal relationships that adolescents have with others (in terms of quantity and quality of) can be considered unique data collection technique.

Adolescent substance use (tobacco, alcohol and other illicit substances) continues to be a major public health concern in various regions of the world such as America, Europe, Asia and Africa (Das et al., 2016; Siegel, 2014; Sorsdahl et al., 2014; Vigna-Taglianti et al., 2014). Significant increases intobacco and alcohol use, including binge drinking, are often initiated and established during adolescence and young adulthood (Kabiru et al., 2010; Reddy et al., 2013). Although progress has been made in reducing smoking amongst youth, large numbers of young people still use tobacco (Reddy et al., 2013). Similarly, concerns about alcohol consumption among youth are evident in the increase in the research to understand the phenomenon of use among the youth (Kabiru et al.,2010; Marshall, 2014; Ramsoomar, 2015). The use of licit substances during adolescence may progress to illicit substances and continue into adulthood (Eriksen et al., 2015; Jantjies, 2010;Morrison, 2011; Olumide et al., 2014; Reddy et al., 2013; Secades-Villa et al., 2005). In thisdissertation, licit substances (i.e. relating to the legal status for use by adults) include tobacco, alcohol and cannabis while illicit include all other psychoactive substances (addictive and injectable) such as cocaine, heroin and methamphetamine.

The extent of adolescent substance use becomes clearer when unpacking the patterns of substance consumption globally, nationally, and regionally/provincially. In America, the National Youth Risk Behaviour Survey monitors health-related behaviours such as sexual behaviours related to unintended pregnancy and sexually transmitted infections (STIs), including HIV; violence; tobacco, alcohol and other drug use among school-going students (Asteman & Schönfeld, 2015). Drawing on the findings of the survey, 28.9% of the students reported lifetime prevalence (ever smoked a cigarette) and 9.5% smoked their first cigarette by age 13 years (Asteman & Schönfeld, 2015). Regarding current cigarette smoking, 8.8% reported having smoked cigarettes in the past 30 days. More than half of the students had reported a lifetime prevalence of alcohol use (60.4%) of at least one drink in their life and 15.5% had their first alcoholic drink before 13 years (Asteman & Schönfeld, 2015). Over a quarter reported current use (29.8%) of, at least one drink of alcohol during the past 30days. The prevalence of current alcohol use was higher among female students (31.8%) than males (27.6%). Nationally, 35.6% of the students reported having used cannabis during their life and 6.8% of the students had used it for the first time by age 13 years. In terms of the current use of cannabis 19.8% of the students reported using it one or more times during the past 30 days (Asteman & Schönfeld, 2015). The European School Survey Project on Alcohol and Other Drugs (ESPAD) monitors trends in substance use among 13- to 15-year-olds from 37 countries in the region (ESPAD Group, 2016; Marshall, 2014; Ramsoomar, 2015). However, the 2015 ESPAD report was based on data from 36 countries. The results show that the average lifetime prevalence (ever used) rates and current use (past 30 days) of cigarettes were 46.0% and 21.0%; alcohol was 80.0% and 48.0% andthe lifetime use of any illicit substance was 18.0% and cannabis was 16.0%. Nearly one quarter (23%) of the students had first smoked cigarettes at 13 years or younger; 47.0% first used alcoholand 3.0% first used cannabis at 13 years or younger (ESPAD Group, 2016). The average rates for current smoking among boys and girls were similar in most countries, while on average more boys than girls reported current alcohol use (49.0% and 46.0%) and cannabis use (19.0% and 14.0%) respectively (ESPAD Group, 2016).

There is a growing epidemic of substance use in many developing and sub-Saharan African countries such as Ghana, Nigeria, Zimbabwe, and Burkina Faso (Kabiru et al., 2010; Manu & Maluleke, 2017). Tobacco, alcohol, and cannabis are the most widely used substances in sub-Saharan Africa (Kabiru et al., 2010; Olawole-Isaac et al., 2018). There is a substantial amount of literature thatshows the patterns of alcohol consumption among adolescents in southern and sub-Saharan Africa (Kabiru et al., 2010). The Global School-Based Student Health Survey (GSHS) is a WHO initiated a collaborative project that measures and assesses behavioural risk factors, including substance use andmental health among 13- to 17-year-olds. It currently provides a global overview of the patterns of risk behaviours

from 2003 to 2010 across 94 countries. The data show that the African region constituted the largest proportion of current alcohol consumption (at least one alcoholic drink on one or more days in the past 30 days) among school-going youth between 13 and 15 years (Ramsoomar, 2015). In a systematic review, Kabiru et al. (2010) found that the estimated proportion of alcohol use among adolescents in sub-Saharan Africa was 32.8%, where Southern Africa had the highest proportion of alcohol use among adolescents at 40.8%. The proportion of adolescents who used cannabis in Southern Africa constitute 25.7% (Kabiru et al., 2010). It is noteworthy that South African data are lacking from a significant survey such as GSHS. This significant omission has implications for the surveillance and systematic comparison of substance use and risk behaviours among South African youth on a global scale.

There is a lack of reliable and quality data for South Africa; in particular, data sources that depict prevalence or track the patterns of adolescent substance use are sparse. There are however three nationally representative sources of data. The first is surveillance data drawn from substance use treatment centres across South Africa twice a year; namely, the South African Community Epidemiology Network on Drug Use (SACENDU) reports (Dada et al., 2018; Morojele et al., 2018). The second, South African National Youth Risk Behaviour Survey (YRBS), comprised three waves of surveys (2002; 2008; 2011) with school-going youth. The data drawn from the SACENDU report provide provincial and regional level data across all age categories. The data from the South African YRBS provide a national prevalence as well as disaggregated data on various risk behavioursincluding substance use and mental health among school-going youth in the country. The third data drawn from the 2012, South African national HIV prevalence, incidence, and behaviour survey that provides cross-sectional data on the current (past 3 months) prevalence of illicit substance use among South Africans 15 years and older (Peltzer & Phaswana-Mafuya, 2018).

The data from SACENDU and YRBS show that adolescents initiate the use of substances before the age of 10 years (Dada et al., 2018; Reddy et al., 2013). The national lifetime prevalence (ever used) of cigarette use constituted 27.6% and 17.6% for current cigarette use (smoked cigarettes on one or more days preceding the survey) among school-going youth (Reddy et al., 2013). There were gender variations within the black African population group, as more males (33.4%) reported lifetimecigarette use compared to females (14.9%). More Coloured (11.3%) and Indian (8.8%) learners smoked their first cigarette before the age of 10, while more males (20.7%) than females (12.1%) reported current smoking. In comparison to the national average (17.6%), learners from Western Cape (25.1%), Gauteng (25.0%) and Free State (24.9%) reported significantly higher prevalence rates of current smoking (Reddy et al., 2013). For patients aged 20 years and younger, treatment for alcohol-related

problems remained sporadic from July to December 2017. Cannabis was the most common primary and secondary substance of use reported among youth (aged 20 years and younger) in the Western Cape (30.0%) and Gauteng (55.0%) (Dada et al., 2018). More specific data regarding provincial patterns of substance use among youth (20 years and younger) attending treatment within Gauteng, KwaZulu-Natal and Northern Cape are presented below. Peltzer and Phaswana-Mafuya (2018) show that 15- to 24-year-olds constituted the second largest proportion (5.7%) that reported using any illicit substance, where 9.6% were men and 1.8% were women. For this age category, cannabis was the highest proportion 5.6%. followed by cocaine (0.4%), amphetamine (0.4%) and opiates (0.4%).

For Gauteng, from July to December of 2017, the largest proportion of young treatment patients aged 20 years and younger were males (89%), Black African (73.0%), and 82.0% had secondary school education (Dada et al., 2018). For the same period, the admissions for patients aged 10 to 14 years constituted 7.0% and for those aged 15 to 19 years 23.0 % (Dada et al., 2018). Cannabis (81.0%) was the most commonly reported substance of use, followed by alcohol (17.0%) and heroin (13.0%) for the period. In KwaZulu-Natal, from July to December 2017, the greatest proportion of youth (20 years and younger) admitted into treatment was male (86%), Black African (67.0%) and employed full-time (35.0%). The proportion of admissions for patients aged 10 to 19 years was 21.0% (Parry et al., 2018). The most frequently used substance in the province for those aged 20 years and younger was alcohol (37.0%) followed by cannabis (29.0%). For the Northern Cape from July to December 2017, one treatment centre provided data. Hence, the sample sizes are quite small. The largest proportion of young treatment centre patients were male (63.0%) and Black African (75.0%). Nearly half 42.0% of the treatment centre patients were aged 10 to 19 years. An overwhelming majority (88.0%) reported cannabis as their primary substance of use and 12.0% reported methamphetamine as their primary substance of use, those for below the age of 20 years, it was cannabis use (Dada et al., 2018).

At the regional level, Magidson et al. (2017) show that substance use by school-going adolescents, residing in urban and peri-urban communities is on the rise (Magidson et al., 2017). Shumba and Makura (2014) sought to examine the extent of drug use in four township schools within the Eastern Cape Province of South Africa. Their methods included interviews with learners, school governing body members as well as document analysis of social workers' records. The researchers found that legal substances such as tobacco and alcohol and illegal substances such as cannabis were widespread among learners and readily available (Shumba & Makura, 2014). Learners were found touse a cocktail of substances, for example, cigarettes and cannabis, cigarettes and tablets, mandrax and alcohol. Similarly, a study conducted in the Eastern Cape (East London) shows that among high school learners,

a greater proportion (37.0%) of learners used and preferred alcohol; while fewerused and preferred cigarettes (27.0%) and cannabis (13.0%) (Manu & Maluleke, 2017). Important gender differences in alcohol and other substance use among adolescents were noted. School-age males were twice as likely as school-age females to use alcohol (Ramsoomar et al., 2013).

Moodley et al. (2012) conducted a study in Atteridgeville (Gauteng), among secondary school learners (grades 9 to 11). The results of the study showed that the average age of initiation of alcohol,cigarettes, cannabis and Nyaope (a mixture of cannabis and heroin unique to South Africa) among the participants was 14.6 years. A significant proportion of the participants had their first alcoholic drink by the age of 14 years. More than a quarter of the participants (25.2%) reported lifetime use of cigarettes, 51.4% reported alcohol use and 13.2% reported cannabis use (Moodley et al., 2012). When examining the current use of substances (past month), the largest proportion reported alcohol use (18.1%) followed by cigarette use (12.4%). This pattern is similar to the provincial treatment centre data; namely, alcohol was the most commonly used substance, followed by cigarettes and cannabis (Moodley et al., 2012). Combrink et al. (2010) present the emerging trend of adolescents' smoking hookah (also known as water pipes) within the Johannesburg central business district. More

than half (60.0%) of the secondary school students reported that they previously smoked or were smoking hookahs at the time of the study. Thirty-five percent (35.0%) reported smoking weekly or less and those who smoked daily comprised a third (33.3%). Half of the hookah smokers initiated the use between the ages of 13 and 15 years (50.4%). Hookah smoking occurred more often at social events (Combrink et al., 2010).

Ghuman, Meyer-Weitz and Knight (2012) investigated the prevalence and predictors of alcohol use and abuse among secondary school students in KwaZulu-Natal. The data were collected in schools within a southern district of the province. More than half (54.0%) of the adolescents reported consuming alcohol at some time in their life (i.e. lifetime prevalence). The greatest proportion (28.6%) of those who reported lifetime use had their first drink when they were 15 to 16 years old while 22.5% had their first drink when they were 13 to 14 years old. The researchers also measured current alcohol use (alcohol use in the month preceding survey) and binge drinking (more than five drinks in succession in the month preceding survey), 40.8% reported current use and 31.8% reported binge drinking. There were significant age differences for current alcohol use 32.0% among 16-year-olds, 45.5% among 17-year-olds and 51.8% among 18-year-olds. Evidently, the use of substances increased with age. A similar trend was apparent for binge drinking 23.0% among 16-year-olds, 34.9% among 17-year-olds and 47.3% among 18-year-olds (Ghuman et al., 2012). Regional researchdepicts patterns of substance use in communities within Gauteng and KwaZulu-Natal, but there appears to be a lack of

research within the Northern Cape.

What is noteworthy is that not all adolescents follow the same pattern of substance use initiation and development (Weybright et al., 2016). In general, literature shows that there are substance use trajectory categories such as stable, escalating, and decreasing user groups (Weybright et al., 2016). The stable category includes individuals who have never used and or those who have consist oflevels of use. The escalating category comprises early heavy users (high use at the stage of initiation and increase over time) and late-heavy users (low use at the stage of initiation and increases over time). Decreasing groups include those that have a high initial level of use which decreases over time (Weybright et al., 2016).

The phenomenon of substance use is complex, therefore, exploring and understanding it is equally complex due to its variations, health challenges and different legal connotations surrounding its use globally (Olawole-Isaac et al., 2018). Adolescents typically initiate the use of substances by the age of 12 years where they start with cigarettes, hubbly and alcohol and subsequently progress to hard substances such as cannabis and methamphetamine (Ghuman et al., 2012; Manu & Maluleke, 2017; Mudavanhu & Schenck, 2014).

1.2. Aetiology of adolescent substance use

Adolescence is a developmental stage characterized by a transformation that renders young individuals vulnerable. Young people may face numerous challenges owing to physical bodilychanges, identity formation, forging and maintaining relationships with peers and adults as well as adapting to new ways of thinking (Barnes, 2015; Papalia & Feldman, 2012; Rith-Najarian et al., 2014; Shefer, 2008). Substance use and mental health problems may be linked to the challenges that they might experience during this time (Papalia & Feldman, 2012; Tarter, 2002). Substance use during adolescence may lead to major health and social consequences such as an increased risk for injury, perpetration or exposure to violence, risky sexual behaviour, suicide, academic difficulties, and school drop-out (Boles & Miotto, 2003; Lightowlers, 2011; Mattila et al., 2005; Morojele et al., 2009; Plüddemann et al., 2014). The body of literature on the aetiology of adolescent substance use highlights that initiation and progression of substance use is the result of a combination of the individual level, interpersonal, social, and environmental factors. Individual characteristics such as biological and demographic factors include age; sex; race as well as psychosocial factors such as the propensity for experimentation, symptoms of depression or generalized anxiety and coping repertoires are thus integral to understanding the aetiology of adolescent substance use (Case & Haines, 2008; Hendricks et al., 2015; Low et al., 2012).

In addition, the initiation of adolescent substance use is a complex phenomenon because it is a culmination of multiple processes or interactions as well as contextual factors that differ from person to person (Hayman, 2013). In addition to individual-level characteristics, interpersonal relationships dynamics are identified as aetiological factors for adolescent substance use (Rich, 2017; Walsh et al., 2010; Wongtongkam et al., 2014). Adolescents are exposed to and learn about substance use behaviours from multiple socialising sources and through processes that may exist at the interpersonal level (Alhyas et al., 2015; Brook et al., 2006). These include but are not limited to family functioning, the parent-adolescent relationship, parental monitoring, peer relations and the formation of friendships (Martinez et al., 2015; Rusby et al., 2018; Samek et al., 2015). With regard to contextual factors, the socio-political history and landscape of a country such as the colonial and apartheid legacies in South Africa are thought to shape the social and structural determinants of health including substance use that result in various forms of marginalisation and inequality based ongender, class and race (Jacobs & George, 2021; Olumide et al., 2014). Other contextual factors identified include country-level and global substance use patterns; norms and attitudes about the use of substances; as well as policy and legislative measures on substance use (Jacobs & George, 2021).

1.3. Definitions of key terms

1.3.1. Adolescent

An adolescent is an individual who is transitioning from childhood into adulthood (Lynn, 2010). The developmental period of adolescence is characterized by a range of physical and psychosocialchanges, as well as risk-taking behaviours (Jones et al., 2015; Schulenberg & Maggs, 2002; UNICEF, 2016). Age categories are, typically, used to demark early (11 to 13 years), middle (14 to 18 years) and late adolescence (19 to 24 years) (Ammerman, 2019; Diane et al., 2003; Paulse, 2010; UNICEF, 2016).

1.3.2. Common Mental Disorders (CMDs)

The term common mental disorder was coined by David Goldberg (Pinheiro et al., 2007). It refers to depressive non-psychotic symptoms, anxiety and somatic complaints that affect the performance of daily activities (Kerebih et al., 2017; Pinheiro et al., 2007). According to the International Classification of Diseases-10 (ICD-10), Common mental disorders (CMDs) are defined as ‘neurotic, stress-related and somatoform disorders’ which also include mood disorders such as depressive and anxiety disorders (Kamath et al., 2014; Lopes et al., 2016; Pinheiro et al., 2007). Depression and anxiety are the two CMDs included in this research.

1.3.3. Stress and coping

Stress, according to Lazarus and Folkman (1984), refers to the outcome of an individual's appraisal of events or environments, whereby the individual perceives that the demands exceed the available resources (Harada & Chen, 1984). Stress is, therefore, a reciprocal transaction between individuals and their environments.

Lazarus and Folkman (1984) define coping as the efforts made (either cognitive or behavioural) to master, tolerate, or reduce external and internal demands and conflicts (Brechting & Giancola, 2006; Eitle & Eitle, 2014; Harada & Chen, 1984; Lazarus & Folkman, 1984; Sudraba et al., 2014). They offer a typology of coping processes namely problem-focused and emotion-focused coping. Problem-focused coping involves individuals' actions or behavioural endeavours to reduce stressful environments or consequences. Emotion-focused coping refers to a person's efforts to reduce stress through the use of emotional responses such as blaming oneself or avoidance strategies including minimizing, escaping or denial (Eitle & Eitle, 2014; Wagner et al., 1999).

1.3.4. Substance use

In the context of substance use research, it is important to understand the distinction between substance use and abuse, as the word is used interchangeably. According to the Department of Social Development (the National Drug Master Plan [NDMP] 2013-2017), substance abuse among the general adult population is defined as '*the misuse and abuse of legal or licit substances such as nicotine, alcohol, over the counter and prescription medication, alcohol concoctions, indigenous plants, solvents, and inhalants, as well as the use of illegal or illicit substances'* (p 19). Any form of use of a specific substance concerning adolescents is considered to be abuse (Barnes, 2015; Central Drug Authority, 2013; Visser & Routledge, 2007). However, given that adolescent substance use occurs on a continuum and not all adolescents who 'use' substances 'abuse' it according to clinically significant standards such as the Diagnostic and Statistical Manual of Mental Disorders (DSM–5); this study ascribes to employ the term substance use. In this study, the categories of substances included tobacco, alcohol, cannabis, cocaine, amphetamines, sedatives, inhalants, hallucinogens, and opioids. Soft drugs' and 'hard drugs' are arbitrary terms with little to no clear criteria or scientific basis. Therefore, I refrained from categorising substances in these artificially imposed categories.

1.4. Locating the current doctoral study within a larger research project

1.4.1. Background to the larger research project

The larger study entitled, *Using sport as an intervention for substance use reduction among adolescents and young adults in three selected communities in South Africa: An exploratory study,* was a collaboration between the Human Sciences Research Council (HSRC) and The New loveLife Trust led by the Principal Investigator, Prof P Naidoo (Naidoo et al., 2016). It was an exploratory intervention aimed at reducing substance use among youth between the ages of 12 and 24 years. The study sought to explore the use of skateboarding, as a substance use reduction strategy among young individuals in three selected communities. There were three phases in the study, namely: pre-intervention phase, intervention phase and post-intervention phase. The pre-intervention phase comprised of screening for substance use and symptoms of two CMDs (depression and anxiety). It was followed by focus group discussions (FGDs) among youth on the contributory and maintaining factors for substance use and the use of skateboarding as a plausible substance use reduction strategy for young people. The intervention phase comprised basic skateboarding coaching combined with a life skills workshop. The post-intervention phase comprised of screening for substance use, the two CMDs, followed by FGDs.

1.4.2. Rationale for conducting the doctoral research project

The doctoral candidate was the project director and actively involved in the conceptualisation and implementation of the larger study. She was particularly interested in understanding the adolescents' lived experiences pertaining to stressors, coping and their interpersonal relations. The key questions that guided her scientific inquiry were: 1) What are the relationship profiles and interpersonal relationships of adolescents who use substances in three low-income communities? And 2) What are adolescents' lived experiences of stress and coping among adolescents who report using substances in three low-income communities.

Literature that examined stress, coping and interpersonal relationship dynamics among adolescents who use substances were primarily quantitative (Brechting & Giancola, 2006; Eitle & Eitle, 2014; Hsieh et al., 2014; Low et al., 2012; Tavolacci et al., 2013; Wagner et al., 1999; Wills et al., 2001). Researchers such have excelled at pinpointing predictors of adolescent substance use within international settings such as Sweden, Canada and Cambodia (Gunnarsson, 2012; Orsi et al., 2014; Yi et al., 2011). In South Africa, quantitative research focused primarily on determining prevalence rates and has begun to pave the way for investigating and identifying the factors that influence adolescent

substance use (Amoateng et al., 2006; Muchiri & dos Santos, 2018; Olumide et al., 2014).A limited amount of research focuses on stress, coping or interpersonal relationships in samples of youth who use substances in South Africa (Barnes, 2015; Visser & Routledge, 2007). Moreover, these studies employed quantitative research methods to investigate associations between these variables. Considering these, there is a dearth of in-depth qualitative research on stress, coping and interpersonal relationship dynamics in adolescent samples, particularly with those who use substances, in the country. Evidently, there is an impetus for a methodological shift in research regarding the inquiry into adolescent substance use; namely a progression from quantitative and descriptive research to more in-depth qualitative explorations and interpretations.

In conjunction with existing quantitative research, Babbie and Mouton (2001) suggest that in-depth qualitative inquiries may prove helpful in providing comprehensive and phenomenological understandings of adolescent substance use in relation to stress, coping and interpersonal relationship dynamics (Babbie & Mouton, 2001). Given the limited attention paid to the experiences of adolescents who use substances in relation to stress, coping and interpersonal relationship dynamics,

the qualitative dominant mixed method design as employed in this research project, offers a valuable approach because it goes beyond identifying associations between variables and seeks to uncover and understand their perceptions and lived experiences.

As an extension of the larger study described earlier this doctoral project also sought to research the same communities. These communities were chosen for two reasons. The first is based on a situational analysis conducted by The New loveLife Trust (preceding the larger project) three communities, one in each of the following provinces: Gauteng, KwaZulu-Natal and the Northern Cape were purposefully selected. These provinces had a high burden of adolescent substance use. The second reason is that these communities were low-income communities that have been under- researched for the general population and even more so for adolescents. By employing an interpretative phenomenological framework, the research findings would offer in-depth insights into some of the experiences and complexities of the day to day lived experiences of adolescents within the three low-income communities.

1.4.3. Background to the doctoral research project

The research questions rendered a qualitative dominant mixed method research design. Figure 1 (page 11) depicts the phases of the larger intervention study alongside the doctoral research study. The doctoral project was divided into two phases. The first phase sought to determine the substance use patterns, report symptoms of two CMDs (depression and anxiety) and explore the perceived

contributory factors for the initiation and continued abuse of substances among adolescents in the selected communities. To achieve the objectives of the first phase, data analysis was conducted using data from the screening instruments (i.e. substance use, symptoms of depression and anxiety) and the FGDs of the larger study. The second phase sought to determine interpersonal relationship profiles and to explore the experiences of stress; coping and the interpersonal relationships of adolescents who use substances. This phase constituted an additional component of data collection, whichincluded the use of EcoMaps and in-depth individual interviews. As an extension of the larger project, the researcher used the same study sites and sample to recruit participants for the second phase. The three sites were similar to each other in that they were urban disadvantaged communities that are characterized by high levels of unemployment, poverty, overcrowding, violence and crime (Butchart et al., 2000; Butchart & Kruger, 1999; Swart & Seedat, 2001). Detailed explanations of themethod of the study and the research settings are presented in Chapter 3.

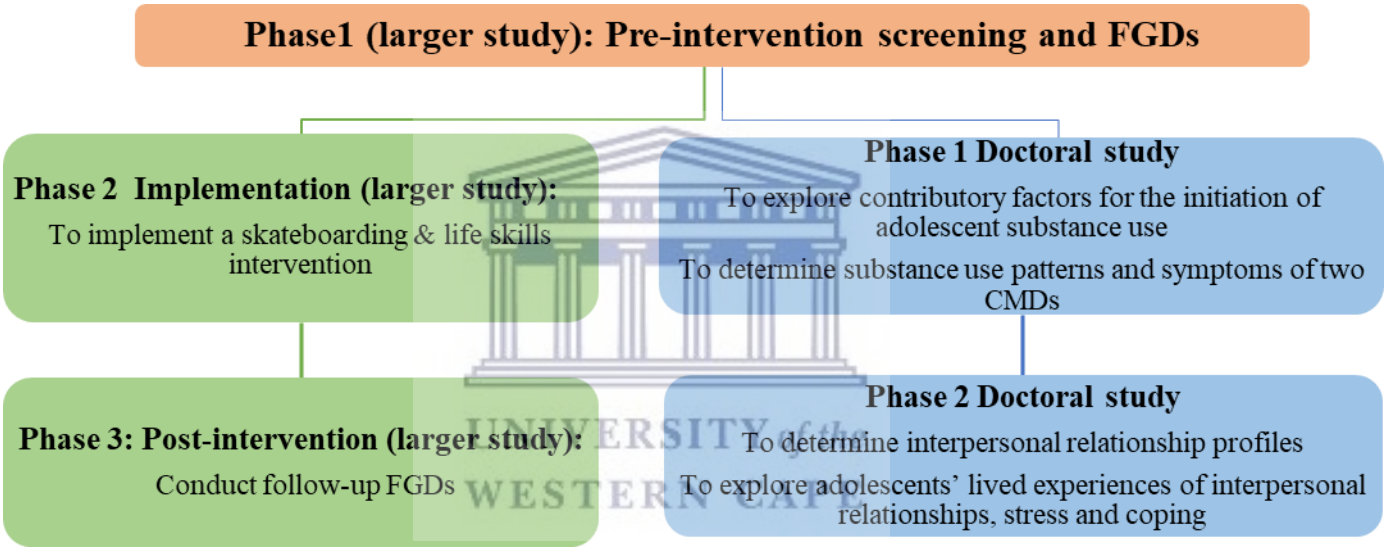

Figure 1 Schematic representation of the phases of the two projects

1.5. Aim and objectives of this study.

The primary aim was to explore the lived experiences of interpersonal relationships, stress, and coping among adolescents who report substance use in three selected low-income communities in South Africa. The specific objectives of the study were to:

i) Explore adolescents' perceptions of factors that contribute to the initiation of adolescent substance use.
ii) Determine the substance use patterns among adolescents who report using substances.
iii) Determine the reported symptoms of two CMDs among adolescents who report using substances.

iv) Determine the interpersonal relationship profiles of adolescents who report using substances.
v) Determine the association between substance use patterns reported symptoms of two CMDs among adolescents who use substances.
vi) Explore adolescents' experiences of stress, coping and interpersonal relationships.

1.6. Structure of thesis

The structure of the dissertation delineates the systematic progression of the research project in relation to answering the research questions adequately. The structure helped to provide details of the conceptualisation phase and formulation of research questions as seen in the Introduction, Chapter 1. During the conceptualisation, it was crucial to review existing literature on the research topic. This process assisted the researcher to locate her study within the larger body of knowledge and identify key theoretical lenses to understand phenomena under exploration such as adolescent substance use, stress, coping and interpersonal relationships. Further, it enabled her to get a sense of the empirical literature and unearth the gaps within the body of research. As such, Chapter 2 presents the relevant literature and theoretical underpinnings of the research. To answer the research questions asked at the outset of the study, an appropriate method is necessary; in this case, a qualitative dominant mixed methods research design guided the execution of the research study. Hence, extensive information about the methods and procedures of the research project are documented in Chapter 3. Chapters 4, 5 and 6 provide 'answers' to the research questions and present the findings. The first section of Chapter 7 presents the conclusions drawn from the key findings; the subsequent sections provide recommendations for future research for health practitioners, interventionists and policy makers and discusses the limitations of the study.

Chapter 2: Theoretical Perspectives and Literature Review

2.1. Introduction

The first subsection in this chapter will locate the study within the philosophical foundations for researching adolescent experiences, as well as explain the theoretical underpinnings aligned to this research study for researchers to make sense of adolescent substance use. The second subsection will provide an overview of adolescent development that helps to understand the phenomenon of adolescent substance use. Further, it will expand on the pathways to adolescent substance use, which operate at the individual, interpersonal and environmental (and community) levels.

2.2.Philosophical and theoretical perspectives: Adolescent substance use and lived experiences.

2.2.1. Philosophical underpinnings of adolescent lived experiences

Drawing on global political agendas on children's rights, such as the United Nations Convention on the Rights of the Child (1989), an expanding body of literature calls for greater consideration of children and adolescents and their specific roles and relationships in our society. The current research study explores adolescents' perceptions of contributory factors of adolescent substance use as well as adolescents lived experiences of stress, coping and interpersonal relationships. The aims ofthe research align well with a broader philosophy that recognizes children and adolescents as active beings in our society. This philosophy asserts that adolescents are competent social beings who are capable of speaking for themselves. In the context of substance use and lived experiences of interpersonal relationships, adolescents are regarded as experts in their own lives and can provide valuable insights into their behaviours and experiences (Foster, 2009). Pragmatically, this translates into the greater inclusion of children and adolescents in research, rather than simply responding to categories imposed by adult models.

This philosophy is also linked to the theoretical foundations of an interpretive phenomenological approach (IPA) which considers '*individuals as experts on their own experiences who can offer researchers an understanding of their thoughts, commitments and feelings through telling their own stories, in their own words, in as much detail as possible'* (Foster, 2009, p. 124). This approach highlights the importance of focusing on lived experiences as well as the adolescents' understandings (i.e. sense-making processes) of this experience. Underpinning this approach is the philosophy of no one objective reality, and adolescents' experiences are influenced by their perceptions, which are

socially constructed (Foster, 2009). IPA is thought to be a useful tool for researching various phenomena located in both clinical and health psychology fields. Along with a bio-ecologicalsystems lens (presented later), IPA allows for the exploration of experiences of adolescents within contexts, recognizing that contextual factors (e.g. economic, cultural, and psychosocial) withinadolescents' lives may directly or indirectly influence their sense-making processes of these experiences. These theoretical foundations of IPA fit the key objectives of the research to provide an opportunity to investigate phenomena such as interpersonal relationships, stress, and coping, through learning from those who are experiencing it, rather than from pre-existing theories or knowledge (Foster, 2009).

2.2.2. Theoretical perspectives

The body of evidence on adolescent substance use has yielded a range of distinct theoretical perspectives on complex issues from causation models to influencing factors for adolescent substance use. What is clear is that present theories seem to be bound by reductionist interpretations from different disciplines. For example, biomedical theories, explain that substance use and dependencies stem from biological processes such as genetic predisposition (Ammerman, 2019; Jinadu, 2012). While the majority of psychological theories focus on the internal individual processes and characteristics, one such theory is trait theory that seeks to identify which personality traits or a specific personality profile predisposes individuals to substance use, for example, poor impulse control or a high need for excitement (Ammerman, 2019; Jinadu, 2012). There appear to be various ways of viewing adolescent substance use, with the acknowledgement that the pathway to substance use and abuse encapsulates a complex interaction of multi-dimensional influences in and between personal, family, peer, school, neighbourhood, and community domains. Alternative and broader theoretical explanations have emerged including the bio-ecological systems theory.

Considering that multiple risk factors that span multiple social domains (e.g. individualtemperament, familial and peer influence) have already been identified for adolescent substance use,a systemic lens provides an advantageous framework for exploring the perceived contributory influences on adolescent substance use. Further, the model also aligns well with this study as it seeks to unpack the interpersonal relationships that adolescents who report using substances develop and maintain their repertoires of coping.

2.2.2.1 Bio-ecological systems theory

A broad systemic framework, such as the bio-ecological systems theory of development, proposed by Urie Bronfenbrenner (1979; 2005) bridges the reductionist theory gap and offers a theoretical lens to examine social contexts systematically and simultaneously at the micro and macro levels

(Bronfenbrenner, 1979, 2005; Eriksson et al., 2018). The framework has three fundamental ideas of the theory. The first premise asserts that the individual (active participant) is the central force in development, the individual shapes environments, evoking responses from them, and reacting to them. In particular, the individual is at the centre of five major environmental contexts, namely: micro-, meso-, exo-, macro- and chronosystems (these will be described further in the sectionbelow). The phenomenological nature of the bio-ecological theory comprises the second fundamentalpremise of the theory and it is asserted that '*if men define situations as real, they are real in their consequences'* (Darling, 2007, p. 204). The third principle of this theory highlights how different environments will be responded to in different ways by different individuals, experienced and objectively defined environments will not be randomly distributed regarding the developmental processes and the individuals that one observes within them (Darling, 2007).

i) Microsystem

The microsystem is the innermost system, which is the immediate environment of the adolescents (physically, socially and psychologically); this may be people and events in the family, school/peers, and neighbourhood/community. Here the adolescents are situated at the centre of this system and are active recipients of experiences in these settings, that reciprocally interacts with others while helping to construct the settings (Rich, 2017). This system becomes the adolescents' earliest and foundational setting for learning about the world as it offers them a reference point of the world (Swick & Williams, 2006).

ii) Mesosystem

The mesosystem is thought to be the system of the various microsystems, and the real power of mesosystem is that they help to connect two or more systems in the adolescents' lives and tend to permeate every dimension of their lives (Ennett et al., 2008; Eriksson et al., 2018; Swick & Williams, 2006). This system moves beyond the dyadic relationships and represents the connections and interactions between one or more microsystem settings. For example, the connections between family and school experiences, or between the family and peers. Experiences in one microsystem can affect experiences in another microsystem, for example, children, whose parents have rejected them, might have difficulty developing positive relationships with teachers (Rich, 2017).

iii) Exosystem

'We all live in systems psychologically and not physically; these are exosystems' (Swick & Williams, 2006, p.3). Exosystems are the settings in which the adolescent is socialized. Exosystems are thought

to be those contexts that do not contain the developing adolescent, and the people and contexts are experienced vicariously and yet they have a direct impact on the adolescents (Ennett et al., 2008; Newman & Newman, 2015). For example, policies in the parents' place of employment, for example, a lack of flexibility to childcare duties could affect the quality of the parent-child relationship and therefore hinders the child's development.

iv) Macrosystem

This represents the outermost systems, referred to as a 'societal blueprint', where the larger social systems including cultural beliefs, societal values and political trends exist. The macrosystem exerts powerful overarching influences on the adolescent and the macrosystems in which individuals live shape the behaviour as well as their interactions /relationships with others. Culture is a very broad term that includes the roles of ethnicity and socioeconomic factors in children's development, as wellas societal values, customs, laws, beliefs and resources. For example, some cultures emphasise traditional gender roles that may promote male dominance, while in other cultures, more varied gender roles are accepted, and individuals have become sensitive to endorsing the value of equal opportunities for females and males (Bronfenbrenner, 2005).

v) Chronosystem

The chronosystem reflects changes and transitions that are not only limited to the changes in the adolescent but also includes the social contexts or environments in which adolescents find themselves (Eriksson et al., 2018). These are specific time-related events, milestones, or turning points in the individuals' life. The timing of these transitions, or socio-historical conditions, may affect the child's development. For example, the negative effects of parents' divorce often peak during the first year of the separation, family dynamics become unstable and changes to parental carers may coincide with the transition to adolescence. The timing of these may all negatively affect the young person's development.

2.2.2.2. Process–Person–Context–Time (PPCT) model

It is worth noting the evolution of Bronfenbrenner's theory, as it influenced the reconceptualization of the microsystem. In the final stages of Bronfenbrenner's theoretical development, he put forth the PPCT model to extend the existing ecological theory now known as the bio-ecological theory. The process is conceptualized as proximal processes that are considered the engines of development and ensue within microsystems and encapsulate the reciprocal interaction between the developing individual and other significant people, objects, and symbols in his/her immediate environment

(Eriksson et al., 2018). This model takes into consideration the developing person (a component of the PPCT model) as well as the influence of the unique attributes of the individual (e.g. age, gender, temperament, intelligence) on the proximal processes. The context is conceptualized as involving four interrelated systems, namely, the microsystem, mesosystem, exosystem and macrosystem (which has previously been explained). Time in the model refers to the fifth system (chronosystems) where time-specific events and experiences influence the development of the adolescent.

The interdependence of these systems makes up a larger complex system. Bronfenbrenner's bio-ecological theory of human development recognizes that for every individual, there is an ever-changing set of complex social contexts and relationships that exist and interact within these systems to influence the developmental trajectory of an individual, that is, the adolescent (Foster, 2009; Tudge et al., 2016).

In the context of adolescent substance use, all five of these social systems are thought to uniquely contribute to the development of adolescent substance use behaviours (Ennett et al., 2008), further this theory highlights the interplay of factors within these layers of systems that contribute to the issues of substance use. In low-income communities such as the ones researched, families typically experience breakdown and dysfunction of relationships characterized by absent, single parents or grandparent guardianship. Parent's employment is often low paying, compelling them to relocate or work long hours, subsequently, family life becomes secondary or neglected (Florence & Koch, 2011;Yip et al., 2011). Families may be unstable, wrought with conflict, which hinders family functioning and severs the parent-adolescent relationship. Consequently, this microsystem serves to undermine the developmentof adolescents and risk behaviours in children and adolescents (Ennett et al., 2008).

Macrosystem factors in the communities of interest include low socio-economic status tied to race and the political history of South Africa. Further, the low economic Coloured and Black African townships were established during apartheid under the Group Areas Act that sought to inflict disenfranchisement, inequity, and unequal distribution of resources (Urban et al., 2015). Today the social fabric of these communities is highly disrupted as they are challenged with various social problems such as high crime, violence, gangsterism and substance use (Choi et al., 2014). All of these, including other social determinants of health (poverty, unemployment and overcrowding) are thought to contribute to the development of wellbeing and risk behaviours including substance use inchildhood (Choi et al., 2014; Reddy et al., 2010). In addition, the apartheid-era policies left a lasting legacy of eroded family dynamics (composition and cohesion). Family members were separatedfrom each other, reinforced by the destructive influences of urbanisation and industrialisation. Post- apartheid, we see parents relocating and migrant labour resulting in a high number of single-parent families.

Consequently, this influences the parenting styles, and the parents' capacity and proximity to cater to, establish and maintain stable relationships with their children. These are examples of howthe macro-(socio-political environment), chronosystems, and influences the microsystem and indirectly the child's development and substance use (Florence & Koch, 2011).

Each of these systems on its own is crucial to development in and of itself; the interactions among systems are more important. There may be strong and frequent interaction between the microsystems that reinforce each other, while in other cases there may be little interaction among members of the different microsystems of an adolescent's life, for example, adolescents whose parents reject them are less likely to develop positive and healthy relationships with their peers and friends (Jaeger, 2017; Newman & Newman, 2015). Factors in the macrosystem such as an economic regression may result in parent/caregivers' job instability and unemployment (change in exosystem); which may further impact the family microsystem functioning practices, including those associated with literacy,with parents in and out of the home at irregular times (home microsystem). It may even require moving to less expensive housing in a neighbourhood served by a different school with altered literacy expectations (school i.e., microsystem and, potentially, home-school dynamics i.e. mesosystem).

In this study, both the bio-ecological theory and the PPCT model were practically utilized to understand adolescent substance use and make sense of adolescents' lived experiences of interpersonal relationships and coping repertoires in low-income communities within the South African context. In other words, this research aligns with the theory as it provides specificity of how social contextual systems interact with the individual characteristics and (proximal) processesto offer an understanding of the pathways of adolescent substance use behaviour and to delineate adolescents lived experiences of interpersonal relationships and their coping repertoires (Ennett et al., 2008; Tudge et al., 2020). There may be multiple pathways to adolescent substance use behaviours, these two frameworks recognise the complexities of multi-level factors and influences that interact that may lead to adolescent substance use. Some of the pathways could emanate from individual level factors such as exposure to daily stressors and adverse life events; other pathways may stem from of interpersonal relationship factors such as parent-adolescent attachment and peer pressure; pathways to adolescent substance use may be a culmination of environmental influences such as normalisation of behaviours. These pathways will be discussed at length in subsequent sections.

Further, within this research, adolescents' experiences of stress, interpersonal experiences and coping repertoires can be seen as proximal process because information and communications critical to development are relayed to youth during these processes. These can also be viewed as contextual factors as well proximal processes as part of an individual's immediate environment with which

interaction occurs on a regular basis over extended periods of time.

2.3. Adolescents transitioning to adulthood: developmental milestones and vulnerabilities

It is useful to consider the contexts and factors that predispose individuals to substance as well as the factors and contexts that can mitigate many of the negative consequences or protect individuals against substance use (and other mental health outcomes). The researcher acknowledges that there is benefit to applying a risk-resilience ecological perspective that allows for a balanced view of social/contextual systems, (Corcoran et al., 2004; Phillips et al., 2019) but the focus of the research and subsequent subsections is to enumerate risks factors.

2.3.1. Understanding and contextualizing adolescent development

Adolescence is a critical developmental period, as it is characterized by significant physical, social and emotional changes compared to any other developmental stage. This is a transition from dependence to independence; adolescents start to adopt a range of new emotional and social rolesand have to cope with hormonal and bodily changes (Arnold, 2017). The extent and magnitude of thechanges occurring during this transitional time requires a certain level of adjustment and may negatively impact youth psychosocial development (Foster, 2009; Patel et al., 2008).

Adolescents not only perceive more stressors but also are more receptive to stressors, both physiologically and emotionally (Rith-Najarian et al., 2014). The experiences of stress have become more universal and are shared lived experiences of adolescents from varied social circumstances and backgrounds (Matthieu & Ivanoff, 2006). The literature points to two broad sources of stress namely: daily stressors and major stressful life events (Aldridge-Gerry et al., 2015; Brook et al., 2011; Gelhaar et al., 2007; Low et al., 2012; Moor et al., 2019). Daily stressors are generalized sources of stress and are not linked to particular events or occurrences. Examples of daily stressors include difficulties in relationships with family members and parents, boy/girlfriends, friends, school performance, weight, and health problems such as asthma and acne (Aldridge-Gerry et al., 2015; Gelhaar et al., 2007; Low et al., 2012). Stressful life events are distinct quantifiable events or circumstances that may result in severe negative psychological impacts. Severe traumatic events such as childhood neglect, abuse and rape are stressful life events (Matthieu & Ivanoff, 2006; Tessner et al., 2011). Stressors such as interpersonal stress, academic stress, and for some, posttraumatic stress are no longer isolated experiences for individuals (Matthieu & Ivanoff, 2006).

A large body of literature documents contextual stress resulting from parent/guardian–adolescent

relationship and the household environment problems, this will be expanded in detail in section 2.3.2 (Low et al., 2008, 2012; Luk et al., 2010; Rith-Najarian et al., 2014; Seiffge-Krenke et al., 2001). Additionally, adolescents are exposed to various environmental stressors in their daily lives which may affect their psychological well-being (Amoateng et al., 2006; Barnes, 2015; Brook et al., 2011; Leoschut, 2008; Makota & Leoschut, 2016). Low income, unemployment and deprivation in families create a unique type of stressor for adolescents in comparison to other types of stressors they face in their lives (Barnes, 2015; Brook et al., 2011; Chandra & Batada, 2006). Adolescents who grow up in deprived and low-income families must learn to cope with poverty-related stressors, which occur daily. Therefore, it is not surprising that living in conditions of persistent poverty- related stress negatively impacts their psychological health (DeCarlo Santiago et al., 2011). Further, literature shows that individuals and families living in poverty experience more uncontrollable and chronic life events and stressors than the general population (Drimie & Casale, 2009; Santiago et al., 2011). These stressors tend to leave them more vulnerable to maladaptive coping strategies (such as risk-taking behaviours including substance use; rumination and escapism) and have an influence on their ability to plan for the future (Drimie & Casale, 2009; Löfving et al., 2018).

Violence in schools has moved beyond bullying and takes on many forms including physical attacks, verbal aggression, and sexual violence (Leoschut, 2008). These incidents of violence can occur between students, or between students and educators. The contextual risk factors for school violence include community disorganisation, frequent exposure to violence, easy accessibility to firearms and weapons, reflect a complex combination of the legacy of violence as well as recent stresses on individuals, schools, and broader communities (Leoschut, 2008; Makota & Leoschut, 2016). The negative impact of exposure to violence exposure (i.e. vicarious or first-hand experience; frequency and magnitude) adolescent mental health outcomes has been highlighted in literature previously, particularly substance abuse as a possible outcome of violence exposure (Löfving et al., 2018).

South Africa was an apartheid state from 1948 to 1994 defined by a system of racial segregation, characterized by systematic exclusion and marginalization of non-white racial categories[1] of South Africans (Das-Munshi et al., 2016; Mapadimeng, 2013). The regime created exclusions through separate development policies that banned access to geographic spaces, economic power and resources; healthcare, education and socio-cultural rights for these population groups (Das-Munshi et

[1] The Population Registration Act of 1950 imposed four racial categories namely White, Black, Coloured, and Indian. Historically, Black referred to native individuals mainly of African descent, Coloured referred to individuals with mixed- race ancestry and Indian referred to people mainly of Indian descent. Although the act has been repealed, these racial categories remain in use, to some degree (Mthembu, 2015; Weybright et al., 2016)

al., 2016; Mapadimeng, 2013). This historical and political period has a significant influence on contemporary South Africa where socio-economic inequalities continue to disproportionately affect the Black African majority and Coloured individuals and communities. For example, the Group Areas Act placed Black and Coloured populations in substandard communities on the outskirts of towns. Today various manifestations of economic inequality (e.g. poverty, unemployment, and low levels of education) and social marginalisation (e.g. family disorganisation, violence, substance use and gangsterism) are prevalent in these communities. Several of these unequal socioeconomic manifestations such as poverty, violence, disenfranchisement and discrimination become social determinants of mental health and common sources of distress for many adolescents living in South Africa (Jacobs & George, 2021). Present-day South African adolescents are regarded as 'Born Frees' as they were born in democratic South Africa. Born Frees are commonly perceived to be a generation free from marginalisation, discrimination and inequality or are able to realise their potential, claim equal rights, entitlements and opportunities (Jacobs & George, 2021; Maseti, 2018). However, many non-white (i.e. Black, Coloured and Indian) Born Frees contend that while born into a new democracy, the psychosocial development, well-being and everyday experiences are shaped by historical disadvantage, structural determinants and inequalities that still echo in their lives (Jacobs &George, 2021; Maseti, 2018). The residual effects of apartheid either constrains every aspect of their lives or result in a sequela of negative consequences for overall development functioning. Substance use and other mental health conditions are thought to be outcomes and consequences of the apartheidregime.

2.3.2. Identity development

Life-course and developmental theorists regard development as a series of stages where each stage has developmental tasks to achieve before moving onto the next (Ammerman, 2019). Adolescence being one of these stages, the literature highlights a set of 'tasks' for adolescence which include: accepting one's body, adopting appropriate social roles, developing close peer relationships, preparing for occupational roles, preparing for intimate relationships, achieving emotional independence from parents, establishing personal values and ethics and striving for social responsibility (Foster, 2009). In particular, identity formation espoused through interaction with others, for example, parents or peers is understood as the central task for adolescence (Klimstra et al.,2010). Although identity formation is often presented as a milestone to achieve during adolescence, the researcher acknowledges that the formation of an individual's identity is a lifelong process. Ethnicity might be an important determinant of identity formation; in some instances, religionequates to ethnicity, but this does not apply to all ethnic groups (Oppong, 2013). Within collectivisticand conservative ethnic and religious groups, adolescents are more likely to struggle with and negotiate the meaning of their own identity. Here, the

formation of adolescents' own identity is overshadowed or suppressed, and they need to modify or enhance their identity to match theethnic/religious group identity (i.e. formation of ethnic/religious identity). They continually searchfor a sense of self while identifying and associating themselves with the familial, vocational, and societal roles ascribed to their ethnic or religious groups. It is likely that the influence of this component in identity formation in contemporary time is less pervasive and forceful than before.

Erik Erikson (1956) brought identity formation to the fore of human development where

> *"… identity formation is necessary for a young person to experience wholeness and youth must feel a progressive continuity between that which he has come to be during the long years of childhood and that which he promises to become in the anticipated future*" (Arnold, 2017, p3).

Consequently, identity formation includes several changes in one's identity that is 'characterized by progressive developmental shifts' (Arnold, 2017). The conceptualization of Erikson's identity theory is more commonly evident through Marcia's identity status paradigm, where identity is on a continuum (Cote & Levine, 1983; Klimstra et al., 2010). This perspective is centred on two dimensions of Erikson's theory of identity formation namely exploration and commitment. With regard to exploration, adolescents tend to choose and explore developmental alternatives during identity-defining experiences or situations. Commitment refers to subsequent engagement in relevantactivities towards the implementation of these choices of developmental alternatives. According to Marcia's theory, an adolescent's identity can be classified into four distinguishable identity statuses, based on the degree of exploration and commitment; namely diffused identity, foreclosure identity, moratorium and achieved.

Considering the defining attributes of these identity statuses in understanding the trajectories of youth development and risk behaviours such as substance use (Arnold, 2017), a diffused identity status is characterized by low levels of exploration and low commitment where an individual has not started identity formation (either through commitment or through the exploration of possibilities). Itis thought to be the least adaptive and adolescents generally have higher levels of psychosocial problems including low self-esteem, poor peer relations, social isolation and higher levels of hopelessness (Arnold, 2017). Evidence suggests that adolescents with foreclosed identity have formed an identity without exploring other available options for adolescents. These individuals typically have a strong need for social approval and develop dependent relationships with significant others (Arnold, 2017; Gullotta et al., 2000). Those with moratorium status tend to have high levels ofexploration, but no stable commitment. These adolescents actively search and explore answers to their identity. The

tension of the "hunt" understandably leaves these youths with anxiety (Arnold, 2017; Gullotta et al., 2000). Identity-achieved youths have the most complex, highly adaptivepersonality profile of the four identity-status groups. These adolescents have the highest levels of cognitive complexity moral-reasoning abilities, self-esteem and reflective (or analytic) cognitive style (Côté, 2011). Various factors come to play when adolescents attempt to forge secure and achieved identities. These factors may be adaptive and maladaptive and may influence the physical and mental wellbeing of the individual. There has been an acknowledgement of developmental domains such as ethnicity and race, gender on the overall formation of identity and the lived experiences of adolescents; particularly those who are marginalised or 'othered'. Further, the notion that identity formation involves the intersectionality of race, ethnicity, and sexual orientation (i.e., intersectionality theory) may help us understand how multiple identity categories affect the ways that individuals think about themselves. Individuals' levels of vulnerability are based on their experience of their social positionality and experiences, which for many youths involves the experience of interlocking systems of oppression and support (Cerezo et al., 2020; Velez & Spencer, 2018).

Adolescent identity development within a South African context is influenced by the unresolved (structural) identity issues inherited from the colonial and apartheid legacies. The post-apartheid South Africa brings a unique set of opportunities and challenges for adolescents to explore and consider various identities as they attempt to negotiate the development in the transformative socio-historical context (Jacobs & George, 2021; Maseti, 2018). From a bio-ecological perspective South Africa provides a unique context for development as identity formation is thought to be challenged by various socio-economic and psychosocial factors such as poverty, exposure to interpersonal and community violence, normalisation of substance uses behaviours, discrimination. South African adolescents are thought to not only experience an individual identity crisis, but also a national identity crisis (Du Plessis, 2014).

2.3.3. The propensity for risk-taking: the influence of experimentation

Experimentation during adolescence is a normative developmental phase (United Nations Office on Drugs and Crime [UNODC], 2004). In an attempt to develop a secure identity, adolescents generally seek out new experiences where risk-taking behaviour becomes a characteristic feature (Das et al., 2016; Duell & Steinberg, 2019; Jordan & Andersen, 2017; Swift et al., 2012) (Duell & Steinberg, 2019). It is important to mention that risk behaviours are thought to fall along a spectrum. At one end are positive risks (also referred to as prosocial) which are constructive for development and or socially acceptable such as initiating a new friendship or trying out for a sports team. At the other end are

negative risks which are dangerous, harmful behaviours (to self) or illegal such as fighting, drinking, or stealing (Duell & Steinberg, 2019).

Curiosity is one of the factors driving experimentation during adolescence and appears to increase the susceptibility of risk-taking behaviours (Nodora et al., 2014). This suggests that adolescents may have an interest in engaging in risk-taking behaviours even though the intent to do so may have been lacking at first (D'Amico et al., 2015; Nodora et al., 2014; Portnoy et al., 2014). Adolescents' curiosity may be influenced by other factors such as peer pressure or mass media coverage and social media (Hendricks et al., 2015; Swartbooi et al., 2016) Literature shows that enhancement motivations (i.e. the perception that the use of substances will heighten positive experiences or emotional states) for adolescent substance usegenerally include excitement, and experimentation or curiosity (Manley, 2009)To demonstrate, Patrick (2013) conducted a qualitative study to explore and describe the reasons for risk behaviours among school-going youth residing in a low-income township near Cape Town, South Africa. The participants stated that having fun or feeling good is one of the reasons for their substance use (Patrick, 2013). Additionally, the curiosity of the effects of substances appeals to adolescents to experiment with and initiate the use of substances while the experience of intoxication itself was alsofound to have a desirable physiological effect on youth (Manley, 2009).

There are adolescents who merely experiment with substances such as cigarettes, alcohol, andcannabis and cease to use it long term, there are those who, experiment and continue to use it more regularly into adulthood (Haase, 2010). As such, the deleterious consequence of unhealthy experimentation is that it marks the onset of a trajectory of negative health and behavioural impacts including lifelong difficulties with substance dependence or addiction (Burlew et al., 2009). For example, Sargent et al. (2017) demonstrated that experimentation with cigarette smoking between the ages of 10 to 14 years predicted daily smoking two years later (Sargent et al., 2017). It is also noteworthy to point out that experimentation may not only be limited to one substance (Font- Mayolas et al., 2013; Moss et al., 2014; Mudavanhu & Schenck, 2014; United Nations Office on Drugs and Crime [UNODC], 2004). As in the case of Moss et al. (2014), single substance experimentation was more sporadic than multiple substance use experimentation in earlyadolescence (before the age of 16) within a sample of youth from the United States of America. Adolescents usually start experimenting with 'soft' or legal substances such as tobacco and alcohol and then progress to more severe levels of using these substances. Adolescents may also progress to using more 'rewarding' yet harmful substances which are typically 'hard' or illegal such as amphetamines, cocaine, and ecstasy (Kirby & Barry, 2012; Moss et al., 2014; Nkansah-Amankra & Minelli, 2016; Otten et al., 2017). On the other hand, adolescents

might start to experiment with illegal substances (Mohasoa, 2010; Nkansah-Amankra & Minelli, 2016), as in the case in the rural areas of the North West province of South Africa (Mohasoa, 2010). Mohasoa (2010) found that adolescents experimented with both illegal and legal substances. Participants experimented with cannabis and heroin and then progressed to use alcohol and tobacco. Font-Mayolas et al. (2013) offerthree explanations why adolescents may experiment with multiple substances or combine different substances. One, adolescents want to experience the cumulative or complementary effects of multiple substances. Two, combining one substance with another to counteract its negative effects (e.g. lace the hubbly bubbly with cannabis). Three, replace one substance with another due to changes in price, fashion, availability, and legality. It is important to note that polysubstance use among adolescents is regarded as an indirect indicator of drug use later in life (Font-Mayolas et al., 2013).

2.4. Pathways to substance use

There is evidence to suggest that a variety of factors influence adolescents' risk of using licit and illicit substances. There is no simple approach to uncovering the motivations for and factors leading to adolescents' initiation of substance use and entry into the substance world (Ammerman, 2019; Gray & Squeglia, 2018). This may somehow be explained by the notion that one factor maypredispose some individuals to substance use while the very same factor may be a protective factor for others, for example, emotion-focused coping for one person may be a protective factor for another individual (Rich, 2017; Stone et al., 2012). Adolescents vary in their motives for substance use (Stapinski et al., 2016). It is important to understand why and what influences adolescents' initiation of substances. As mentioned before, adolescent substance use is multifaceted and thus operate across various levels and domains of an adolescent's life. The factors that influence adolescent substance use initiation can broadly be categorized into the individual level, interpersonal and relational, and environmental (and community) factors. These factors are explained in thesections below.

2.4.1. Individual factors

Selected individual characteristics contribute to the way people behave in daily life situations as well as their responses to emergencies. Individual-level factors can be either personal or psychological. Personal factors are related to a person's biological and social disposition or demographic characteristics (Upton, 2013), which include age, sex, education level, economic status, and ethnicity. The age of substance use initiation varies according to the substance in question. For tobacco and alcohol, the initiation of substance behaviours is typical during early adolescence, thatis, 10 to 12

years or even earlier, as some trends are depicting (Peltzer, 2014). There is minimal consistent data about the age of initiation for illegal substances, but the age of initiation is usually from middle adolescence to 14 years (Hamdulay & Mash, 2011). The literature documents consistently higher prevalence rates of substance use among males compared to females (Kabiru et al., 2010; Peltzer & Peltzer, 2014). Psychological, factors pertain to individual-level processes and traits that influence mental states, which drive individuals' behaviour. (Upton, 2013). These factors vary from person to person. Some individual factors can contribute to the risk of developing a substance use behaviour including the need for experimentation during adolescence and stressful experiences and coping processes. These factors will be presented in detail in the sections to follow.

2.4.1.1. Stressors and substance use

In this study, psychological stress is defined as a consequence of an individual's appraisal of events or environments, particularly where the individual perceives that the demands exceed the available resources. Stress is, therefore, a reciprocal transaction between individuals and their environments. The association between stress and substance use among adolescents is documented in the literature, suggesting a positive relationship between the two (Eitle & Eitle, 2014; Low et al., 2012; Uba et al., 2013).

An extensive body of literature documents contextual stress resulting from the parent-adolescent relationship; family and household environment; and school to have an impact on adolescents' mental health and substance use trajectories (Low et al., 2012; Luk et al., 2010; Rith-Najarian et al., 2014; Seiffge-Krenke et al., 2001). Low et al. (2012) sought to examine the association between various sources of stress and adolescent substance use behaviours. They measured sources of stress such as family disruption, a romantic breakup, interpersonal stress, and personal stress in a population-based sample of Canadian adolescents. Family disruption variables included parental separation/divorce and new family; interpersonal stress variables comprised relationships with father, mother, siblings and friends; personal stress included health problems, weight and schoolwork. Regarding family disruptions, 18.7% of adolescents reported stress relating to the divorce or separation of parents; 22.3% reported stress related to the relationship with the father, 19.2% reported stress related to the relationship with the mother. More than a quarter (25.8%) reported stress related to a health problem. Girls more frequently reported stress than boys did. Substance use variables were cigarette smoking (past six months), binge drinking (past six months) and illicit substance use in this sample. Family disruption was associated with cigarette and cannabis use.

Magaya et al. (2005) sought to determine the major stressors and coping strategies of Zimbabwean

adolescents (16 to 19-year-olds). They also sought to determine the interplay among stress, coping and social support. They found that Zimbabwean adolescents face considerable stress related to interpersonal relationships, success in school, finances and the developmental issues related to adolescent social development (i.e. identity formation and group affiliation). Further, they found differences in how Zimbabwean adolescent girls and boys perceived stress (Magaya et al., 2005).

2.4.1.2. Adverse childhood experiences

The literature demonstrates that adverse childhood experiences are often associated with psychological distress; and subsequently linked to an increased risk of substance use in adolescents and adults (Bujarski et al., 2012; Gunnarsson, 2012; Lamers-Winkelman et al., 2012; Strine et al., 2012; Waldron, Grant, et al., 2014; Whitesell et al., 2013). Siqueira, Diab, Bodian and Rolnitzky (2000) sought to determine the relationship between stress and coping strategies with smoking status among a clinic-based adolescent sample. Their results revealed that a greater number of negative life events increased the risk of becoming smokers (Siqueira et al., 2000). More specifically, stressful negative life events were lowest amongst those who never smoked, intermediate for experimenters, and highest amongst current smokers. Further, they explored the role of perceived stress in stages of smoking initiation and found that the level of perceived stress was lowest in never-smokers, higher inexperimenters, and highest in current smokers.

Strine et al. (2012) conducted a retrospective study of the adverse childhood experiences (childhood physical and sexual abuse; emotional and physical neglect; witnessing domestic violence; household members who used drugs or were mentally ill; separation or divorce of parents), psychological distress and the effects on substance use. They found that adverse childhood experiences andpsychological distress were related to a higher risk of self-reported alcohol problems in adult men and women. The findings pointed to gendered differences. In particular, adverse experiences such as abuse (emotional, physical, sexual), neglect (emotional, physical), and household dysfunction (parental separation or divorce, drug use in household and mental illness in household) were found toincrease women's risk of alcohol problems. For men, sexual and physical abuse, emotional neglect and various types of household dysfunction (drug use and mental illness in the household and family members being incarcerated) were associated with self-reported alcohol problems.

2.4.1.3. Parental separation

Several studies have shown parental separation or divorce to be associated with a negative impact on cognitive functioning and psycho-social well-being of children and adolescents (Kristjansson et al., 2009; Paulse, 2010; Waldron, Grant, et al., 2014; Yip et al., 2011). In comparison to children from

intact families (both parents and children living together), children whose parents are separated or divorced are more likely to report frequent use of alcohol and other drugs during adolescence (Waldron, Vaughan, et al., 2014; Yip et al., 2011). The research by Yip et al. (2011) demonstrates a higher prevalence of ever using substances among adolescent boys (8.6%) and girls (9.0%) whose parents were separated or divorced as compared to their counterparts whose parents were married (boys 5.4% and girls 3.6%). However, within the literature, it is unclear whether the experience of divorce itself or specific factors or processes of parental divorce and family dissolution account for adolescents' distress (Kristjansson et al., 2009).

Kristjansson et al. (2009) investigated factors associated with the divorce process and its influence on adolescent substance use (cigarette smoking and alcohol use). The variables measuring divorce factors or processes included family conflict, levels of parental monitoring, time spent with parents as well as disruptive changes in adolescents' social environment. The results of their study showed that emotional familial stressors that accompanied marital discord were found to increase the risk of adolescent substance use. Serious arguments between the children and one or both parents were strongly related to cigarette smoking and alcohol use. While disruptive social changes, for example, moving to a new home because of divorce was not significantly associated with adolescent substance use. Changing schools, however, was a risk factor for smoking, but not for alcohol use. The study also found that time spent with parents and parental monitoring constituted protective factors for both smoking and alcohol use (Kristjansson et al., 2009).

2.4.1.4. Exposure to violence

The impact of exposure to intimate partner violence (IPV) on children has been well documented in the literature (Jewkes et al., 2010; Lamers-Winkelman et al., 2012; Mikton, 2010; Otwombe et al., 2015; Thaler, 2012). Children exposed to violence typically experience multiple traumas and are at high risk of a range of psychopathology outcomes such as posttraumatic stress disorder (PTSD), depression, substance use and delinquency (Cisler et al., 2012; Cohen et al., 2003; Lamers- Winkelman et al., 2012). Results from three meta-analyses (Chan & Yeung, 2009; Kitzmann et al., 2003; Wolfe et al., 2003) demonstrate that children's exposure to IPV was moderately associatedwith emotional problems, behavioural problems, and trauma symptoms (Lamers-Winkelman et al., 2012). The consequences of the exposure to IPV may vary and are dependent on the chronicity (i.e. duration) and the severity of the violent acts (Kitzmann et al., 2003). More importantly, research suggests that adolescents exposed to interpersonal violence including IPV have elevated levels of distress or posttraumatic stress symptoms and are more likely to use substances (Brechting &Giancola, 2006;

Bujarski et al., 2012; Cohen et al., 2003; Lamers-Winkelman et al., 2012).

2.4.1.5. Separation from and loss of a parental figure

The nature of parental loss takes on different forms including parental rejection, separation from a parent, or loss through death (Keenan, 2014). In South Africa, the extent of separation from parents through parental absence, from a child's household, is high (Hall & Mokomane, 2018). The reasons for parental absence range from divorce or separation, non-marital childbearing, adult employment and labour strategies, housing constraints, schooling opportunities, limited availability of affordable care, choices about who is best placed to provide care for children, or a combination of these factors (Hall & Mokomane, 2018). The negative effect of parental loss during childhood or early adolescence on later adolescent and adult development can be seen in the literature (Keenan, 2014; Strine et al., 2012). Parental acceptance/rejection has a significant effect on the personality development and mental health of the child (Gülay & Önder, 2011; Sentse et al., 2010). Being accepted by parents was found to positively enhance adolescent adjustment (Sentse et al., 2010). On the contrary, parental rejection is linked to emotional and behavioural maladjustment such as depression, aggression, suicidal behaviour and substance use (Sentse et al., 2010). The nature and extent of the impact of parental acceptance-rejection will be discussed in the section relating to interpersonal relational factors (section 2.4.2).

Daily stressors: familial, household and school stressors

The parent/guardian-adolescent relationship poses a major source of stress for adolescents, as they struggle with becoming more autonomous and experience communication problems with their parents (Seiffge-Krenke et al., 2009). Consequently, everyday conflicts in the home and with parents become the order of the day and are deemed one of the significant contributors to the distress, adolescents experience (Seiffge-Krenke et al., 2009). Other literature documents that the homeenvironment (inter-parental relationship and family structure) can either be a place of solace or a source of distress for adolescents (Amoateng et al., 2006, 2007; Barrett & Turner, 2006). The inter- parental relationships factors such as behaviours and/or strategies used to express disagreements are of particular importance as it affects youth's wellbeing (Amoateng et al., 2006). Constant exposure to hostility between parents was found to be associated with internalizing and externalizing behaviours among adolescents (Amoateng et al., 2006; Yip et al., 2011). The inter-parental relationship may consequently affect the parent-child relationship (Yip et al., 2011). Family structureposes some vulnerability and becomes a stressor for adolescents. Research demonstrates that adolescents from single-parent and blended families experience more life stressors and adverse experiences (Barrett & Turner, 2006; Flisher et al.,

2010; Yip et al., 2011). In their study, Barrett andTurner (2006) found that adolescents from single-parent families that included at least one additional relative did not face elevated risks of stress, depression and substance use. Their results do not reveala similar advantage for adolescents living in stepfamilies. In blended families, stress may be a consequence of remarriage and suggest that parents' re-partnering have a negative ripple effect on parent-adolescent relationships.

School is an important social space that adolescents occupy, as they spend a large portion of their day there (Leoschut, 2008). School may be a contributory source of stress for adolescents (Barnes, 2015; Rith-Najarian et al., 2014). A well-known source of school-related stress is academic performance, assessments and workload (Andrade, 2014; Chandra & Batada, 2006; Rith-Najarian et al., 2014). The relationships between academic performance and substance use are not clear-cut and are difficult to distinguish which caused the other. There is some consensus that there is an inverse relationship between the two; specifically, low academic performance is correlated with the increased use of substances (Andrade, 2014; Mohasoa, 2010). (Donath et al., 2012) investigated protective and risk factors of binge drinking among grade nine students in Germany. Academic failure and violence at school (teachers' aggressive behaviour) were among the top identified risk factors for binge drinking. The social environment at school poses a great deal of stress especiallythe high levels of violence or threats of violence within schools (Barnes, 2015; Leoschut, 2008; Rith-Najarian et al., 2014). Reddy et al. (2010) provide rates of adolescent violence exposure in schools across South Africa. More than half (58.7%) of the participants witnessed a physical fight at school, 15.7% was threatened/injured by someone with a weapon at school, 27.0% reported that they felt unsafe at school and 22.9% felt unsafe on their way to school (Reddy et al., 2010).

The associations between adolescent distress and health behaviours including substance use are not straightforward and some studies show that these links depend on the type of stressor, gender, socio-economic status (SES), ethnic identity and environmental characteristics (Bates et al., 2011; Elgar et al., 2003; Park & Iacocca, 2014; Stein & Nyamathi, 1998). As such, the literature implies the importance of understanding the role of stress in the development of mental health problems and that screening for these mental problems may be useful for adolescent well-being.

2.4.1.6. Coping styles and substance use

Lazarus and Folkman's (1984) transactional theory of coping is widely used to describe and explain how individuals cope with stress (Griffiths, 2009; Harada & Chen, 1984; Lazarus & Folkman,

1984a; Newness, 2011; Wagner et al., 1999). Stress, to them, is not considered a specific kind of external stimulation or a specific pattern of physiological, behavioural or subjective reactions. Instead, stress is viewed as a 'transaction' between individuals and their environment (Harada & Chen, 1984); specifically, people who are confronted with a stressor, evaluate the stressor, and this evaluation determines their behavioural or emotional reactions (Eitle & Eitle, 2014; Griffiths, 2009; Zimmer-Gembeck et al., 2011). In other words, individuals' subjective interpretations of events, as opposed to the events or experiences themselves, determine the individual's responses and reactions to relating to the coping (Carney et al., 2000).

In their transactional model, Folkman and Lazarus (1984) identify two broad dimensions of coping: problem-focused and emotion-focused strategies (Eitle & Eitle, 2014; Wagner et al., 1999). Problem-focused coping include processes or active steps taken by individuals to remove or circumvent the stressor or its effects, for example, seeking information or generating possible solutions. Emotion-focused strategies include indirect methods to avoid and control the stressor or its emotional impact, for example, expressing one's emotions, seeking solace and support from others, ignoring, excessive worry or distancing oneself from the stressor (Leonard et al., 2015; Valtonen et al., 2006). The problem-focused (also referred to as behavioural coping or task-oriented coping) involve some level of engagement, while emotion-focused coping is characterized by disengagement by the individual (Mcconnell et al., 2014; Valtonen et al., 2006). The terms problem-focused and engagement coping as well as emotion-focused and disengagement coping are often used interchangeably within literature. (Seiffge-Krenke, 2011). Engagement (problem-focused) is regarded as an adaptive or morepositive way of dealing with stress, especially when stress is perceived to be controllable (Leonard etal., 2015). In contrast, disengagement is regarded as maladaptive as these strategies are aimed at managing distress rather than changing the problem situation (Adan et al., 2017).

Various factors may influence the development of coping styles during adolescence. Adolescents experience normative stressors within relationships with significant people in their lives, which may require them to develop and employ various coping styles. A review of literature on the association between relationship stress (with parents and friends) and the utilization of different coping styles was conducted by Seiffge-Krenke (2011). Several findings were highlighted in the review. The review found that gender was linked to certain coping styles. Adolescent boys employ problem- focused coping styles where they focus on positive aspects of the situation or used distraction and relaxation coping strategies as an attempt to control their emotions. Girls, on the other hand, were found to use person-centred coping, which involves support seeking (i.e. emotion-focused), expressing emotions

openly, but avoid confrontations for the sake of the relationship. Regarding the parent-adolescent relationship stress, supportive parenting (low levels of conflict) was found to be linked to adolescents' support seeking and problem-focused coping (adaptive). A poor relationship marked with rejection, abandonment or harsh discipline was associated with avoidant coping. Further, inter-parental conflict was found to have an impact on adolescents, as adolescents would employ involvement or avoidance strategies, which in the short-term prove to be adaptive, but not in the long-term. It is well known that adolescents' relationships with their peers are centred on peer group acceptance and the internal pressure to conform as a means to develop and maintain a close attachment or intimacy. In the contexts of mutual friendships, adolescents employed strategies that involved collective coping (talks with friends and seek mutually beneficial solutions), as maintaining the friendship was a priority to both. In the case of casual friendships, adolescents employed self- serving strategies, such as avoidance or confiding in another friend. Relational conflict and overt aggression in friendships also cause a substantial amount of distress for adolescents which means they need to develop ways to cope. The review highlighted distancing strategies were more frequently used to cope with relational conflict than with overt aggression (Seiffge-Krenke, 2011). Adolescents on the other hand would employ physical violence (fighting back) in response to dealingwith overt aggression displayed by peers, particularly among boys and older adolescents. When comparing the coping styles across the parent-adolescent relationship and friendship, it is apparent that adolescents adopt quite different approaches (Seiffge-Krenke, 2011). This could be attributed to the fact that the parent-adolescent relationship has a power imbalance (the parent is the figure of authority) while friendships are more equal. Also, within friendships, adolescents would employ strategies to reduce conflict; specifically, compromise to avoid straining the relationship but these approaches do not seem necessary to preserve family relationships.

The coping strategies employed by adolescents are considered a particularly influential factor in the development and trajectory of their mental health problems including depression, anxiety and substance use (Adan et al., 2017; Leonard et al., 2015; Mcconnell et al., 2014; Wingo et al., 2015; Zhang, 2013). Through a longitudinal approach, Wingo et al. (2015) sought to examine the development of coping strategies as well as the relationship between coping styles and psychiatric disorders from late adolescence (17 years) to adulthood (33 years). There were four time-points (mean ages 17, 24, 29 and 33) of data collection. Task-oriented (i.e. problem-focused) and emotion- focused coping were measured as well as DSM-IV-TR Axis-I psychiatric disorders (major depressive disorder, generalized anxiety disorder, panic disorder, phobias, social anxiety disorder, alcohol abuse or dependence, and drug abuse or dependence). With regard to the development of coping, task-oriented coping increased sharply from mean ages 17 to 24 years and remained stable from mean ages 24 to 33

years for both men and women. In contrast, emotion-oriented coping gradually decreased, among both men and women, from a mean age of 17 years to a mean age of 33 years. At the mean age of 17 women scored moderately higher than men and slightly higher at mean age 24 to 33 years on emotion-oriented coping than men. Further, they found that emotion-oriented coping at age 24 was significantly associated with increased odds of a diagnosis of major depression or anxiety disorder, but not of alcohol or drug use disorders. However, task-oriented coping in late adolescence was associated with a lower risk of developing a drug or alcohol use disorder.

A body of literature on the relationship between stress, coping and substance use suggests that adolescents turn to substances as a response (coping) to stress (Hasking et al., 2011). Substances are used to enhance positive effect and/or decrease an aversive mood. Within this context, the use of alcohol as a coping response may be seen as adaptive and successful in the short term. However, consuming alcohol to cope with chronic stress or persistent negative mood is generally considered a maladaptive response. Disengagement coping (i.e. emotion-focused.) is associated with the initiation, early and continued use of substances, whereas engagement coping, is considered protective against substance use (Adan et al., 2017; Lee-Winn et al., 2018). McConnell et al. (2014) investigated the relationships between the use of engagement and disengagement coping strategies and intention to use tobacco and marijuana use in a large sample of adolescents who have not yet reported any substance use. They found that adolescents who scored higher on the engagement coping had lower odds of having intentions to use tobacco and marijuana. While those who scored higher on disengagement had higher odds of having intentions to use tobacco or marijuana, or initiated tobaccoand marijuana use.

Similarly, Lee-Winn et al. (2018) examined the association between coping styles (problem-focused, avoidance and distraction (disengagement) coping styles and adolescent marijuana use behaviours (lifetime, past 12-month frequency of use) in America. The researchers found that avoidance and distraction coping styles were significantly associated with lifetime marijuana use. Another study explored the associations between coping and substance use among youth in private schools using a mixed-methods approach (Leonard et al., 2015). With regard to coping, they examined problem-focused ("get help from a friend") and a dichotomy of emotion-focused, namely, internal avoidance ("go off by yourself") and external avoidance ("get mad and throw or hit something"). Girls were significantly more likely, than males, to report adaptive coping (problem-focused) as well as emotion-focused internal avoidance. Boys, on the other hand, reported more emotion-focused external avoidance coping styles than girls. Recent substance use patterns were significantly associated with high levels of perceived stress, and emotion-focused external avoidance coping.

While the transactional model of coping has been found to be useful; and has been applied in various contexts with different population groups; contemporary coping theorists considers this model more traditional and limiting. Especially the framing of emotion-focused coping which is commonly cited and criticized for pathologizing emotion-focused coping as well as mischaracterize it coping as avoidant.

2.4.1.7. The co-occurrence of substance use and common mental disorders among adolescents

During the developmental phase of adolescence, individuals begin to develop substance use behaviours. The onset of mental disorders also, typically, sets in during this developmental phase. Despite this trajectory, there are fewer research studies that specifically examined and explored associations between substance use and the two CMDs, namely, depression and anxiety among adolescents (Wu et al., 2010). A growing body of evidence suggests that substance use and the two CMDs do co-occur within adolescent samples (Ammerman, 2019; Visser & Routledge, 2005), with some researchers who have begun to determine the prevalence of these co-occurrences in adolescent populations (Wu et al., 2010). Pang et al. (2014) found that adolescents' levels of depression were associated with an increased likelihood of lifetime use of various substances including tobacco alcohol, cannabis, inhalants and prescription medication. Researchers also found that depression levels lowered the age of onset of substance use initiation. Among Spanish adolescents, depression and substance use were found to co-occur (Espada et al., 2011; Pang et al., 2014). In South Africa, for example, Hamdulay and Mash (2011) found that one-third of school-going adolescents who reported using illicit substances had attempted suicide. While there have been fewer studies investigating the relationship between substance use and anxiety disorders in adolescent populations, research points out that an association between anxiety and pathways to substance use among young people do exist (Low et al., 2008; Scalco et al., 2014; Wu et al., 2010).

There is still debate on the hypotheses and models to adequately explain the underlying mechanisms and developmental pathways of the co-occurrence of substance use and these two CMDs, forexample, whether substance use precipitates, is a consequence of depression and anxiety; or whether substance use affects the outcome of these CMDs and vice versa. What is clear is that the relationship between substance use and CMDs is a complex one with explanations stemming from both the biomedical and social science disciplines. From the body of evidence, there are tworecognized pathways of the co-occurrence of substance use and mental disorders. Pathway one proposes that symptoms of the two mental disorders are risk factors for adolescents to self-medicate with substances and the second pathway suggests that the use of substances induces symptoms of or the onset of the two mental

disorders.

2.4.2. Interpersonal relational factors

2.4.2.1. Attachment, quality of the parent-adolescent relationship

The literature consistently implicates the influence of families, parents, in particular, in the initiation of adolescent substance use (McLaughlin et al., 2016). Parents/guardians influence adolescent's development in different ways including providing family structure, instilling values, and regulating how time is spent (Ewing et al., 2015). Over the years, research has demonstrated that a positive family environment is beneficial to the child's development (Miranda et al., 2016). Secure parent/guardian-adolescent attachments can protect young people from substance use initiation (Calafat et al., 2014; Meeus, 2016; R. Velleman, 2009). Research conducted by several researchers (Burlew et al., 2009; Coker & Borders, 2001; Mak et al., 2010; Pires & Jenkins, 2007; Scheer et al., 2000) demonstrate that the quality of parent/guardian–adolescent interaction considerably influences adolescent's substance use. A good quality relationship between the parent/guardian and the adolescent, characterized by warmth, connectedness and control and monitoring, not only reduces the likelihood of adolescents' initiation of substance use, but also the progression to addiction (Hayman, 2013; Velleman et al., 2005).

One factor that has been documented to influence the quality of the parent/guardian–adolescent relationship is parental acceptance-rejection (Hale et al., 2005; Miranda et al., 2016; Sentse et al., 2010). Parental acceptance (by both parents) is closely associated with children's psychological adjustment (Carrasco et al., 2019; Hale et al., 2005). A substantial amount of research on parental acceptance or rejection is based on Rohner's parental acceptance-rejection theory (R. Rohner, 2015; R. Rohner et al., 2019; R. P. Rohner, 2004). Rohner's interpersonal acceptance-rejection theory conceptualizes parental acceptance-rejection on a single continuum, comprising four interrelated components namely: warmth/affection situated at the acceptance end of the continuum and three other facets—hostility/aggression, undifferentiated rejection, and indifference/neglect— situated at the rejection end of the continuum (Jager et al., 2016; Miranda et al., 2016). Their theory posits that adolescents' experience of rejection informs adjustment, and the experience of rejection is, to a certain degree, a subjective one (Jager et al., 2016; R. P. Rohner, 2004; R. Rohner et al., 2005). As such, high (perceived) parental acceptance and low perceived parental rejection are linked to positiveand negative developmental outcomes respectively (Miranda et al., 2016; Sentse et al., 2010). Some of the negative developmental outcomes may include depression, externalizing problems and school failure (Miranda et al., 2016; Sentse et al., 2010).

Hale et al. (2005) sought out to explore the potential function of perceived parental rejection on adolescent depression and aggression. It also investigated the mediated effects of gender. Thefindings of their study confirmed that perceived parental rejection, when mediated through adolescent depression, explained adolescent aggression and withdrawal behaviours. Further, their study showed that perceived parental rejection had a significantly stronger effect on the older girls' depression than that of the boys. Similarly, Sentse et al. (2010) tested the impact of parent and peer

acceptance and rejection (separately and simultaneously) in relation to pre-adolescent externalizing and internalizing problems. Their study confirms the importance of the need for adolescents to belong (to parents or peers). The results imply that parent and peer acceptance and rejection are interdependent and that risk-effects of one context should be considered relative to protective factors of another context. The findings of this study also show that peer acceptance was able to buffer the effects of parental rejection even though parental acceptance did not buffer the effects of peer rejection. Although girls were more likely than boys to have internalizing problems in early adolescence because of parental and peer rejection, there was no gender difference in the moderating effect of peer acceptance on parental rejection (Sentse et al., 2010).

Most of the research that investigated the parent-adolescent relationship or attachment has sampled mother and child dyads, while other studies neglected to differentiate between maternal and paternal attributes. Nevertheless, there is a growing body of evidence that suggests that mothers and fathers do not have the same influence on children's psychological problems (Hale et al., 2005; Jager et al., 2016; Miranda et al., 2016). Maternal rejection is the most significant and painful for children to deal with, while paternal rejection greatly contributes to children and adolescent maladjustment (Hale et al., 2005). Jager et al. (2016) conducted a study to examine whether adolescents' perspectives of the adolescent–mother and adolescent–father rejection are associated with one another. Their second aim sought to determine whether adolescents' perspectives of parental rejection predicted future internalizing and externalizing. They found that adolescents' perspectives of maternal rejection were unequivocally similar to adolescents' perspectives of paternal rejection. Concerning adolescent adjustment, adolescents' perspectives of parental rejection predicted higher internalizing and externalizing behaviours one year later.

In keeping with research that investigated both parents' attachment and the development of children and adolescents, Miranda et al. (2016) examined the relationship between adolescents perceived paternal and maternal acceptance-rejection and adolescent maladjustment. A second aim of the study was to determine whether inter-parental inconsistency was a specific risk factor for maladjustment. Inter-parental consistency refers to the inconsistent parenting styles between mothers and fathers.

The results of their research demonstrated that, firstly, adolescents' ratings of maternal and paternal acceptance–rejection were highly correlated; secondly, adolescents perceived mothers to be less rejecting than fathers (statistically small difference); thirdly perceived paternal and maternal rejection were both related to adolescent aggression and anxiety–depression symptoms. Inter- parental inconsistency had a negative effect on adolescent adjustment, over and above the effects of maternal and parental rejection. Furthermore, family structure (intact versus. non-intact) moderated the relationship between parental acceptance-rejection typology and anxiety-depression symptoms.

Studies such as Miranda et al. (2016) confirm that the acceptance-rejection of both parents has significant effects on the children's development and adjustment. Occasionally the contribution of one becomes more relevant than the contribution of another. As such, Carrasco et al. (2019) investigated the distinctive influence of perceived parental acceptance (fathers versus mothers) on children's adjustment, taking into account the role of perceived interpersonal power and prestige of mothers and fathers in familial dynamics.

The extensive literature on parental acceptance and rejection on adolescents (Carrasco et al., 2019; Hale et al., 2005; Jager et al., 2016; Miranda et al., 2016) suggests the powerful influence the parent-adolescent relationship has on adolescents. It is evident through the literature that parental acceptance-rejection not only influences the development of internalizing and externalizing behaviours but has also been associated with adolescent's substance use.

2.4.2.2. Parental monitoring and parenting styles

Parent/guardian-adolescent attachment and parental monitoring are closely related to one another (Hummel et al., 2013; Yip et al., 2011). A prerequisite for effective parental monitoring is to have a secure parent/guardian-adolescent relationship. Consequently, the importance of parental control and monitoring has been emphasized in adolescent development research as it was found to lower adolescents' risk of substance use (Becoña et al., 2012; Yip et al., 2011). Results from a meta- analysis by Lac and Crano (2015) show that (across 25 samples consisting of more than 35 000 participants) a strong link between parental monitoring of adolescents and lower rates of cannabis use. Specifically, intense monitoring was associated with less cannabis use among adolescents (Lac& Crano, 2015). The encouragement to make responsible choices by fostering positive interactions with adolescents, for example, involve teens in the family decision-making processes protects them against future substance use and peers' influence to use (Donovan, 2004; Ewing et al., 2015; Jang et al., 2013). Similarly, Amoateng, Heaton and Kalule-sabiti (2007) found that parental behavioural control (including monitoring knowledge and limit-setting behaviour) predicted significantly lower levels of

tobacco and alcohol use among Black, Coloured and White adolescents in a sample of South African adolescents (Amoateng et al., 2007).

While there is a considerable body of quantitative literature that links the parent-child attachment and parental monitoring to adolescent substance use (Calafat et al., 2014; Fallu et al., 2010; Velleman, 2009), few attempted to qualitatively offer detailed accounts of young people's views on these processes. McLaughlin et al. (2016) qualitatively explored adolescents' perceptions of the parent/guardian-child attachments, parenting style and parental substance use. Their findings indicated that adolescents viewed their relationship with their parents was a critical factor for their own substance use behaviours (McLaughlin et al., 2016). The parent-child attachment was identified as a protective factor. Further, an authoritative style accompanied by parental monitoring and effective parent-child communication encourages children to share and disclosure aspects of their lifewith their parents. In contrast, family conflict is characterized by parents' difficulty in setting boundaries, communication challenges and adolescents' rejection of the discipline imposed in the family. Hence a lack of parental monitoring is associated with earlier initiation and increased alcoholand other drug use (Ewing et al., 2015). Luk et al. (2010) sought to examine gender-specificvariations in the associations between communication with parents (both father and mother) and substance use (cigarette smoking, alcohol drinking and marijuana use) in male and female adolescents. Their findings showed that easy communication with fathers did not serve as a protective factor against smoking for both boys and girls, while easy communication with mothers was protective against smoking for boys but not girls. Further easy communication with fathers was negatively associated with marijuana use among boys, however, easy parent-adolescent communication was otherwise not associated with adolescent substance use (Luk et al., 2010).

Muchiri and dos Santos (2018) investigated family management risk and protective factors for adolescent substance use. The research was conducted with adolescents, who had a history ofsubstance use, admitted into drug treatment centres in Pretoria, South Africa. Family management factors included parental monitoring, discipline and behavioural control. Substance use variables included the frequency and intensity of youth and parental use of alcohol, cannabis, and other illicit drugs (amphetamines, barbiturates, cocaine, heroin, LSD or and tranquillizers). The age of the participants in their study was between the ages of 14 and 20 years. Cannabis was the mostcommonly used illicit substance as 63% of adolescents reported using it. Low levels of parental monitoring were associated with an increased likelihood of alcohol use in adolescents (Muchiri & dos Santos, 2018).

A noteworthy observation made by Becoña et al. (2012) is that culture is important when considering

the role of parenting factors in adolescent substance use. For example, in Western cultures, authoritative parenting buffers against substance use, while in African families an authoritarian parenting style serves as a protective factor. This finding was also corroborated in Asian and Arab populations (Becoña et al., 2012). The associations between familial factors and adolescent substance use are multifaceted and likely involves the interplay between parental factors and the contextual environment in which these factors unfold (Samek et al., 2015).

2.4.2.3. Family composition

The types and patterns of attachment between the parent and adolescent are likely to be influenced by family structure or the composition of the households. The typologies of families are changing across the globe, and in South Africa there are new emergent types of household and familystructures (Hall & Mokomane, 2018; Ledoux et al., 2002; Yip et al., 2011).

Drawing from three household surveys in South Africa (NIDS, Census, GHS) Hall and Mokomane, (2018) found that the extended family (all members in the household are related to each other) constituted the largest category (36.0%), followed by single-person households (22.0%). Less than one-fifth (19.0%) of households in South Africa takes the form of a nuclear family (i.e. spouse/partner couple with their children and no other members). However, children's living arrangements are very different from the overall adult pattern. With more than half (62.0%) of the children living in an extended household, 25.0% live in nuclear households (i.e., children and their biological parents) and a tenth (10.0%) living in lone parent households (Hall & Mokomane, 2018). Many non-resident parents see their children regularly and help to support them financially even though they live elsewhere, but a more disturbing observation is that children are less likely to have contact with their absent fathers than with absent mothers (Hall & Mokomane, 2018).

Certain types of household compositions and family structures predispose adolescents to mental health problems, where adolescents are more likely to initiate and continue to use substances (Ledoux et al., 2002). Mak et al. (2010) found a strong association between adolescent substance use and non-intact families (i.e. single parent or no-parent families). Adolescents from these types of families were more likely to smoke tobacco and drink alcohol regularly as well as use illegal substances compared to adolescents from intact families (both parents). Previous longitudinal studiesconcur that adolescents who do not reside with both parents have a higher likelihood of developing drug use problems (Yip et al., 2011). Brown (2004) found that children with stepparents or single parents are more likely to have behavioural and emotional problems than those who are born by couples in a traditional marriage relationship (S. L. Brown, 2004). Empirical evidence suggests that the involvement of non-resident

fathers have a significant impact on adolescents' lives and wellbeing(Menning, 2006). As documented in the literature, some distress experienced by adolescents is owingto the nature and quality of their relationship with non-resident parents (Booth et al., 2010; Spruijt & Vandervalk, 2004). Previous longitudinal studies point out that adolescents who did not reside with

both parents had a higher likelihood of developing substance use problems (Yip et al., 2011). However, the involvement of a father is a noteworthy contributory factor for the developmental trajectory of an adolescent and in particular substance use behaviours (Hall & Mokomane, 2018; Menning, 2006; Olumide et al., 2014). Menning (2006) found that non-resident fathers' involvement decreases the likelihood that adolescents will start to smoke regularly, and changes in involvement will correspond with changes in the probability of this smoking outcome. More recently, in a study conducted in five disadvantaged urban cities (Delhi, India; Ibadan, Nigeria; Johannesburg, South Africa; Baltimore, Maryland and Shanghai, China), Olumide et al. (2014) found that the absence of acaring father figure was a predictor for current alcohol use among adolescents. Further, the findings indicated that extended families (parents and grandparents) served as a protective factor for substance use. This finding may be explained by the fact that grandparents within a household play an active role in their grandchildren's daily lives and are part of the monitoring and rearing process. Grandparents are instrumental in conveying messages about norms, values and ethics (Martinez et al., 2015). Martinez et al. (2015) examined the relationship between parents', grandparents' and peers' norms and adolescents' intentions to use substances, the results indicate that grandparents' andpeers were the strongest predictors of young American Indians intention to use substances. As such the collectivistic approach to child-rearing was found to be a cultural strength (Martinez et al., 2015).

Grandparents, specifically grandmothers, assume a surrogate parenting role when one or both biological parents are unavailable (parents' hours or location of employment, family disruptions divorce and remarriage) or regarded unfit by the state have custody of the children (Yip et al., 2011). Literature shows that children under kinship care (extended family members in the absence of parents) display more behavioural, emotional, and school-related problems than other children (Hunt,2018). Children under the custodial care of grandparents' struggle and battle with feelings of abandonment by their parents and may resist authority, stretch limit setting and be manipulative (Hunt, 2018; Yip et al., 2011). Grandparents also face challenges in parenting adolescents, specifically with the generational gap or developmental mismatch and if they take the role with ambivalence (Landry-Meyer & Newman, 2004). Such psychological distress could increase the possibility of dysfunctional parenting (Yip et al., 2011). The issues with grandparenting often relate to child management, for instance, whether the grandparents have enough stamina to properlymonitor adolescents (Frederick,

2010).

There are, however, varying degrees to which parents or families contribute to the use of substances, as peers and romantic partners also exert a considerable influence on adolescents' behaviours and attitudes (Martinez et al., 2015). Kim et al. (2010) investigated whether peers have a greater impact on adolescent substance use than parents. The result demonstrated that both, parental and peer influences were equally significant in influencing adolescent substance use in South Korea.

2.4.2.4. Peer relationships and peer influence

An important factor that shapes adolescent substance use is the influence and pressure from their peers and friends (Pan African, 2012). Some research shows that parental influence remains important during adolescence, while others demonstrate the importance of peers take precedence during early adolescence, as time spent with peers increases and the role of parents (and time spent with them) decreases (Griffin, 2014; Yang et al., 2013). What is clear is that positive and negative peer relationships are both critical influences on adolescent development (Griffin, 2014; Gunnarsson,2012). Peer influence can be constructive; the interaction may help the adolescents develop social skills separate from those learned within the familial and household environment resulting in autonomy or increased self-confidence (Gunnarsson, 2012). Peers become the primary source of social support to adolescents; the need for companionship, belonging, acceptance and approval becomes of great importance; especially, if they do not receive support at home (Mudavanhu & Schenck, 2014). Adolescents seek to emulate their friends and constantly seek acceptance andreassurance from their peers. Often, adolescents believe that they will be perceived as more favourably and earn their peers' respect if they conform to social norms. Adolescents' fear of rejection often results in them making decisions and choices about engaging in certain activities, for example, substance use (Razali & Kliewer, 2015). As such developing and maintaining positive peer relationships are associated with a host of negative outcomes, including aggression, delinquency and substance use (Telzer et al., 2013).

Schofield, Conger and Robins (2015) put forth two pathways to explain the association between peer interactions and substance use in adolescence. The first pathway, namely, the peer socialization pathway refers to adolescents' socialization with peers who use substances are more likely to use substances (Schofield et al., 2015). The second, the peer selection pathway, describe that adolescents who use substances actively seek out peers who also use substances and that it is not so much that young people are influenced by their peers but that they select like-minded peers which subsequently leads to a process of mutual influence (Velleman, 2009). A term that is linked to this pathway is Dielman's susceptibility to peer pressure (Radin et al., 2006), earlier studies have implicated an

association with substance-using peers and peer selection as a linking mechanism. A longitudinal study by Schofield, Conger and Robins (2015) showed that adolescents who intended to use alcohol and other substances during grade five had an increase in the number of deviant peers they befriended in grade seven, and adolescents who befriended deviant peers in grade five were more likely to use alcohol and other substances when they reached grade seven. Peer delinquency (including the use of substances) was also found to be a risk factor for adolescents' use of substancesin Cambodia (Yi et al., 2011), as adolescents who belong to delinquent peer groups have easieraccess to substances (Wongtongkam et al., 2014).

In South Africa, the Western Cape specifically, research findings indicate that 22.6% of secondary school learners reported that they experimented with friends and used substances at friends' houses (Pan African, 2012). Another study in the Western Cape, which explored the perceptions of multiple sources of the participants regarding the environmental factors associated with substance use in the community of Grabouw, Western Cape, showed that adolescents believed that peer norms of substance use, as well as approval from peers, were key motivations for young people abusing substances in their community (Mudavanhu & Schenck, 2014). Hendricks et al. (2015) examined the combined effect of peer pressure and leisure boredom on adolescent substance use and when disaggregated, peer pressure was found to be a stronger predictor of substance use among adolescents than leisure boredom. Further, adult participants in the study (such as community representatives) also corroborated the finding, however, they implied that youths' involvement in gangsterism was concomitant and exacerbated the use of substances.

2.4.3. Environmental contributors to adolescent substance use

Adolescent substance use is shaped within multilevel psychosocial and economic environments ranging from interpersonal relationships to societal or country-level contexts (Sznitman et al., 2013). The normalization of substance use has been identified as the dominant contributor to adolescent substance use at an environmental level. Normalization refers to the social processes through which individuals' attitudes and behaviours become 'acceptable' within specific contexts or groups, as in the case of substance use (Collins, 2015). Sznitman et al. (2013) sought to empirically test the substance use normalization thesis (in high prevalence countries adolescents are less likely to report substance use and risk factors). Specifically, they examined the relationship between the national population-level prevalence of substance use (cigarette, alcohol and cannabis) and the individual level risk profiles of adolescents. The data were drawn from the health behaviour in school-aged Children, HBSC (World Health Organization) for 2009/2010, where 43 countries/regions participated and

comprised representative samples of 11, 13 and 15-year-olds. The researchers used prevalence rates and current substance use (past month cigarette, alcohol and cannabis) to predict

risk profiles and normalization patterns. The results confirmed the normalization thesis for current cigarette smoking and alcohol use in several countries (Sznitman et al., 2013).

There is evidence to suggest that substance use normalization occurs at both a micro level e.g. familial and peer contexts (Monahan et al., 2011) and macro-level e.g. availability and affordably of substances, media exposure and representations, and policy environment development and implementation (Hayman, 2013; Razali & Kliewer, 2015).

2.4.3.1. Micro-level normalization

Adolescents' exposure to family and peers who use substances place them in proximity to attitudes, norms and behaviours relating to substance use behaviours (Hooper et al., 2012; Mares et al., 2011). Parents' favourable attitudes towards substances may increase the transference of the acceptability (positive messages) of the use of substances to their children, which ultimately leads to normalization and intergenerational substance use (Yip et al., 2011). Parental or familial substance use (modelling behaviour) and favourable attitudes towards substance use are strong predictors of adolescent substance in international contexts such as the United Kingdom, United States of Americaand Australia (Hemphill et al., 2011; Hoffmann & Cerbone, 2002; Mcardle et al., 2002)(Hemphill et al., 2011; Hoffmann & Cerbone, 2002; Mcardle et al., 2002). In Australia, for example, parents' intentions to supply their children with alcohol demonstrate that such behaviours may be a reflection of the normalization of alcohol use (Gilligan & Kypri, 2012). Further, in South Africa, the National YRBS reported on parental/guardian smoking in relation to adolescent smoking. The results showed that 37.5% of current smokers had one or more parent/guardian who smoked tobacco, which was significantly more than adolescents who were never smokers 19.9% (Reddy et al., 2013).

Razali and Kliewer (2015) conducted a study to investigate the risks and protective factors of recreational and 'hard drugs' on multiple levels. Recreational substances included beer, wine and liquor, inhalants, and cannabis. Hard drugs in the study included psychotropic pills, stimulants, heroin, and morphine. The levels included the individual level (e.g., sensation seeking, favourable attitudes and early initiation of deviant behaviour), familial level (e.g., poor parental monitoring, family conflict, family favourable attitudes and family deviant behaviour) and community level (e.g., low neighbourhood attachment, community disorganisation, favourable attitudes and perceived availability of drugs). The findings showed that parental and community favourable attitudes towards drugs, perceived availability of drugs and community disorganisation were associated with recreational drug

use among participants. Concerning hard drugs, once again, parental and community favourable attitudes towards drugs, parental attitudes toward deviant behaviour and

perceived availability of drugs and community disorganisation were factors associated with the useof hard drugs (Razali & Kliewer, 2015).

2.4.3.2. Macro level normalization

Parker, Williams and Aldridge (2002) identified dimensions of normalization that pertain to the macro-level contexts, these include increasing prevalence rates, the availability and affordability of substances, societal or cultural accommodation of substances, media representations and a lack of or changes in drug policy control in countries (Parker et al., 2002).

The availability of substances, as an aspect of normalization of substance use behaviour, mayinfluence the patterns of substance use in a specific community or area at a given time (Gunnarsson, 2012; Mathews, 2004). The availability and accessibility of substances in and around homes, schoolsand communities also augment the acquisition and use (Gunnarsson, 2012; Manu & Maluleke, 2017; Mathews, 2004). Yip et al. (2011) found that the availability and supply of substances such as ketamine (a variant of methamphetamine) and ecstasy was rarely a problem for experimental and regular substance users in Hong Kong. More specifically, ketamine was accessible in classrooms, schools as well as within the neighbourhood parks or karaoke venues. Furthermore, ketamine was found to be relatively affordable. In South Africa, a similar picture can be painted, as both legal and illegal substances are readily available and cheap to the extent that adolescents can afford to buythem regularly. Manu and Maluleke (2017) revealed that 86.8% of learners in secondary schoolswere aware of drug-peddling activities and their usage in schools. The findings further established that adolescent substance users accessed their substances at school – either through fellow learners (37.0%), through drug peddlers over the school fence (21.1%) or at spaza shops (home tuck shops) near schools (28.9%) (Manu & Maluleke, 2017).

Adolescents spend a large part of their day consuming various forms of media, the representations and content relating to attitudes and behaviours associated with substance use constitute a major source of exposure for youth, despite the absence of direct interaction or lived experience (AlSayyari & AlBuhairan, 2018; K. M.Jackson et al., 2018). AlSayyari and AlBuhairan (2018) investigated the relationship between media exposure (television, internet and video games) and substance use (cigarette/shisha smoking, solvents sniffing, misuse of prescription medications as well as alcohol, marijuana and other illicit drugs) among adolescents in the Kingdom of Saudi Arabia. Their results showed a greater likelihood of adolescents using tobacco, prescription medication, solvents, alcohol

and cannabis if they were exposed to media for more than two hours. The researchers also conducted a gender analysis; males were found to be more impressionable to exposure to the Internet. Both heavy and light internet exposure was significantly associated with smoking amongst males, while only excessive use of the Internet was associated with smoking amongst girls. Swartbooi et al. (2016) explored adolescents' perceptions of the influences of urban contemporary music on health and well-being. They found both positive and negative influences of this music genre. Negative influences included the promotion of risky behaviours, including substance use, misogyny, sexual behaviour and violence. Urban contemporary music was found to be a catalyst for risky behaviour in adolescence as well as a tool of normalization (Swartbooi et al., 2016).

The policy landscape has systemic, structural and direct or indirect influences on individuals in a country. In many countries, there are substance control policies and regulations in place for legal substances (tobacco and alcohol). These regulations include the price and taxation, physical availability (age, days sold, outlets that serve) or restrictions on the marketing of products. Consequently, the regulations influence substance users in the way that they can access and consume substances; it also influences their patterns of substance use considering the price and marketing. There is evidence to suggest that the progression of substance control policy development, implementation and enforcement have been slower in low- and middle-income countries (Andersonet al., 2016). For example, Ferreira-Borges, et al. (2015) determined the strength of national alcohol control policies in 46 African countries in 2012. They found that Algeria (75.0), Equatorial Guinea (68.2), Lesotho (65.9) scored the highest while Sao Tomé and Principe (9.1), Serra Leone (17), Togo
(18) scored lowest on policy restrictiveness (of 100). The researchers also examined the association between policy restrictiveness and adult alcohol per capita consumption among drinkers at the national level; they found a negative association between policy restrictiveness and adult alcohol per capita consumption, indicative that policies influence patterns of drinking, which consequently, are normalized in countries in the African continent (Ferreira-Borges et al., 2015).

With regard to adolescent substance use, the substance control policies aim to prevent youth consumption and the harm associated with it. Specifically, prescribing age limits (18 or 21 years in different countries) for the legal purchasing and consumption protects the youth. For adolescents, this means that they are not permitted to buy or consume these products; doing so constitutes a criminal offence. More specific South Africa has implemented a comprehensive tobacco control legislature under the Framework Convention on Tobacco Control (Reddy et al., 2013), the legal age of using/buying tobacco products increased to 18 years. Reddy et al. (2013) demonstrate that the degree of impact of the control regulations on adolescent smoking use over 12 years (1999-2011). They show

that there was a decline in prevalence in adolescent smoking and norms related to smoking changed favourably as fewer adolescents glamorise smoking. In contrast Ferreira-Borges (2015) indicated that South Africa has a less restrictive mix of alcohol control policies with a scoreof 37.9 of 100 (Anderson et al., 2016). Given a pending ban on alcohol advertising (Control of Marketing of Alcoholic Beverages Bill), Morojele et al. (2018) sought to investigate whether exposure to alcohol marketing and liking alcohol advertisements were predictors of adolescents' alcohol use in Gauteng Province, (Morojele et al., 2018). The prevalence of adolescent drinking inthe six months preceding the survey was 10.6%. The number of modes of alcohol advertising exposure was positively related to adolescent alcohol use. Further, having a moderate dislike or a liking for alcohol advertisements was also positively associated with alcohol use in the past six months. The lack of substance control policies or the enforcement of progressive control policies may create spaces where substance use attitudes and behaviours are normalized within the households and communities in the country. These attitudes are transferred (from society) and permeate the micro and meso levels of individuals' lives; consequently, relaying confusing messagesof favourable substance use behaviours to adolescents.

Developmental pathway One: CMDs as risk factors for self-medication

The first, and dominant pathway for the association between substance use and the two CMDs is that depression and anxiety are recognized as risk factors for adolescent substance use (Mckenzie et al., 2011; Wolitzky-Taylor et al., 2012; Wu et al., 2010) This pathway is described through the self-medication theory, as proposed by Khantzian (1985). In particular, this theory conceptualizes internalizing symptoms (sadness, anxiety, depression, and loneliness) as risks factor for adolescent substance use (Khantzian, 1985). Here self-medicating with substances, for adolescents with mood and emotional dysregulation, become a mechanism to alleviate, manage and escape the symptoms of negative mood states (Castellanos-Ryan et al., 2013; Gillen et al., 2016; Marmorstein et al., 2010; Scalco et al., 2014; Schuckit, 2006; Smith, 2015; Wolitzky-Taylor et al., 2012). These symptoms and feelings may lead to further problems of heavy substance use as youth may realise that substances are gratifying because it appeases uncomfortable feelings and therefore increase the frequency and quantity of their use

The investigations into the pathway of this co-occurrence usually explore one or multiple substances and either one of the two disorders, (Scalco et al., 2014). When explored separately, several researchers found depression to be a predictor of substance use initiation among young people (Mckenzie et al., 2011; Pang et al., 2014; Yi et al., 2011), thus confirming the self-medication theory.Whitesell et al. (2013) explain that feelings of sadness experienced by some adolescents are one of the strongest

motivations for them deciding to initiate substance use. This constitutes a form of self- medication common among adolescents especially those who may not have been clinically diagnosed with depression but still experience symptoms of some form-undiagnosed depression (Whitesell et al., 2013). A noteworthy trend about this theory is that the severity of depressive symptoms (higher levels of symptoms) is associated with the lifetime use of several substances including tobacco, alcohol, marijuana, inhalants, prescription painkillers in adolescent samples (Pang et al., 2014). Further, an individual's dispositions towards mood-based rash action (i.e. trait urgency) is a plausible underlying mechanism to explain the pathway of depressive symptoms and substance use initiation among adolescents. In their research, Pang et al. (2014), found that negative urgency accounted for the covariance between depression and alcohol use. These findings suggest thatnegative agency could be considered as a factor that channels risk for alcohol use in individuals experiencing emotional symptoms (Pang et al., 2014).

An important trend with regard to the self-medication theory is that symptoms of anxiety are specifically associated with alcohol use (Katz et al., 2011; Scalco et al., 2014; Smith, 2015). Low et al. (2008), for example, examined the relationship between current anxiety and adolescent alcohol and cannabis use disorders within primary care settings. The results showed a strong correlation between current anxiety and alcohol use but not cannabis use. The relationship between these two is thought to vary depending on the severity of substance use (substance use versus abuse or dependence) as well as the type of anxiety, for example, generalized or social anxiety (Katz et al., 2011; Marmorstein et al., 2010). In particular Marmorstein et al. (2010) found that generalized anxiety was associated with increased risk for alcohol use and dependence, while social anxiety may be related to lower risk for alcohol problems, at least among adolescents.

Developmental pathway Two: Substance-induced mental disorders

A less dominant pathway that explains the association between substance use and mental disorders, in adolescents, is the substance-induced mental disorders theory (Wolitzky-Taylor et al., 2012). This theory explains that the psychiatric symptoms of mental disorders are a direct consequence of substance use. Stated differently, substance use and substance use disorders trigger the development of an additional mental disorder (i.e. depression, anxiety or psychosis) that runs an independent course. The premise behind the theory is that individuals who experience multiple intoxications and withdrawal episodes have a greater disposition to develop depression and anxiety disorders. Moderate to heavy consumption and prolonged substance use is associated with mood instability such as hypomania and dysphoria, anxiety, decreased impulse control, and increased social confidence (getting

high). These are often followed by acute withdrawal (a few days), that isaccompanied by dysphoria (a hangover) perceptual distortions, fatigue, insomnia, reduced sexual interest, and hostility for weeks (Center for Substance Abuse Treatment, 2005).

This theory explains that the pathway from substance use to the development of mental disorders is understood to be influenced by both biological and psychosocial factors. On the one hand, substance use contributes to the biological causation of mental disorders by affecting the changing the neurotransmitters, while on the other, hand individual social factors family dysfunction and low self-esteem are associated with both a higher risk of suicide and substance abuse (European Monitoring Centre for Drugs and Drug Addiction, 2014; Hamdulay & Mash, 2011).

Two notable observations made is that: One, the co-occurrence of substance use and these two CMDs is understood to be a consequence of the same predisposing factors (e.g. stress, personality, additional psychiatric disorders, childhood environment and genetic influences) affecting the risk for multiple conditions (Schuckit, 2006). Two, the effects of substance use (either acute or chronic use) can conceal the symptoms of other mental health disorders, therefore, making the identification and detection of these co-occurrences quite challenging. In addition, the symptoms of mental health disorder may have negative consequences on the development and trajectory of substance use for adolescents (such as facilitate the start of substance use; increase the levels of drug use and facilitate risky patterns of drug use).

Chapter 3: Method

3.1. Introduction

There is limited research on experiences relating to interpersonal relations, stress, and coping, particularly among adolescents who use substances. To bridge the evidential and methodological gaps, a qualitative dominant mixed method was required to adequately achieve the aim of the research. This research methodology was guided by the research aim and objectives that centre on the experiences adolescents who report the use of licit and illicitsubstances. In particular, the primary aim was to explore the lived experiences of interpersonal relationships, stress, and coping among adolescents who report substance use in three selected low-income communities in South Africa. The specific objectives of the study were to:

i) Explore adolescents' perceptions of factors that contribute to the initiation of adolescent substance use.

ii) Determine the substance use patterns among adolescents who report using substances.

iii) Determine the reported symptoms of two CMDs among adolescents who report using substances.

iv) Determine the interpersonal relationship profiles of adolescents who report using substances.

v) Determine the association between substance use patterns reported symptoms of two CMDs among adolescents who use substances.

vi) Explore adolescents' experiences of stress, coping and interpersonal relationships.

This chapter details the research design; explains the two phases of the project; and describes the research communities, data collection tools and analysis techniques. It concludes with the strategies employed to enhance the rigour of the study as well as the researcher's reflexivity.

3.2. Research Design

This study employed a qualitative dominant mixed-method design to explore the experiences of interpersonal relationships, stress and coping amongst adolescents who report using substances. Mixed methods research is used to draw on the strengths and curtail the weaknesses of both approaches (qualitative and quantitative) within a single research study to answer the research questions adequately. In this study, the research questions on the perceived contributory factors for the initiation of adolescent substances as well as the experiences of interpersonal relationships, stress and coping rendered extensive qualitative techniques. At the same time, the research objectives seeking to determine patterns of substance use, the symptoms of two CMDs (depression and generalized anxiety) rendered a quantitative research design. Neither a qualitative nor quantitative research design alone

permitted the researcher to adequately answer the research questions of the study. The strength of qualitative designs primarily is suitable to uncover the essence of peoples' experiences and explore how they make sense of their worlds and events; and the strength of quantitative research designs is suitable to provide measurable statistics that quantify the phenomena under investigation (Creswell et al., 2007; Willig, 2008).

As adopted by many mixed methods researchers, a visual representation and approach to the research design is fundamental to understanding the procedures and techniques employed in the research (West, 2012). Figure 2 (p. 62) presents the phases of the project, and the designs are presented in the figure as well as in subsequent subsections.

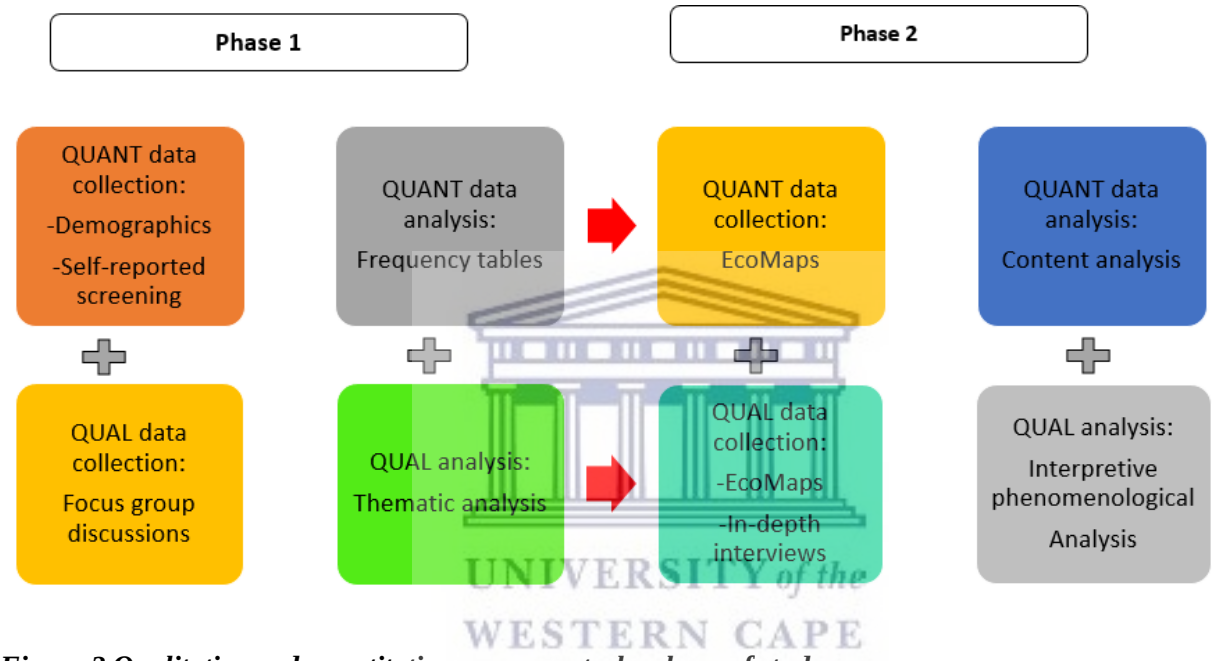

Figure 2 Qualitative and quantitative components, by phase of study

Phase 1 comprised of a quantitative component, which focused on eliciting demographic data and measuring the participants' substance use patterns, as well as symptoms of two CMDs (depression and GAD) utilizing self-report screening tools. The qualitative component explored adolescents' perceptions of factors that influence the initiation and continued use of substances, which was achieved through the FGDs.

Phase 2 also comprised a quantitative component, namely, the EcoMaps that were utilised to elicit data on the types and quality of interpersonal relationships within participants' family, neighbourhood and community contexts, as well the support available to adolescents. While the qualitative component comprised in-depth individual interviews to explore the experiences of interpersonal relationships, stress and coping.

3.3. Study setting and participants

The study population comprised adolescents who report using substances, within three selected low-income communities in each of the following provinces: Gauteng, KwaZulu-Natal and the Northern Cape. The communities have similar socio-demographic profiles such as population group, household types and dwellings, high levels of economic inactivity, as well as poverty. The communities are similar in that they face social problems such as high levels of crime and violence, with substance use a major concern among both adults and youth resident. These are thought to be residual effects of the apartheid legacy, as all three these communities were classified as 'coloured' townships during the Group Areas Act 1950. Hereunder is a description of the socio-demographic profile of the respective communities.

3.3.1. Gauteng Province

This research community is an urban township, situated approximately 20 km from the central business district of Johannesburg, Gauteng Province. It has a population of 65 698 residents (Statistics South Africa, [Stats SA] 2011). Under the Group Areas Act, the community was declareda coloured township, but the legacy of apartheid can still be seen in the community's socio- demographic and architectural composition. The majority of residents are classified as coloured (of mixed heritage) (85.2%), followed by Black Africans (12.4%) (J. Brown, 2013; Frith, 2011; Otwombe et al., 2015). A large proportion of formal housing residents (67.2%) have a monthly household income of less than R1 600 (J. Brown, 2013). However, in terms of the economic activity status, 26.6% are employed, while 73.3% of the inhabitants are considered economically inactive which includes unemployed, seeking employment or 'other', for example, retired (Brown & Dickinson, 2014; Otwombe et al., 2015). As seen in Figure 3 (p. 51) the predominant housing is the government subsidized housing apartments that date back to the apartheid era. The community is surroundeded by informal settlements.

Figure 3 Predominant housing types in the community, Gauteng

3.3.2. KwaZulu-Natal

The research site is located south of Durban central and forms part of the Durban Basin (Municipal Institute of Learning, 2013). Under apartheid's Group Areas Act, the community was proclaimed a coloured area from 1963. Despite the end of apartheid, the community remains predominantly a Coloured township with a population of approximately 35 000 (Bhana & Anderson, 2013; Chari, 2005). During apartheid, the community was characterized by scatterings of small sub-economic houses and cramped flats for temporary housing, with up to 10 to 15 people in a flat (Figure 4, p. 52). The monthly household income for residents in this community ranges from R1 600 to R3 200. Census statistics show that more than a third of residents of this community are regarded economically inactive (36.0%) comprising unemployed, seeking employment or 'other', i.e. retired (Municipal Institute of Learning, 2013).

Figure 4 Typical housing in the community, KwaZulu-Natal

3.3.3. Northern Cape

This community is located 10.3 km north of the city centre of Kimberley, Northern Cape (de le Espriella, 2001). It has a population of 20 263 people (Statistics South Africa, 2016). Under the Group Areas Act, the community was established as a Coloured township in 1975. Today still, the majority of residents are classified as Coloured (83.4%), followed by Black Africans (12.2%)(Statistics South Africa, 2016; Urban et al., 2015). The dominant language spoken is Afrikaans (81.4%) and 9.0% of the residents' first language is English (Urban et al., 2015). As seen in Figure 5 (p.53), the typical housing is substandard flats. There are no reliable statistics for this community only the household monthly income in the city of Kimberley ranges from R 9 601 to R76 400 (55.3%), but the average income in this community is much lower (Statistics South Africa, 2016).

Figure 5 Example of housing in this community, Northern Cape

3.4. Participant recruitment

The participants were purposefully selected. Purposeful sampling allows researchers to select participants based on those who will yield an in-depth understanding of the phenomenon being researched employing and developing criteria for inclusion into the study (Patton, 2002, 2015; Rubin & Babbie, 2010). Patton (2002 p. 230, 2015) provided a description of purposeful sampling and that is regarded as an authority on purposeful sampling:

> *The logic and power of purposeful sampling lie in selecting information-rich cases for study in depth. Information-rich cases are those from which one can learn a great deal about issues of central importance to the purpose of the inquiry, thus the term purposeful sampling. Studying information-rich cases yields insights and in-depth understanding rather than empirical generalizations.*

As such purposive sampling lends itself well to this study, as the research relied on the researcher's judgement to include and select and participants who would help her answer her research questions adequately. The inclusion criteria for the study included: age (between the ages of 12 years to 17); at risk or currently using substances; residing in one of the three selected communities; as well as voluntary participation. The recruitment processes for the two phases are delineated hereunder.

3.4.1. Phase 1

In the larger study, adolescents were mainly recruited from schools. The New loveLife Trust regional games coordinators at the provincial offices played an important role in initiating communication with

schools in the respective communities. They provided lists of schools, contact persons and they accompanied the researchers during recruitment and data collection. The researchers contacted the schools telephonically to schedule face-to-face meetings with principals to present the research concept and request permission to conduct research the schools. When principals were agreeable, the researchers scheduled times and venues to present the research project to learners. A designated teacher was assigned to liaise with the researchers, for recruitment and throughout the study. The aims of the research, information on the three phases of the study, screening process as well as the eligibility criteria were explained in detail to learners. Those who were keen to participate weregiven information sheets, parental consent forms and assent forms. Given the first phase of this doctoral project was predominantly secondary data analyses, stemming from the larger research project; the doctoral student requested access to the datasets. This was done through a Data Use Agreement (DUA) between The New loveLife Trust and the doctoral student.

Table 1 (p. 67) shows the sample of the participants for phase 1 of the larger study, which also comprises the first phase of the doctoral study. One hundred and thirteen participants were screened across the three sites (Gauteng n=25; KwaZulu-Natal n= 17; Northern Cape n=71), with 45 not eligible (Gauteng n=7; KwaZulu-Natal n= 6; Northern Cape n=32) as they scored low on thesubstance use scale. A proportion were eligible but did not volunteer to participate in the research. Therefore, the sample comprised adolescents who were at risk or current users of substances (scored high on substance use scale) and further volunteered to participate in the FGDs. The sample size for this phase of the project was 37 participants who participated in the FGDs (Gauteng n=7; KwaZulu-Natal n= 9; Northern Cape n=21). The researcher deemed it appropriate to compare key quantitative variables such as prevalence of substance use (lifetime and 3months); severity of depressive symptoms and generalised anxiety to establish if the participants from the larger study (i.e., non-study participants) were systematically different to ascertain if the sample for the PhD research was generalizable. Chi-square tests were performed, and the results showed that for all variables were non-significant, meaning and there were no differences between the two groups (See Table 2, p. 67).

Table 1 The sample of Phase 1 of the doctoral study, by province

Province	Total number screened	Not Eligible	Eligible for intervention	Eligible; did not participate	Participated in study (FGDs)
Gauteng	25	7	18	11	7
KwaZulu-Natal	17	6	11	2	9
Northern Cape	71	32	39	18	21
Total	**42**	**13**	**29**	**13**	**37**

Table 2 Correlation between study participants and non-participant's and lifetime prevalence of substance abuse

Lifetime prevalence of substance use	Value	df	Asymptotic Significance (2-sided)
Tobacco	.234[a]	1	.629
Alcohol	.129[a]	1	.720
Cannabis	.129[a]	1	.720
Cocaine	.234[a]	1	.629
Amphetamine	1.062[a]	1	.303
Inhalants	.972[a]	1	.324
Sedatives	.046[a]	1	.830
Hallucinogens	.234[a]	1	.629
Opioids	.020[a]	1	.887
In the past 3 months, how often have you used____?	**Value**	**df**	**Asymptotic Significance (2-sided)**
Tobacco	.882[a]	4	.927
Alcohol	2.089[a]	3	.554
Cannabis	3.903[a]	3	.272
Cocaine	3.722[a]	2	.156
Amphetamine	1.286[a]	2	.526
Inhalants	1.198[a]	2	.549
Sedatives	1.875[a]	3	.599
Hallucinogens	4.091[a]	3	.252
Opioids	1.149[a]	2	.563
Severity of Depressive symptoms	**Value**	**df**	**Asymptotic Significance (2-sided)**
	4.179[a]	3	.243
Severity of GAD	**Value**	**df**	**Asymptotic Significance (2-sided)**
	.122[a]	1	.727

3.4.2. Phase 2

The DUA granted the researcher permission to access the contact details of the participants as well as teachers and community representatives who assisted with recruitment in the larger study. The researcher commenced the recruitment by contacting participants telephonically or via SMSs and WhatsApp to introduce the study. Many participants were not reachable via their phones – mainly because their parents' contact details were not updated, or the number was not in service. Some of the participants also moved from the community or province in which they resided during the larger study. The teachers were approached to verify contact details or assist in the recruitment. Anexplanation of the specific recruitment process for each province is provided hereunder:

Gauteng Province– There were seven participants in the larger study. The researcher contacted the participants telephonically to explain the study. Only two participants were reachable, after several attempts. She approached the educator but was not able to get updated details, as the participants were in not at the school anymore. The researcher then scheduled appointments with the twoparticipants. She then arranged for appointments with participants and one of their parents/guardians to introduce and explain the study face-to-face as well as obtain parental consent. The participants preferred to participate during the school holidays.

KwaZulu-Natal Province – Nine participants were enrolled in the larger study. The researcher contacted these participants to explain the study, and four participants were reachable on their phones. However, one relocated to another province. The researcher contacted teachers who assisted in the larger study to verify contact details of the other participants. When the researcher explained the study, three participants were interested. She then arranged for appointments with participantsand one parent/guardian to introduce and explain the study face-to-face as well as obtain parental consent. One of the participants withdrew from study on the day of the interview. The interviews were conducted after school.

Northern Cape Province – A total of 21 participants were enrolled in the larger study. The researcher contacted potential participants via telephone. The contact numbers for several participants were not in service. The researcher then verified the contact details with the teacherswho assisted in the larger study. At one of the schools, the teacher arranged for a meeting between the researcher and some of the learners who were at still the school. The researcher was able to introduce the study face-to-face. The researcher managed to trace eight participants; she then scheduled appointments to obtain parental consent. Four students participated in the study, while the other four withdrew or were unreachable on the day of the interview.

The sample size in qualitative inquiries is ambiguous, but the proposed criterion for determining a large enough sample size to adequately answer the research question is data saturation, specifically, sufficient quality and completeness (Gentles et al., 2015). While saturation is a benchmark criterion, Gentles et al. (2015); Guetterman (2015) acknowledge the pragmatic challenges researchers face and lack of practical guidance on how to determine sufficient sample sizes for rigorous qualitative research (Gentles et al., 2015; Guetterman, 2015). The sample size is argued to not only be determined by the type of qualitative tradition, namely, phenomenology in this study but the researchquestions, the depth of exploration and the researcher's discretion throughout data collection (Gentles et al., 2015). Mason (2010) offers a guideline for the sample size for the various qualitative traditions. For research, projects with a phenomenological approach, the sample size typically ranges from five to 25 participants (Mason, 2010). As seen in Table 3 (p. 69), the sample size for this phase of the project is eight participants, the researcher sought to recruit at least two participants per community.

Table 3 The sample included in phase 2, by province

Province	**Participants who completed the EcoMaps**	**Participants who completed an interview**
Gauteng	2	2
KwaZulu-Natal	2	2
Northern Cape	4	4
Total	**8**	**8**

3.5. Data Gathering techniques

Primary data for this study collection took place in the second phase. The data for the first phase was previously collected in the larger research project. However, it is important to mention that a socio-demographic questionnaire, a screening tool for substance use, screening tools for depression and generalized anxiety, as well as the FGDs, constituted the data collection techniques for the first phase of the study. The data gathering techniques used for the second phase of the current study included EcoMaps and in-depth individual interviews. The quantitative and qualitative data gathering techniques are listed in Table 4 (pg. 70). A description of both the quantitative and qualitative data gathering techniques are presented in the section thereafter.

Table 4 Data gathering techniques used

Quantitative data gathering techniques
Socio-demographic questionnaire
Substance use screening tool
Depression screening tool
Anxiety Screening tool
Qualitative data gathering techniques
Focus Group Discussions
In-depth Individual Interviews
Mixed method data gathering techniques
EcoMaps

3.5.1. Quantitative data gathering tools

3.5.1.1. Socio-demographic questionnaire

The socio-demographic questionnaire (Appendix A, p. 166) comprised of categorical items where participants selected the appropriate response. In some instances, items probed for written responses. The variables included age, race, sex, level of schooling, parents' employment, people living in the house.

3.5.1.2. Alcohol Smoking and Substance Involvement Screening Test

The alcohol smoking and substance involvement screening test (ASSIST, Version 3.0) is a self- report substance use instrument designed by the World Health Organization (WHO ASSIST Working Group, 2002) (Appendix B, p. 154). The ASSIST was designed to screen for problem or risky use of substances such as tobacco, alcohol, cannabis, cocaine, amphetamine-type stimulants (ATS), sedatives, hallucinogens, inhalants, opioids and 'other drugs. ASSIST comprises of eight items, the first seven asks about the lifetime use and the past three months use of ten substances, namely: tobacco, alcohol, cannabis, cocaine, amphetamine, stimulants, inhalants, sedatives, hallucinogens, opioids and 'other drugs'. The eighth item elicits information on non-medical use of substances through injection. Itemstwo to five are scored on a 5-point scale ranging from "Never" to "Daily or Almost Daily". While items six through eight are scored on a 3-point Likert scale ranging from "No, Never" to "Yes, in the past 3 months". A composite score was calculated for items two through seven for each of the substances. The composite score is coded into three categories namely "No Intervention"; "Receive Brief Intervention" And "More Intensive Treatment" to determine the level of risk and treatment for

substance use. Onifade ad Bello (2014) reported that the internal consistency coefficient was greater than 0.7 (Onifade & Bello, 2014). Peltzer and Phaswana-Mafuya (2018) also used this instrument within the South African context and reported a Cronbach's alpha coefficient of 0.6 (Peltzer & Phaswana-Mafuya, 2018). Furthermore, given that these data were previously collected as part of the larger project, the measure was found to have excellent internal consistency (α =0.905).

3.5.1.3. Severity Measure for Depression: Child (11–17 years).

The Severity Measure for Depression–Child (11–17 years) is an adaptation of the depression component of the Patient Health Questionnaire (PHQ-9). It is often referred to as the PHQ-A(Appendix C, p. 159). The measure has nine items that correspond with the diagnostic criteria for Major Depressive Disorder covered in the DSM–5. The items assess the severity of clinicallysignificant symptoms of depressive disorders and episodes for the past seven days. The instrument is appraised on a scale from 0 to 3, with 0 being "Not at all" and 3 being "Nearly every day". A composite score was created, scores were summed and can range from 0 to 27 (Cameron et al., 2008). When administered in Nigeria, the PHQ-9 instrument was found to have good psychometric properties, α=0.894 (Adewuya et al., 2006). When assessing the psychometric properties of these data for the larger study the instrument proved to have an acceptable internal consistency reliability score (α=0.875), indicating that the tool adequately measures the symptoms and severity of depression in adolescents within in the South African context. Considering the sample size, further psychometric properties could not be explored.

3.5.1.4. Severity Measure for Generalized Anxiety Disorder: Child (11–17 years)

The severity measure for generalized anxiety disorder—Child Age 11 to 17 was developed by Craske et al. (2013) see Appendix D (p. 162). The instrument consists of 10 items that measure the severity of generalized anxiety disorder (GAD) for the past seven days in children aged 11 to 17 years (Craske et al., 2013). The items are closely aligned with the criteria of the DSM-5 forgeneralized anxiety disorder. The instrument consists of Likert-type response options where participants rate the severity of their symptoms; with response categories ranging from 0=Never; 1=Occasionally; 2=Half of the time; 3=Most of the time, to 4= All of the time. Literature on the utilization of this instrument within the South African context is lacking. However, when assessing the psychometric properties during the larger study, the instrument was found to have acceptable internal consistency reliability (α =0.852) to measure symptoms and severity of GAD among adolescents from the South African population. Further psychometric properties could not be explored given the sample size.

3.5.2. Qualitative data gathering techniques

3.5.2.1. Focus Group Discussions (FGDs)

Focus group discussions (FGDs) were conducted with adolescents who reported using substances, to explore their perceptions of factors that influence substance use initiation among adolescents. The focus group technique has proved to be a useful complementary data collection technique for researchers, especially in the context of a mixed-methods research design. Due to its exploratory potential, it allows researchers to discover interesting themes that can further be explored though either qualitative or quantitative data collection methods (Bagnoli & Clark, 2010; O'Reilly, 2009).An advantage of using FGDs is that data is generated through interactions between group members, thus being a collectivistic research method rather than an individualistic one (Bagnoli & Clark,2010). This may be attributed to the fact that FGDs provide a platform where participants influence each other in terms of their perceptions and feelings about particular issues or phenomenon (Krueger & Casey, 2000). Consequently, participants ascribe meaning to their life situations and these meanings may typically be forged during the discussions or interactions with other participants in thegroup (Babbie & Mouton, 2001; Creswell, 2003).

The FGDs lasted for approximately 60 to 90 minutes, it was conducted in a classroom at school or private room at local community centres. The discussions were conducted in either English or Afrikaans. The groups were facilitated by the doctoral researcher and a masters student who was the co-facilitator. A semi-structured interview discussion guide was developed to guide the facilitators during the discussions (see Appendix E, p. 165). The FGDs were recorded

3.5.2.2. In-depth Individual Interviews

In-depth individual interviews were conducted with adolescents who reported using substances. The aim of the in-depth individual interviews was to explore adolescents' experiences of interpersonal relationships, stress and coping. Kvale (2007) suggests that the in-depth interview becomes a powerful tool for participants to convey their own lived experiences or life stories from theirperspectives, as the interview is shaped by the experiences of their lives. In this way, it helps the researcher to understand the meanings of central themes within the participants' lived world (Kvale, 2007). When researchers want specific information about phenomena, they employ semi-structured interviews (Rubin & Rubin,

2012). During semi-structured interviews, the interviewer introduces a topic, guides the discussion and encourage the participants to describe as accurately as possible what they experienced and felt through a series of focused questions (Kvale, 2007; Rubin & Rubin, 2012). As such, a semi-structured interview schedule allowed the phenomenological researcher sufficient guidance when conducting the interviews, while still allowing a degree of freedom to explore areas of interest raised by the participant during the interview (Kvale, 2007; Pietkiewicz et al., 2014).

The EcoMap served as a precursor for the in-depth individual interview, both were conducted in one session (on the same day) with each participant. The interview lasted approximately 60 to 90 minutes was conducted at home, in a private room in the school or local community centres. The interviews were conducted in either English or Afrikaans. The interview schedule was used to ensure that the researcher gathers the necessary information from the participants while still allowing for a flowing dialogue (see Appendix G, p. 168). The interview schedule consisted of three key topics namely interpersonal relationships, daily stressors or stressful life events and coping. This allowed the researcher to probe participants' experiences of managing their substance use. Pietkiewicz et al. (2014) recommend that it is necessary to audio record interviews when doing IPA to produce verbatim transcriptions. For this reason, the interviews were audio-recorded. One of the participants did not allow the interview to be recorded and the researcher took notes during the interview to capture the responses of the participant.

3.5.3. Mixed – quantitative and qualitative techniques

3.5.3.1. EcoMaps

EcoMaps produce a snapshot view of the external sources of influences on an individual. As such they are useful tools for illustrating individuals' interpersonal relationships within their family, neighbourhood and community contexts (Kennedy, 2010). A unique feature of EcoMaps is that it can be used as both a quantitative and qualitative data collection technique (Kennedy, 2010). EcoMaps, as a quantitative data collection tool, makes use of a standardized set of symbols to represent how individuals are connected to social elements in their lives, for example, people, organisations and activities (Bonecutter & Gleeson, 1997; Kennedy, 2010). Additionally, it allows the researcher to follow a structured process of gathering specific information related to the significant relationships of an individual. As a qualitative data collection technique, the EcoMap can be used as a method of establishing rapport with the participant and to produce in-depth information about nature of the participants' connectedness and the impact of interactions (Rempel & Neufeld, 2016). Furthermore,

completing an EcoMap is essentially a collaborative process which requires the involvement of the researcher and participants using story-telling that provides rich contextual data or a holistic view of what is occurring (Rempel et al., 2010).

The researcher collected the EcoMap data during the second phase of the doctoral study. Once consent was obtained from parents/guardians, the researcher transported the participants to a private venue in the community, for example, library, empty school classroom or boardroom at her place of work. A template of the EcoMap and probing questions were used when participants completed it (Appendix F, p. 166). The researcher requested that the EcoMap be audio recorded to ensure that the researcher captured the qualitative data missed on the participants. The EcoMap was completed within 30 minutes.

3.6. Procedure

The procedure of the study is explained by the two phases of the study. Phase 1 started with researcher obtaining permission to use the existing data of the larger study. Permission was sought from the funder, New loveLife Trust. The agreement allowed the researcher access to contact information (parents or adolescents contact details) as well as specific elements of the dataset (qualitative and quantitative). The researcher had access to electronic and hard copies of the data. Given that the first phase of this doctoral study was a secondary analysis, the researcher started analysing the qualitative data, which comprised the FGDs. She imported the transcribed and translated FGDs data into Atlas.ti (version 8) for analysis. A description of the analysis can be found in the data analysis section (Section 3.8, p. 63). The researcher could only analyse the quantitative data once the data collection of the second phase was completed because she had to select the respective cases (participants) to be included in the analysis. The cases were dependant on the inclusion of the participants in the second phase of the study.

Phase 2 of the study commenced once ethics approval was obtained from the Human and Social Sciences Research Ethics Committee of the University of the Western Cape (Ethics Reference Number: HS/16/3/26). The researcher compiled a list of adolescents who screened positive for substance use from the data of the larger project. Telephonic contact was made as an initial invitation to take part in the study. The researcher explained the aims of the study, as well as the role of the participant in the study and invited participants to the study. When agreeable, a face-to-face meeting was scheduled with participants and one parent/legal guardian to further explain the study and for the consenting process. On the day, the researcher explained the research study, what participation in the study involved as well as participants' rights during the study (voluntary participation and withdrawal

from the study). Thereafter, the researcher and participant discussed a convenient time for the interviews such as after school or during the school holidays. The EcoMap and interview were conducted in either English or Afrikaans. If data collection took place at the participant's home, a private space was used. When data collection took place elsewhere, a private office at a community centre or a classroom at school was used. When interviews were not conducted at home, theresearcher also arranged for transport for participants to and from private venue.

3.7. Ethics considerations

The Research Ethics Committee of the Human Sciences Research Council, REC number 8/18/02/15, reviewed the larger research study, from which the first phase of the project was drawn. The Faculty of Community and Health Sciences Higher Degrees Committee as well as the Human and Social Sciences Research Ethics Committee of the University of the Western Cape reviewed the proposal for the doctoral research project, REC number 130416-049 (Appendix H, p. 169).

According to the South African constitution, adolescents aged 12-17 years are regarded as minors. Therefore, parental consent along with assent is a legal requirement. Given this requirement, informed consent was obtained from parents/guardians of the participants as well as assent obtained from participants (Appendix I p. 172 & Appendix J, p. 176). An information sheet was provided before obtaining consent and assent. The information sheet explained that participation was voluntary, and participants could withdraw from the study at any point. Participants were also informed that others would not know their decision to not participate or withdrawal from theresearch, and thus no negative consequences would be associated with their non-participation. The information sheet also explained that the participants' identity and their responses would remain anonymous, and the researcher would assign codes name to ensure anonymity. Therefore, no oneelse would be able to trace the responses back to individuals. The confidentiality of the participants was assured and ensured throughout the study. Only the researcher had access to raw data, and all identifying information, for example, names and contact details of the participants would be stored separately from the data. For participants who wanted to discuss any aspect of the research, the information sheet provided the contact details of the doctoral researcher, Head of Department (Psychology), and Dean of the Faculty of Community and Health Sciences. Due to the sensitive nature of the topic under exploration, namely, experiences of interpersonal relationships, stress and coping, the researcher ensured that a referral to counselling services was made available to participants where necessary. The researcher provided the contact number for the South African Depression and Anxiety Group (SADAG), whereby participants could receive telephonic or face-to- face counselling. The telephonic counselling services were accessible through a phone call to a toll- free call from a landline or sending a Please Call Me (free SMS message)

from a mobile phone and a counsellor would return the call. Regarding face-to-face counselling, the initial contact had to be made via the telephone, the counsellor would make arrangements for subsequent sessions.

3.8. Data Analysis

3.8.1. Quantitative data analysis

Given that the quantitative analysis was performed in the second phase, as the researcher had to select participants who participated in both the larger study and this doctoral study to include in the analysis. The researcher and an assistant scored the socio-demographic questionnaire and screening tools (substance use, depression and GAD) manually.

3.8.1.1. Socio-demographic characteristics of the participants

Frequency tables were generated to describe the demographic profiles of adolescents. The demographic profiles included age (categories 12 to 13 years and 14 to 15 years), race, sex, level of schooling, parents' employment status, and parents residing in household. Further, frequency tables were generated to determine the amount of people living in the household (categories 1 to 5 people and 6 to 10 people in the house), including non-relatives in the house.

3.8.1.2. Patterns of substance use

Nine substances were included in the analysis (tobacco, alcohol, cannabis, cocaine, amphetamine- type stimulants, inhalants, sedatives, hallucinogens, opioids). The analysis relating to the patterns of substance use comprised: 1) lifetime use of substances (ever used), 2) current use of substances (three months preceding data collection), 3) lifetime use of injectable substances, 4) attempts to quit using substances, and 5) the extent of intervention required for respective substances. The extent of intervention required was calculated by a composite score (summing items 2-7), which was recoded into three categories No Risk (0-3); Brief Intervention (4-26) and More Intensive Treatment (≥27). Frequency tables and cross-tabulations were generated to identify the patterns of substances use variables.

3.8.1.3. The severity of symptoms of depression

With regard to the severity of clinically significant symptoms of depression, each symptom was scored on 4-point Likert scale, namely, 0 = Not at all; 1 =several days; 2 =more than half of the days;3=nearly every day. A composite score was generated by summing the items, the total raw score was then recoded into five categories, namely: None (0-4); Mild (5-9); Moderate (10-14); Moderately Severe

(15-19) and Severe (20-27). Frequency tables were generated to determine the occurrence of each symptom as well as the severity of these clinically significant symptoms of depression. Cross-tabulations were also created to determine the symptoms of depression alongside socio-demographic characteristics and substance use patterns, respectively.

3.8.1.4. The severity of symptoms of GAD

An approach similar to the approach for severity of depression was utilized for obtaining thecategories for the severity of GAD symptoms. Each symptom was scored on a 5-point scale where 0=Never; 1=Occasionally; 2=Half of the time; 3=Most of the time and 4=All of the time. The scores of the items were summed, to obtain a total raw score. To reduce the total raw score to a 5-pointscale, a total mean score was calculated. Five categories were generated from the mean scores namely: None (0), Mild (1), Moderate (2), Severe (3), and Extreme (4). Frequency tables were generated to determine the occurrence of each symptom as well as the severity of these clinically significant symptoms of GAD. Cross-tabulations were created to determine the symptoms of depression alongside socio-demographic characteristics and substance use patterns among sample. respectively.

3.8.1.5. Relationship profiles

A basic content analysis (i.e. to count the number of occurrences of particular focus of inquiry such as relationship characteristics) was performed using the EcoMaps. The data were coded into several variables namely: 1) people who lived with participants in the household, 2) the strength of relationships (strenuous/weak and strong/supportive) and the 3) quantity of strenuous and supportive relationships. To include the data from the EcoMaps in the analyses, the data were quantified and coded into categorical variables. There was a two-tier scoring process for the EcoMaps. To quantify the variable 'people in the household' each relation was assigned a category on its own (e.g. 1= mother, 2= aunt/uncle). After reviewing all EcoMaps, a final list of categories of relationships were established, which the researcher combined and recoded, for example, 1= mother and extended family (grandparents, aunts, or uncle). To determine the strength of relationships, the researcher usedthe coding system inherent to the EcoMaps analysis methodology, namely, a staggered line represents a strenuous and weak relationship while a bold solid line represents a strong supportive one. To quantify these relationships, each strenuous or strong relation was assigned a category on its own (e.g. 1=strong relation mother; 2 =strenuous relation aunt). The relationships were themed into Family (close and extended), Friends (school and home) and Other adults (neighbours and teachers). An exhaustive list of relationships was established for each participant. The researcher summed the amount of strenuous

and strong relationships for each theme (family, friends, and other adults) and recoded it into four categories per theme example 1 = <3 strong relations (family); 2 = >3 strong relations (family); 3 = < 3 strenuous relations (family) and 4 = >3 strenuous relations (family).

3.8.2. Qualitative data analysis

3.8.2.1. Thematic analysis

The qualitative component, the first phase of analysis comprised of secondary data analysis of FGDs data. The data were thematically analysed as proposed by Braun and Clarke (2006; 2014); Nowell et al. (2017). Thematic analysis is a process that helps researchers identify, analyse and report themes (or patterns) within data. It often goes beyond minimalizing, organizing and describing data sets because it allows for an additional level of interpretation to various aspects of the research topic (Braun & Clarke, 2006, 2014; Nowell et al., 2017). Even though thematic analysis forms thefoundation of grounded theory, ethnography and phenomenology, there remains insufficient literature that describes the pragmatic process for conducting a trustworthy thematic analysis. Given this limitation, the utilization of the framework method of as a complementary guideline, offered a practical tool to perform the thematic analysis (Gale et al., 2013). The Framework Method is not aligned with a particular epistemological, philosophical, or theoretical approach. It is flexible enoughto be adapted for use with many qualitative approaches that aim to generate themes. The distinguishing feature of Framework Method is the matrix output that provides a structure for the researcher to systematically reduce the data and to analyse data by cases (in the rows) and by codes (in the columns). Therefore, the Framework Method is a tool for supporting thematic analysisbecause it provides a systematic model for managing and mapping the data.

As such, the researcher performed a thematic analysis utilizing the Framework Method as set out by Braun and Clarke (2014); Gale et al. (2013). Following the thematic analysis and the Framework method, the analysis consisted of four analytical phases namely: 1) familiarization of data, 2) identification of themes and 3) indexing and 4) charting. Although the researcher was actively involved in the larger research project, she did not transcribe the entire data. Therefore, it was vital for her to familiarize herself with all elements of the data. To familiarize herself with the data, the researcher listened to the audio recordings while reading the transcripts. While doing this she started making notes of interesting pieces of information within each discussion.

The transcribed focus group data were imported into Atlas.ti (version 8), and a Hermeneutic Unit was created. An initial open coding process followed whereby all the data were given equal

consideration. A list of tentative codes was produced which helped her to develop the codebook. Once the researcher had a list of codes, she actively searched for themes by evaluating how different codes were related to each other, thereafter she combined overarching codes that enabled her to develop a working analytical framework. To revise and refine the code list, the researcher used mind-maps to classify or cluster codes.

Once an exhaustive list of codes and themes were established, the charting and indexing process commenced, this involved arranging summarized components of the data into a database according to the theme, subtheme, category and interpretation (Kim et al., 2016).

In addition, the writing process progressed as the analysis process did. As such, it was an important part of the analysis. The initial phase of writing included noting ideas and potential coding schemes and themes. It also helped the researcher identify themes and show how they were related to each other. The researcher started writing up the findings once she had identified tentative themes; this facilitated the refinement and naming of themes. It was an iterative process, where the researcher constantly worked on theme refinement and writing up the findings.

3.8.2.2. Interpretive Phenomenological Analysis

Interpretive Phenomenological Analysis (IPA) was performed with the data from the individual interviews collected in the second phase of the study. IPA is nested within the phenomenological epistemology, which emphasises experiences in the everyday reality of individuals to gain an understanding of the phenomenon in question (Braun & Clarke, 2006). IPA encompasses a two-tier analytical and interpretative process known as the double hermeneutic. The first tier involves the participants' interpretation of their own experiences and sense-making process. The second phase is where the researcher engages and attempts to make sense of the participants' understanding of their experience (Smith & Osborn, 2007). Further, IPA also offers the researcher an opportunity touncover issues that participants may not be aware of or do not make explicit (Smith & Osborn, 2007). Howitt (2010); Pietkiewicz et al. (2014) offer six practical guidelines for performing IPA. Thefirst guideline encompasses initial case familiarization. The second involves preliminary themeidentification by transforming notes or memos into tentative themes. The third guideline is the search for interconnections or relationships between themes (Howitt, 2010; Pietkiewicz et al., 2014). The fourth guideline suggests that researchers create visual representations of the superordinate and subordinate themes. The fifth guideline involves the analysis of other cases, the researcher analysed all the participants in a similar manner (Howitt, 2010; Pietkiewicz et al., 2014). Lastly, "writing up

the analysis", requires the researcher to report on all the important themes, which were identified throughout the process.

The transcribed in-depth interview data were imported into Atlas.ti (version 8), where a Hermeneutic Unit was created. The researcher became acquainted with the data of the first participant by listening to the audio recording while reading the transcript. After rereading the transcripts, she made initial comments by creating memos to document aspects of the data that appeared to be interesting. The researcher revisited the data and reviewed the memos with the intent of linking or associating it with other comments or broader ideas. Emergent themes were identified when the researcher started uncovering common keywords or phrases within her comments or notes. The researcher searched for interconnected themes by grouping emergent themes into clusters that constituted broader superordinate themes. This process also involved naming themes that were reflective of the underlying content. The researcher could then proceed with the interpretation of the data. The researcher also made use of mind-maps to illustrate the connections between themes. Once she reached this point, she moved on to the next participants and followed the same process described above. The similarities and differences between the participants were identified and then tabulated. During the writing process, each theme was described in enough detail supported by excerpts from the interview transcripts. This was followed by the researcher's analytic interpretations and remarks.

3.9. Rigour

Rigour, in mixed methods, is assessed quite differently given the ontological differences between quantitative and qualitative traditions (J. Brown et al., 2015). Despite the increased popularity and utilization of mixed methods research, there is little consensus within the literature to describe and explain techniques that enhance the rigour within mixed method studies (Brown et al., 2015; Halcomb & Hickman, 2015; Jick, 1979). Some authors have, however, started to provide some guidance and practical strategies for other researchers to employ, for example, *the key to demonstrating rigour in mixed methods research is in providing the reader with a clear audit trail and well considered and justified rationales for the decisions made throughout the research process* (Halcomb & Hickman, 2015, p. 12.) Curry and Nunez-Smith (2017) explain that enhancing the rigour of mixed methods studies occurs at two stages. The first stage in which rigour can beenhanced is through enhancing the rigour of the two respective research traditions: qualitative or quantitative, separately by employing the universal and well-developed techniques of rigour within each of these traditions (Curry & Nunez-Smith, 2017). The second stage of rigour requires the integration of these two traditions. They propose a rigour appraisal framework that speaks to various

domains of quality, which includes project conceptualisation and justification, the appropriateness of the research design to answer the research questions; adherence to universal standards for respective traditions (qualitative and quantitative), quality of analytic integration and quality of interpretation.

With regard to the quantitative component, the rigour encompassed the use of validated and adapted data collection tools for South African adolescents – the reliability scores of these instruments are reported earlier in this chapter. Given that the study was a qualitative dominant mixed-method study, there is a greater focus on the qualitative component and employing various techniques to ensure its rigour. Nevertheless, the strategies employed to enhance the rigour of the qualitative component included: triangulation of data collection methods, memo'ing and reflexivity.

3.9.1.1. Triangulation

Triangulation is referred to as *the combination of methodologies in the study of the same phenomena* (Flick, 2012, pg. 6). Flick (2012) explains that triangulation can be seen on a continuum, the one end comprising "within-method" triangulation and the other end comprising "between-method" triangulation (Flick, 2012; Jick, 1979). Across this continuum, there are four strategies of triangulation, namely, the use of 1) different data collection methods, 2) multiple and different sources of data, 3) various researchers and 4) integration of multiple theories.

This research used a combination of within-methods and between methods triangulations. In particular, the research primarily comprised of triangulation techniques that incorporated different data collection methods. The triangulation strategy most often used in mixed-methods research including this one, relates to data gathered through multiple methods (e.g. observation and interviewing). This strategy can yield a richer and more balanced picture of the phenomenon, andalso serves as a cross-validation method (Elliott & Timulak, 2005).

The different methods for collecting data, comprised FGDs; individual interviews and EcoMaps and self-report screening tools for substance use and two CMDs. Considering the within-methods triangulation – the interview data offered further insights into the data emanating from the FGDs and EcoMaps. For example, in the FGDs participants alluded to stressors and coping among adolescents who use substances, with the interviews the researcher was able to explore this further. With regard to between-methods triangulation, the self-report screening tools (quantitative) and the interviews (qualitative) provided data that described, explained and confirmed or disproved the data emanating from the FGDs (qualitative) and EcoMaps. Here the researcher used the results of one method to corroborate and compliment the findings of others. Particularly, the data from the FGDs indicated

that adolescents are faced with various stressors, and the interview data detailed adolescents' lived experiences of various stressful life events and daily stressors. In addition, the self-report screening tools measured whether adolescents experience clinically significant symptoms of depression and anxiety to understand the sequela of consequences of adolescents' stressful situations.

3.9.1.2. Memo'ing

Memo'ing is another technique used in this research to enhance the rigour. Memo'ing involves the researchers' field notes whereby they describe contextual observations (what they hear, see experience), and reflect on and ideas about the phenomenon (i.e. hunches, impressions, feelings) during the course of the data collection and processes beyond that. However, it is important that the researcher maintain a balance between descriptive notes and reflective notes (Groenewald, 2004). In this research, memo'ing took place during, after the interview, and during the data analysis phase. This helped me to reflect on the interview process and participants' responses regarding the phenomena under exploration. As such, new insights yielded from memo'ing informed subsequent interviews. During the analysis, the memo'ing offered additional contextual information and served as a tool in the initial stages of the coding and interpretative phases.

3.10. Reflexivity

Reflexivity is key to the researcher, as she is the primary instrument in a qualitative inquiry (Watt, 2007), because the selection, collection and interpretation of data is influenced by the central figure, that is, the researcher. Further, the interpretations of findings are inevitably influenced as participants' responses are shaped by my behaviour and positionality (Finlay, 2002). Researchers must evaluate how inter-subjective elements impact on the data collection and analysis processes to increase the integrity within qualitative research (Finlay, 2002). From a phenomenological viewpoint, eradicating subjectivity is not desirable. To unravel interpretations and perceptions from the phenomena being considered, inquirers need to engage in introspection (Giorgi, 2009; Giorgi, 2005). As an inquirer, I started my research process by thinking and reflecting on how I can interrogate my subjectivity. My historical background lived experiences and specific understandings will contribute to the constitution and my interpretation of adolescents' experiences of sources of influence for substance use as a phenomenon. My perspective of the phenomena, as a scientific inquirer, will inevitably integrate with my perspective of how I perceive the phenomena.

I hail from the Northern Cape, and specifically the community, which I researched. One of my

family members is an educator at one of schools we recruited participants. While recruiting and collecting I was fully aware of how participants could interpret my positionality. Therefore, it was particularly important for me to explain the ethical parameters of the research and that I would not be sharing information, particularly when screening for substance use with my family members. Some of the students were not keen to take part in the study as they felt that I would share information with my family despite my assurances that I would not.

Further, given that I grew up in one of the research communities, my worldviews and experiences shape my framing and interpretations as I have some experiences that resonate with participants and others that differ. I may be desensitized to some of the occurrences that take place in the research communities, as they were commonplace in my household and community as I grew up and remain prevalent. For example, my father was a smoker (cigarettes), and he would send my siblings and me to the shop to buy cigarettes: the shopkeeper would sell to us even though we were underage. Another example demonstrates that my lived experiences differ from the experiences of some of the participants whose household composition comprised single mothers, grandmothers, or extended families. However, I grew up in a household with both parents.

I used memo'ing as strategy deal with issues where participants' experiences may have resonated with mine, it was also used to document the decisions made throughout the project the supervision process also facilitated the questioning of my own attitudes, thought processes, values, assumptions, prejudices particularly during the analysis and how I made sense of the data.

3.11. Chapter summary

Research should enhance understanding of the phenomena in question, specifically, interpersonal relationships, stress and coping among substance-using youth (Moe et al., 2007). The chapter described the research design and methods implemented for executing the research project, in an attempt to gain an understanding of the respective phenomena. The researcher recognizes that the lessons to be learned from this research may be very specific ones, given the progression of the project –from a larger intervention study, the qualitative dominant mixed-method approach to understanding the stress, coping and the interpersonal relationships among youth who use substances, as well as the individual and contextual nature of communities studied. However, the methods employed in the study may somewhat apply to other contexts. For example, a prominent feature of the research was the use of EcoMaps that preceded the qualitative interviews with young people from three similar low-income communities. This method seemed to offer the researcher an excellent platform to establish rapport

and ease into the interview. In this way, the use of the EcoMaps rendered an age-appropriate tool to delve into the interpersonal relationship dynamics of adolescents. Through the utilization of the selected techniques, the research in its entirety, offered great potential to gain insights through entering the world's adolescents who use substances in these three low-income communities. I believe the study confirmed many aspects of the literature review too and that the main results and findings yielded could be of interest and exploration in other settingsand communities in South Africa, as I will go on to present and discuss in the chapters to follow. It was difficult to organise the findings of the study in a way that could adequately demonstrate the interconnectedness of finding where they are well integrated. The findings are presented as three chapters which is followed up by an introductory subsection of the final chapter that attempts to integrate and link the findings across the three chapters to each other.

Chapter 4: Findings and Discussion: Patterns of substance use and symptoms of Common Mental Disorders

4.1. Introduction

The research study aimed to examine the experiences of interpersonal relationships, stress and coping and among adolescents who report using substances in three selected low-economic communities in South Africa. The study employed a qualitative dominant mixed-method design to examine the research question. The project had two phases and it is worth noting that the results in the three chapters are not presented chronologically (per phase or as the data was collected), but rather strategically to present findings that are conceptually related to present the findings more holistically. This chapter, the first of three findings' chapters presents the patterns of adolescent substance use and the reported symptoms of the two CMDs under investigation (depression and generalized anxiety). In particular, it presents the lifetime prevalence and the patterns of current substance as well as the reported symptoms of depression and generalized anxiety among the study participants (n=8).

4.2. Demographic characteristics of the sample

The majority (75.0%) of the participants were aged 12 to 13 years while a quarter (25.0%) was aged 14 to 15 years (Figure 6). Males (50.0%) and females (50.0%) were equally represented in the study (Figure 7). Figure 8 shows that three-quarters of the participants identified as Coloured (75.0%) with an equal representation of Black African (12.5%) and Indian (12.5%). Half of the participants resided in the Northern Cape (50.0%) and 25.0% each resided in KwaZulu-Natal and Gauteng(Figure 9). In terms of parental employment status, 62.5% of the mothers and 75.0% of the fathers were employed (Figures 10 and 11).

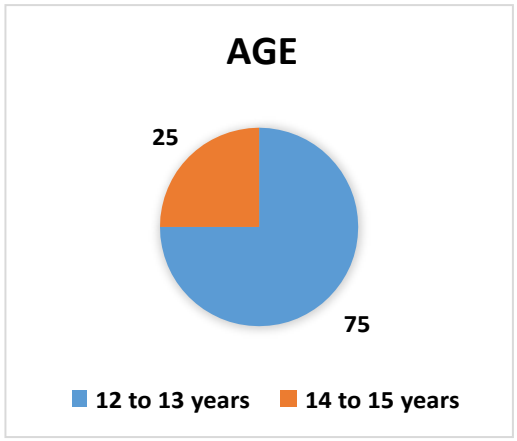

Figure 6 Age of participant

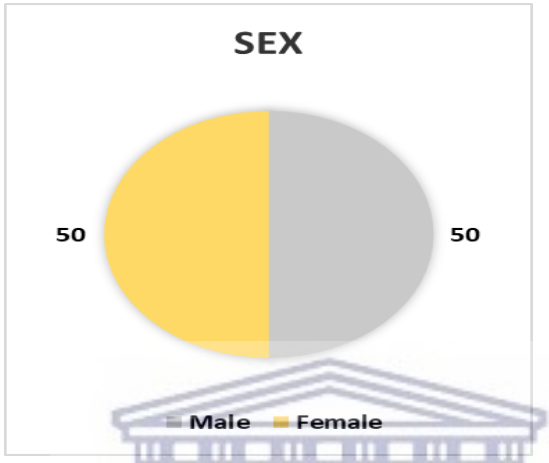

Figure 7 Sex of the participants

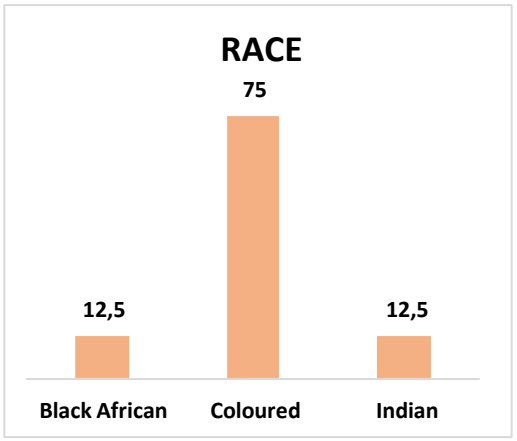

Figure 8 Race of the participants

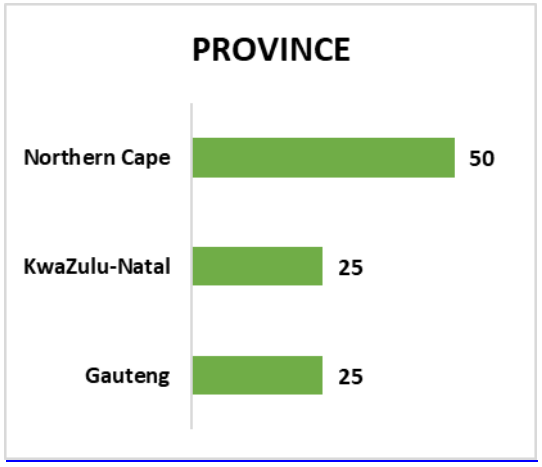

Figure 9 Province of residence

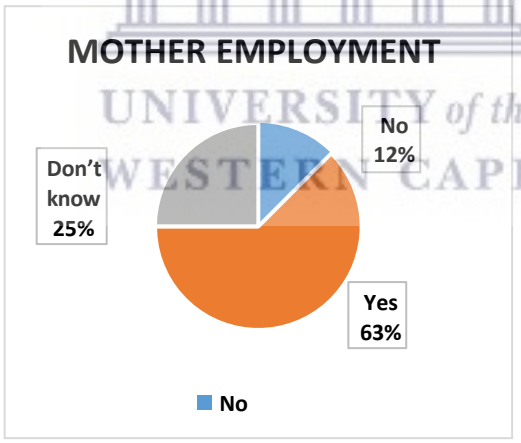

Figure 10 Mothers' employment status

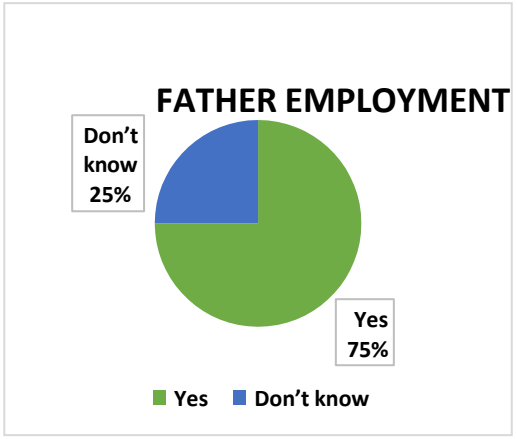

Figure 11 Father's employment status

4.3. Patterns of substance use

The overwhelming majority of the participants (87.5%) reported a lifetime prevalence (i.e., ever used) of alcohol. Nearly two-thirds (62.5%) reported having ever used tobacco, 25% used cannabis, methamphetamine and sedatives, while 12.5% reported lifetime use, cocaine use,hallucinogens, and opioids (Table 5, p.87).

Table 5 The lifetime prevalence of substances used

In your life, have you ever used ?	Yes		No	
	%	n	%	n
Tobacco (n=8)	62.5	5	37.5	3
Alcohol (n=8)	87.5	7	12.5	1
Amphetamine (n=8)	25.0	2	75.0	6
Sedatives (n=8)	25.0	2	75.0	6
Cannabis (n=8)	25.0	2	75.0	6
Cocaine (n=8)	12.5	1	87.5	7
Hallucinogens (n=8)	12.5	1	87.5	7
Opioids (n=8)	12.5	1	87.5	7
Inhalants (n=8)	0	0	100	8

With regard to current substance use (the three months preceding the data collection), more than half (57.1%) of the participants reported using tobacco once or twice and 14.3% reported having used tobacco daily or almost daily (Table 6, p.88). Concerning alcohol use, 62.5% reported using alcohol once or twice and a quarter and 25.0% reported to never have used alcohol in the period in the past three months. Three-quarters of the participants (75.0%) reported to never have used cannabis, while an equal proportion (12.5%) reported using weekly and once or twice in a 3-month period. The overwhelming majority (87.5%) reported never to have used cocaine in the three months preceding the data collection, while 12.5% reported daily or almost daily use. Similarly, 87.5% of the participants reported having never used inhalants and opioids while 85.7% reported having never used sedatives and hallucinogens, three months preceding the data collection.

Table 6 Current substance use (3 months before data collection)

In the past 3 months, how often have you used ___?	Never		Once /twice		Monthly		Weekly		Daily /almost daily	
	%	n	%	n	%	n	%	n	%	n
Tobacco (n=7)	28.6	2	57.1	4	0	0	0	0	14.3	1
Alcohol (n=8)	25.0	2	62.5	5	12.5	1	0	0	0	0
Cannabis (n=8)	75.0	6	12.5	1	0	0	12.5	1	0	0
Cocaine (n=8)	87.5	7	0	0	0	0	0	0	12.5	1
Amphetamines (n=8)	75.0	6	25	2	0	0	0	0	0	0
Inhalants (n=8)	87.5	7	0	0	12.5	1	0	0	0	0
Sedatives (n=7)	85.7	6	14.3	1	0	0	0	0	0	0
Hallucinogens (n=8)	85.7	7	0	0	0	0	14.3	1	0	0
Opioids (n=8)	87.5	7	0	0	0	0	0	0	12.5	1

It was important to ascertain the extent to which adolescents attempted to manage their substance use, namely, an indication of their attempts of cessation or resistance to use substances (Table 7, p.88). When asked, have you ever tried and failed to control your use of substances, 71.4% reported '*No, never'*, 14.3% reported '*Yes, in the past three months'* (for both tobacco and alcohol), and 14.3% reported '*Yes, but not in the past three months'* (for both tobacco and alcohol).

Table 7 Attempts to control and quit the use of substances

Attempts to control and quit the use of___?	No, never		Yes, but not in the past 3 months		Yes, in the past 3 months	
	%	n	%	n	%	n
Tobacco	71.4	5	14.3	1	14.3	1
Alcohol	71.4	5	14.3	1	14.3	1
Cannabis	75.0	6	12.5	1	12.5	1
Cocaine	87.5	7	12.5	1	0	0
Amphetamine	87.5	7	12.5	1	0	0
Inhalants	87.5	7	0	0	12.5	1
Sedatives	100.0	7	0	0	0	0
Hallucinogens	87.5	7	0	0	12.5	1
Opioids	87.5	7	0	0	12.5	1

Further, establishing the degree of intervention required for each substance was also examined (see Table 8, p.89). For both tobacco and alcohol, more than half of the participants (62.5%) required

brief intervention, 12.5% required intensive intervention and no intervention, equally. For the rest of the substances under investigation, no intervention was required.

Table 8 Extent of intervention needed for substances

Extent of intervention Needed for____?	No Intervention		Brief Intervention		Intensive Intervention	
	n	%	n	%	n	%
Tobacco	25.0	2	62.5	5	12.5	1
Alcohol	25.0	2	62.5	5	12.5	1
Cannabis	62.5	5	25.0	2	12.5	1
Cocaine	75.0	6	12.5	1	12.5	1
Amphetamine	75.0	6	12.5	1	12.5	1
Inhalant	87.5	7	0	0	12.5	1
Sedative	75.0	6	25.0	2	0	0
Hallucinogens	87.5	7	0	0	12.5	1
Opioids	87.5	7	0	0	12.5	1

Given that tobacco and alcohol were the primary substances of use among participants, and were found to require some level of intervention, these patterns were further disaggregated by demographic characteristics. As can be seen in Table 9 (p.90), half (50.0%) of the adolescents aged 12-13 years required brief intervention for tobacco use, 17.0% required intense intervention while 33.0% required no intervention. A third of the boys required brief intervention, intense intervention and no intervention (33.0%) for tobacco use, equally. While most girls (75.0%) required brief intervention and 25.0% required none for tobacco use. In terms of race, 67.0% of those who identified as Coloured required brief intervention, while 100% of those who identified as Indian required intense intervention for tobacco use. With alcohol use, 67.0% of those aged 12-13 years required brief intervention while 33.0% required none (see Table 10, p.90). All the boys (100%) required brief intervention, while half of the females (50.0%) required brief and none, respectively. Of those who identified as Coloured 67.0%, required brief intervention; 100% of those who identified as Black African and Indian required brief intervention, respectively.

Table 9 Intervention needed for tobacco, by age, sex and race

	Intervention needed for tobacco						
Age	**None**		**Brief**		**Intense**		**Total**
12 to 13	33.0%	2	50.0%	3	17.0%	1	6
14 to 15	0.0%	0	100.0%	1	0.0%	0	1
Total	29.0%	2	57.0%	4	14.0%	1	7
Sex	**None**		**Brief**		**Intense**		**Total**
Male	33.0%	1	33.0%	1	33.0%	1	3
Female	25.0%	1	75.0%	3	0.0%	0	4
Total	29.0%	2	57.0%	4	14.0%	1	7
Race	**None**		**Brief**		**Intense**		**Total**
Coloured	33.0%	2	67.0%	4	0.0%	0	6
Indian	0.0%	0	0.0%	0	100.0%	1	1
Total	29.0%	**2**	57.0%	**4**	14.0%	**1**	**7**

Table 10 Intervention needed for alcohol, by age, sex and race

	Intervention needed for alcohol				
Age	**None**		**Brief**		**Total**
12 to 13	33.0%	2	67.0%	4	6
14 to 15	0.0%	0	100.0%	2	2
Total	25.0%	2	75.0%	6	8
Sex	**None**		**Brief**		**Total**
Male	0.0%	0	100.0%	4	4
Female	50.0%	2	50.0%	2	4
Total	25.0%	2	75.0%	6	8
Race	**None**		**Brief**		**Total**
Black	0.0%	0	100.0%	1	1
Coloured	33.0%	2	67.0%	4	6
Indian	0.0%	0	100.0%	1	1
Total	25%	**2**	75.0%	**6**	**8**

4.4. Symptoms of depression and generalized anxiety (CMDs)

When analysed by symptom, smaller proportions of the participants reported current symptoms of depression at varying frequencies in the past seven days (Table 11, p.92). A quarter reported feeling down, depressed, irritable, or hopeless *several days* (25.0%) and 12.5% reported experiencing these

more than half of the days. More than a third (37.5%) reported little interest or pleasure in doing things on *several days* Twenty-five percent (25.0%) of the participants reported sleep disturbances (trouble falling asleep, staying asleep, or sleeping too much) on several *days* and 12.5% *nearly every day*. Similarly, 25.0% reported disturbances in eating patterns (poor appetite, weight loss, or overeating) on *several days* during the 7-day period. A quarter reported feeling tired or having little energy on *several days* (25.0%) and 12.5% experienced these *nearly every day* or *more than half of the days*. More than a tenth (12.5%) of the participants reported trouble concentrating on schoolwork, reading, or watching TV on *several days* and *nearly every day*, equally. Similarly, 12.5% reported moving or speaking slower or being fidgety or restless more than usual *nearly every day*. More than a tenth (12.5%) of the participants reported suicidal thoughts or of hurting themselves in some way *several days* and *more than half of the days, equally*.

With regard to symptoms of GAD, smaller proportions reported current symptoms of anxiety at varying frequencies in the past seven days with the majority reporting never, occasionally or half of the time (Table 12, p. 93). A quarter (25.0%) reported having intrusive thoughts (bad things happening e.g. family tragedy or accidents) *most of the time.* Twenty-five percent (25.0%) of the participants experienced psychosomatic symptoms (i.e. tense muscles, felt on edge or restless) *half ofthe time*, and 12.5% experienced it *all of the time*. The overwhelming majority reported having *never* (87.5%) avoided or did not approach or enter situations that they worried about. More than a tenth (12.5%) left situations early or minimally participated due to worries and reported having experienced it *occasionally* or *all of the time*. Over a third of the participants *never* (37.5%) spentlots of time making decisions, putting off making decisions, or preparing for situations, due to worries, a quarter occasionally and 12.5% reported *half of the time*, *most of the time* and *all of the time* respectively. Seventy-five percent *never* (75.0%) sought reassurance from others due to worries while 12.5% reported *occasionally* and *all of the time.* More than half of the participants reported to *never* (62.5%) have needed help to cope with anxiety (e.g. alcohol or medication, superstitious objects, or other people), 25.0% reported *occasionally* and 12.5% *half of the time.*

Table 11 Reported symptoms of depression in the past seven days

During the past 7 days how often have you been bothered by?	Not at all		Several days		More than half of the days		Nearly every day	
	%	n	%	n	%	n	%	n
Feeling down, depressed, irritable, or hopeless?	62.5	5	25.0	2	12.5	1	0	0
Little interest or pleasure in doing things?	62.5	5	37.5	3	0	0	0	0
Trouble falling asleep, staying asleep, or sleeping too much?	62.5	5	25.0	2	0	0	12.5	1
Poor appetite, weight loss, or overeating?	75.0	6	25.0	2	0	0	0	0
Feeling tired, or having little energy?	50.0	4	25.0	2	12.5	1	12.5	1
Feeling bad about yourself—or feeling that you are a failure, or that you have let yourself or your family down?	100.0	8	0	0	0	0	0	0
Trouble concentrating on things like schoolwork, reading, or watching TV?	75.0	6	12.5	1	0	0	12.5	1
Moving or speaking so slowly that other people could have noticed? Or the opposite—being so fidgety or restless that you were moving around a lot more than usual?	87.5	7	0	0	0	0	12.5	1

Table 12 Reported symptoms of generalized anxiety

During the past 7 days I have:	Never		Occasionally		Half of the time		Most of the time		All of the time	
	%	n	%	n	%	n	%	n	%	n
Felt moments of sudden terror, fear, or fright	50.0	4	50.0	4	0	0	0	0	0	0
Felt anxious, worried, or nervous	75.0	6	12.5	1	12.5	1			0	0
Had thoughts of bad things happening, such as family tragedy, ill health, loss of a job, or accidents	37.5	3	25.0	2	12.5	1	25.0	2	0	0
Felt a racing heart, sweaty, trouble breathing, faint, or shaky	75.0	6	12.5	1	0	0	12.5	1	0	0
Felt tense muscles, felt on edge or restless, or had trouble relaxing or trouble sleeping	62.5	5	0.0	0	25.0	2	0.0	0	12.5	1
Avoided, or did not approach or enter, situations about which I worry	87.5	7	0.0	0	12.5	1	0.0	0	0	0
Left situations early or participated only minimally due to worries	75.0	6	12.5	1	0.0	0	0.0	0	12.5	1
Spent lots of time making decisions or preparing for situations, due to worries	37.5	3	25.0	2	12.5	1	12.5	1	12.5	1
Sought reassurance from others due to worries	75.0	6	12.5	1	0.0	0	0.0	0	12.5	1
Needed help to cope with anxiety	62.5	5	25.0	2	12.5	1	0.0	0	0.0	0

In terms of the overall severity of reported symptoms of the two CMDs measured, 37.5% ofadolescents reported mild and 12.5% moderate symptoms of depression, while 50.0% reported none (Table 13, p.94). Half of the participants (50.0%) reported mild and 12.5% moderate symptoms of generalized anxiety while 37.5% who reported no symptoms.

Table 13 The severity of symptoms of two CMDs

	None		**Mild**		**Moderate**	
The severity of symptoms of:	%	n	%	n	%	n
Depression	50.0	4	37.5	3	12.5	1
Generalized anxiety	37.5	3	50.0	4	12.5	1

The severity of reported symptoms was further analysed (disaggregated) by demographic characteristics. In terms of depression, 33.0% of those aged 12 to 13 years reported mild symptoms and 17.0% reported moderate symptoms of depression (Table 14, p. 95). Twenty-five percent (25.0%) of boys reported mild and moderate symptoms of depression. Half the girls (50.0%), either reported mild or no symptoms of depression. With regard to race, 50.0% of those identified as Coloured reported mild or no symptoms of depression, while 100% of those who identified as Black African reported no symptoms and 100% of those identified as Indian reported moderate symptoms of depression.

In terms of GAD symptoms (Table 15, p. 95), 50.0% of those aged 12-13 reported mild symptoms and no symptoms respectively. Half of the boys (50.0%) reported mild symptoms of GAD and 25.0% reported either moderate or no symptoms respectively, while 50.0% of girls reported mild or no symptoms of GAD. With regards to race, 50.0% of those identified as Coloured reported mild or no symptoms, while 100% of those who identified as Black African reported moderate symptomsand 100% of those identified as Indian reported mild symptoms of GAD.

Table 14 The severity of depressive symptoms, by demographic characteristics

	Depression							
Age	None		Mild		Moderate		Total	
	%	**n**	**%**	**n**	**%**	**n**	**%**	**n**
12 to 13	50%	3	33%	2	17%	1	75%	6
14 to 15	50%	1	50%	1	0%	0	25%	2
Total	50%	4	38%	3	13%	1	100%	8
Sex	None		Mild		Moderate		Total	
	%	n	%	n	%	n	%	n
Male	50%	2	25%	1	25%	1	50%	4
Female	50%	2	50%	2	0%	0	50%	4
Total	50%	4	38%	3	13%	1	100%	8
Race	None		Mild		Moderate		Total	
	%	n	%	n	%	n	%	n
Black	100%	1	0%	0	0%	0	13%	1
Coloured	50%	3	50%	3	0%	0	75%	6
Indian	0%	0	0%	0	100%	1	13%	1
Total	50%	4	38%	3	13%	1	100%	8

Table 15 The severity of symptoms of generalized anxiety, by demographic characteristics

	Generalized anxiety							
Sex	None		Mild		Moderate		Total	
	%	**n**	**%**	**n**	**%**	**n**	**%**	**n**
Male	50%	3	50%	3	0%	0	75%	6
Female	0%	0	50%	1	50%	1	25%	2
Total	38%	3	50%	4	13%	1	100%	8
Race	None		Mild		Moderate		Total	
	%	n	%	n	%	n	%	n
Black	25%	1	50%	2	25%	1	50%	4
Coloured	50%	2	50%	2	0%	0	50%	4
Indian	38%	3	50%	4	13%	1	100%	8
Total	None		Mild		Moderate		Total	
Sex	%	n	%	n	%	n	%	n
	0%	0	0%	0	100%	1	13%	1
Male	50%	3	50%	3	0%	0	75%	6
Female	0%	0	100%	1	0%	0	13%	1
Total	38%	3	50%	4	13%	1	100%	8

In line with the objective to determine the patterns of substance use and symptoms of CMDs, I examined the association between the severity of the symptoms of the two CMDs and the severity of substance use (Table 16 & 17, p. 96). Three-quarters of the participants (75.0%), who reported *mild symptoms* of depression and *moderate-to-severe* symptoms of GAD required brief intervention for

tobacco use. Half (50.0%) of the participants who reported mild depressive symptoms and 83.0% of those who reported moderate and severe symptoms of anxiety required brief intervention for alcohol. The associations between other substances measured (cannabis, heroin, etc.) and the reported symptoms of the two CMDs were negligible (Addendum 1, Table 21 & 22 p. 179-180)

Table 16 Associations between tobacco and alcohol use and the severity of depressive symptoms

Intervention required for Tobacco		**None**	**Mild**	**Moderate**	**Total**
None	**n**	2	0	0	2
	%	100	0	0	100
Brief	**n**	1	3	0	4
	%	25	75.0	0	100
Intense	**n**	0	0	1	1
	%	0	0	100	100
Intervention required for Alcohol		**None**	**Mild**	**Moderate**	**Total**
None	**n**	2	0	0	2
	%	100	0	0	100
Brief	**n**	2	3	1	6
	%	33,3	50.0	16,7	100
Total	**n**	4	3	1	8
	%	50.0	37,5	12,5	100

Table 17 Associations between tobacco and alcohol use and the severity of generalised anxiety symptoms

Intervention required for tobacco		**None to slight**	**Moderate to severe**	**Total**
None	n	2	0	2
	%	100	0	100
Brief	n	1	3	4
	%	25	75.0	100
Intense	**n**	0	1	1
	%	0	100	100
Intervention required for alcohol		**None to slight**	**Moderate to severe**	**Total**
None	**n**	2	0	2
	%	100	0	100
Brief	**n**	1	5	6
	%	16,7	83,3	100
Total	**n**	3	5	8
	%	37,5	62,5	100

4.5. Discussion

4.5.1. Patterns of substance use [Individual; Contexts]

Most of the participants in this study were between 12 and 13 years; an equal proportion of males and females participated in the study, and most of the participants identified as Coloured. The results

also showed that both parents of the participants were employed. This is an important finding for understanding the parent-adolescent relationship, while parental employment improves the financial standing of the family it also impacts family cohesion and parent-adolescent dynamics. Particularly in low socio-economic communities, parents are required to work long hours, which reduces or disrupts their time with their children (Santiago et al., 2011). Santiago et al. (2011) explain that employment generally increases income and reduces poverty stressors but may also result in occupational stress and increases stress related to childcare and transportation. For children and teens, employment may mean less adult supervision and parental presence resulting in increased difficulties in attachment with parents. While unemployment may bring additional stress by reducingincome, it may also provide buffering by way of having more adults around to monitor children's activities and whereabouts. This finding provides an exemplar for Bronfenbrenner's theory in that the mesosystem (nature and structure of parents' work) influences the interaction between theindividual (adolescent) and the microsystem (parents) (Florence & Koch, 2011).

Methodologically this study offered an advantage to understand the prevalence patterns of multiple substances (legal and illegal) which allows for comparisons across substances. A pattern that stands out most is that tobacco and alcohol were reported to be the primary substances used most used by adolescents. This may further be explained by the social acceptance and availability of tobacco and alcohol among the adolescent and adult populations in the country. This finding is not surprising as it mirrors and corroborates trends in South Africa and globally where tobacco use (cigarette smoking) and alcohol use (binge drinking or social drinking) is frequently reported in low-economic communities particularly during early and middle adolescence (Moodley et al., 2012; Olawole-Isaac et al., 2018; Pan African, 2012). Several researchers (Haase, 2010; Olumide et al., 2014; Surís et al., 2015) assert that tobacco smoking, and alcohol primes and predisposes adolescents to problematic substance use and opens the way for experimentation with illegal substances; namely, the gateway theory. This is a noteworthy finding for the design of interventions to reduce substances, by prioritizing the reduction of tobacco and alcohol use in adolescent populations.

The results show that substance use initiation takes place well before 12 years (i.e., early adolescence) is particularly concerning because the earlier the initiation of substance use the greater the risk of developing addictions and substance use dependence in late adolescence and adulthood (Ammerman, 2019; Kingston et al., 2017; Olawole-Isaac et al., 2018). This resembles other research findings where the early onset of adolescent substance use predicts a sequela of short- and long-term social and mental health problems including school drop-out and higher risk for assault, suicide and alcohol poisoning (Kingston et al., 2017; Palen et al., 2009; Paruk & Karim, 2016; Winters et al., 2011). As such,

delaying the age of onset could change the prevalence and nature of future adult- onset substance use disorders. Further, the findings in Chapter 4 as well as existing literature expandsour understanding of the age of onset and the importance of contextualizing this pattern. In other words, the context in which adolescents find themselves contribute to the early initiation of substance use. Family environments where parents and other adults use substances and or do not monitor children's activities and whereabouts create enabling contexts for adolescents to experiment more easily with risk behaviours, resulting in earlier initiation and onset (Ghuman et al., 2012; Kapungu et al., 2006). Communities with greater availability and accessibility to substances exacerbate this pattern of substance use in homes and neighbourhoods. In keeping with Bronfenbrenner's theory, this finding highlights an important factor for consideration during the design of interventions for the reduction and prevention of adolescent substance use – interventions should not only focus on individual levels but also micro and macro levels which translate into long- term sustainable interventions that encourage these levels and sectors to change the norms and behaviours about the acceptance of substance use.

This research provides a demographic profile of adolescents, indicating who are at risk of developing substance use problems and require intervention for tobacco and alcohol use. More specifically 12- to 13-year-olds require brief interventions for both alcohol and tobacco. Girls are at higher risk of tobacco use, while boys are at higher risk for alcohol use that requires intervention. This is not entirely congruent with existing research that suggests males tend to report higher rates of both substances and are at higher risk for addiction than females generally (Gray & Squeglia, 2018; Henry, 2010). This research illustrates the nuanced and gendered nature of substance use at the same time highlighting the need for more substance-specific research as substance users are not a heterogeneous group.

4.5.2. Co-occurrence of symptoms of Common Mental Disorders and severity of substance use [Individual]

The findings show a greater proportion of adolescents reported mild symptoms of GAD as compared to depressive symptoms, which may suggest that this group may be more vulnerable to developing anxiety disorders. One possible explanation could be that the anxiety is related to the unique stressors (poverty, crime, violence) faced by adolescents in low-income communities. Therefore, the reported symptoms may well be an indication of adolescents' vulnerability to psychopathology and adolescents may require appropriate psychosocial and clinical interventions to manage it. Another consideration for the reported symptoms of generalized anxiety is the developmental stage of adolescence and these symptoms can arguably be attributed to the transitional phase characterized bystorm and stress where the experiences of certain 'symptoms' may be part of the normative developmental trajectory. As such,

the findings of the study may need to be interpreted with some caution. This finding speaks to the importance of adolescent-specific mental health screening to discern between the risk of the development of pathology and typical adolescent developmental difficulties.

Younger adolescents (12 to 13-year-olds) appear to be at higher risk for depressive and anxiety symptoms. The research findings of this study demonstrate that gender may be a predictor ofsymptoms of depression and GAD. More specifically, the severity of symptoms of depression and anxiety among boys traversed mild to moderate, while girls predominantly reported mild symptoms for both depression and anxiety. This may mean that boys are more vulnerable to a trajectory of depressive disorders as the higher severity of symptoms (of depression) has been associated with adolescent depression, ongoing depression and antidepressant use later in life (Naicker et al., 2013). This finding is surprising as it is different to the majority of existing literature (Granrud et al., 2019) that suggests greater proportions of girls and women report symptoms of depression than boys and men. This result shows a caveat and warrants research to determine the risk of depression andanxiety disorders based on the severity of symptoms for adolescent boy populations that are representative in South Africa. It may also be worthwhile to examine whether gender differences influence the respective depressive symptoms of adolescents and whether boys or girls may be more vulnerable to experience these.

A noteworthy finding of this study is the associations between the two CMDs, tobacco and alcohol use among adolescents. It seems likely that depressive and generalized anxiety symptoms may be an outcome and consequence of substance use coping, which should be considered on a continuum. South Africa's burden of disease attributable to substance use and mental health disorders is concerning. Available evidence on the correlation between the prevalence rates of depression, anxiety and substance use within South Africa show a positive association. For example, (Bonner et al., 2021) found that depressive symptoms and heavy alcohol use were also positively related (although this association was not significant). Further the researchers Bonner et al. (2021) observe that correlations between symptoms of depression and substance use or symptoms of anxiety and substance use may differ based on the dimension that is measured (e.g. frequency, severity, duration, impairment).

Existing literature points to the self-medication hypothesis which asserts that substance use serves as a way ofcoping with dysphoric moods, for example, anxious adolescents may use alcohol to cope with their emotional distress and alleviate physical symptoms (Dyer et al., 2019; Espada et al., 2011; Pang etal., 2014; Shehnaz et al., 2014; Wolitzky-Taylor et al., 2012). This explanation is corroborated by thequalitative findings of this research (Chapter 4) where adolescents alluded to substance use to appease and escape from their unpleasant emotional states. Bronfenbrenner's ecological theory helps

us contextualise this coping strategy learned by adolescents, as there is a recognition that theindividual attributes (i.e. self-regulation and temperament), as well as the microsystem (i.e. parental role modelling) and macrosystem (pro-substance use messages portrayed by adults in communities and mass media), contribute to the development of this coping behaviour (Rioux et al., 2016); bringing to the fore the interplay of the individual-environment dynamic.

The assessment and measurement of these comorbid disorders is a complex endeavour because they share a common underlying aetiology and have a substantial overlap in the symptoms of mood disorders and substance intoxication and withdrawal (Castellanos-Ryan et al., 2013). Paruk and Karim (2016) describe the challenges of mental health and substance use (separately and comorbidly) among South African adolescents, highlighting how mental health and substance use issues among adolescents are often poorly assessed, detected, and treated (Paruk & Karim, 2016). There is a call for more mental health promotion (including screening), which is also closely aligned with the South African government's impetus for the provision of mental health promotion services among adolescent populations (Plüddemann et al., 2014). More specifically, screening high-risk adolescents for common mental health conditions, using brief questionnaires may also assist in early detection and treatment, with a consideration of the institutionalization of routine screening inschools (Paruk & Burns, 2016). The findings of this study urge us to discern between universal and targeted interventions (Jackson et al., 2012); in this case, universal interventions aimed at health promotion for adolescents in low-economic communities who are most often at higher risk for developing mental health problems and substance use seem most applicable (Espada et al., 2011).

Chapter 5: Findings and Discussion: Factors Contributing to the Initiation of Adolescent Substance Use

5.1. Introduction

The study aimed to examine the perceptions of stress, coping, and interpersonal relationships among adolescents who report substance use and symptoms of two CMDs in three selected low-income communities in South Africa. This chapter presents the findings from five FGDs with 37 adolescents conducted across the three provinces (Gauteng, KwaZulu-Natal, and Northern Cape). The purpose of the FGDs was to explore the perceived contributory factors for the initiation of adolescent substance use.

5.2. Findings

Three key themes delineate adolescents' perceptions of the contributory factors of adolescent substance use initiation in three low-income communities. Namely, individual-level factors, familial functioning and home stressors, and community and environmental factors (as can be seen in Table 18, p. 103). Some of the codes overlapped and were recurrent in one or more themes.

Table 18 Themes encompassing the contributory factors for the initiation of adolescent substance use

Theme	▪ Sub-theme

Theme 1: Individual-level factors	▪ The 'healing' effect
	▪ The need to experiment with substances
	▪ Alternative coping mechanisms
	  o Belonging, fitting in and self-esteem
	  o Masking low academic performance and school truancy

Theme 2: Familial functioning and home stressors	▪ Family dysfunction
	  o Parent-adolescent conflict
	  o Attachment and monitoring
	▪ Home-environment as a stressor
	  o Parental discord and conflict
	  o Parental substance use

Theme 3: Community and environmental factors	▪ Peer influence and pressure ▪ Harmful and irresponsible adult behaviour ▪ Lack of law enforcement and corruption ▪ Normalization of substance use behaviours

5.2.1. Theme 1: Individual-level factors

This theme centred on the perceived individual factors that drive adolescent substance use initiation. The participants were insightful about the driving forces of young people's initiation of substance use including the perceived positive effects of substances; the need for experimentation; and substances as an alternative way to cope. Participants explained that adolescents hold views about the anticipated pharmacological effects, namely, happiness effect of substances, which makes it alluring to them. Subsequently, they purposefully seek out to become intoxicated 'high' and experience the effects.

5.2.1.1. The 'healing' effect of substances

The participants discussed the perceived healing benefits or medicinal purposes of substances such as cannabis and cocaine. Below are two examples from the FGDs in Gauteng and KwaZulu-Natal when asked about the reasons for the initiation of adolescent substance use. Excerpt from Gauteng FGD:

Male: *Ma'am I hear by the people, they say uh, this –this [sic] drugs is now helping cancer—taking away cancer. [GP]*

Facilitator: *What drugs?*

Female: *Dagga [cannabis]…They say dagga is good for your chest [GP]*

Male: *They say it's medicine. [GP]*

As evidenced above, the consumption of cannabis was thought to have positive effects or medicinal properties among community members in Gauteng, and thus participants cited it as one of the reasons they believed adolescents would choose to use it.

In KwaZulu-Natal, a similar discussion took place regarding e-cigarettes and cannabis consider the following quotes below:

Facilitator: *So, the drugs stay in the community all the time. Are there other reasons why young people start to use drugs other than it being available to young people?*

Male: *He smokes that [electric cigarette] because he—it helps you to quit smoking cigarettes [KZN]*

Male: *Miss and also dagga, dagga makes you lose weight, and it does. Because I experienced it when it was exams, miss. It also helps with the brain in the June exams, we also smoked dagga. We went to school miss, I was getting all the answers right, especially English –but maths, hey! [KZN]*

Electronic cigarettes were thought to be 'safer' and aids in cigarette smoking cessation. Similar to the perceptions held by adolescents in Gauteng, those in KZN perceived cannabis to have medicinal benefits for respiratory problems. They alluded to the notion that cannabis use increases mental

vitality. Further, participants believed that cannabis use also helps with weight loss as a quick fix as opposed to the effort needed from physical activity.

5.2.1.2.The need to experiment with substances

Participants stated that experimentation with substances typically involved adolescents desire to explore the sensations and pharmacological effects of certain substances. Their experimentation also involves designing their own concoctions of substances to chase the 'high' and increase the intensity of intoxication. These concoctions may include legal substances mixed with over-the-counter medication or illegal substances. Consider the quotes below:

Male: *To experience what it does to you and to have fun. [KZN]*

Male: *Miss, like for the fun they can just take a pill, just to loosen it and make—do fun. Or they can go to clubs and take cocaine and all and-and party nice. They say cocaine makes you party; it makes you feel happy [KZN]*

Female: *Some of them mix different kinds of things, they put everything together [GP]*

Female: *Some of them put Grandpa [pain medication] in their cool drink and Disprin [pain medication] to make them drunk. Dagga and they mix with tablets [sic]. [NC 2]*

Male: *Miss inside the hubbly-bubbly they put everything, but just that they add zol (cannabis), and then they smoke it, and they get goofed [KZN]*

It is evident adolescents in these communities want to experience the perceived positive effects (i.e. illusion of euphoria). Participantselaborated adolescents initiate the use of substances for the sake of 'trying it out' and to explore the perceived effects. In the case where adolescents already use one substance, for example, tobacco,they would want to experiment by mixing additional substances (cannabis) to achieve the desired effect. The participants explained that adolescents use substances to primarily have fun and experience the effects. They described how adolescents would concoct drug cocktails in an attempt to boost the combined effects. They also indicated that adolescents start to use substances to improvetheir emotional state; make them less anxious or nervous -this point is elaborated on in the following section.

5.2.1.3.Alternative coping mechanisms

A major emphasis was placed on substance use as a coping tool when adolescents experience stressful situations or events. Participants spoke about the types of stressors that drive adolescents' initiation and continued use of substances. The stressors were mainly grounded in day-to-day interactions with their parents or peer groups as well as traumatic life events.

Male: *They say that when you smoke a cigarette that it takes your stress away. [KZN]*

Female: *Maybe they just tried one day to smoke dagga and then they felt that –No –the dagga makes them forget about everything at home. Now I'm going to do it every day, constantly, so that they can forget what's happening at home. [NC1]*

Female: *I started smoking cigarettes Miss when –when my mother and my father passed away. [KZN]*

From the discussion, participants alluded to the fact that substance use is deemed a plausible coping mechanism. The parent-adolescent relationship and home environment was a prominent stressor for adolescents. The nuances of this relationship will be explained in the following theme: *Familial factors*. Further, participants identified major stressful life events such as the death of parents that adolescents face. Participants explained that some adolescents merely experiment with substances and then realise that substances somehow enable them to escape their problems and realities of life, which then becomes their coping tool.

In the discussions, it became apparent that adolescents also use substances to help them 'fit in' or conform to social groups. Substance use serves as a mechanism that enables adolescents to experience a sense of belonging to their peers or other substance users. Consider the quotes below:

Female: *If they are hanging out with wrong friends. See how my friends are laughing I also want to laugh like that. [NC 3]*

Female: *When they want to impress their friends and boyfriends by showing who can drink the most. [NC 2]*

Male: *They want to be like the drug users. [NC 3]*

Female: *I walked with friends, and they all smoked a gwaai [slang for cigarette]. I never smoked a gwaai yet, but that day I told my friends to let me try! So that is how I started. I took the gwaai and started smoking. And that was 2013, December 24, I will never forget, I took on a gwaai. To this day I still do it with my friends. (Giggles) [NC 1]*

The participants explained that adolescents seek approval from their peers, they may inherently experience some form of internal pressure to do things to impress them, in the hope that it would enable them to identify and relate with friends and romantic partners. The influence of peers in adolescents' initiation of substances was discussed as a pertinent driving force – this theme will be discussed in detail in section 4.1.3: Community and environmental factors. It is important to note that this finding falls within two sub-themes namely substance use a mechanism for coping with stressors; and substance use as a mechanism for feeling a sense of belonging with peers.

Masking low academic performance and school truancy were also postulated as a stressor and motivator for initiating substance use among adolescents.

Female: *They may have failed at school— [GP]*

Male: *Like if you fail and all and your mother says you must work harder, she hits you and all—and troubling—we're having trouble with school and all that's what makes you starts [KZN]*

Female: *Now and then if the children fail then they do it. [NC2]*

Male: *They leave school miss and then they—their parents kick them out, Miss and then they live on the streets and start smoking whoonga [low grade heroin] 'cause it's the cheapest drug they can smoke. [KZN]*

Participants explained that adolescents may perform poorly academically, and as explained by the adolescents previously, substance use may seem to be a plausible stress reliever. emotional and psychological experiences underpinning low academic performance may include low self-esteem as well as a sense of belongingness to other adolescents who do not attend school Poor academic performance also places additional strain on parent-adolescent relationships as adolescent may feel like they do live up to parents' expectations. In certain instances, adolescents may drop out of school because of poor academic performance, the situation escalates where parents rebuke and disown their children and they ultimately end up on the street. Street life is thought to be concomitant with substance use.

5.2.2. Theme 2: Familial functioning and home stressors

This theme emerged as one of the key driving forces for adolescent substance use, family dysfunction and the home environment as stressors. Particularly family dysfunction pertains to the parent-adolescent dynamic while home stressors are sources of stress within the household. This theme was further linked to Theme One, as participants alluded to specific aspects of the family that influence their individual-level characteristics, for example their exposure to stress and coping repertoires are influenced by their family and events within the household.

5.2.2.1. Family dysfunction

Regarding family dysfunction, the parent-adolescent interaction was thought to be a significant contributor to adolescent substance use. Participants described that parenting styles and parent-adolescent attachment fuelled the initiation of adolescent substance use. Characteristics of parenting and attachment are described below:

Male: *When –like –when your parents and all—they're hitting you for nothing and they don't want you to go out late and all, and then you like say, "Eish I wish my mother is dead, I wish I could kill her now". That's what makes you. [NC 3]*

Male: *Father breaks them down all the time –if they do something wrong. [NC 1]*

Male: *Miss, some parents allow it [KZN]*

Female: *Some children whose people do not care for them start to steal and do drugs [NC2]*

Male: *Miss, there are two brothers, and the mother likes only the one because he plays good sport, then the other one feels he is not loved. Then he goes and does drugs. [NC 2]*

Female: *Once I drank pills because my mother and father neglected me at home. I drank pills and landed up in the hospital. [NC 1]*

Participants indicated that authoritarian and permissive parenting styles were attributed to adolescents' use of substances. Authoritarian parenting (physical disciplining, high levels of parental monitoring) aggravates or creates resentment towards their parents, which contributes to the initiation of adolescents' use of substances. Permissive and neglectful parenting was associated with

parents condoning their children's behaviours. Permissive parenting was characterized by parental rejection and low attachment, which inadvertently results in adolescents turning to substance use and crime.

Further, the participants explained that within parent-adolescent attachment and relationships characterized by emotional abuse; conflicts; and no perceived support or weak emotional connection (i.e. adolescents feel neglected) adolescents tend to self-medicate by using substances.

5.2.2.2. Home-environment as a stressor

The home environment was characterized as stressful and that in turn influences adolescents' initiation of substance. Participants explained parental discord and conflict leaves the adolescent feeling like a burden or the cause of his/her parents' conflict. Consequently, they turn to substancesto self-medicate and deal with these negative emotions.

> *Male:* *When there are conflicts between the—both parties—your parents, your mother and your father and then—you just put yourself in that picture that, why did I come to this earth to come and fight—their conflicts and then you just wish that you were dead… And then, the whole recordplays and again, and again, and then you just get to use substances. [KZN].*

The excerpt indicated that adolescents might internalize the parental conflict observed in the household. Adolescents may believe that they are a burden and the reason for their parents' discord; they may also experience depressive symptoms and have excessive guilt, wishing themselves away. Substance use to them becomes a form of escapism from their unending circle of problems.

Along with parental discord, parental substance use contributes to the stressful situations that occur in the household, which subsequently leads to adolescent substance use. Parental substance abuse makes young people vulnerable to physical, verbal and emotional abuse hence adolescents' resort to substance use, themselves. Below, participants explained situations of parental substance use and the subsequent adolescent use:

> *Female:* *Sometimes if your family is on drugs and they don't have money they become frustrated and then they hit you [NC2]*
>
> *Female:* *I have a father and he drinks, say every day. When I come from school, then he tells me he has a deep hatred towards me. The other night he told me he wishes I get AIDS and that he wishes I will experience ugly things in the area or the street. [NC1]*

Female: *The teenagers smoke, drink because the father annoys them at home. He [father] does what he is not supposed to do, he shouts them around or hit them if he is on drugs. [NC2]*

The participants mentioned that adults' substance use leads to their parents becoming physically and psychologically abusive towards them. In addition, during their state of intoxication parents tend to neglect their children. Parents' daily use of substances contributes to the socialization and learning of substance use behaviour. Poverty and deprivation were thought to be linked to parental substance use as well as violence or aggression directed towards children and adolescents. Here, parents project their frustrations owing to financial constraints onto their children. Within blended families, stepparents tend to mistreat and abuse their partner's children.

5.2.3. Theme 3: Community and environmental factors

This theme focused on the manifestation of substance use behaviours within the community contexts for adolescents, such as peer groups and the larger neighbourhood or community. This theme comprised peer influences; the harmful and irresponsible behaviour of adults; and the normalization of substance use behaviours.

5.2.3.1. Peer influence and pressure

Influences of peers and more overt peer pressure were pertinent in the discussion on community factors driving adolescents' initiating of substance use. In addition, adolescents experience internal or overt pressure to conform to peer groups, for example:

Male: *If he sees his friends smoke it, then he says 'come, let me try –I also want to smoke that'. [NC1]*

Male: *If they are hanging out with wrong friends – 'See how my friends are laughing, I also want to laugh like that.' [NC3]*

Male: *Sometimes if some of them leave the drugs and they see their friends doing it they do it again then they don't want to feel out. [NC1]*

Male: *Then their friends encourage them, and say come, then they say no, and they carry on with their friends [KZN]*

Female: *So, if you don't do it, then I will hit you. Or you are retarded or slow, so you're not cool [NC2]*

Female: *Other people are forced through their own friends [NC1]*

Participants explained that adolescents observe their friends and may feel internal pressure to use substances because they would like to be part of the peer group. Consequently, some adolescents voluntarily initiate their use of substances to ensure that they abide by or conform to the group norms. Participants alluded to the underlying dynamics between adolescents' personal motives and the blatant pressure from peers to initiate the use of substances. On the other hand, some peer groups apply

external overt pressure on the members in the group to comply with the activities (including substance use).

5.2.3.2. Harmful and irresponsible adult behaviour

Participants spoke about the significant role adults play in the initiation of adolescent substance use behaviours. In addition to the role parents play in their own children's use of substances, (asexplained in Theme 2), adolescent substance use can also be traced to the '*bad influence from the people older than the teenagers (KZN)*' including adults they are acquainted with and unfamiliar adults in their communities. The excerpts below depict adults' irresponsible behaviour and their role in adolescent substance use:

Male:	*Big people—they won't stop because big people don't set the example for them [GP]*
Female:	*Now and then if you stay with your stepmother or father, they will force you to smoke if you don't want to smoke, they will threaten you that they will kill you or they will put something in the food. [NC2]*
Male:	*Mam, Mam there's a—so, uhm—people-people in our street—in my street and they smoke drugs, mam…Yes, Mam. Then they call the small children to, smoke Mam. [GP]*
Male:	*Miss, miss but you know uhm, like when you report that there's somebody's selling drugs in your area, Miss—Miss the people that sell drugs Miss they have money, and when the cops want to come and arrest them, they'll bribe them with money. Then the police will take the money, Miss. Then after that, they'll ask who's—who reported me—Miss, then they add the money on, Miss. So, like every time you—Miss when you go to them, they want money then— Miss we get into trouble for reporting them. [KZN]*
Male:	*Miss, I think from my community. Miss, they can sell it to anyone Miss. And I think if there was like, age restriction, Miss—because like, if you are like, uhm—Miss, the people that uhm—that take drugs, they started from a young age and then they get addicted to it, Miss. Miss, so if uhm, they weren't allowed to sell it to young people, Miss I don't think they would be hooked on it as much as they are, Miss [KZN]*

Adolescents stated that adults in their communities act irresponsibly in terms of their own substance use and the safety of children. More specifically, adults place adolescents in dangerous situations such as coerce or threaten them to use substances. Adults may also more subtly entice and encourage children to use substances and socialize with them. A more vicious occurrence mentioned was adults spike adolescents' drinks at parties and social events. Participants explained that adults are bad role models for adolescents within the communities. In part of the discussion on bad role modelling, participants indicated that law enforcement officials are corrupt in terms of drug dealing and trafficking within the communities. Further, participants expressed a sense of hopelessness when talking about solutions to the dealing and trafficking; they deemed it futile to report the drug dealers to the police as good Samaritans are punished for trying to put a stop to drug dealing.

5.2.3.3. The normalization of substance use behaviours

Participants explicated in their communities, adolescents are frequently exposed to a wide variety of substances and patterns of substance use behaviours. Adolescents alluded to the constant exposure of substance use behaviours that favour the normalization of substance use within their communities:

Male:	*There is a lot of people here in the community that's using [GP]*
Male:	*They see big people smoke it, and then they say like 'I want to join' [GP]*
Male:	*They smoke in the house, in the street and the field [N3]*
Male:	*There are many youngsters that drink from Friday to Sunday at the tavern during the day. [NC1]*
Male:	*Miss and there's also a new thing at school. Every time when you break up [end of term] it's an explosion. So, we—when you are smoking pills and rock [KZN]*
Male:	*They see it on-on—or when they listen to music then they watch the videos because the stars use drugs—all that stuff [GP]*
Female:	*They see others do it…. it is family and friends [GP]*

Substance use was a normalized behaviour for both adults and adolescents within their communities. Participants also mentioned that substance use is in plain sight, starting in the home and moving to other shared spaces within the larger community. The participants indicated that they witnessed substance use daily, but there were peak times for adolescent' substance use, for example, over the weekends as well as on special social occasions such as the end of the school term. Further,celebrities within the mass media such as music videos portray the use of substances as positive behaviour, which results in the glamorization and normalization of substance use behaviour for adolescents. This is also linked to the influences of adults in adolescents' initiation of substance use.

The participants also highlighted that adolescents live in proximity to those selling both legal and illegal substances, for example, tuckshops and illicit drug dealers, which compounds the availability of substances. The excerpts below demonstrate how accessible substances are to adolescents within these communities:

Female:	*Young children from eight come and buy cigarettes and then they stand and smoke it at the shop. [GP]*
Female:	*Some people sell it from the house – [NC2]*
Female:	*Some sell it in the street. [NC2]*
Female:	*If you have money, they give you the stuff. They do not care how old you are as long as they make money. [NC2]*
Female:	*Miss our next-door neighbour sells the drugs Miss, and mostly, uhm, it is the sugars [a heroine-based drug] that are bought and its mostly young people, both boys and girls. [KZN]*

Male: *Some-some drive with the car and then they—when they just— then when they just make [whistles] then they stop, and then they— [GP]*

The participants stated that it was quite easy and convenient for anyone, including adolescents to obtain both legal and illegal substances within the community. There is no limitation to the accessibility of substances for minors (below 18 years), mainly because shop vendors and drug dealers are interested in their profits; therefore, they do not comply with age restrictions when sellingto minors. Young people have free reign to buy substances as drug dealers are not particular whom they sell to. Furthermore, the lack of law enforcement, non-compliance to policies relating to selling legal substances and corruption were concomitant with the accessibility of substances in the communities. Consequently, resulting in an increased vulnerability for adolescents to use substances.

5.3. Discussion

I discuss the key findings of this chapter in relation to Bronfenbrenner's bio-ecological systems theory with a focus on the PPCT model, I denote these components in parenthesis.

5.3.1. Misinformed information about substances [Individual; Contexts]

The findings show that adolescents hold misinformed perceptions and information about the pharmacological effects of substances. The community at large and subsequently the adolescents glamourize the use of legal and illicit drugs (such as tobacco, alcohol, cannabis, and cocaine) to the extent that adolescents' purposive and intentional use of a substance is often merely to experience the effects of these substances. this finding is not surprising, as This glamorization is attributed to mass media and advertising that portrays messages of substance use that is appealing to youth such as independence, rebelliousness, romance and sociability (Jackson-Best & Edwards, 2018; Swartbooi et al., 2016). Given the changein legalization regarding the medicinal and recreational use of cannabis use during the data collectionphases of the research it is understandable why there is a lack of information about the medicinal purposes and the psychoactive effects of recreational cannabis use, which influences greater acceptability of the use cannabis more broadly in communities. This speaks to an intervention pointto increase the focus of information sharing strategies employed by state and other stakeholders in communities to explain various intended purposes and the consequences/results of cannabis use. For example, cannabis extract-based products such as oil or 'wax' can contain up to 90.0% of the additive element, tetrahydrocannabinol (THC) and involves rapid intake of large amounts of THC. However, these products used for medicinal purposes are better regulated by the government and need to comply with quantities and ingredient ratios, for example, a maximum of 5mg for recreational use (UNODC, 2016).

In the current study, the findings indicate adolescents' inclination to seek out new and unusual experiences, the perceived effects, as well as peer influences are central to experimenting with substances. Further, it is common for young people to use multiple substances simultaneously such as tobacco and cannabis (e.g., mixing the hookah tobacco with cannabis) for the sake of experimentation and to experience the combined pharmacological effects. Literature concurs with the normative experimentation with substances during adolescence (Barnes, 2015; Bidwell et al., 2015; Khurana et al., 2015; Sargent et al., 2017), for example, Sargent et al. (2017) alludes to the high rates of experimentation particularly during early adolescence (10-14 years). Similar to the findings in the present study, Wang et al. (2014); Khurana et al. (2015) found that experimentation with substances was reported by half (50.0%) of the adolescents residing in low-income urban areas; and the high levels of reward motivation increased their propensity to experiment with substances (Khurana et al.,2015; Wang et al., 2014). Further research should explore the trajectory and progression of experimentation, particularly to distinguish between occasional and normative experimentation and enduring long-term substance use behaviours (Malá, 1994).

5.3.2. Substance use as an alternative coping mechanism [Individual; 'Proximal' Processes]

Although adolescents are thought to initiate substance use for experimentation and sensation seeking, others are believed to initiate substance use to cope with stressors and anxiety. Young people believe that substances may serve as a coping mechanism by reducing the manifestations of stress, for example, overthinking and muscle tension and certain substances allow them to escape from their problems. This suggests a progression from experimentation to more regular use of substances to self-medicate. This is in line with Bidwell's et al. (2015) research that suggests that the rewarding effects of substances may potentially be a risk factor for the progression of substance use from experimentation to more frequent use. Previous studies demonstrate that adolescents (9 to 13 years) who experienced generalized anxiety symptoms had an increased risk for the initiation of alcohol useand that anxiety coping was one of the motives for self-medication among adolescents (Gillen et al., 2016). This notion is further explained by adolescents who have expectations that substances, for example, tobacco or alcohol, will reduce their tension or anxiety and subsequently the use is driven by the need to cope with internal or external stress (Hasking et al., 2011; Marmorstein et al., 2010).

5.3.3. Family dysfunction [Microsystem; 'Proximal' Processes]

Parents are believed to play a significant role in the initiation of adolescent substance use mainly through their relationships with their children and parenting practices (Brake et al., 2012). This study concurs with the widely known association between the perceived quality of parent-child

relationships and the initiation of adolescent substance use (R. P. Rohner, 2004; Rusby et al., 2018). More specifically, within parent-adolescent relationships characterized by conflict, use and neglect, poor connectedness, adolescents are less likely to form strong family bonds, secure attachment, and consequently adhere to family rules such as the avoidance of substance use (R. P. Rohner, 2004; Rusby et al., 2018). When adolescents believe that the parent-adolescent relationship is weak or strained, they are more likely to seek support and validation from their peers instead. These adolescents, for example, are more amenable to their peers' norms around the initiation and use of alcohol and cannabis (Rusby et al., 2018). Permissive parenting may increase the likelihood of their child's alcohol use, through active encouragement of experimentation with alcohol (Gonzalez & Dodge, 2010; Jacob et al., 2015). Consequently, adolescents whose parents are neglectful andpermissive are more likely to be swayed by their peers to engage in risk behaviours including substance use (Ghuman et al., 2012; Gonzalez & Dodge, 2010). Research found that parents often feel ill-equipped to discuss substance use issues with their children (Jacob et al., 2015). This is important as prevention strategies aimed at improving parenting practices (styles and attachment) may assist in the reduction of adolescent substance use within these high-risk communities and possibly the rest of South Africa (Henry, 2010; Jacob et al., 2015).

Within existing research and including this research study, parental substance use is thought to havea negative impact on adolescents' general wellbeing as well as risk behaviours and substance use. The likelihood of adolescent's initiation of substance use is much higher when they are exposed to it at an early age as evidenced in literature because the family context provides socialization (Gonzalez & Dodge, 2010). Parental substance use also increases the presence and availability of substances in the homes of adolescents. Parental intoxication interferes with family management and parents' ability to monitor adolescents' activities and whereabouts or recognize that their adolescents are using substances or likely face significant challenges in preventing their children from initiating and using substances (Kingston et al., 2017; Muchiri & dos Santos, 2018).

5.3.4. The normalization of substance use [Macrosystem; Contexts]

This research study provides evidence to suggest that unhealthy norms are transferred from adults to adolescents, such as using alcohol as a pastime on the weekend or for social events. Another important norm that adults relay is that substance use is a stress reliever (discussed earlier). The normalization of substance use behaviours and attitudes is a classic illustration of the systemic influences as described in the bio-ecological theory put forth by Bronfenbrenner. Parents as the microsystem portray these favourable attitudes and behaviours through modelled behaviour.

Consequently, adolescents seek to emulate these models (Brake et al., 2012; United Nations Office on Drugs and Crime [UNODC], 2004).

The family emerged as a key contributor to the accepting culture around adolescent alcohol use. In particular, parents have also been reported to encourage alcohol use, through their view that drinking is a normal part of life, and it encourages their children to drink greater volumes through rebellion (Jacob et al., 2015). The normalization of adolescent substance use can be explained by the widely held view that substance use is a *normal* activity during adolescence and supports the notion that family and community social norms about adolescent substance use encourage substance use initiation during adolescence. A surprising yet encouraging finding in this study is that while many adolescents are believed to emulate adults in their homes and communities, youth acknowledge the normalization of unhealthy norms and that adults are not good role models for youth in theircommunities.

The findings demonstrate that unhealthy norms are transferred among adolescents themselves as in the case of negative peer pressure. This is linked to the notion that identity formation and belonging to a group are key features of adolescence. Specifically, where adolescents tend to initiate and continue to use substances to establish a group identity with peers, instead of being ridiculed. In addition, young people may overtly pressurize their friends to engage in substance use behaviours toa degree that borders on bullying. The ecological systemic perspective describes a shift in influences of ecological forces, which can help understand adolescents' initiation of such as substance use. Familial factors (e.g. behaviours, attitudes) and context are thought to be crucial during early childhood while peers, neighbourhood or societal influences become more pronounced during adolescence when youth spend more time away from home, at school (Sitnick et al., 2014). Universal approaches have shown the effects on attitudes towards substance use, but not necessarily on behaviours, suggesting that explicit attitudes do not translate directly to behaviours or play a key rolein reasons to use substances (Castellanos-Ryan et al., 2013).

South Africa is among the countries with the highest levels of episodic drinking and has been labelled as a 'hard-drinking country' and a 'nation of boozers' (Ramsoomar, 2015). The problematic alcohol consumption in the country can be attributed to the lasting effects of the *Dop System* dating back to the apartheid era i.e., farm and vineyard workers in the Western Cape Province were compensated with wine as partial payment for their labour (May et al., 2019). Many communities, including the research sites, are characterized by heavy episodic drinking particularly on weekends and special social occasions. These drinking patterns may serve to convey permissive

attitudes towards the use of alcohol and normalise the behaviour of adolescents. Further the dynamics that operate within in the family microsystem (accepting culture around adolescent alcohol use in the family microsystem) is embedded within this societal level of normalisation (i.e. as a macrosystem factor). This accepting approach towards adolescent alcohol use is at odds with guidance from the National Youth Policy (2015 - 2020) which states that it is against the law for young people (below the age of 16) to consume alcohol and other substances (Cooper & Lannoy, 2015). Further, the acceptance of adolescent substance use (including sending under-aged children to purchase alcohol and tobacco) demonstrates 1) the extent of the availability and accessibility of substances to youth and 2) the disregard of public health and social development legislature aimed at the prevention and reductionof under aged substance use (Pan African, 2012).

The research findings demonstrate that context matters and resonate with Bronfenbrenner's ecological model as the contributory factors identified by adolescents are located at the individual level, interpersonal level (i.e., microsystems) exosystem and minimally macro systems (Jackson et al., 2012). The findings of this study show that contributory factors for adolescent substance use predominantly occur at the individual, microsystem (family and friends) as well as community levelsand these factors interplay across levels making the initiation of substance use a complex problem to solve. The need for experimentation, substance use as an alternative coping mechanism operates at the individual level but the influences of microsystems and ecosystems are evident on these individual-level factors that contribute to substance use. It becomes clear that understanding the complex influence of family processes and adolescent substance use to inform appropriate methodsof intervention and the site in which they occur (e.g. family settings), to prevent or reduce the harm associated with adolescent substance use. More specifically, the need for experimentation is largely impacted by the peer/peer groups (microsystem), while the glamorization is located within the familyand community levels. Community and societal level norms are not amenable to immediate short- term change, these factors require sustained inter-sectoral and multi-systemic approaches to disrupt how substances use, especially tobacco and alcohol are perceived, advertised and regulated in the country which is also linked to broader public health and social development policies (Rich, 2017).

Chapter 6: Findings and Discussion: Experiences of interpersonal relationships, stress and coping styles

6.1. Introduction

The study employed a qualitative dominant mixed-method design to examine the experiences of stress, coping, and interpersonal relationships among adolescents This chapter, the last of three, draw on individual interview data with adolescents (n=8), it was supplemented by the EcoMap data (procedure fully described in the method chapter (Chapter 3). This chapter offers an overview of adolescents' relationship profiles. It then provides detailed accounts of adolescents lived experiences relating to these interpersonal relationships, as well as the stress and their way of coping with it.

6.2. Findings: Relationship profiles

As a prelude to adolescents' interpersonal relationship profiles, it seems useful to provide personal and contextual information about participants to give insights into their positionality within their home and familial context. Table 19 (p. 117) depicts each participant's demographic information(age and sex) and their household composition. In summary, participants were between the ages of12 and 15 years. Two participants (Michael and William) lived with both parents and extended family, two resided with one parent and extended family (Musa and Estelle), two had a nuclear family structure (Paul and Channel) and the remainder (two) lived with an extended family only (Rosa and Wynona). The majority of the participants reported having used tobacco and alcohol and two used cannabis recently. The findings within this chapter portray the deeply subjective lived experiences of each participant. Therefore, to enable the reader to capture the essence of the participants' lived experiences/'life stories' the data are personalised, and pseudonyms are used.

Table 19 Description of the participants interviewed

Participant	Age	Sex	Household composition	Substances used
Chanel	12	Female	Parents and siblings	Tobacco and alcohol
Estelle	14	Female	Father and extended	Tobacco, alcohol
Michael	12	Male	Both parents, siblings, and extended	Tobacco, alcohol, and cannabis
Musa	15	Male	Mother and extended	Tobacco, alcohol, and cannabis
Paul	12	Male	Parents and siblings	Tobacco and alcohol
Rose	13	Female	Extended (grandparents/aunts/cousins)	Tobacco and alcohol
William	13	Male	Both parents, siblings, and extended	Tobacco and alcohol
Wynona	13	Female	Extended (grandparents/aunts/cousins)	Tobacco and alcohol

With regard to the relationship profiles, three-quarters of the participants had four to 10 supportive family relations (75.0%) and the remainder had 1 to 3 supportive family relations (25.0%), as can be seen in Table 20 (p. 118). The inverse is true for supportive friendships; participants had 1 to 3 supportive friendships 75.0% while a quarter had 4 to 10 supportive friendships (25.0%). Half of the participants had 1 to 3 supportive relationships with other adults or people (50.0%), while the remaining proportion (50.0%) had zero relationships. More than half of the participants had 1 to 3 stressful family relationships (62.5%) and 37.5% had zero stressful family relationships. Similarly, 62.5% had 1 to 3 stressful friendships and 37.5% had zero stress. The majority of the participants had 1 to 3 weak family relationships (87.5%) and the remainder of the participants had zero weak family relationships (12.5%). The same trend was observed for friendships, 75.0% of the participants had 1 to 3 weak friendships while 25.0% had zero weak friendships.

Table 20 Quantity and nature of interpersonal relationships

Supportive relationships with:	**Zero**		**1 to 3**		**4 to 10**	
	%	**n**	**%**	**n**	**%**	**n**
Family	0	0	25.0	2	75.0	6
Friends	0	0	75.0	6	25.0	2
Other adults or people	50.0	4	50.0	4	0	0
Stressful relationships with:	**Zero**		**1 to 3**		**4 to 10**	
	%	**n**	**%**	**n**	**%**	**n**
Family	37.5	3	62.5	5	0	0
Friends	37.5	3	62.5	5	0	0
Other adults or people	100.0	8	0	0	0	0
Weak relationships with:	**Zero**		**1 to 3**		**4 to 10**	
	%	**n**	**%**	**n**	**%**	**n**
Family	12.5	1	87.5	7	0	0
Friends	25.0	2	75.0	6	0	0
Other adults or people	100.0	8	0	0	0	0

6.3. Findings: Experiences of relationships, stress and coping

Three themes emerged from the interview data to explore adolescents' experiences of interpersonal relationships, stress and coping (see Table 21, p. 119). Namely: *Experiences of familial relations and friendships*, *Life disruptions and everyday stressors* and *Coping mechanisms*. These themes are interrelated as accounts from adolescents' experiences of interpersonal relationships were also linked to their stressors and the ways they cope.

Table 20 Lived experiences of interpersonal relationships, stress and coping

Theme	Sub-themes
Familial relations and friendships	Experiences of the family (life) - Household composition, familial interaction and functioning - Relationship with (biological) parents - Relationship with other family and or adults - Sibling relationship Friendships: selection, networks and experiences
Life disruptions and day-to-day stressors	Life-altering events Parenting style and interparental conflict Household functioning and chores
Coping Mechanisms	Distracting activities Emotional avoidance or speaking to someone Expression through writing Internalization (self-blame) versus externalization

6.3.1. Theme 1: Familial relations and friendships

Adolescents spoke at length about their experiences and interactions with their families. They also spoke about their friendships and interactions with peers. Some found their families to be sources of encouragement and support while others felt alienated from their families. Household composition, function and family interaction shaped their familial experiences. Adolescents also spoke directly about their relationship with their biological parents, their custodial guardians and other extended family members with whom they interact.

6.3.1.1. Household composition, familial interaction and functioning

The participants in the study live in a variety of family/household configurations, as described by the excerpts below:

Rose: *I live with my aunty Teresa, Shelby, Veronica, and Sherwin… [Nods head, starts crying] Now and then, I feel very alone because I don't live with my mother*

Wynona: *My mom… I don't speak to her much because she doesn't live here.*

Musa: *Uhm. Uhm. My mother and her eldest sister, Jabu.*

Michael: *It feels very comfortable to be with the whole family [biological parents and siblings] …Not far, far away from them. They have to spend money every month coming through and going back. So, it's better to live with your family.*

Some participants lived with their extended maternal families such as their grandmothers or aunts. Others lived with their mothers and extended maternal family, while the rest had nuclear family compositions (both biological parents and siblings). Some participants indicated that family composition shaped their experiences of family life. Rosa explains that not living with her mother makes her feel lonely. Michael, on the other hand, feels comforted living with his parents and siblings (i.e. new living arrangement) after living with his grandmother.

Adolescents discussed their family interactions and functioning: Functioning included the daily routine of the participants and other family members in the household.

William: *I normally just make up my bed and sweep our room. My sister makes up her bed. She'll clean the cupboard. My mother makes up her room. My father just lay. My mother does the dishes and I'll sweep the kitchen. And my sister goes play outside.*

Wynona: *I come and do my homework, I eat, I play with [sister] in the room. And with the dolls…. On Saturday? Yeah, Saturday is almost the same as Sunday because we are going to eat, we going to sit here, watch TV, clean the house, throw the dustbin out, go to the shop, and come back. Yeah. It is normal everyday things we do in the house.*

Chanel: *My mother works most of the time and my father. And Stacey [sister] is at school and my brother– He's at my grandma.*

William: *She [mother] has days where she works morning shifts and afternoon. So, when it's in the morning, I don't see her really in the afternoon - or nine o'clock at night I'll wait for her to come home.*

Participants described their routines and explained how they assisted with basic chores around the house. Participant explicitly expressed some degree of mundaneness to their routine. Others spoke of their parents being employed for most of the day (and works shifts), not being available and inadvertently leaving their siblings and themselves unattended after school (afternoon to evening). They alluded to the roles parents play in the household functioning, for example, William's mother is the breadwinner while the father is uninvolved in the household.

Adolescents provided accounts of their daily experiences (negative and positive) about their family and household:

Wynona: *Some of my family members can be fun and some cannot be fun. That's why I don't talk too much of them sometimes especially when I come from school, I just greet and ask for things I want and do my homework and things like that. And some of them I talk to, like my aunty. I talk to her mostly also and my sister… What is not fun? It's like sitting here in this house with these people, clearly not having friends to talk to. Normally I like to talk to my friends alone, so I play with them outside I have to sit in this house watch TV.*

Paul: *Every day is boring sometimes –sometimes it's nice. In the night then I always like to tease my sister because her boyfriend's nickname is Fish*

Michael: *Because we are always together. Hmm. We always sit in the living room together, we do, we do everything together.*

Michael: *They always encourage me to finish school. That's what I like about them and the other thing that I still like about them, is when we are busy with exams, there's no going out unless finish studying for three hours. Then they always on my case.*

Michael: *And my mother and my father, they every weekend, we go out. We buy clothing, shoes, and stuff. Yeah. They are very good to us.*

Wynona explains that her life and family is dull and unfulfilling. She does not connect emotionally and socially with members of her household. She feels isolated, as she is not allowed to socialize beyond the confines of the home. Paul also shares the sentiments of every day being boring and but recognizes that there are days where life is fun and interesting. Michael appreciates family life and spending time with his family. He feels supported, encouraged and cherishes his parents.

6.3.1.2. Relationship with (biological) parents

When speaking about their relationships and experiences of interactions with people in their lives, participants almost instantaneously opened their conversations with an account of their relationship with their biological parents. I present their experiences of their relationship with their mothers and fathers separately. Hereunder are participants' accounts and experiences of their mothers:

Chanel: *My mother is important in my life. Yes. My mother is important because she's always there when I need something.*

Peter: *Very good… because my mother helps me with everything- Like if I do something wrong then she will help me.*

Musa: *The type of relationship I have with my mother, on a scale from one to 10, I can say 10. My mother is so supporting, at times I feel down. But I never have to talk to her. Sometimes we'll go into an argument and stuff but one minute and thirty seconds down the line we will be singing and clapping and making jokes and stuff. And it's, she's actually one of a kind. She is an angel sent from heaven…I want to be the superman for my mother even though my dad was taking her love for granted*

Rosa: *[Crying] Then I miss her! And I wish she was here by me –she could be here with me. She's not here with me! She lives in Joburg [Johannesburg] –she works in Joburg…If I'm alone then I feel like telling my mother, but she is in Joburg. That's why I don't like speaking about things. Then when I feel like it, I would like to speak to my mother, just my mother, because I tell my mother most of the things happening to me.*

Estelle: *Her relationship with her mother 'convenient' arrangement so she can go to school. When she feels like her father does not support her, she turns to her mother for familial support. She sees her mother occasionally during the school holidays.*

They communicate via WhatsApp sometimes she feels that it is a barrier because it's not the same as speaking to her mother in person! She feels that she has a goodbond with both her parents despite them being divorced. [Researcher field notes no recording]

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Many participants shared positive stories and experiences of their mothers and their relationships with their mothers. For example, Musa takes on the role of his mother's protector (against his father who physically abused her during his early childhood.) The mother-adolescent relationship was characterized by support, love encouragement. Participants regarded their mothers as their confidantes and one of the significant people in their lives. Rosa, on the other hand, shared feelings of maternal rejection and abandonment, she explained that the distance makes it hard for her to reach out and maintain a bond with her mother. Similarly, Estelle has a 'convenient' relationship with her mother. She primarilylives with her father and visits her mother during the school holidays. They use WhatsAppto connect and stay in touch but feels as though it creates a communication barrier, as it feels insignificant to speak about daily occurrences over text and not face-to-face.

Hereunder are excerpts of adolescents' experiences of their relationship with their fathers:

William: *He [father] goes to his friends and early in the morning then he'll come back home and on weekends he drinks. So, he doesn't really buy us anything… Uhm, I want him to take me fishing, show me how to fix cars.*

Musa: *I know that it is something that I shouldn't be saying. But it's something that I – it's something that is close to me because it doesn't feel well to me because my dad –he is not a good role model to me. Even though he supports me financially and stuff, but I don't want to lie it comes to a point where he actually makes me sick and stuff and sometimes, I actually get scared of telling such things. But I know there will be that one day that there will be no hiding behind the doors that would –there will be no hiding behind the truth and ill state the truth as it is.*

Michael: *My father and me we're close. We gym together. We play soccer together…And my favourite colour is red because why, my father loves red. Everything he buys, he buys it in red for me.*

Estelle: *She has a good relationship with her father. He is her first source of support she is comfortable to speak to him about many issues. [Researcher field notes no recording]*

As evidenced many participants were negative; they shared accounts and experiences of their relationships with their fathers. For the males, in particular, they had weak or strained relationships and they described their father figures to be emotionally unavailable and unresponsive as well as bad role models. William and Musa expressed that they yearn for

their fathers' attention and love and may be resentful toward their fathers for not fulfilling their parental duties. Michael described that he has a meaningful relationship with his father, and he seeks to emulate him as a means of building a connection with him. Estelle was the only female participant who spoke about a relationship with her father, and in her case, she has a close bond with her father.

6.3.1.3. Relationship with other family members and or adults

Participants also described their relationships with other family members such as grandparents and aunts as evidenced below:

Musa:	*She [aunt] gives me advice about life like generally all the advice that I get they are 50-50. My mother gives me advice and she gives me advice. There is no one that I could say is more important or more advising between them. Yah!*
Paul:	*It's a good relationship…because my auntie and I always do everything together. We always walk around. It is like this if my auntie walks to that side [another neighbourhood] then I'm with.*
Michael:	*Ronel, is my aunty. She, she's always caring. She's always like – Yes. She's always caring for us. When we need something for school, she will always help us out.*
William:	*She [aunt] will call about seven o'clock in the morning! Tell me I must come down] there [to her house and I'll have to sit there, sit there. Then she will send me to the shops! I have to go look after her baby then I'll sleepover. In the morning, I have to take the baby out. Take her to the park.*
William:	*My grandfather helps me build things…He helps me experiment with electricity, teaches me what to touch and what not to touch.*
Michael:	*What I don't like about my grandfather is that he is always shouting me to put on the TV for him, change the channels. He always tells, shouts me to go to the shop to buy cigarettes for him and that stuff.*
Paul:	*With my grandfather, I had a bad relationship with him because I did not speak to him much because he always sat on the stoep. Then he would always ask me to make him coffee but then I am afraid of him then I do not shout at him but then I take long to make the coffee.*

Participants also spoke about their interactions with other family members in their lives. Musa has an equally strong relationship with his maternal aunt as he does with his mother. Similarly, Paul has a good relationship with his aunt, and he spends a lot of time with her. Musa shared his frustration with his aunt because she expects him to run errands for her and babysit her child.

Some spoke about interactions with their grandparents. Michael and Paul alluded to the negative and weak relationship with their grandfathers, owing to their grandfathers'

unreasonable requests and shouting. William on the other hand enjoyed the time and attention he received from his grandfather.

6.3.1.4. Friendships: selection, networks and experiences

Along with family, in this theme, participants also shared the experiences of their friendships. Participants explained how they initiated friendships as well as described their current relationships with some of their friends as well as. They spoke about their network of friends, as well as the motivations for choosing and maintaining certain friendships, as evidenced below:

Musa: *I interact with elderly people, people who have gone through such things and people who are matured in life…Like this one Nthando [pointing to EcoMap], he he's my neighbour, he's a teacher he's graduated from teaching and he's one of the people that I can say they are my friends, but sometimes even though we don't see eye to eye. And this one Bongela [aunt] she's supporting, even Lumka she's even supporting, at times I would actually be. Even though she would say something to me but whenever I see her. There will be as if there's a chip over my shoulder and stuff. As if this weight has gone down. Even though it felt as though my shoulders are heavy and stuff.*

Chanel: *Tatum is my friend. Yes. She is always there, uhm, she's always there to speak to a person. But what I don't like about her is that she hangs out with people older than us and who do wrong things…Camille is also my friend. Yes, sometimes we have good times and sometimes we have bad times… We are, we are most of the times together. We just go maybe now just play and so. And she only hangs out with people her own age and not people who do wrong things.*

Wynona: *I only have friends at school…Like Lorelle, she understands more than others. Yes. So normally in the morning when I do go to school, she will ask me how it was at home. What did you do? But she knows I don't play outside so she won't ask me.*

Rose: *I do not know people around here.*

Rose: *Chelsea - we have a good relationship. We tell each other everything as well…Yes! Then she tells me if her mother is screaming at her or her mother and father fight with each other; then she does not feel nice when they do, then she will come to tell me.*

Paul: *Mikyle that I tell everything because I trust her with everything that I say then she does not tell. She also tells me everything that happens to her and so on.*

Paul: *Yeah. Yeah. I do tell. Only one. Only one knows because some of them they don't actually know how to keep secrets…nobody else…because I do not trust them a lot.*

Estelle: *At home, she has a friend in the community who she walks to the shop or socializes with. She does her school homework with this friend in the afternoons after cleaning and washing her school clothes [Researcher field notes no recording]*

Some of the adolescents indicated that they had a good network of friends while others mentioned few but close friends. Participants explained that they deliberately choose certain types of people to befriend based on the perceived contribution of these relationships to their lives. Musa, for example, prefers older friends who offer wisdom and knowledge. Most participants also shared that they have

mutually beneficial friendships that serve as a form of social support, someone whom they can confide in when faced with challenges. Others 'befriend' people by association or default, as in the cases of Wynona and Rosa. They reflected that their 'friends' are mainly family members where certain circumstances influenced their development or maintenance of friendships either through restricted socialization or through relocation and adjustment issues.

6.3.2. Theme 2: Life disruptions and day-to-day stressors

This theme comprised of adolescent's narratives about events that significantly altered their lives as well as their first-hand experiences of everyday stressful situations and events. The main sources of stress emanated from the family environment and their interactions with either parents or other family members while other stressors were less prominent.

6.3.2.1. Life-altering events

In the excerpts below participants describe previous and current life-altering events that evoke strong emotions and induce a great deal of stress in their lives.

Musa:	*Yes. It's basically something about my parents' separation and stuff. My dad actually used to beat my mother whilst I was four or five years old. And there was this one day where my mother was like ironing because my mother wouldn't like sleep whilst my father didn't come back at home, he would wait for him. That's what a proper wife would do! So, my mother was ironing, doing the ironing. That was a Sunday morning at about half-past three or four. And then my dad came, and he was drunk, and he came, and he fought with my mother and took her to the bedroom, he took the side lamp, and my mother was trying to fight with this monsterdad of mine. And then I went to him, and I was trying to help my mother like to escape and stuff and to tell my father like to stop what he was doing, and I actually hit him. The matter went to the lounge, and I was hitting my father and he pushed me towards the gate, and I got hurt, and then we ran away -with my mother –then we went to our neighbour and then my dad took a machete and he wanted to hit my mother. My mother's uncle came and my aunts. And then they wanted to resolve the issue but then the matter went to court and then it was six months or seven months and then we stayed back here [granny's house] and then we wentback home.*
Wynona:	*This thing with me going to live there until I'm eighteen you see…With my mother… Most of the times sometimes when she comes here. That's why she [mother] doesn't come a lot here because she says granny sometimes my granny would shout her.*
Michael:	*The one thing that was stressful for me is when I went to the hospital to drain water out of my lungs and the doctor told me I have asthma.*
Rose:	*She's not here with me!! She lives in Jo'burg [colloquial term for Johannesburg] –she works in Jo'burg… Three years I am staying here, I lived in Cape Town*

Participants shared their experiences of life-altering events and situations; for some these are distal childhood events for others these are recent or current events. Musa described one of many domestic violence events during childhood that permeates his current life. He describes how he witnessed his

father physically abuse his mother during his early childhood. His parents have since separated, he is estranged from his father and took it upon himself to save his mother from his father. Beinghospitalized was a stressful and traumatic period for Michael and he was mainly concerned about his recovery; a secondary concern was how it would impact his academic performance. Wynona and Rose speak about adjusting to living without their mothers. Wynona is in the care of her maternal grandmother at the moment. Her grandmother and mother are fighting to gain full custody ofWynona until she comes of age. Rose is in the care of her aunt (maternal), she previously relocated with her mother to this town, her mother, however, has moved to another city for employment purposes. Rosa feels rejected by her mother, alienated and isolated in her new home environment andfamily members. She does not have social support.

6.3.2.2. Relationship stressors: parenting style and interparental conflict

The adolescents described how everyday interactions and situations such as parenting style and interparental conflicts created stressful situations for them.

Wynona:	*The over-protectiveness. My granny can be negative sometimes, you know. Like even if you can ask to play under the window, and she is going to say: "They will steal you" and what! And to me, that's like thinking negative. I like to think positively most of the times you see, andmy granny, Eish! Tsk!*
Wynona:	*(Sigh) It doesn't really make me feel good, you see, because my granny shout at my mother then feels they are shouting me also. Because it's like my mother they are shouting, and I don't really like it when my mother cries. She has a small heart, and she cries very quickly.*
Wynona:	*Normally the most when my granny and my aunty fight. Yes.*
Chanel:	*Maybe now and then when my mother and father argue*
Paul:	*If I do something wrong then I should not do it or sometimes I do not do it then I stress too much then I think he [father] will come hit me.*
Michael:	*When he comes from work, some people make him angry at work. Then he wants to come and take it out on us at home. He's frustrated. Yes*

Wynona described her grandmother's authoritarian parenting which she believes to be the underlying issue for their constant miscommunication. More specifically, Wynona appraised the parenting style of her grandmother as overprotective, allowing no autonomy, which stifles her psychosocial development as she is not allowed to play or leave the house unless for school or shopping. Further, she indicated that there is a conflict between her parent (mother) and legal guardian (grandmother) regarding issues of her guardianship as well as her grandmother and her aunt. Consequently, she feels conflicted by their fighting which influences the relationships she has

with them. Other participants shared similar experiences of conflict between parental figures. Paul mentioned that his father's parenting style makes him fearful and is afraid of making mistakes or doing anything wrong, as it will result in physical punishment. Similarly, Michael spoke about his fear for his father and his father's projection of work frustrations that spills over into the home environment.

6.3.2.3. School and academic stressors

Participants disclosed that they experience school-related stressors that are not only linked to their academic performance but a range of other social factors. Consider the following excerpts:

Chanel: *Schoolwork sometimes. If I don't understand*

Michael: *Only thing that stresses me now out is that my report and my results. If I'm going to pass or fail. I did very well. But I still think there's a chance that I can fail because why we didn't get a Maths teacher for one month also because why the first Maths teacher broke his leg and couldn't come back to school that's why. I felt stressed because why every subject I wrote, I was like this wasn't in the scope that the teacher gave us. and now it's here. We learned about it, but we learned it in term one. Now I don't know what's going on here.*

William: *Yeah, last week Wednesday. At the library and a boy, Jacob, he's irritating me at the library. I was using the computers and he keep on irritating me and hit me over the head and I said before if somebody injures me, I get angry, so he did that too. He does it all the time doing that to me.*

William: *So, even at school, it's not even safe in school because after school the boys wait for you. Yeah, yes - Yes, it happened last week Friday. Four boys were waiting for a boy to come out of school. Teachers were trying to chase them away. They take him to phone the cops. And when the boy came out, they jumped on him but then he hit them, and they ran away. Yeah, because it's outside the school so they can't do anything. Even if they phone the cops, they take their time.*

Academic related factors included not understanding the work, performance during examination stress and passing the grade induces some stress. Michael explained that not having a mathematics teacher and not getting a scope for the examination (guideline of what is included in the examination) were challenges for his performance. Another challenge is that this very participant, Michael, had been hospitalised for a month and missed school. Other school-related stressors pertained to social aspects of school such as harassment and bullying. William shared that he was frequently bullied at school. Further, he provided an example of how community and gang violence permeate the boundaries of the school. As a student, he feels unsafe as teachers are not able to protect them from the violence and gangsterism beyond the school grounds and the police are unresponsive.

6.3.3. Theme 3: Coping mechanisms

This theme provides insight into the way adolescents make sense and cope with the stressors they experience. Adolescents described various coping mechanisms, depending on the type and intensity of stressors, their individual characteristics. This theme was relatively smaller, as some of theparticipants were not aware of the ways they manage stress.

6.3.3.1. Support seeking

Girls more commonly reported seeking support from certain family members and or friends as a form of coping with difficult situations.

Rose:	*Feel comfortable then I will tell myself or my aunt at home or Veronica [cousin]*
Chanel:	*I go to my friends, go and tell my grandmother.*

Adolescents generally talk to friends about their problems at home if they cannot confide in their family members in their homes. Friends are generally preferred for emotional support. There are cases where adolescents seek advice and instrumental support from family members outside the household especially if it is related to stress emanating from within their household.

6.3.3.2. Avoidance

One approach to coping was avoidance. Participants explained that when they are upset, they avoid the situation or repress their feelings, by default.

William:	*I don't like personal things…Yeah. If I get angry, I just keep quiet.*
Wynona:	*Normally sometimes, I just go to sleep you see. I go make my bed on the floor and lay until maybe later, until when it's about time to eat then I go out I eat. But I don't normally tell them you, see? I just-*
Rose:	*I'll first keep quiet about it and when I feel that I can't handle it anymore then I'll tell Chelsea about it. Then she will tell me to speak to the sir [teacher] about it. And sometime the teacher will see that I am not okay and then he will ask me what's wrong.*

Participants explicitly stated that they do not like to express themselves or share '*personal things'* with others. In particular, they were reluctant to share their negative experiences and emotions suchas anger, disappointment and sadness. Participants explained that they automatically cope by avoiding the issues, situations and people that upset set them. One participant explained that she represses her feelings until it is unbearable then she would share them with her friend.

6.3.3.3. Distraction

Distraction strategies were used for immediate relief from negative and unpleasant thoughts. Adolescents highlighted a range of activities that they engage in to cope with stress.

Musa: *Even though it felt as though my shoulders are heavy and stuff. I listen to music and stuff, slow jams house music, gospel. And especially one of the artists that I admire is a fusion artist – singer Keg Wilhm. His music actually takes me from the position that I am into another position and it actually. I actually get sad whenever I have to turn off the music. Then I'm going back to the position.*

William: *I'll just go jogging… or play games.*

Wynona: *I will sit and draw, sometimes I will write. I normally write letters like friendly letters to my friends, and I put it in my file and then when we come at school and we have nothing to do, I give it to them, and they write back to me. We write to each other like, you see.*

Adolescents explained that when they are stressed or have distressing thoughts they turn to music as the tempo and rhythms enhance their moods. Other distraction includes engaging in physical activities such as jogging; as well as playing computer/TV games to keep their mind off the distressing situations. Wynona describes that she uses journaling and drawing to express herself and cope with the negative emotional states. She also alludes to the writing as part of support seeking.

6.4. Discussion

Elsewhere in the thesis, I contend that the exploration of adolescents' experiences is a worthy endeavour as it gives voice to their experiences as they transition from childhood to adulthood. By employing an interpretative phenomenological lens, the researcher was, therefore, able to understand how adolescents make sense of their day-to-day lived experiences. I discuss the key findings of this chapter in relation to Bronfenbrenner's bio-ecological systems theory with a focus on the PPCT model.

6.4.1. Familial relations [Microsystem; 'Proximal' Processes]

The findings from Chapter Three highlights that parental employment arrangements (where parents are employed for long hours, or both parents are employed) is an important factor for understanding parent-child relationships as it impacts family cohesion and parent-adolescent dynamics, this is further evidence by the findings in this chapter where adolescent are feel some level of abandonment. in addition, drawing on the findings from Chapter Three and this chapter, family patterns and composition, rituals and routines are key contexts for the dynamics to play themselves out in family systems, which may be a contextual factor for substance abuse amongst adolescents.

Adolescent perceptions, and subjective experiences of their relationship with parental figures and their

families are important to understand in the context of adolescent development and more importantly for risk behaviours. Adolescents in this study talked about the family as a unit, but parents and 'the family' were regarded as distinct from each other. Adolescents' accounts revealed that their ideal family was a nuclear family -mother, father and children living in one household. For half of the participants, their lived realities were far from this ideal as they grew up in homes where either one or both parents were absent.

Adolescents hold high expectations and hopes for their relationship with their parents. They shared their wishes to spend time with their parents and do things together. Adolescents gave examples of fun outings such as fishing but were quite specific that they wished their parents would be involvedin their day-to-day life. It was apparent that only a few participants were content with their relationship with their parents. They intentionally raised their resentment and dissatisfaction with oneof their parents. Adolescents made a distinction between their relationship with their mothers and their fathers, where adolescents experienced relationships that are more meaningful with their mothers, and mothers are regarded as an important source of support for adolescents. This finding is not surprising as much literature primarily shows that in comparison to the father-adolescent relationships, mothers are thought to have closer relationships and of higher quality with theirchildren. The study found that some participants who had their fathers in their lives (living in the same household or have some form of contact) had weak and strained relationships. Firstly, this finding contributes to the extremely limited body of evidence that offers adolescents experiences of both parents and not just either one, which allows us to get a sense of the nature of adolescents' relationship with both their mothers and their fathers. In addition, this is an important finding for the psychosocial development of adolescents, for example, self-esteem and moral development (Jones, 2004) as fathers function as a microsystem resource from which adolescents can benefit and earn positive experiences (Yoon et al., 2018). In their theoretical framework, Dumont & Paquette (2013) explains that attachment to fathers develops through different mechanisms than those involved in the development of the attachment with mothers, and it influences children's socio- emotional development in a unique way (Dumont & Paquette, 2013).

Further, as with other research, the negative effects of a non-resident parent (parent who does not live in the same household as a developing adolescent) on the parent-adolescent relationship become obvious, specifically relating to contact and closeness (Valarie King et al., 2010). This finding traces back to the legacy of apartheid in South Africa where families were decimated for employment purposes. Women worked as sleep-in domestic workers and men as miners or labourers in other parts

of the country. This research study findings revealed that adolescents have more frequent contact with their non-resident mothers than with their non-resident fathers. The frequency of contact may subsequently intensify closeness and strengthen the relationship. Adolescents experience long-lasting emotional effects of maintaining a relationship with non-resident parents; they are faced with recurrent grief and separation from that parent and are challenged with ambivalence and tensions to nurture a relationship with or distance themselves from their non-resident parent (Jerves et al., 2018).

This research indicates that some adolescents grow up in family contexts where other family members such as grandmothers or aunts are the primary parental figure or active caregivers. This finding mirrors other research in low-income settings and families, where grandmothers often playan important role in caring for their children's children, whether they are orphaned or not (Damian, 2017; Pittman, 2007). Damian (2017) explains that grandmothers experience several socio-economic challenges such as physical health and psychological well-being and unemployment/retirement of grandmothers which ultimately influence their parenting and relationship with their grandchildren. The conflict between parental figures (particularly parents and grandparents) creates apprehension towards parental figures; the adolescent may find it difficult to navigate the conflict. As expected, adolescents have strained relationships with parental figures (grandparents or aunts), and they tend tofeel isolated and alone.

6.4.2. Friendships [Microsystem; Mesosystems]

The findings highlight the relevance of peer relationships during early adolescents because they involve more unilateral power and mutual reciprocity than the parent-child relationship. As with previous research, this research shows three dimensions of friendship on individual adolescent development, namely: having friends, who adolescents' friends are, and the quality of the friendships (Gorrese & Ruggieri, 2012). Gorrese and Ruggieri (2012) suggest that gender socialization experiences influence the formation of friendships as well as the quality of friendships. Adolescent girls are more attached to their peers than boys; girls' friendships tend to be more intimate, empathic, and interdependent while boys seek out companions to their share an interest in hobbies and leisure activities. The world over the attachment and socialization between parents, family and adolescents is seen to have a ripple effect on the formation and maintenance of friendships and vice versa (Gorrese & Ruggieri, 2012). This research supports the notion that friendships do not replace familial relationships (Eisenberg et al., 2014; Gorrese & Ruggieri, 2012; Ragelienė, 2016); particularly when the parental and familial attachment is weak, adolescents tend to lack the social and emotional competence and capacity to be able to form and maintain stable friendships (Laible, 2007; Seiffge-

Krenke, 2004). This is consistent with ecological theories that explain the interlinking influences of the different microsystems (family and friends) which all affect the individual.

The findings suggest that the quality of friendships is determined by companionship or support and conflict (Telzer et al., 2013). Close and stable friendships provide adolescents with social support while those who do not have positive friendships are less likely to have adequate emotional support in times of stress. Friendships riddled with conflict can be particularly stressful and challenging for adolescents to maintain positive friendships. Day-to-day disagreements, as well as opposing attitudes, beliefs and behaviours, appear to be the main causes of conflict in adolescent friendships.

6.4.3. Influence and exposure to stressors [Context]

The research findings demonstrate the factors and situations adolescents deem stressful, specifically adolescents perceived and lived experiences of stress. It provides a rich picture of the nature of stressors requiring adolescent coping. The adolescents in this research study hailed from low socio- economic communities where they experience a variety of stressors across the ecological systems (microsystems: family dysfunction, peer relations; school violence, and macrosystems: community/ neighbourhood disorganization). Parikh et al. (2019) explain that the social challenges during adolescence operate within the interacting ecological systems, which result in differing experiences of stress for adolescents by their intrinsic characteristics (age and gender) physical and socialenvironment, and broader socio-cultural norms. This research concurs with one of the key contributions made by ecological systems theories concerning stress and adolescent development – the recognition that adolescents will differ greatly in their ability to handle diverse social situations, given that they are embedded within complex, multilevel and interrelated social systems (Parikh et al., 2019). Further to this Bronfenbrenner suggest that promotive processes would have the greatest effect on positive outcomes in environments with the greatest resources and for individuals who had the greatest ability to take advantage of those resources (Darling, 2007). As such for the adolescents in this study, and many other low-income communities in South Africa, adolescents are believed to develop in contexts that lack the resources to foster optimal development.

The findings implicate day-to-day stressors including the relationship stressors as the major contributors to adolescent distress, particularly those emanating from the familial socio-emotional climate (events or situations within their homes and families). Consequently, the culmination of malfunctioning relationships, multiple stressors and ineffective coping create a vicious circle, which

is thought to contribute to increased symptomatology of mental health conditions (Seiffge-Krenke, 2004; Seiffge-Krenke et al., 2009).

6.4.4. Adolescent coping repertoires [Individual; 'Proximal' Processes]

Given the increased psychosocial stress during adolescence, how adolescents cope with these stressors are potentially important mediators and moderators of the impact of stress on current and future adjustment. A noteworthy finding is that adolescents do not employ only one type of coping,as their coping styles are highly determined by individual socialization, the severity of stressors and their environmental contexts (Parikh et al., 2019; Pinczés, 2015). Adolescents were found to use both adaptive and ineffective coping strategies. Dominant coping styles among adolescents include 1) seeking support from parents and friends and 2) avoidance and withdrawal.

Consistent with previous research that highlights a gendered difference with respect to the reliance on certain coping styles as well as their effect, specifically, adaptive versus maladaptive coping. Avoidant coping is considered maladaptive for girls while it serves protective functions in boys who are confronted with severe stressors (Seiffge-Krenke, 2011). The results concur with the hypothesis that when conflicts arise in the adolescent-parent relationship, adolescents tend to attempt to solve these conflicts by withdrawal. Literature associates socialization (familial behavioural responses and cultural norms) with coping styles; where adolescent that hail from cohesive, expressive, and individuated families report comparably low levels of stress and exhibit the highest level of active coping and the lowest levels of withdrawal or avoidant coping (Seiffge-Krenke, 2004). This finding encourages the consideration of the adaptability of certain coping styles that may be shaped by the culture of adolescents (Seiffge-Krenke, 2011). For example, in collectivistic cultures, that are prominent in South Africa, avoidant coping may be the normative or preferred coping strategy for adolescents when dealing with interpersonal challenges with family members or friends, as it reflects consideration for others and serves to protect the integrity of relationships. This style of coping may further be reinforced by the values held in many cultures to respect one's elders. In South Africa and the world over, cultural norms are predominantly adult-centric and teach children to demonstrate manners and respect towards adults and anyone older than them. This influences how children interact with their parental figures and other adults; they are compelled to obey adults; given the power difference in this relation, adolescents are not in the position to negotiate or attempt to resolve challenges with adults as a symbol of respect towards them.

When adolescents encounter day-to-day problems, some prefer to seek help from friends (Sears, 2020;

Seiffge-Krenke, 2004). As seen in previous research, mutually beneficial friendships provide acontext for help-seeking as it makes available a source of support and helps with someone whom the adolescent regarded positively; someone who is trustworthy and a good listener (Sears, 2020; Seiffge-Krenke, 2004). While support seeking can serve to be an adaptive coping style, seeking support from peers specifically has been noted to be questionable given that other adolescents/peers may not have the necessary skills themselves to assist their friends to manage and deal with challenges and stressors. Not all adolescents seek help from their friends, some reach out to their parents and family while others are reluctant to seek help from anyone. Adolescents tend to take approaches that are more complex in their decision making when seeking help; whereby theyconsider multiple factors including the type of problem, past experiences of seeking help andavailable sources of help.

Avoidance coping may act as a 'universal' way of coping in adolescence when an adolescent does not know how to deal with certain stressors and problems. Avoidance coping is thought to be adaptive in the short term especially in the case of highly stressful, traumatic and life-altering events (Parikh et al., 2019). However, the positive effects of using avoidant coping may wane with time (Seiffge- Krenke, 2004; Seiffge-Krenke & Klessinger, 2000). Previous literature demonstrates that all forms ofavoidant coping, whether stable or not, are linked to serious symptomatology, for example, depression, even two years later (Seiffge-Krenke, 2004; Seiffge-Krenke & Klessinger, 2000).

Chapter 7: Conclusion

7.1. Introduction

This chapter completes the dissertation, offers concluding remarks on the salient findings from the current research study as presented in Chapters 4, 5 and 6. The latter part of the chapter presents the implications and recommendations for mental health practice and implementation. It is followed by the limitations of this study. The current study addressed a gap in the South African context regarding young people's perspectives around the contributory factors of substance use as well as their lived experiences of their stress, coping and interpersonal relationships using Bronfenbrenner's bio-ecological theory and the PPCT model as a lens to guide the research.

7.2. Summary of findings

This section integrates and link the pertinent findings of the study in accordance with Bronfenbrenner's bio-ecological theory and the PPCT model. Several findings of this study relate to the developing adolescent (individual) and microsystem. Issues related to adolescent's exosystems were not dominant in the findings. Further to this, the findings predominantly relate to elements ofthe PPCT model namely the person and proximal processes.

The person-process-context-time (PCCT) model has been necessary to provide a conceptual model for organizing key aetiologic factors associated with the initiation and progression of substance use and for identifying potential opportunities for intervention (Botvin & Griffin, 2014). With regard to Bronfenbrenner's bio-ecological theory, the perceived contributory factors of adolescent substance use predominantly stemmed from individual, familial and communitylevel factors. Adolescents who are perceived to be at risk of initiating and using substances are those who have inaccurate information or beliefs about substance use; seek out new and exciting experiences through experimentation; and those who do not have adequate coping skills required to manage stressors, characteristic of the transitioning period adolescence and disenfranchised populations. This study demonstrates the influence of parents/caregivers and families on adolescent's initiation of substance. Particularly those who grow up in dysfunctional families with inappropriate parenting styles (i.e. authoritarian, and permissive) and weak parent-adolescent attachment. Further, stressful home environments characterized by parental discord and substance use predisposes adolescents to substance use initiation. The manifestation of substance use behaviours within the community contexts are thought to place adolescents at risk of

initiating substance use such as internal or overt pressure from peers, harmful and irresponsible adult behaviour, and the normalization of and constant exposure of substance use.

The family and household environments, as conceptualized by Bronfenbrenner, have also been found to be key contexts for *proximal processes* to influence adolescent development, but these may not necessarily be regarded proximal process as the processes negatively influence the development of adolescents when considering their substance use, overall mental well-being and their chronic exposure to stressors. Although the current sample is limited in size, many of the findings are consistent with previous research studies. The nature of the analysis provides further insights into family environments in low-income communities – which are evidenced to be inconsistent and chaotic and continually disrupt proximal processes for developing adolescents.

This thesis contributes to the knowledge about substance use patterns and two CMDs symptoms during early adolescence among South African adolescents from low-income communities that have been under-researched. The results affirm the importance of the identification of substance use and symptoms of depression and GAD during early adolescence, considering the reported age of initiation or severity of symptoms being reported by age 13 years. The lifetime prevalence of legal substances (tobacco and alcohol) is more frequently reported to be used, with alcohol being the primary substance of use. Half of the participants reported mild symptoms of GAD while half reported no symptoms of depression. These research findings validate the *Person* component of Bronfenbrenner's PPCT model demonstrating individual characteristics such as demographic profiles (age, sex, race) and the co-occurrence of CMDs and substance use that are thought to foreground the proximal processes activities and interactions for optimal development individuals. It is worth mentioning that regarding the racially classified social grouping within the research communities, Coloureds constitute the majority of the communities' population. This study sample reflects the population preponderance of Coloured adolescents. The absence of Black adolescents is, however, surprising, particularly considering the proximity of neighbouring Black communities.

The findings from this component provide insights into adolescents' (who report using substances) experiences of interpersonal relationships, the stressors they experience and their coping mechanisms. It highlights the interactions and relationships adolescents have with significant people in their lives, including parents/guardians, peers, and other adults. These findings showed that family plays an

integral part in the experiences of children's interpersonal relationships; and how they make sense of their social worlds. The finding demonstrates mutual interactions between the adolescents and their contexts. Regarding Bronfenbrenner's bio-ecological systems theory and PPCT model, the microsystems and mesosystems were found to be the dominant social systems, this also aligned with the person and proximal processes of the PPCT model. The day-to-day interactions and relationships between the developing adolescent and parents/guardians are salient processes for the adolescent in terms of the stressors they experience and their coping repertoires. More broadly, the *'proximal'* processes are disrupted by inconsistency, maladaptive behaviours or dysfunctional contexts; and subsequently, the processes are not beneficial and have negative consequences for the developing adolescent. By analysing the interactions within and between the different ecological social systems of adolescents, we can make recommendations for interventions located not only in the discipline of psychology but broader public health. For example, the findings offer the potential to highlight or rule out the specific circumstances (e.g. intrapersonal interactions, social environments) that account for substance use as a phenomenon or mental health condition; which informs subsequent analysis and investigations of the contextual factors that are likely to impact the effectiveness of the development of interventions (Eriksson et al., 2018).

7.2.1. Final concluding remarks

A contextualist approach such as Bronfenbrenner's highlights that the developing person, developmental processes, and environments are intertwined and that neither individual competencies nor the environment can explain development alone. This research offers empirical evidence to substantiate Bronfenbrenner's PPCT model -one of the most comprehensive and researchable frameworks that is generally overlooked (Jaeger, 2017). It is worth stating that Bronfenbrenner did not conceive that all four elements of the PCCT model be included in every research study; but

prescribed that research employing the model focus on proximal processes, showing how they are influenced both by individual characteristics of the developing person and the context in which they occur. This study included the recommended *minimum requirements* of a research study claiming to employ Bronfenbrenner's PCCT model namely, inclusion of at least one proximal process and the following components: (1) characteristics of the developing person(s), (2) at least two micro- or macrosystems. Hereunder I situate and outline the research key findings within the components of the model:

Person: The findings evidenced that substance use initiation is highly influenced by an individual's characteristics (i.e., misperceptions of the 'benefits' of substance use; the need to experiment during adolescence and substance use as a coping mechanism). The patterns of substance use, symptoms of depression and GAD and the stressors experienced highlight the nature and extent of the mental health of adolescents (who report using substances) in low-income communities. The findings also demonstrate the role of the adolescents' agency and capacity to manage stressors in their contexts (demonstrating the interrelatedness of the Person and Context components of the model).

Processes: The research findings highlight the important role proximal processes play, as an explanatory mechanism for understanding many developmental outcomes, be it negative or positive. The relationships and interactions adolescents have with their biological parents and or guardians are one of the important processes of their developing relationship. This relationship subsequentlyshapes the relationships with other family members or adults, the formation and maintenance of friendships and interpersonal relationships. The research shows a degree of progression in thecomplexity of proximal processes in adolescents' development. As such the proximal process are deeply embedded in the contextual system.

Contextual systems: The contextual systems that are thought to contribute to adolescents' initiation of substance use are microsystems (family) and mesosystems (interaction between family and friends), and macrosystems (societal norms such as the acceptance or normalization of substance use behaviours). The research highlights the interconnectedness of the different contextual social systems, for example, South African adolescents exist in families (microsystems) and societies with broader cultural traditions of collectivism (macrosystems) and the notion that children are *raised by avillage.* This is contradictory to the individualistic populations Bronfenbrenner studied.

Collectivistic ideologies are favourable in the context of child-rearing as there are more resources and social actors and adolescents are encouraged to remain safe as part of a network of family members and friends who provide support. However collectivistic cultural beliefs perpetuate unhealthy norms and attitudes or promote a certain family lifestyle (generational pattern) regarding substance use, mental health and coping repertoires; adolescents may adopt behaviours that are acceptable to the family or community as a sense of belonging. Furthermore, of the conditions of the PCCT model is the absence of 'frequent interruption and acute environmental or emotional stress' (Tudge et al., 2020); this is not common in the low-income communities (that many South African adolescents live and grow up in) riddled with social problems such poverty, unemployment, single parent or custodial parent households, gangsterism, crime and violence that give rise to instability, inconstancy, and disorganisation of daily family life.

Time: Time in this study, aligns with the developmental phase of development. Adolescence -as a transitioning phase- predisposes developing individuals to risk behaviours; substance use behaviours make them more susceptible to developing mental health problems. Additionally, this transitioning period is also recognized to be the beginning of the acquisition of interpersonal relationships and skills that will endure into adulthood, result from an inability to cope with various stressors faced.

7.3. Implications of findings for mental health policy, practice, and implementation

This research offers insights to make recommendations for mental health practitioners, practice, and implementation relating to adolescent substance use, interpersonal relationships, and stress andcoping. The results of this study have implications for the prevention of adolescent substance use andthe two CMDs with regard to both timing and content of messages and normalization. The timing of preventive interventions in early adolescence may be most beneficial in preventing the cascade of risks associated with substance use and depression and GAD. Interventions designed to reduce substance use must recognize the normative nature of early initiation of substances for many adolescents who are residing in low-income communities and those who experience mild to moderate symptoms of depression and GAD.

A recommendation is to develop tailored prevention efforts (primary, secondary and tertiary level prevention) to address the modifiable risk factors that are associated with adolescent substance use and adolescent's mental health issues. I recommend selective substance use and mental health

prevention to target adolescents whose risk of developing alcohol and tobacco use problems has been identified as significantly higher than the average. This approach to prevention is based on the premise of identifying and addressing these risk factors is a critical step in the prevention ofsubstance use problems (Sznitman et al., 2013). Family-based mental health promotion programmes targeted at the contributory factors, as reported in this research, may be a practical way of not only with preventing a single mental health issue of substance use but a range of problems emanatingfrom adolescence such as depression, anxiety, violence and maladaptive coping (Muchiri & dos Santos, 2018). Specifically, interventions focused on teaching parents, to be affectionate and caring during interactions with their adolescents and to monitor their children's activities and peer groups during the transition from childhood to adolescence may be a plausible approach. Further, the results of this study ask for interventions that target multiple levels (micro and macro) of an individual's lifeincluding family, peers, community and country-level (Foxcroft & Tsertsvadze, 2012; Razali & Kliewer, 2015). These multilevel interventions will require inter-sectoral collaboration betweendifferent ministries (e.g. health, social development, and education) as well as consultation and engagement with individuals, families and communities to develop appropriate and feasible interventions (Ederies, 2017).

Adolescents perceive that they can derive happiness from substance use; therefore, a recommendation is to educate adolescents about the long-term consequences of substance use that outweigh the short-term happiness emanating from substance use. For example, promulgate media awareness campaigns addressing the use, risk, and harmful effects of common substances such as alcohol and cigarette use for early adolescence.

Early adolescence is the period when unhealthy habits are formed, for example, substance use habits; therefore, health interventions can exploit this phase to encourage healthy norms regarding substance use. Considering that peers are implicated in experimentation and pressure to use substances it may be worthwhile to maximize the importance given to peers and subvert negative norms that may arise. Along with this shifting of norms, provide life skills training specifically refusal skills, and how to cope with challenging and stressful situations in their lives.

It is my recommendation to develop robust screening strategies for binge drinking (hazardousalcohol use) as it is a problematic substance use behaviour prevalent among adolescents. Further, the findings of the current study suggest a need to increase the screening of adolescents (aged 12-15

years) exposed to chronic daily stressors and stressful events. This speaks to the important role of mental health practitioners in raising awareness, developing youth-friendly strategies to screen and identify adolescents who face these challenges within various settings such as their home, school, and community (Low et al., 2012).

This research demonstrates the dysfunctional relationship processes/interactions and coping styles that are learned and practised by adolescents in their current relationships with their families.Therefore, intervening with adolescents and their families at this stage of development could potentially correct problematic models of interaction before they become more firmly entrenched in adolescents' coping repertoires. Parenting style and attachment with adolescents may influence the choice of coping style, therefore, prevention and intervention programs should integrate these issues. The recommendation is to extend youth development programs for youth in stressful and resource- constrained environments where parents/caregivers are unable to adequately provide emotional support for their adolescent child. These should aim to be twofold: One, to capacitate adolescents to mobilize and use available community resources, for example, seek anonymous telephonic or online support so that they can articulate and regulate their emotions. Two, to capacitate parents/caregivers to improve their parenting and communication skills as well as provide training to develop adaptive coping styles, which they can model to their adolescent children.

The literature acknowledges that theoretical models of adolescent development generally support a developmental psychopathology perspective where much of what we learn about atypical development in adolescence informs our understanding of normative adolescent development (Malá, 1994). Specifically, the notion that adolescence is inherently a period of 'storm and stress' is argued to be more interesting for research than normative development, and that healthy adolescent development is more about the avoidance of problems than about the growth of competencies. Dominant frameworks of practice and intervention that focus on dysfunction and maladaptation in adolescence only continue to exist. However, interventions should not exclusively focus on the negative aspects of distressful situations as positive framing (ability to perceive the stressor as an opportunity for growth) stemming from positive psychology shows promise. Hence, the recommendation of including elements of 'positive framing' in stress management and copinginterventions.

7.4. Directions for future research

- Future research should focus on using risk-resilience models of identifying risks and protective factors for adolescent substance use
- Since this research was conducted in one low-income community in each of the three provinces, similar studies in different communities within the provinces are recommended for the research to be generalized to all parts of the province. The research could also beextended to other provinces.
- Future studies could focus on measuring stress perception of these daily stressors and major life events as well as estimate its effect on the developmental trajectory of adolescents. It may further be helpful to explore and investigate the entire process of coping and distinguish between the short- and long-term consequences of these two constructs.
- Considering that this research is explorative and interpretive, more experimental and evidence-based research is recommended to identify and test effective prevention and intervention options for mitigating the burden of substance use among adolescents.

7.5. Constraints and limitations of the study

The study findings should be interpreted in light of potential study limitations. Although a mixed methodology was used to achieve the aims of this study, the study took on the form of a qualitative-dominant mixed-method design. It is widely understood that qualitative research is not aimed at testing hypotheses yet is often the most appropriate or only means of gathering sensitive information about the way people perceive their worlds and attribute meaning to their lived experiences. Consequently, a purposive sample of adolescents who report using substances from three low- economic communities in Gauteng, KwaZulu-Natal and the Northern Cape participated in thiscurrent study.

The research measured the prevalence, patterns of substance use and symptoms of the two CMDs using self-reported measures. It is widely understood that a key limitation of collecting self-reported

measures is the impact of social desirability. In other words, adolescents are often biased in the way they represent and report their behaviours and experiences; they tend to report on experiences and behaviours that are thought to be socially accepted.

Pragmatically, the second phase of the study relied on the same cohort of participants from the larger study. This decreased the pool of the participants to select from in the second phase of the study, as the sample in the larger study was already small at the outset. The second phase of this study was conducted approximately 12 months after the larger study. Consequently, the specific challenge in the second phase was contacting participants to invite them to participate. I could not reach many of them as their contact details changed or they changed schools (went to secondary school) so I was not able to access them.

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Appendix A: Adolescent Demographic Profile

	Participant No	Day	Month	Year	Province		
	FGD_TG #_____	_____	_____	_____	GP	KZN	NC
Item no.	Interviewer:						
2	Gender	Male			Female		
3	Race	Black	Coloured		Indian	White	
4	Date of Birth & Age	Date of Birth:					
		Actual age in years:					
5	Educational institution & level of education	School	University		College		
		Please specify grade:	Please specify which year and course:		Please specify the year and course:		
6	Employment status	Unemployed	Looking for work		Employed		
					Please specify:		
7	Do you have any medical conditions or suffer any form of ill-health?	Yes:			No		
	If yes, please specify						
	Date of onset						
8	How many people do you live with at home?	_____					
9	Does your father live with you?	Yes			No		
10	Father's type of work?						
11	Does your mother live at home?	Yes			No		
	Mothers type of work?						

12	Do you have siblings that live at home?	Yes:			No	
	If Yes, How many brothers do you have that live at home?	No of brothers:	Age:	Age:	Age:	Age:
	If Yes, How many sisters do you have that live at home?	No of sisters:	Age:	Age:	Age:	Age:
	Are there any other friends, relatives or boarders that live at home?	Yes:			No	
	If Yes how many people live at home other than your parents, brothers and sisters?					
13	Do you play any sport?	Yes:			No	
	If yes please specify					
14	Have you ever had the chance to skateboard?	Yes:			No	
	If yes, please specify					

15	Please list your favourite hobbies or activities that you do in your spare time?	How much time do you spend on each per day?		
		More than 2 hours	Between 1 to 2 hours	1 hour or less than 1 hour
	A			
	B			
	C			

16	Please list any jobs or chores you have. E.g. babysitting, making bed, working in store etc. (Including both paid and unpaid jobs or chores)	How many hours per day are you involved in these chores?		
		More than 2 hours	Between 1 to 2 hours	1 Hour or Less than 1 hour
	A			
	B			
	C			

Appendix B: WHO - ASSIST V3.0

A. WHO - ASSIST V3.0

Interviewer ID		**Country**		**Clinic**	
Patient ID		**Date**			

Introduction ***(Please read to patient)***

Thank you for agreeing to take part in this brief interview about alcohol, tobacco products and other drugs. I am going to ask you some questions about your experience of using these substances across your lifetime and in the past three months. These substances can be smoked, swallowed, snorted, inhaled, injected or taken in the form of pills (show drug card).

Some of the substances listed may be prescribed by a doctor (like amphetamines, sedatives, pain medications). For this interview, we will not record medications that are used as prescribed by your doctor. However, if you have taken such medications for reasons other than prescription, or taken them more frequently or at higher doses than prescribed, please let me know. While we are also interested in knowing about your use of various illicit drugs, please be assured that information on such use will be treated as strictly confidential.

Note: Before asking questions, give ASSIST Response Card to patient

Question 1
(if completing follow-up please cross check the patient's answers with the answers given for Q1 at baseline. Any differences on this question should be queried)

In your life, which of the following substances have you ever used? *(NON-MEDICAL USE ONLY)*	**No**	**Yes**
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc.)	0	3
b. Alcoholic beverages (beer, wine, spirits, etc.)	0	3
c. Cannabis (marijuana, pot, grass, hash, etc.)	0	3
d. Cocaine (coke, crack, etc.)	0	3
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)	0	3
f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	3
g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)	0	3
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)	0	3
i. Opioids (heroin, morphine, methadone, codeine, etc.)	0	3
j. Other - specify:	0	3

Probe if all answers are negative:
"Not even when you were in school?"

If "No" to all items, stop interview.

If "Yes" to any of these items, ask Question 2 for each substance ever used.

Question 2

In the past three months, how often have you used the substances you mentioned *(FIRST DRUG, SECOND DRUG, ETC)*?	**Never**	**Once or Twice**	**Monthly**	**Weekly**	**Daily or Almost Daily**
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc.)	0	2	3	4	6
b. Alcoholic beverages (beer, wine, spirits, etc.)	0	2	3	4	6
c. Cannabis (marijuana, pot, grass, hash, etc.)	0	2	3	4	6
d. Cocaine (coke, crack, etc.)	0	2	3	4	6
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)	0	2	3	4	6
f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	2	3	4	6
g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)	0	2	3	4	6
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)	0	2	3	4	6
i. Opioids (heroin, morphine, methadone, codeine, etc.)	0	2	3	4	6
j. Other - specify:	0	2	3	4	6

If 'Never' to all items in Question 2, skip to Question 6.

If any substances in Question 2 were used in the previous three months, continue with Questions 3, 4 & 5 for each substance used.

Question 3

During the past three months, how often have you had a strong desire or urge to use *(FIRST DRUG, SECOND DRUG, ETC)*?	**Never**	**Once or Twice**	**Monthly**	**Weekly**	**Daily or Almost Daily**
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc.)	0	3	4	5	6
b. Alcoholic beverages (beer, wine, spirits, etc.)	0	3	4	5	6
c. Cannabis (marijuana, pot, grass, hash, etc.)	0	3	4	5	6
d. Cocaine (coke, crack, etc.)	0	3	4	5	6
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)	0	3	4	5	6
f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	3	4	5	6
g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)	0	3	4	5	6
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)	0	3	4	5	6
i. Opioids (heroin, morphine, methadone, codeine, etc.)	0	3	4	5	6
j. Other - specify:	0	3	4	5	6

Question 4

During the past three months, how often has your use of *(FIRST DRUG, SECOND DRUG, ETC)* led to health, social, legal or financial problems?	Never	Once or Twice	Monthly	Weekly	Daily or Almost Daily
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc.)	0	4	5	6	7
b. Alcoholic beverages (beer, wine, spirits, etc.)	0	4	5	6	7
c. Cannabis (marijuana, pot, grass, hash, etc.)	0	4	5	6	7
d. Cocaine (coke, crack, etc.)	0	4	5	6	7
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)	0	4	5	6	7
f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	4	5	6	7
g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)	0	4	5	6	7
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)	0	4	5	6	7
i. Opioids (heroin, morphine, methadone, codeine, etc.)	0	4	5	6	7
j. Other - specify:	0	4	5	6	7

Question 5

During the past three months, how often have you failed to do what was normally expected of you because of your use of *(FIRST DRUG, SECOND DRUG, ETC)*?	Never	Once or Twice	Monthly	Weekly	Daily or Almost Daily
a. Tobacco products					
b. Alcoholic beverages (beer, wine, spirits, etc.)	0	5	6	7	8
c. Cannabis (marijuana, pot, grass, hash, etc.)	0	5	6	7	8
d. Cocaine (coke, crack, etc.)	0	5	6	7	8
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)	0	5	6	7	8
f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	5	6	7	8
g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)	0	5	6	7	8
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)	0	5	6	7	8
i. Opioids (heroin, morphine, methadone, codeine, etc.)	0	5	6	7	8
j. Other - specify:	0	5	6	7	8

Ask Questions 6 & 7 for all substances ever used (i.e. those endorsed in Question 1)

Question 6

Has a friend or relative or anyone else ever expressed concern about your use of *(FIRST DRUG, SECOND DRUG, ETC.)*?	**No, Never**	**Yes, in the past 3 months**	**Yes, but not in the past 3 months**
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc.)	0	6	3
b. Alcoholic beverages (beer, wine, spirits, etc.)	0	6	3
c. Cannabis (marijuana, pot, grass, hash, etc.)	0	6	3
d. Cocaine (coke, crack, etc.)	0	6	3
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)	0	6	3
f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	6	3
g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)	0	6	3
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)	0	6	3
i. Opioids (heroin, morphine, methadone, codeine, etc.)	0	6	3
j. Other – specify:	0	6	3

Question 7

Have you ever tried and failed to control, cut down or stop using *(FIRST DRUG, SECOND DRUG, ETC.)*?	**No, Never**	**Yes, in the past 3 months**	**Yes, but not in the past 3 months**
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc.)	0	6	3
b. Alcoholic beverages (beer, wine, spirits, etc.)	0	6	3
c. Cannabis (marijuana, pot, grass, hash, etc.)	0	6	3
d. Cocaine (coke, crack, etc.)	0	6	3
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)	0	6	3
f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	6	3
g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)	0	6	3
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)	0	6	3
i. Opioids (heroin, morphine, methadone, codeine, etc.)	0	6	3
j. Other – specify:	0	6	3

Question 8

	No, Never	Yes, in the past 3 months	Yes, but not in the past 3 months
Have you ever used any drug by injection? ***(NON-MEDICAL USE ONLY)***	0	2	1

IMPORTANT NOTE:

Patients who have injected drugs in the last 3 months should be asked about their pattern of injecting during this period, to determine their risk levels and the best course of intervention.

Pattern of Injecting	Intervention Guidelines
Once weekly or less or **Fewer than 3 days in a row**	**Brief Intervention including "risks associated with injecting" card**
More than once per week or **3 or more days in a row**	**Further assessment and more intensive treatment***

How to calculate a specific substance involvement score.

For each substance (labelled a. to j.) add up the scores received for questions 2 through 7 inclusive. Do not include the results from either Q1 or Q8 in this score. For example, a score for cannabis would be calculated as: **Q2c + Q3c + Q4c + Q5c + Q6c + Q7c**

Note that Q5 for tobacco is not coded, and is calculated as: **Q2a + Q3a + Q4a + Q6a + Q7a**

The type of intervention is determined by the patient's specific substance involvement score

	Record specific substance score	no intervention	receive brief intervention	more intensive treatment *
a. tobacco		0 - 3	4 - 26	27+
b. alcohol		0 - 10	11 - 26	27+
c. cannabis		0 - 3	4 - 26	27+
d. cocaine		0 - 3	4 - 26	27+
e. amphetamine		0 - 3	4 - 26	27+
f. inhalants		0 - 3	4 - 26	27+
g. sedatives		0 - 3	4 - 26	27+
h. hallucinogens		0 - 3	4 - 26	27+
i. opioids		0 - 3	4 - 26	27+
j. other drugs		0 - 3	4 - 26	27+

NOTE: *Further assessment and more intensive treatment may be provided by the health professional(s) within your primary care setting, or, by a specialist drug and alcohol treatment service when available.

Appendix C: Severity Measure for Depression—Child Age 11–17*

The APA is offering a number of "emerging measures" for further research and clinical evaluation. These patient assessment measures were developed to be administered at the initial patient interview and to monitor treatment progress. They should be used in research and evaluation as potentially useful tools to enhance clinical decision-making and not as the sole basis for making a clinical diagnosis. Instructions, scoring information, and interpretation guidelines are provided; further background information can be found in DSM-5. The APA requests that clinicians and researchers provide further data on the instruments' usefulness in characterizing patient status and improving patient care at http://www.dsm5.org/Pages/Feedback-Form.aspx.

Measure: Severity Measure for Depression—Child Age 11–17 (adapted from PHQ-9 modified for Adolescents [PHQ-A])
Rights granted: This measure can be reproduced without permission by researchers and by clinicians for use with their patients.
Rights holder: This measure was adapted from the PHQ-9 modified for Adolescents (PHQ-A), which is in the public domain (http://www.phqscreeners.com/instructions/instructions.pdf). The original measure was developed by Drs. Robert L. Spitzer, Janet B.W. Williams, Kurt Kroenke and colleagues, with an educational grant from Pfizer Inc.
The reference for the original measure is: Johnson JG, Harris ES, Spitzer RL, Williams JBW: The Patient Health Questionnaire for Adolescents: Validation of an instrument for the assessment of mental disorders among adolescent primary care patients. J Adolescent Health 30:196–204, 2002.
To request permission for any other use beyond what is stipulated above, contact: The measure is in the public domain and can be used without permission.

Severity Measure for Depression—Child Age 11–17*

*PHQ-9 modified for Adolescents (PHQ-A)—Adapted

Name:_____ Age:_____ Sex: Male ❑ Female ❑ Date:_____

Instructions: How often have you been bothered by each of the following symptoms during the past 7 days? For each symptom put an "X" in the box beneath the answer that best describes how you have been feeling.

						Clinician Use
						Item score
		(0) Not at all	(1) Several days	(2) More than half the days	(3) Nearly every day	
1.	Feeling down, depressed, irritable, or hopeless?					
2.	Little interest or pleasure in doing things?					
3.	Trouble falling asleep, staying asleep, or sleeping too much?					
4.	Poor appetite, weight loss, or overeating?					
5.	Feeling tired, or having little energy?					
6.	Feeling bad about yourself—or feeling that you are a failure, or that you have let yourself or your family down?					
7.	Trouble concentrating on things like school work, reading, or watching TV?					
8.	Moving or speaking so slowly that other people could have noticed? Or the opposite—being so fidgety or restless that you were moving around a lot more than usual?					
9.	Thoughts that you would be better off dead, or of hurting yourself in some way?					
					Total/Partial Raw Score:	
					Prorated Total Raw Score: (if 1-2 items left unanswered)	

Modified from the PHQ-A (J. Johnson, 2002) for research and evaluation purposes

Instructions to Clinicians

The Severity Measure for Depression—Child Age 11–17 (adapted from PHQ-9 modified for Adolescents [PHQ-A]) is a 9-item measure that assesses the severity of depressive disorders and episodes (or clinically significant symptoms of depressive disorders and episodes) in children ages 11–17. The measure is completed by the child prior to a visit with the clinician. Each item asks the child to rate the severity of his or her depression symptoms **during the past 7 days**.

Scoring and Interpretation

Each item on the measure is rated on a 4-point scale (0=Not at all; 1=Several days; 2=More than half the days; and 3=Nearly every day). The total score can range from 0 to 27, with higher scores indicating greater severity of depression. The clinician is asked to review the score of each item on the measure during the clinical interview and indicate the raw score in the section provided for "Clinician Use." The raw scores on the 9 items should be summed to obtain a total raw score and should be interpreted using the table below:

Interpretation Table of Total Raw Score

Total Raw Score	Severity of depressive disorder or episode
0-4	None
5-9	Mild
10-14	Moderate
15-19	Moderately severe
20-27	Severe

Note: If 3 or more items are left unanswered, the total raw score on the measure should not be used. Therefore, the child should be encouraged to complete all of the items on the measure. If 1 or 2 items are left unanswered, you are asked to calculate a prorated score. The prorated score is calculated by summing the scores of items that were answered to get a partial raw score. Multiply the partial raw score by the total number of items on the PHQ-9 modified for Adolescents (PHQ-A)—Modified (i.e., 9) and divide the value by the number of items that were actually answered (i.e., 7 or 8). The formula to prorate the partial raw score to Total Raw Score is:

$$\frac{\text{(Raw sum x 9)}}{\text{Number of items that were actually answered}}$$

If the result is a fraction, round to the nearest whole number.

Frequency of Use

To track changes in the severity of the child's depression over time, the measure may be completed at regular intervals as clinically indicated, depending on the stability of the child's symptoms and treatment status. Consistently high scores on a particular domain may indicate significant and problematic areas for the child that might warrant further assessment, treatment, and follow-up. Your clinical judgment should guide your decision.

Appendix D: Severity Measure for Generalized Anxiety Disorder—Child Age 11–17

The APA is offering a number of "emerging measures" for further research and clinical evaluation. These patient assessment measures were developed to be administered at the initial patient interview and to monitor treatment progress. They should be used in research and evaluation as potentially useful tools to enhance clinical decision-making and not as the sole basis for making a clinical diagnosis. Instructions, scoring information, and interpretation guidelines are provided; further background information can be found in DSM-5. The APA requests that clinicians and researchers provide further data on the instruments' usefulness in characterizing patient status and improving patient care at http://www.dsm5.org/Pages/Feedback-Form.aspx.

Measure: Severity Measure for Generalized Anxiety Disorder—Child Age 11–17
Rights granted: This measure can be reproduced without permission by researchers and by clinicians for use with their patients.
Rights holder: American Psychiatric Association
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Severity Measure for Generalized Anxiety Disorder—Child Age 11–17

Name:_____ Age:_____ Sex: Male ❑ Female ❑ Date:_____

Instructions: The following questions ask about thoughts, feelings, and behaviors, often tied to concerns about family, health, finances, school, and work. **Please respond to each item by marking (✓ or x) one box per row.**

							Clinician Use
	During the PAST 7 DAYS, I have...	Never	Occasionally	Half of the time	Most of the time	All of the time	Item score
1.	felt moments of sudden terror, fear, or fright	❑ 0	❑ 1	❑ 2	❑ 3	❑ 4	
2.	felt anxious, worried, or nervous	❑ 0	❑ 1	❑ 2	❑ 3	❑ 4	
3.	had thoughts of bad things happening, such as family tragedy, ill health, loss of a job, or accidents	❑ 0	❑ 1	❑ 2	❑ 3	❑ 4	
4.	felt a racing heart, sweaty, trouble breathing, faint, or shaky	❑ 0	❑ 1	❑ 2	❑ 3	❑ 4	
5.	felt tense muscles, felt on edge or restless, or had trouble relaxing or trouble sleeping	❑ 0	❑ 1	❑ 2	❑ 3	❑ 4	
6.	avoided, or did not approach or enter, situations about which I worry	❑ 0	❑ 1	❑ 2	❑ 3	❑ 4	
7.	left situations early or participated only minimally due to worries	❑ 0	❑ 1	❑ 2	❑ 3	❑ 4	
8.	spent lots of time making decisions, putting off making decisions, or preparing for situations, due to worries	❑ 0	❑ 1	❑ 2	❑ 3	❑ 4	
9.	sought reassurance from others due to worries	❑ 0	❑ 1	❑ 2	❑ 3	❑ 4	
10.	needed help to cope with anxiety (e.g., alcohol or medication, superstitious objects, or other people)	❑ 0	❑ 1	❑ 2	❑ 3	❑ 4	
						Total/Partial Raw Score:	
						Prorated Total Raw Score: (if 1-2 items left unanswered)	
						Average Total Score:	

Instructions to Clinicians

The Severity Measure for Generalized Anxiety Disorder—Child Age 11–17 is a 10-item measure that assesses the severity of generalized anxiety disorder in children and adolescents. The measure was designed to be completed by the child upon receiving a diagnosis of generalized anxiety disorder (or clinically significant generalized anxiety disorder symptoms) and thereafter, prior to follow-up visits with the clinician. Each item asks the child to rate the severity of his or her generalized anxiety disorder **during the past 7 days**.

Scoring and Interpretation

Each item on the measure is rated on a 5-point scale (0=Never; 1=Occasionally; 2=Half of the time; 3=Most of the time, and 4=All of the time). The total score can range from 0 to 40, with higher scores indicating greater severity of generalized anxiety disorder. The clinician is asked to review the score of each item on the measure during the clinical interview and indicate the raw score for each item in the section provided for "Clinician Use." The raw scores on the 10 items should be summed to obtain a total raw score. In addition, the clinician is asked to calculate and use the **average total score**. The **average total score** reduces the overall score to a 5-point scale, which allows the clinician to think of the child's generalized anxiety disorder in terms of none (0), mild (1), moderate (2), severe (3), or extreme (4). The use of the average total score was found to be reliable, easy to use, and clinically useful to the clinicians in the DSM-5 Field Trials. The **average total score** is calculated by dividing the raw total score by number of items in the measure (i.e., 10).

Note: If 3 or more items are left unanswered, the total score on the measure should not be calculated. Therefore, the child should be encouraged to complete all of the items on the measure. If 1 or 2 items are left unanswered, you are asked to calculate a prorated score. The prorated score is calculated by summing the scores of items that were answered to get a partial raw score. Multiply the partial raw score by the total number of items on the Severity Measure for Generalized Anxiety Disorder (i.e., 10) and divide the value by the number of items that were actually answered (i.e., 8 or 9). The formula to prorate the partial raw score to Total Raw Score is:

$$\frac{\text{(Raw sum x 10)}}{\text{Number of items that were actually answered}}$$

If the result is a fraction, round to the nearest whole number.

Frequency of Use

To track changes in the severity of the child's generalized anxiety disorder over time, the measure may be completed at regular intervals as clinically indicated, depending on the stability of the child's symptoms and treatment status. Consistently high scores on a particular domain may indicate significant and problematic areas for the child that might warrant further assessment, treatment, and follow-up. Your clinical judgment should guide your decision.

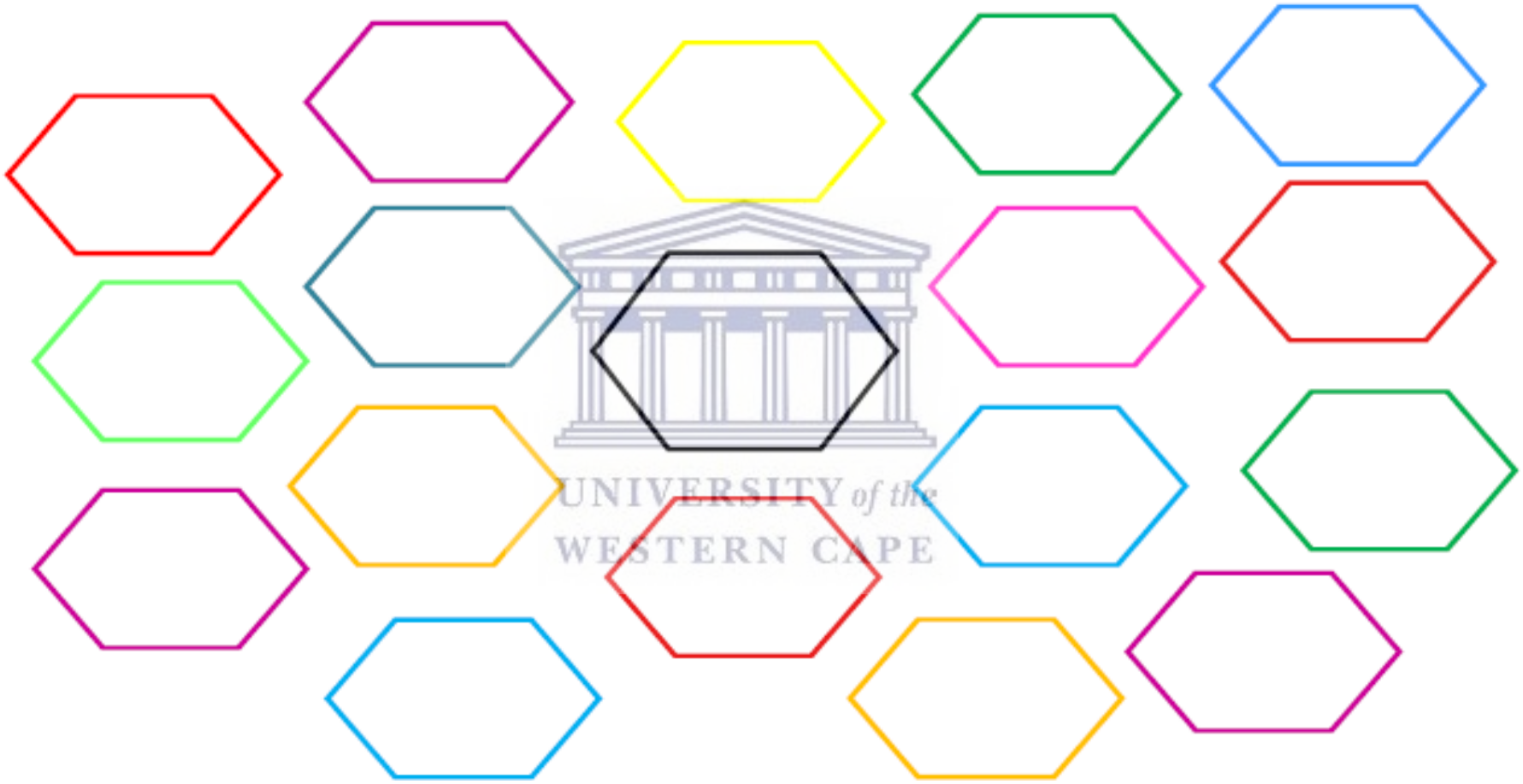
Appendix E: Focus Group Discussion Interview Guide

FGD Interview Guide

1. Please tell us about substance use among young people in the community. Tell us about what is commonly used, the age that young people start abusing and how they get introduced to it? Please give us any other information you feel is important.
2. What are the reasons that young people start using and abusing substances?
3. What factors contribute to young people continuing to using and abusing substances?
4. Are you aware of ways in which young people can try to stop or reduce substance use?
5. Are you aware of programmes available in the community to help young people reduce or stop abusing substances?
6. Are there sports programmes/activities for young people available in the community?
7. Do you think that young people playing sport can be an effective way of preventing them from using and abusing substances?
8. Have you heard about skateboarding?
9. What are your views on the idea of using skateboarding as a way of reducing or stopping substance use and abuse among young people your community?
10. Would you consider learning to skateboard?
11. Can you recommend other activities that might help young people reducing or stopping substance use and abuse among young people?

Appendix F: The Ecomap

Code name: _____ Date: _____ Age:_____ Sex:_____ Study site:_____



Key for EcoMap

a solid or thick line represents an important, strong or positive connection

a broken line represents a tenuous or weak connection

lines with crosses through them indicate a stressful relationship

arrows along the line point towards the direction or flow of resources, energy or interest.

Appendix G: Individual Interview Guide

Individual Interview guide

Could you please tell me about you?

- Stressful situations
- Coping methods

Please tell me about the types of relationships you have with the people in your life?

- Family (parents/ guardians, siblings and other family members); other people (friends at school or community, boyfriend/girlfriend, teachers, neighbours and community members,)
- What are the things you enjoy about the relationship with these people?
- What are the things you would like to change?

What is your home like? Can you describe who you share a home with and what do all of them do? The things you like about it and things that you would want to change.

Would you please tell me about when and how you started using XXXX (type of drug) and XXX (probe if poly-substance user)

What has been your experience of using this substance?

What would you say are some of the things that you've experienced in you your life that has contributed to your abuse of XXX?

Appendix H: Research Ethics Approval Letters

UNIVERSITY of the WESTERN CAPE

OFFICE OF THE DIRECTOR: RESEARCH
RESEARCH AND INNOVATION DIVISION

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South Africa
T: +27 21 959 2988/2948
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www.uwc.ac.za

23 November 2016

Ms G Khan
Psychology
Faculty of Community and Health Sciences

Ethics Reference Number: HS/16/3/26

Project Title: Examining adolescents' mental health status, their perceptions and lived experiences of leisure activities; stress and coping processes; interpersonal relationships and aspects on substance abuse.

Approval Period: 23 November 2016 – 23 November 2017

I hereby certify that the Humanities and Social Science Research Ethics Committee of the University of the Western Cape approved the methodology and ethics of the above mentioned research project.

Any amendments, extension or other modifications to the protocol must be submitted to the Ethics Committee for approval. Please remember to submit a progress report in good time for annual renewal.

The Committee must be informed of any serious adverse event and/or termination of the study.

HSRC
Human Sciences Research Council

Human Sciences Research Council
Lekgotla la Dinyakisišo tša Semahlale tša Setho
Raad vir Geesteswetenskaplike Navorsing
Umkhandlu Wezokucwaninga Ngesayensi Yesintu
Ibhunga Lophando Ngenzulu-Lwazi Kantu

Research Coordination, Ethics and Integrity (ReCEI)

RESEARCH ETHICS COMMITTEE ADMINISTRATION

Room 1345 - HSRC Building
134 Pretorius Street, Pretoria
Gauteng, South Africa
Tel: 27 12 3022012 - Fax: 27 12 3022005
Email: ksithole@hsrc.ac.za - Website: research.ethics@hsrc.ac.za
REC toll free no 0800 212 123

11 April 2015

Prof. Pamela Naidoo
Population Health, Health Systems and Innovation (PHHSI)
Private Bag X9182
69-83 Plein Street, Plein Park Building
Cape Town
South Africa
8001

Dear Prof Pamela Naidoo

Ethics Clearance of HSRC Research Ethics Committee Protocol No REC 8/18/02/15: Using Sport as an Intervention for Substance Abuse Reduction among Adolescents and Young Adults in Three Selected Communities in South Africa

The HSRC REC has considered and noted your application dated 18 February 2015.

The study is provisionally approved pending receipt of site permission letters; then the study will be granted full ethics approval and may begin. At this point data collection may not commence.

To ensure uninterrupted approval of this study beyond the approval expiry date, an application for recertification must be submitted to the HSRC REC on the appropriate HSRC form 2-3 months before the expiry date. Failure to do so will lead to an automatic lapse of ethics approval which will need to be reported to study sponsors and relevant stakeholders.

Any amendments to this study, unless urgently required to ensure safety of participants, must be approved by HSRC REC prior to implementation.

Pretoria Office: 134 Pretorius Street, Pretoria, 0002, South Africa. Private Bag X41, Pretoria, 0001, South Africa. Tel: +27 12 302 2000 Fax: +27 12 302 2299/2149
Cape Town Office: Plein Park Building, 69-83 Plein Street, Cape Town, 8001, South Africa. Private Bag X9182, Cape Town, 8000, South Africa. Tel: +27 21 466 8000 Fax: +27 21 461 2099
Durban Office: Intuthuko Junction, 750 Mary Thipe Road, Durban, 4001, South Africa. Private Bag X07, Dalbridge, 4014, South Africa. Tel: +27 31 242 5400 Fax: +27 31 242 5401
Port Elizabeth Office: 44 Pickering Street, Newton Park, Port Elizabeth, 6055, South Africa. PO Box 35115, Newton Park, 6055, South Africa. Tel: +27 41 399 8700 Fax: +27 41 399 8711
Pietermaritzburg Office: Old Bus Depot, Mbubu Road, Sweetwaters. PO Box 90, Msunduzi, 3200, South Africa. Tel: +27 33 324 5000 Fax: +27 33 324 1131

HSRC Board: Ms P Nzimande (Chairperson), Prof. A Lourens, Dr FG Netswera, Prof. A Olukoshi, Prof. TS Pillay, Prof. LI Qalinge, Dr O Shisana (Chief Executive Officer), Dr B Tema, Prof. E Uliana, Prof. EC Webster, Prof. PM Zulu

www.hsrc.ac.za

Your acceptance of this approval denotes your compliance with South African National Research Ethics Guidelines (2004), South African National Good Clinical Practice Guidelines (2006) (if applicable) and with HSRC REC ethics requirements as contained in the HSRC REC Terms of Reference and Standard Operating Procedures, all available at http://www.hsrc.ac.za/index.php?module=pagesetter&func=viewpub&tid=132&pid=167

The HSRC REC is registered with the South African National Health Research Ethics Council (REC-290808-015). The HSRC REC has US Office for Human Research Protections (OHRP) Federal-wide Assurance (FWA Organisation No. 0000 6347).

We wish you well with this study. We would appreciate receiving copies of all publications arising out of this study.

Yours sincerely

Professor D.R Wassenaar
Chair: HSRC Research Ethics Committee

The National Health Act's section 71 governs 'research on or experimentation with human subjects'. This section was made effective from 1 March 2012 by proclamation in the Government Gazette.

The content of this provision has an extremely restrictive impact on research, particularly if the research involves minor participants. No regulations came into effect simultaneously. This presents a problem for compliance because there is no current guidance on how to comply, and the newly proclaimed section 71 is inconsistent with the current SA Department of Health (2004) ethical guidelines and policies.

Until clarity is obtained, the HSRC REC has decided to proceed, in the interim, on the same basis as before the proclamation, i.e. **the ethics review process will, in certain circumstances, deviate from the newly proclaimed provisions of s 71, but will follow the same rigorous and comprehensive ethics review process as it has always done**. The REC will thus continue to approve methodology, recruitment strategies and informed consent requirements and processes in accordance with current ethics guidelines and policies.

The implications of this decision by the REC for researchers are that changes to methodology and informed consent processes may have to be made if and when the provisions of section 71 are made properly implementable. The full text of the National Health Act may be viewed at http://www.info.gov.za/view/DownloadFileAction?id=68039
Should you require more information on this matter, please feel free to send your queries to research.ethics@hsrc.ac.za

Appendix I: Information Sheet (Parent/Guardian)

INFORMATION SHEET (PARENT/GUARDIAN)

Project Title: Perceptions of stress, coping, and interpersonal relationships among adolescents reporting substance use and symptoms of common mental disorders

What is this study about?

This is a research project being conducted by Ms Gadija Khan at the University of the Western Cape. I am inviting your child to participate in this research project because he/she is a young person between 12 and 17 years old and was found to be using substances. There are many reasons why young people become involved in substances and then become addicted; some may have problems at home, at schooland in the community. The researcher is interested in understanding young people's views and experiences of some of the reasons why young people may become involved in substances, for example, stress and coping as well as relationships that contribute to adolescent substance use in communities. In order to prevent, reduce and treat substance use among young people it is important to understand these factors that influence young people's involvement in substances.

What will I be asked to do if I agree to participate?

If you agree to your child's participation in this study, he/she will be asked to draw a diagram (an EcoMap) with information about different people in his/her life as well as resources and challenges in your family, school, neighbourhood and community. The drawing will take up to 30 minutes to complete. The researcher will then ask your child to participate in a face-to-face individual interview to discuss his/her experiences of stress and coping processes and interpersonal relationships that contribute to his/herabuse of substances. The interview will last approximately 45 to 60 minutes. The interview will be conducted at a place convenient for your child (e.g. at home, a private office on the school premises, or a room at a local community centre). In addition, I also ask that you grant permission for the interview to be voice recoded. The purpose for recording the interview is to ensure that the researcher correctly recordswhat your child says.

Would my participation in this study be kept confidential?

The researcher undertakes to protect your child's identity and the nature of his/her contribution in the study. All information that can identify your child will be kept private (confidential), it will not be available to others and will be stored a locked file cabinet. It will be kept private (confidential) to the extent possible by law. Please understand that your child's privacy (confidentiality) does not extend to information about child abuse, significant risk of harm to self or others. Your child will be assigned a codenumber and a pseudonym (e.g. participant #1 Daren). The information that he/she gives us will be linkedto that code number and pseudonym. The records from your child's participation may be reviewed by people who are responsible for making sure that research is done properly such as the researcher's supervisors (these people are required to keep your child's identity private and not discuss your you or your child with anyone). The records that identify your child will only be available to researchers working

on the study. When the researcher writes reports or other research publications your child's identity will be protected by utilizing the code numbers and pseudonyms.

What are the risks of this research?

There may be some risks from your child's participation in this research study as all human interactions and talking about self or others carry some amount of risk. The researcher will attempt to minimise risk and act promptly to assist if your child experiences any discomfort, psychological or otherwise during the process of his/her participation in this study. In particular, there is a slight risk that some of the questions might be sensitive and that your child might feel embarrassed or upset when he/she shares his/herexperiences. If this should happen, your child should feel free to inform the researcher and may decide notto answer any question. Where necessary, an appropriate referral will be made to a suitable professionalfor further assistance or intervention.

What are the benefits of this research?

This research is not designed to help your child personally in the short-term future, but the results may help the researcher learn more about some of the factors that influence substance use among young people in the community. We hope that, in the future, other young people might benefit from this study through understanding how individual characteristics, interpersonal relationships and environmental influences contribute to young people's abuse of substances. The information will help professionals design appropriate substance use prevention and treatment programs that are tailor made for young people.

Do I have to be in this research and may I stop participating at any time?

Your child's participation in this research is completely voluntary. He/she may choose to not take part in this study at all. If your child decides to participate in this research, he/she may also stop participating at any time and will not be penalised for it.

What if I have questions?

This research is being conducted by Ms Gadija Khan, a doctoral student from the Department of Psychology at the University of the Western Cape. If you have any questions about the research study itself, please contact the primary researcher:

Gadija Khan
Tel: 081 27 111 26,
Email: 2825149@myuwc.ac.za

Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, please contact:

Dr Michelle Andipatin
Head of Department (Psychology)
University of the Western Cape
Private Bag X17
Bellville 7535
mandipatin@uwc.ac.za

Prof José Frantz
Dean of the Faculty of Community and Health Sciences
University of the Western Cape
Private Bag X17
Bellville 7535
chs-deansoffice@uwc.ac.za

This research has been approved by the University of the Western Cape's Senate Research Committee.

(Ethics Reference Number: HS/16/3/26)

CONSENT FORM (PARENT/GUARDIAN)

Title of Research Project: Perceptions of stress, coping, and interpersonal relationships among adolescents reporting substance use and symptoms of common mental disorders

The study has been described to me in language that I understand. My questions about the study have been answered. I understand what my child's participation will involve and I allow him/her to participate in this study out of his/her own free will. I understand that his/heridentity will not be disclosed to anyone. I understand that my child may withdraw from the study at any time without fear of negative consequences or loss of benefits.

Parent's name: ……..

Parent's signature: …….

Date: ……

Please give us permission to voice record your child's participation (make a √)

I agree to my child's participation being audiotaped

I disagree to my child's participation being audiotaped

Thank you for your time and valued participation!!

Appendix J: Information Sheet (Participant)

INFORMATION SHEET (PARTICIPANT)

Project Title: Perceptions of stress, coping, and interpersonal relationships among adolescents reporting substance use and symptoms of common mental disorders

What is this study about?

This is a research project being conducted by Ms Gadija Khan at the University of the Western Cape. I am inviting you to be part of this this research project because you are a young person between 12 and 17 years old. There are many reasons why young people become involved in substances (drugs e.g. cigarettes, alcohol, dagga) and then becomeaddicted; some may have problems at home, at school and in the community. The researcher wants understand young people's views and experiences of some of the reasons why young people may become involved in substances such as stress and coping and relationships that contribute to adolescent substance use in communities. In order to stop, reduce and treat substance use among young people it is important to understand factors that influence how young people come to use substances.

What will I be asked to do if I agree to participate?

If you agree to be part of this study, you will be asked to draw a diagram (an EcoMap) with information about different people in your life as well as resources and difficulties in your family, school, neighbourhood and community. The drawing will take up to 30 minutes to complete. The researcher will then ask you to take part in a face-to-face interview to discuss your own experiences stress and coping and relationships that contribute to your abuse of substances. The interview will last approximately 45 to 60 minutes. The interview will be done at a place convenient for you (e.g. at home, a private office on the school premises, or a room at a local community centre). In addition, I ask that you give me permission to tape- record the interview. The reason for recording the interview is to make sure that I correctly record what you say.

Would my participation in this study be kept confidential?

The researcher will protect your identity and your involvement in the study. All information that can identify you will be kept private (confidential), kept in a locked cupboard and will not be made available to others. Please understand that your privacy (confidentiality) does not include information about child abuse, the risk of harm to yourself or others. You will be assigned a code number, for example, participant #1 Daren. The information that you give will be linked to that code number. The records from your participation may be checked by people who are responsible for making sure that research is done properly such as theresearcher's supervisors (these people are required to keep your identity private). When the researcher writes reports or other research publications your identity will be protected by using code names.

What are the risks of this research?

There may be some risk from your participation in this research study as all human interactions and talking about yourself or others carry some amount of risk. The researcher will try to reduce the risks and act promptly to assist if you experience any, psychological or

otherwise during your participation in this study. In particular, there is a slight risk that some of the questions might be sensitive and or that you might feel embarrassed or upset when you share your experiences. If this should happen, you should feel free to tell me and you may also decide not to answer any question. Where necessary, an appropriate referral will be made to a suitable professional for further assistance or intervention.

What are the benefits of this research?

This research is not intended to help you in the immediate future, but the results may help the researcher learn more about some of the factors that influence substance use among young people in the community. We hope that, in the future, other young people might benefit from this study through understanding how individual characteristics, relationships and environmental influences contribute to young people's abuse of substances. The information will help professionals plan suitable substance use prevention and treatment programs for young people.

Do I have to be in this research and may I stop participating at any time?

Your participation in this research is completely voluntary. You may choose to not take part in this study at all. If you decide to participate in this research, you may also stop participating at any time and will not be penalised for it.

What if I have questions?

This research is being conducted by Ms Gadija Khan, a doctoral student from the Department of Psychology at the University of the Western Cape. If you have any questions about the research study itself, please contact the primary researcher:

Gadija Khan
Tel: 081 27 111 26,
Email: 2825149@myuwc.ac.za

If you have any questions about this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, please contact:

Dr Michelle Andipatin
Head of Department (Psychology)
University of the Western Cape
Private Bag X17
Bellville 7535
mandipatin@uwc.ac.za

Prof José Frantz
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This research has been approved by the University of the Western Cape's Senate Research Committee. (Ethics Reference Number: HS/16/3/26).

ASSENT FORM (PARTICIPANT)

Title of Research Project: Perceptions of stress, coping, and interpersonal relationships among adolescents reporting substance use and symptoms of common mental disorders

The study has been described to me in language that I understand. My questions about the study have been answered. I understand what my participation will involve and I participate in this study out of my own free will. I understand that my identity will not be shared with anyone. I understand that I may withdraw from the study at any time without fear of negative consequences or loss of benefits.

Participant's name: …….

Participant's signature: …….

Date: ……

Please give us permission to tape-record your participation (make a √)

I agree to my participation being audiotaped ___

I disagree to my participation being audiotaped _ __

Thank you for your time and valued participation!!!

Addendum 1

Table 22 Associations between substance use and symptoms of depression

Intervention required for cannabis		**None**	**mild**	**moderate**	**Total**
None	**Count**	3	2	0	5
	%	60,0	40,0	0,0	100,0
Brief	**Count**	1	1	0	2
	%	50.0	50.0	0	100
Intense	**Count**	0	0	1	1
	%	0	0	100	100
Total	**Count**	4	3	1	8
	%	50.0	37,50%	12,50%	100
Intervention required for cocaine		**None**	**mild**	**moderate**	**Total**
None	**Count**	4	2	0	6
	%	66,70%	33,30%	0	100
Brief	**Count**	0	1	0	1
	%	0	100	0	100
Intense	**Count**	0	0	1	1
	%	0	0	100	100
Total	**Count**	4	3	1	8
	%	50.0	37,5	12,5	100
Intervention required for amphetamine		**None**	**mild**	**moderate**	**Total**
None	**Count**	4	3	0	7
	%	57,10%	42,90%	0	100
Brief	**Count**	0	0	1	1
	%	0	0	100	100
Total	**Count**	4	3	1	8
	%	50.0	37,50%	12,50%	100
Intervention required for inhalants		**None**	**mild**	**moderate**	**Total**
None	**Count**	4	3	0	7
	%	57,10%	42,90%	0	100
Intense	**Count**	0	0	1	1
	%	0	0	100	100
Total	**Count**	4	3	1	8
	%	50.0	37,50%	12,50%	100
Intervention required for sedatives		**None**	**mild**	**moderate**	**Total**
None	**Count**	3	3	0	6
	%	50.0	50.0	0	100
Brief	**Count**	1	0	1	2
	%	50.0	0	50.0	100
Total	**Count**	4	3	1	8
	%	50.0	37,50%	12,50%	100
Intervention required for hallucinogens		**None**	**mild**	**moderate**	**Total**
None	**Count**	4	3	0	7
	%	57,10%	42,90%	0	100
Intense	**Count**	0	0	1	1
	%	0	0	100	100
Total	**Count**	4	3	1	8
	%	50.0	37,50%	12,50%	100
Intervention required for opioids		**None**	**mild**	**moderate**	**Total**
None	**Count**	4	3	0	7
	%	57,10%	42,90%	0	100
Intense	**Count**	0	0	1	1
	%	0	0	100	100
Total	**Count**	4	3	1	8
	%	50.0	37,50%	12,50%	100

Table 23 Associations between substance use and symptoms of generalised anxiety

Intervention required for cannabis		**None to slight**	**Moderate to severe**	**Total**
None	**Count**	3	2	5
	%	60.0	40.0	100
Brief	**Count**	0	2	2
	%	0	100	100
Intense	**Count**	0	1	1
	%	0	100	100
Total	**Count**	3	5	8
	%	37,50%	62,50%	100
Intervention required for cocaine		**None to slight**	**Moderate to severe**	**Total**
None	**Count**	3	3	6
	%	50	50.0	100
Brief	**Count**	0	1	1
	%	0	100	100
Intense	**Count**	0	1	1
	%	0	100	100
Total	**Count**	3	5	8
	%	37,5	62,5	100
Intervention required for amphetamine		**None to slight**	**Moderate to severe**	**Total**
None	**Count**	3	4	7
	%	42,90%	57,10%	100
Brief	**Count**	0	1	1
	%	0	100	100
Total	**Count**	3	5	8
	%	37,50%	62,50%	100
Intervention required for inhalants		**None to slight**	**Moderate to severe**	**Total**
None	**Count**	3	4	7
	%	42,90%	57,10%	100
Intense	**Count**	0	1	1
	%	0	100	100
Total	**Count**	3	5	8
	%	37,50%	62,50%	100
Intervention required for sedatives		**None to slight**	**Moderate to severe**	**Total**
None	**Count**	3	3	6
	%	50	50.0	100
Brief	**Count**	0	2	2
	%	0	100	100
Total	**Count**	3	5	8
	%	37,50%	62,50%	100
Intervention required for hallucinogens		**None to slight**	**Moderate to severe**	**Total**
None	**Count**	3	4	7
	%	42,90%	57,10%	100
Intense	**Count**	0	1	1
	%	0	100	100
Total	**Count**	3	5	8
	%	37,50%	62,50%	100
Intervention required for opioids		**None to slight**	**Moderate to severe**	**Total**
None	**Count**	3	4	7
	%	42,90%	57,10%	100
Intense	**Count**	0	1	1
	%	0	100	100
Total	**Count**	3	5	8
	%	37,50%	62,50%	100