

**EVALUATING THE CONTENT VALIDITY OF THE DIMENSIONS OF A  
QUESTIONNAIRE MEASURING FACTORS ASSOCIATED WITH SUBSTANCE  
USE IN ADOLESCENTS IN LOW SOCIO-ECONOMIC STATUS COMMUNITIES**

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**A mini-thesis submitted in partial fulfilment for the degree of**

**Master's of Arts Research Psychology in the**

**Department of Psychology**

**University of the Western Cape**

**Bellville**

**2012**

**UNIVERSITY of the  
WESTERN CAPE**

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**Keywords:** Substance use, Bio-ecological Systems Theoretical Framework, Dimensions, Content validity, Psychometric test theory, Adolescent, Associated factors, Nominal technique, Cape Metropolitan, Low socio-economic status community.

## ABSTRACT

Substance abuse is recognised as one of the greatest health and social problems in South Africa (SA). There is a need to explore the problem of substance use in the South African context in terms of the Bio-ecological Systems Theoretical Framework. All of the reviewed local and international studies on instruments that are used to measure factors associated with adolescent substance use, while yielding useful information; do not adequately address the issues of an instrument that successfully includes all the levels of the Bio-ecological Systems Theoretical Framework at the dimension level. As a result, a need for an applicable instrument exists. The overall purpose of the current study was to evaluate the content validity of the dimensions of the proposed self-administered questionnaire in terms of the Bio-ecological Systems Theoretical Framework, which will assist the factors associated with youth at risk of substance abuse in low socio economic status communities in the South African context. The study was framed in psychometric test theory focusing specifically on the procedures for content validation. It is being increasingly recognized that the development of a valid test requires multiple procedures, which are employed sequentially, at different stages of test construction. Validity is thus built into the test development from the outset. Participants were selected by means of purposive sampling. The sampling method was appropriate since the participants were required to meet certain inclusive criteria. The participants comprised of two groups of community leaders within two different communities on the Cape Flats. An adapted version of the Nominal Group Technique method was employed to collect data. The data for aim one was collected using a self administered questionnaire (Content Validity Questionnaire) consisting of two sections. The first section was presented in the form of a ranking scale with all relevant factors associated with adolescent substance use. The second section of part 1 was in the form of open-ended questions. The second aim was collected in the form of focus groups. Data was analysed quantitatively and qualitatively in the relevant sections. Data collected from the Content Validity Questionnaire (CVQ) was analysed quantitatively by means of statistical analysis making use of frequencies, and the open-ended questions of the content validity and data from the focus groups was analysed qualitatively by means of thematic analysis. The study concluded that all factors presented in the CVQ are important factors associated with adolescent substance use in the two low socio-economic statuses communities that were analysed in both the quantitative and qualitative components of the study.

## DECLARATION

I declare that the research *Evaluating the content validity of the dimensions of a questionnaire measuring factors associated with substance use in adolescents in low socio-economic status communities* is my own work. It has not been submitted before for any degree, or examination at any other university. All the sources I have used or quoted have been indicated and acknowledged as complete references.

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**Cassandra Z. Carels**



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## ACKNOWLEDGEMENTS

First and foremost, I thank our Heavenly Father for providing me with the grace, the desire and passion to pursue a tertiary education. For providing me with the strength and courage to complete a Masters Degree and enabling me to make a difference in the lives of others.

My Masters Journey is complete. It has indeed been a long, challenging and exciting one. I could not have completed it without the intellectual, physical, mental and emotional help from the following people in my life. I wish to extend my sincere appreciation to:

- The Psychology Department, UWC, for giving me the opportunity to complete the MA (Research) Psychology Degree. Thank you.
- My supervisor and co-supervisors
  - Maria Florence (Supervisor), for allowing me to work on her project. Thank you for your guidance and contributions. It has been a pleasure to have worked with you.
  - Dr. Shazly Savahl (co-supervisor), an amazing man who has kept me focussed and motivated and has believed in the completion of this thesis. I would also like to thank you for providing me with funding to complete my Masters Degree, it is highly appreciated. Thank you for seeing me through a very challenging study.
  - Prof. Elize Koch (co-supervisor), thank you for your active involvement and contributions in completing my thesis. I am honoured to have worked with and to know a woman of such high calibre.
- The MA (Research) Psychology Class (2011), Sabirah, Maya, Tumi, Mandisa and Qunita. You ladies are a real blessing. Thank you for your encouragement and support. Without you this experience would not have been the same.
- My late grade 6 teacher and friend, Marc Woodman. A man that has constantly encouraged me from the day I met him. For the endless reference letters he wrote and advice he gave. May your good soul rest in peace.
- My Family
  - My grandparents (Mr. and Mrs. Barnes) and my mother, Joanne Adams. Who believes I am able to do anything and everything. Thank you for your ongoing encouragement and support throughout my studies especially those very difficult times.

- My Aunty Mandy, a special thank you to you! For being my friend, my confidante, a shoulder to cry on and at times my ‘grammar checker’. An amazing woman, always willing to go the extra mile to help in whichever way she can. I am truly blessed.
- My siblings, Dehné and Lyle Peters, extended family, and friends thank you for your constant support with all the teasing, you have kept me grounded.
- Mark Wagenaar and the Wagenaar Family for your constant support.
- Last but not least my daughter, Tamara Zoë Carels. Thank you for giving mommy the space and time needed to complete this process. You have shown me how greatly you can behave, how immensely you can love and how understanding a toddler can be. Mommy loves you dearly.



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## GLOSSARY

**Substances:** Broadly speaking, a substance is any chemical that, when absorbed into the body of a living organism, alters normal bodily function. For the purpose of the study this may include alcohol as well as legal and illegal drugs used (Moleko, 2007; The Cape Town Drug Counselling Centre, 2007).

**Substance use:** The recreational use of substances involves using substances occasionally in relatively small doses and thus often without harm to users. That is, users do not develop tolerance or become physically dependent, and the drug does not physically harm them (at least in the short term). Substance use in adolescents ranges from experimentation to dependence (Moleko, 2007; The Cape Town Drug Counselling Centre, 2007).

**Substance abuse:** A maladaptive pattern of substance use manifested by recurrent and significant adverse consequences related to the use of substances (Butcher, Mineka & Hooley, 2007).

**Bio-ecological Systems Theoretical Framework:** This framework contends that the interaction between factors in the individual's immediate personal; family; community; or societal environment, result in particular behaviours, such as substance use.

**Content validity:** Content validity refers to how much a measure covers the range of meanings included in the concept (Babbie & Mouton, 2004). According to Messick (1989), content validity is evaluated by showing how well the content of the test samples the class of situations or subject matter about which conclusions are to be drawn.

**Psychometric test theory:** Psychometric (Classical) Test Theory aims at studying the reliability of a test score variable (measurement, test) that maps a crucial aspect of qualitative or quantitative observations into a set of real numbers.

**Adolescence:** A development stage between childhood and adulthood. Adolescence is a period of rapid physical and emotional changes that starts roughly from puberty, in other words from about 13 years to 18 years old. Thus adolescence can be seen as a growth process towards adulthood (Louw, Van Ede & Louw, 1998).

**Adolescent:** A young person who has undergone puberty but who has not reached full maturity, a teenager (Louw et al., 1998). In other words, someone that is undergoing adolescence would be referred to as an adolescent.

**Associated factors:** For the purpose of the study an associated factor is a variable related to or contributing to adolescent substance use. It may be a variable related to the increase or decrease of adolescent substance use.

**Nominal technique:** The nominal group process is a structured meeting that attempts to provide an orderly procedure for obtaining information from target groups who are most closely associated with a problem area (Fink, Kosecoff, Chassin & Brook, 1984). Participants are typically asked to record ideas independently before meeting the group. These ideas are then shared in the group, then collated and summarized (Van Teijlingen, Pitchforth, Bishop & Russel, 2006).

**Cape Metropolitan:** The Cape Metropolitan area is situated in the Western Cape of South Africa.



**Low socio-economic status community:** Socio-economic status refers to household income, proxied by per capita household expenditure, were used as the main indicator of socio-economic status (Zere & McIntyre, 2003). Thus, low socio-economic status communities refer to communities where household income is very low, usually below the average income within the country.

**Coloured:** Coloured here refers to an individual who is of a mixed (ethnic) descent (The dictionary unit for South African English, 2002). This term was used during the apartheid period to classify individuals into racial categories and is therefore seen as a derogatory term, but for the purpose of this paper, it is used to distinguish between racial groups

**SACENDU:** SACENDU is a network that monitors substance abuse treatment centres in six sites all over South Africa. These sites are the Western Cape, Kwazulu Natal, Eastern Cape, Gauteng Province, Mpumalanga, and Limpopo Provinces (Plüddemann et al., 2010).

## CHAPTER 1: INTRODUCTION

### 1.1. Introduction

The overall purpose of the current study is to evaluate the content validity of the dimensions of a self-administered questionnaire designed to measure substance use, in terms of the matured version of the Bio-ecological Systems Theoretical Framework (Bronfrenbrenner, 1995, 2005) that assesses the factors associated with adolescents at risk for substance use and addiction in low socio-economic status communities in the South African context. The current study forms part of a larger study (the larger study will be referred to as the parent study from here on) that aims to investigate the factors that impact on substance use in low socio-economic status communities of the larger Cape Metropolitan area in South Africa (SA). The parent study consists of two phases. The first phase (conducted during 2009 and 2010) aimed to elicit information, using qualitative research techniques, which contributed to the development of a questionnaire that will be used to collect quantitative data, in the second phase of the project, on the perceptions of users and non-users of substances. The current study forms part of phase one in the parent study, namely the development of a questionnaire.

The current study focuses on the evaluation of the content validity of the factors associated with adolescent substance use based on the qualitative interviews collected from the community members from the parent study; this is presented in the blueprint of the proposed questionnaire (refer to table 4.1, chapter 4). Possible additional factors associated with adolescent substance use as identified in the literature were also evaluated.

Substance abuse is posing a major threat to the public health sphere (Spath, Clair, Sin & Redmand, 2006) both nationally and internationally. Research done in the past two decades has shown that drug-culture has evolved in alarming ways (Emmett & Nice, 1996; Plüddemann, Flisher, Mathews, Carney & Lombard, 2008). Grant and Dawson (1998) reported that, lifetime substance use and dependence has been estimated to start from age 13 and younger and 21 and older. According to Plüddemann et al. (2010), in South Africa, more specifically in the Western Cape, substances are predominantly used by individuals under the age of twenty; almost half of them being adolescents. Furthermore, in Cape Town heroin patients are now mostly from the Coloured population group, showing a marked increase over previous years (Plüddemann et al., 2010). Plüddemann et al. (2010) reported that

between January and June 2010, 44% of individuals admitted to Cape Town treatment centres were under the age of 25. They further reported that more males (74%) than females (26%) were admitted to treatment facilities during January and June 2010 with the majority of the admitted patients being Coloured (70%) and the rest of the population including White (16%), African (12%) and Asian (1%) individuals. 74% of these patients were Coloured patients below the age of 20 years.

Peer influence is the predominant factor associated with adolescent substance use (Barnard, 2005; Brook, Morojele, Pahl & Brook, 2006; Hoberg, 2001; Oetting & Beauvais, 1990; Rauch & Huba, 1991). However, other factors include parental substance use, economic difficulties and cultural influences (Brook et al. 2006; Maseko, Ladikos, Nesor, Van der Merwe & Ovens, 2003; Russell et al., 2008; Walker-Barnes & Mason, 2004; Ward, 2007). Furthermore, substance abuse is recognised as one of the greatest health and social problems in South Africa. Visser and Moleko (1999) suggest that when a community experiences general and drastic socio-economic or political change, as in the case of South Africa, these changes frequently impact the sphere of high-risk behaviour.

The matured version of Bronfenbrenner's Bio-ecological Systems Theoretical Framework will be used as the theoretical framework to guide the evaluation of the dimensions as identified in the parent study and in the literature. This framework was deemed applicable as it has been proven to be useful in developing an in-depth understanding of the dynamics and interwoven complexity of factors impacting on and associated with drug addiction as being a contextual rather than merely an individual problem (Frisher, Crome, Macleod, Bloor & Hickman, 2007). These factors range from the individual to the family to the broader social and political context of a community. This framework will be discussed more extensively later on.

## **1.2. Rationale**

According to Randolph (2004), substance use may be one of the most serious problem behaviours due to its impact on social development, educational attainment, and future adult outcomes. Screening and early intervention is necessary and dependent upon an instrument to monitor populations as well as to identify population subgroups at risk of a particular issue (Ravens-Sieberer et al., 2001; Ravens-Sieberer et al. 2007). Thus, it is important to have

instruments that successfully take into consideration all possible aspects mentioned above that may directly or indirectly affect adolescents and which are considered the predominant factors associated with substance use for this cohort.

Previous research paid very little attention to adolescents at risk of substance use or abuse from a holistic ecological perspective (Haraldstad, Christophersen, Eide, Nativg & Helseth, 2010; Hong et al., 2007; Rajmil et al., 2004; Ravens-Sieberer et al., 2001; Ravens-Sieberer et al., 2007; Robitail et al., 2006). In addition, most of the available research is internationally based and contributes very little to the South African context. None of the research studies adequately explores instruments that are available, that is often used when conducting studies related to adolescents and substance use (such as the KIDSCREEN-52<sup>1</sup>), in terms of the Bio-ecological Systems Theoretical Framework. In other words, these studies do not make use of an instrument that makes use of all the levels and components of the Bio-ecological Systems Theoretical Framework. This focus differs from the current study as the dimensions for the proposed questionnaire are based on factors associated with adolescent substance use in a low socio-economic status community, as conceptualised from the Bio-ecological Systems Theoretical Framework perspective.

Thus, there is a need to explore the problem of substance use in the South African context, in terms of the Bio-ecological Systems Theoretical Framework in that there are factors at all the different levels of the theoretical framework that impact on the prevalence of substance use in low socio-economic areas in SA. Therefore, the need for an applicable instrument exists. This will lead to the recommendation of strategies for intervention and prevention at an individual but more especially community level. The instrument will serve two purposes:

- 1) To assess individual's for risk of substance use from a Bio-ecological Systems Theoretical Framework perspective.
- 2) To evaluate the risk of high prevalence rates of substance use in communities from the Bio-ecological Systems Theoretical Framework perspective of adolescents in these communities.

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<sup>1</sup> The KIDSCREEN generic QoL measure for children and adolescents was originally developed within a European context (The Kidscreen Group, 2004; Ravens-Sieberer et al., 2001)

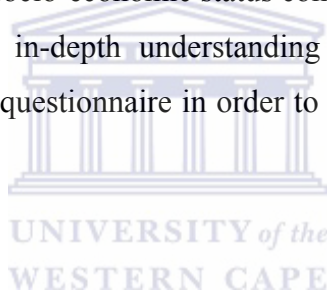


The current study will then map out the factors that are deemed important factors associated with adolescent substance use to contribute to the item writing of the proposed questionnaire. Against the backdrop of the above discussion, the main purpose and aims of the study are conceptualized as follows:

The overall purpose of the current study was to evaluate the content validity of the dimensions of the proposed self-administered questionnaire in terms of the Bio-ecological Systems Theoretical Framework, which will measure the factors associated with youth at risk of substance abuse in low socio economic status communities in the South African context.

**The specific research aims are:**

- 1) To quantitatively evaluate the content validity of the dimensions of the questionnaire in terms of the community stakeholders' perceptions of factors associated with substance use in two low socio-economic status communities.
- 2) To qualitatively gain an in-depth understanding of the themes presented in the blueprint of the proposed questionnaire in order to explore the content validity of the dimensions.



**1.3. Organisation of Chapters**

**Chapter one** provided an overview of the phenomenon of substance use, with emphasis on adolescent substance use in low socio-economic status communities. An outline of the background of the study was provided along with the rationale, aims and objectives of the study.

**Chapter two** gives a detailed explanation of the two theoretical frameworks, namely the Bio-ecological Systems Theoretical Framework on which the dimensions for the questionnaire were based, and the Validation Theory that has been adopted. This section not only provides a detailed explanation but also explains the appropriateness of these frameworks for the current study.

**Chapter three** offers a discussion of the relevant literature that relates to the aims and objectives of the study. More so it highlights the literature relating to the Bio-ecological Systems Theoretical Framework.

**Chapter four** consists of a comprehensive account of the quantitative and qualitative methods, in line with the psychometric test theory, that have been utilized for this study. The methodological framework has been explained in this section. A detailed description of the participants, procedure that was followed, data collection method and the data analysis method is provided, followed by an overview of the ethical considerations that were taken into account while conducting this study.

**Chapter five** provides the main results and findings of the study. The chapter firstly looks at the quantitative component of the study highlighting the dimensions associated with adolescent substance use that has been identified by the parent study based on qualitative data collected from community members that is presented in the blueprint of the proposed questionnaire. Secondly, the chapter outlines the main findings from the open-ended questions of the Content Validity Questionnaire (CVQ). The findings are explained in themes, as suggested by the analysis technique utilized in this study. Lastly, the chapter provides an in-depth overview of the findings of the qualitative component of the study, in line with the second aim of the study.

In **Chapter six**, the results and findings from both the quantitative and qualitative components of the study are discussed related to literature and theories in an attempt to explain them in a more in-depth manner and thus provides a deeper understanding of the results and findings. Lastly, Chapter six concludes the study by summarizing the key findings, noting the limitations of the study and finally, presenting recommendations for further and future research on the topic of discussion.

## **CHAPTER 2: THEORETICAL FRAMEWORK**

### **2.1. Introduction**

The preceding discussion has shown the interrelatedness of factors leading to substance use among adolescents as well as the lack of an adequate measuring tool to measure these factors. The topic will thus, be framed within the field of psychometric research, more specifically construct validity as conceptualised by Messick and with critical realism as a paradigmatic framework. Thus, for the purpose of the study two theoretical frameworks were utilised, namely Bronfenbrenner's Bio-ecological Systems Theoretical Framework, and Validation Theory as conceptualised by Messick (1989). Bronfenbrenner's Bio-ecological Systems Theoretical Framework formed the basis of the study, as the various dimensions of the questionnaire were developed within this theoretical framework, while the Validation Theory guided the methodology of this study. The Bio-ecological Systems Theoretical Framework was used to frame the structure of the study, for example it was used to shape the literature review, the proposed dimensions of the questionnaire as well as the discussion. Validation Theory to a large degree shaped the methodology and specific steps followed to obtain the data.

### **2.2. Bronfenbrenner's Bio-ecological Systems Theoretical framework**

#### **2.2.1. Background and Overview of the theory**

According to Lerner (2005), the existing scientific study of human development is characterized by an obligation to the understanding of the active relationships between the developing individual and the interrelated, multilevel ecology of human development. This approach to developmental science is marked by a theoretical focus on chronologically entrenched person-context relational processes by the embracing of models of active change across the ecological system. Also by relational, change-sensitive methods predicted on the idea that individuals influence the people and institutions of their ecology as much as they are influenced by them (Lerner, 2005). Lerner (2005) further states that the potential for logical change associated with the commitment of the active individual with his or her active context legitimates a positive approach to the possibility that applications of developmental science may improve the course and contexts of human life.

For more than six decades, Urie Bronfenbrenner has been both the standard of excellence and the professional conscience of the field of human development (Lerner, 2005). The field of

human development has become productively multidisciplinary and multiprofessional. Today, scholarship in human development is as likely to integratively combine history, social policy, medicine, economics, political science, home economics (family and consumer sciences), education, child care, community youth development and nursing as it is to integrate psychology, sociology and biology (Lerner, 2005). Furthermore, Bronfenbrenner asserted that only experiments are created as real in their consequences, in other words experiments do not include all aspects of life only what is being examine, and stressed that research should begin to focus on how children develop in settings representative of their actual world (i.e. in ecologically valid settings). For example, instead of studying children only in the laboratory, one should study them in their homes, schools, and playgrounds. According to Lerner (2005), in the initial stages of Bronfenbrenner's theory, developmental psychology was largely descriptive. In 1974, Bronfenbrenner argued that engagement with social policy not only enhances developmental research but also increases understanding of key theoretical issues relevant to the nature of person-context relations.

According to Lerner (2005), Bronfenbrenner's view of the influence of the theory, predicted the potential for systematic change of the human development system. Bronfenbrenner's theory powerfully and creatively portrays that it was transformative, adapting to the field of human development. His theoretical framework and the research that he and his students and colleagues conducted within its frame moved the field of human development beyond description and explanation. His vision included the improvement of the life course and the production, through the person's relations within the developmental system, of positive and healthy development.

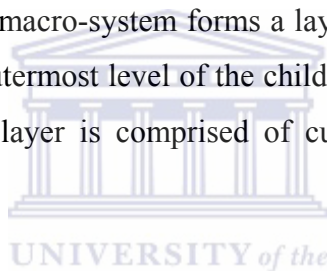
### **2.2.2. Interrelated Levels**

Bronfenbrenner's theoretical vision is embedded in his biological theory of human development from the 1970's up to the present. This theoretical framework has evolved to provide a fuller and more powerful understanding of the importance of the dynamic and multitiered ecology of human development. Since then, Bronfenbrenner explained the importance for human development of interrelated ecological levels, conceived of as nested systems. The levels are as follows:

- **Micro-system:** The micro-system is seen as the closest level to the child which encompasses relationships and structures within the child's immediate environment

(Berk, 2000). Structures in the microsystem include family, school, neighbourhood, or childcare environments.

- **The Meso-system:** The meso-system involve the connection between the structures of the individual's microsystem with each other (Berk, 2000). Examples: the connection between a child's teacher and his parents, between his church and his neighbourhood, etc.
- **The Exo-system:** The exo-system defines the larger social system in which the individual does not function directly. The structures in this layer impact the individual's development by interacting with some structure in his/her micro-system (Berk, 2000). Although the individual may not be directly involved at this level, he/she does feel the positive or negative force involved in the interaction with his/her own system. An example could be the child's parents' workplace or health services within the community.
- **The Macro-system:** The macro-system forms a layer that does not directly influence the child and forms the outermost level of the child's environment. While not being a specific framework, this layer is comprised of cultural values, customs, and laws (Berk, 2000).



### 2.2.3. The integration of levels of biology, psychology and behaviour

According to Lerner (2005), Bronfenbrenner and his colleagues have for more than a decade worked to integrate other levels of the biology, psychology and behaviour, into the model of human development he was formulating. Furthermore, with the rotation or 'change' of the levels he has sought to synthesize in his model (from biology through the broadest level of the ecology of human development) accounts for the label bio-ecological that he has attached to the model (Lerner, 2005).

In short, then, Bronfenbrenner has sought for more than a decade to bring the feature of the developing person into the ecology system he has elaborated. From Bronfenbrenner's (1977) description, the model that has emerged from this scholarship has four interrelated components namely: Developmental (proximal) process, person, context and time.

### **2.2.3.1. Developmental process (Proximal processes)**

Developmental processes or proximal processes involve the fused and dynamic relation of the individual and the context (environment). This refers to the dynamic interaction between the person and the environment through which development occurs, for example dynamic interactions between fathers and children (Adamsons, O'Brien, & Pasley, 2007). Proximal processes feature in three central "propositions" that appear in several of Bronfenbrenner's later publications.

Bio-ecological Systems Theoretical Framework is in at least two senses a living system. Here it is important to note that only two of the nine propositions put forward will be discussed, as these propositions captures the essence of the theory that is relevant to the study.

#### **2.2.3.1.1. Proposition 1**

*Proposition 1:* The theory itself depicts the dynamic, developmental relations between an active individual and his or her complex, integrated, and changing ecology (Riggins-Casper, Cadoret, Knutson & Langbehn, 2003). In addition, the theory is itself developing, as Bronfenbrenner seeks to make its features more precise so that it can be a more operational guide for Person-process-context-time (PPCT)-relevant research about dynamic character of the human developmental process. Thus the Bio-ecological Systems Theoretical Framework has developed to influence several propositions. These sets of ideas promote a dynamic person-context relational view of the process of human development (Riggins-Casper et al., 2003; Tudge, Mokrara, Hatfield & Karnik., n.d.).

As explained by Bronfenbrenner and Morris (1998), a key proposition of the Bio-ecological Systems Theoretical Framework states that through the life course human development takes place through processes of progressively more complex reciprocal interaction between an active, evolving biopsychosocial human organisms and the persons, objects and symbols in its immediate external environment (Lerner, 2005). Lerner further states that to be effective, the interaction must occur on a fairly regular basis over extended periods of time. Such enduring forms of interaction in the immediate environment are referred to as proximal processes.

#### **2.2.3.1.2. Proposition 2**

*Proposition 2:* The form, power, content and direction of the proximal processes effecting development vary systematically as a joint function of the characteristics of the developing person, the environment (both immediate and more distant) in which the processes are taking place; the nature of the developmental outcomes under consideration; and the social continuities and changes occurring over time through the life course and the historical period during which the person has lived (Lerner, 2005).

#### **2.2.3.2. Person – Context**

According to Lerner (2005), both these propositions emphasize a theme found in both instances of developmental systems theory – that within the bioecological system the individual, in dynamic relation to his or her temporally embedded, multilevel ecology, is an active agent in his or her own development. In sum, the individual's contribution to the process of development is made by a synthesis, an interrelation, between the active person and his or her active context (Lerner, 2005; Riggins-Casper et al., 2003; Tudge et al., n.d.).

According to Riggins-Casper et al. (2003), within the Bio-ecological Systems Theoretical Framework, as in the developmental systems models, relations between the active individual and the active context constitute the basic process of human development. Indeed, Bronfenbrenner (2001) provides additional propositions that underscore the relational character of human development (as cited in Riggins-Casper et al., 2003). Thus, the relations between an active individual and his or her active and multilevel ecology constitute the driving force of human development. These relations are also the focus of Bronfenbrenner's vision for ensuring the course of human life.

According to Riggins-Casper et al. (2003), the adaptive regulation of person-context relations, that is: exchanges between the person and his or her ecology that function to benefit both, should from the perspective of the Bio-ecological Systems Theoretical Framework, be the laws of human life at the levels of both individuals and their social world. Indeed the plasticity of these relations and thus the ability to maximize the possibility for adaptive developmental regulations, defines the essence of being human within Bronfenbrenner's system (Lerner, 2005; Riggins-Casper et al., 2003; Tudge, n.d.).

### 2.2.3.2.1. Person

According to Adamsons et al. (2007), the person is a composition of the individual with his or her individual collection of biological, cognitive, emotional and behavioural characteristics. This refers to the individual and his or her characteristics, for example their gender, race, age, previous experience and so on. This also encompasses individual differences in cognitions such as attitudes, beliefs, and expectations. Here we assess personal characteristics via demographic variables such as sex of the individual, parenting beliefs and marital satisfactions (Adamsons et al., 2007; Tudge, Otero, Hogan & Etz, 2003). According to Tudge et al. (2003), they also involve characteristics of individuals themselves, for example their “structuring productivities,” such as motivation, temperament, initiative, and so on. Bronfenbrenner acknowledged the influence of biological and genetic aspects of the person in the development of that person. However, he devoted more attention to the personal characteristics that individuals bring with them into any social situation. He divided these characteristics into three types, which he termed demand, resource and force characteristics (Tudge et al., n.d.).

- *Demand characteristics* are those which he refers to as “personal stimulus” characteristics, those that act as an immediate stimulus to another person, such as age, gender, skin colour, and physical appearance. These types of characteristics may influence initial interactions because of the expectations formed immediately (Tudge et al., n.d.).
- According to Tudge et al. (n.d.), *resource characteristics* by contrast, are not immediately apparent, though sometimes they are induced, with differing degrees of accuracy, from the demand characteristics that are seen. These are characteristics that relate partly to mental and emotional resources such as past experiences, skills, and intelligences. Further these also refer to social and material resources for example access to good food, housing, able parents, educational opportunities appropriate to the needs of the particular society and so on (Tudge et al., n.d.).
- Finally, *force characteristics* are those that have to do with difference of temperament, motivation, persistence, and the like (Tudge et al., n.d.). According to Bronfenbrenner, two children may have equal resource characteristics, but their developmental trajectories will be quite different if one is motivated to succeed and persists in tasks and the other child is not motivated and does not persist (as cited in Tudge et al., n.d.).



#### **2.2.3.2.2. Context**

The context of human development is conceptualized as the nested levels, or systems, of the ecology of human development as Bronfenbrenner has depicted. To account for contextual influences, Bronfenbrenner (1979) introduced four levels of systems that he saw as influential to an individual's development (as cited in Adamsons et al., 2007). Bronfenbrenner (1979) portrayed the developing child as being at the centre of an interconnected set of context, including those that directly impinged on the child and those that affected the child indirectly, mediated by those with whom the child came into direct contact (Tudge, Gray & Hogan, 1997). The environment or context involves four interrelated systems, namely the micro-system, meso-system, exo-system and macrosystem (Tudge et al., 1997).

#### **2.2.3.3. Time**

According to Adamsons et al. (2007), the final element of the PPCT model is time. Time conceptualized as involving multiple dimensions. For example family time and historical time – constitutes the Chrono-system that moderates change across the life course. Bronfenbrenner defined the Chrono-system as encompassing the dimension of time as it relates to an individual's environments.

According to Adamsons et al. (2007), the Chrono-system refers to the historical context as it occurs within the different systems and the changes that take place throughout the child's development. Elements within this system can be either external, such as the timing of a parent's death, or internal, such as the physiological changes that occur with the aging of a child. This could also include changes within the macro-system overtime as in S.A., apartheid (Adamsons et al., 2005). As applies to any theory of human development, time plays a crucial role in the theory. In the same way that both context and individual factors are divided into sub-factors. Bronfenbrenner and Morris (1998) wrote about time as constituting micro-time (what is occurring during the course of some specific activity or interaction), meso-time (the extent to which activities and interactions occur with some consistency in the developing person's environment), macro-time (the chrono-system, to use the term that Bronfenbrenner had earlier used) (Tudge et al., n.d.; Tudge et al., 1997). Time as well as timing, is equally important because all aspects of the PPCT Model can be thought of in terms of relative consistency and change. According to Tudge et al. (n.d.), this is true whether

thinking about developing individuals themselves, the types of activities and interactions in which they can engage, or the various Microsystems in which they are situated. Moreover, cultures also are continually undergoing change, although at some periods of historical time the rates of change are much faster than at others (Tudge et al., n.d.; Tudge et al., 1997).

Together, these four components of Bronfenbrenner's formulation of the Bio-ecological Systems Theoretical Framework constitutes a process-person-context-time (or PPCT) model for conceptualizing the integrated developmental system and for designing research to study the course of human development (Lerner, 2005).

### **2.3. Validation**

As mentioned above, this study was conducted within the field of psychometric research, more specifically psychometric test development and evaluation. The main focus was on content validity as a facet of construct validity according to Messick's Validation Theory as proposed in a seminal article in 1989.

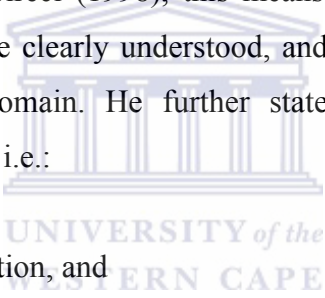
Traditionally, validity was divided into content, construct and predictive validity (Messick, 1989). Messick (1989) however, proposed instead that validity should be conceptualised as a unitary concept namely construct validity, which refers to the extent to which the scores of a test or questionnaire can be used for the purposes that are proposed for it. The above "types" should therefore all be seen as aspects of construct validity, and we now refer to procedures of construct validity instead of types of validity. Thus, according to Messick (1989), construct validity also includes content relevance and representativeness, as well as criterion-related or predictive validity; information about the content domain of reference and about specific criterion behaviours predicted by the test score clearly contributes to score interpretation, and thus construct validity. Thus, construct validity embraces all forms of validity evidence.

Although there are a number of threats to construct validity, Messick (1989) states that they all fall into two major types. The first is referred to as construct under-representation. This refers to the test construct being too narrowly defined and conceptualised, and failing to include important dimensions or facets of the construct. The second type is referred to as surplus- or construct irrelevance, or more pointedly as 'construct-irrelevant test variance'. According to Messick (1989), 'construct-irrelevant test variance' constitutes a contaminant

with respect to score interpretation but not necessarily with respect to criterion prediction. Criterion prediction refers to when a user or test constructor relies on test content to provide validation evidence.

Messick (1989) contends that content validity involves determining whether the content of the measure covers a representative sample of the behaviour domain to be measured. Content validity is a non-statistical type of validity and refers to the specific procedures followed in constructing psychological measures. Specifically content validity is evaluated by showing how well the content of the test samples the class of situations or subject matter about which conclusions are to be drawn (Messick, 1989). In other words, for a test or instrument to be valid, it must be shown that the items and tasks composing the test are representative of the targeted content domain (Sireci, 1998).

In practical terms according to Sireci (1998), this means that in all testing situations, the content domain measured must be clearly understood, and it must be demonstrated that the test adequately measures the domain. He further states that there are three essential characteristics of content validity, i.e.:

- 
- 1) Domain definition,
  - 2) Domain representation, and
  - 3) Domain relevance.

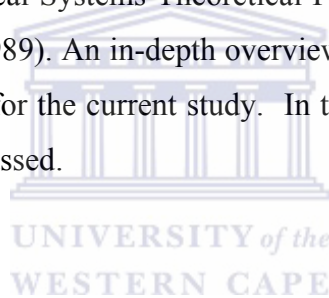
Each aspect must be carefully evaluated when assessing the content validity of a test. The first aspect, domain definition refers to the operational definition of the content domain. Domain representation and domain relevance, however, focuses on the test rather than on the test specifications. Evaluating domain representation usually involves judging how well a item matches its content and cognitive specifications. This is typically accomplished by expert reviewing. Lastly, evaluating domain relevance involves judging the relevance of each test item to the content domain (Sireci, 1998). According to Sireci (1998), content validity studies typically involve a relatively small number of participants who are required to make a variety of important judgements. Thus, the focus in this thesis was on the first characteristic of content validity, namely domain definition.

Against the backdrop of the above discussion the overall purpose of the study was to evaluate the content validity of the dimensions of a self-administered questionnaire in terms of the

Bio-ecological Systems Theoretical Framework that measures the factors associated with adolescents at risk for substance use and addiction in low socio economic status communities in the South African context. Validation Theory, as proposed by Messick (1989) was therefore deemed appropriate as it directly links to the methodology employed to carry out the study. Content validation procedures were employed to verify that the test developer's notion of the content domain is adequate. It was also employed to verify that the test represents content specifications (Sireci, 1998). According to Messick (1989), content validity is based on professional judgements about the relevance of the test content to the content of a particular behavioural domain, that is, factors associated with substance use among children and adolescents in low socio-economic status communities.

#### **2.4. Conclusion**

In this chapter, two theoretical frameworks were looked at namely, the matured version of Bronfenbrenner's Bio-ecological Systems Theoretical Framework, and Validation Theory as conceptualised by Messick (1989). An in-depth overview of both theories was provided as well as why they are applicable for the current study. In the following chapter the literature relevant to the study will be discussed.



## CHAPTER 3: LITERATURE REVIEW

### 3.1. Introduction

Substance use among youth continues to pose a health and social threat worldwide (Brook et al., 2006). Thus, the overall purpose of the current study was to evaluate the content validity of the dimensions of the proposed self-administered questionnaire in terms of the Bio-ecological Systems Theoretical Framework, which will measure the factors associated with youth at risk of substance abuse in low socio economic status communities in the South African context.

In order to obtain an understanding of substance use for the current study, this chapter will focus on literature related to substance use and factors impacting on adolescent substance use by contextualising and explaining this phenomenon within the framework of the matured version of Bronfenbrenner Bio-ecological Systems Theoretical Framework. It is also important to note that Methamphetamine is often cited within this review. Statistics indicate that although, cannabis is still the most common illicit drug used, especially among youth attending specialist treatment centres, Cape Town's level of methamphetamine users remain substantially higher compared to other parts of South Africa (Plüddemann, Myers & Parry, 2008; Plüddemann, Flisher, Mathews, Carney & Lombard, 2008; Plüddemann et al., 2010).

### 3.2. Contextualizing the issue of substance abuse

According to Kulis, Nieri, Yabiku, Stronwall and Marsiglia (2007), youth are less likely than adults to have substance use experience, making them natural targets for prevention focusing on the non-user. Furthermore, because earlier substance use is associated with greater risk of progression to problem use of more harmful substances, preventing onset of use among youth is viewed as a public health priority. According to Randolph (2004), adolescence is a particularly vulnerable period in the life cycle for engaging in problem behaviours. Jessor (1998) stated that increases in violence, delinquency, academic failure, and substance abuse have been shown to be more prevalent during this stage of development (as cited in Randolph, 2004). According to Randolph (2004), substance use may be one of the most serious problem behaviours due to its impact on social development, educational attainment, and future adult outcomes. Rawson, Gonzales, McCann and Ling (2007) stated that although the epidemiological data from around the world present a mixed picture of

substance abuse, and Methamphetamine (MA) use specifically, in many regions of the world substance use by adolescents appear to be a significant public health problem.

According to Rawson et al. (2007), United States, federal government statistics minimize the problem of MA use by adolescents. For example, a national survey of 12<sup>th</sup> graders, between the periods of 1999 – 2005, indicates a downward trend of life time MA use, 4,7% to 2,5% respectively. However, state and local level data from a treatment program in some parts of the United States reveal that rates of treatment admissions of adolescents with a diagnosis of MA abuse or dependence are more than 20% of all admissions, and are increasing.

Rawson et al. (2007) indicates that even though there is a tremendous variability in youth MA rates across Europe, the European Monitoring Centre for Drugs and Drug addiction (EMCDDA) survey shows that the prevalence of MA use among youth aged 15 – 24 years has been increasing since the early 90's. Similarly, findings from a Czech republic survey, European School Survey Project on Alcohol and other Drugs (ESPAD), on 17 – 18 year old students in 2003 shows that nearly 8.4% had used MA in their life-time and 5.4% had used in the previous year (Rawson et al., 2007). Furthermore, Rawson et al. (2007), studies in Taiwan and Northern Thailand also suggest that MA use is highly problematic among adolescents.

Furthermore, in studies in Cape Town, South Africa, treatment centres, 42% of admissions for 15-19 year olds were for treatment of MA dependence in the second half of 2006 (Rawson et al., 2007). According to Plüddemann et al. (2010), most young patients entering treatment centres in Cape Town between January and June 2010 are treated for the abuse of cannabis, methamphetamine or heroin. Cannabis was the most common primary substance for under 20s in this period followed by methamphetamine. Thus, new forms of treatment need to be put in place in order to reduce the new incidences of substance use among adolescents, such as new screening devices need to be developed.

### **3.3. International research on substance use and the social environment**

Many international studies investigated contextual factors associated with substance abuse (Kilpatrick et al., 2000; Sutherland & Shepherd, 2001; Urberg, Luo, Pilgrim & Degirmendogla, 2003; Stevenson & Mitchell, 2003; Randolph, 2004; Feinberg, Ridenour & Greenberg, 2007; Bogg & Finn, 2009; Snedier, Herting & Walton, 2009). These studies

consider different contributory factors that fall into one or more of the ecosystems of the Bio-ecological Systems Theoretical Framework. Furthermore, they consider many theoretical frameworks, often utilising more than one.

### **3.3.1. Micro-system**

Kilpatrick et al. (2000) conducted a quantitative study focusing on individual factors as well as other associated factors impacting on substance abuse. The main objectives highlighted by Kilpatrick et al. (2000) centred on the impact of familial substance use on adolescent substance abuse or dependence, the effect of physical assault, sexual assault, and witnessed violence on the risk of adolescent substance abuse or dependence, and the independent impact of post traumatic stress disorder (PTSD) on substance abuse risk. Their findings were threefold. Firstly they found that adolescents who had been sexually assaulted, who had witnessed violence, or who had family members with alcohol or drug use problems had increased risk for current substance abuse or dependence (Kilpatrick et al., 2000). Secondly they found that PTSD independently increased the risk of marijuana and hard drug abuse/dependence, and lastly, they found that when effects of other variables were controlled, African Americans, but not Hispanics or Native Americans, were at approximately 1/3 the risk of substance abuse or dependence as Caucasians (Kilpatrick et al., 2000).

A quantitative study conducted in the same year by Scheer, Borden and Donnermeyer (2000) was aimed at examining micro-system factors, more specifically examining family factors, such as communication, sanctions, and involvement, associated with adolescent substance use in rural, suburban, and urban settings. According to these authors substance abuse does not occur in isolation, but almost always involves familial and community factors, therefore forming the basis of the study. They found that location did not significantly influence how the family variables predicted substance use (Scheer et al., 2000). They concluded that location as measured by rural-suburban-urban residents contributes minimally to the understanding of adolescent substance use. Furthermore, they stated that the absence of rural-urban differences does not necessarily mean that location is either insignificant for understanding substance use or an irrelevant factors in the design of prevention education and intervention programs (Scheer et al., 2000). They state that location could be relevant as a contextual factor for understanding variations in the influence of peer, school, and community environment on substance use. Additionally, researchers stated that a positive

adolescent-parent relationship becomes a protective factor in the lives of youth as they are confronted with life choices, including substance use.

Urberg et al. (2003) conducted a quantitative study, which proposed a two-stage model of peer influence. According to Urberg et al. (2003), the model served as a framework for examining individual and relationship-specific differences in susceptibility to influence. The two stages were as follows: (1) the acquisition of a peer context, and (2) conforming to the behaviour of a peer. The model makes it explicit that to understand the influence of friends, the friendship-selection stage must be examined in addition to the behaviour change stage which adolescents generally undergo (Urberg et al., 2003).

Using an ecological model of assessment, Okamoto, Dustman, Hohmann-Marricott and Kulis (2004) conducted a study focusing on better understanding problematic substance use situations faced by American Indian youth on the reservation, in school, and in the community. They found that drug and alcohol use occurred primarily with friends or cousins at their houses or after school. According to Okamoto et al. (2004), substance use for American Indian youth may have more to do with whom the substances are used and less to do with the types of substances used or where they are being used.

Killeya-Jones, Nakajima and Costanzo (2007) conducted a study where two competing hypotheses were tested concerning the associations between current alcohol and cigarette use and measures of individual, group and network peer standing (micro-systems) in an ethnically-diverse sample of 156 male and female adolescents sampled at two time points in the seventh grade. The main aim of the study was to examine the relationship between relative peer standing in school-based peer groups and substance use (tobacco smoking and alcohol use) among early adolescents, and to determine whether such relations derived from the power of the person using substances or the substance-using behaviour per se. A multi-method approach was employed for the measurement of peer standing, using several measures derived from self-reports, peer reports, and network analyses (Killeya-Jones et al., 2007). More specifically the *behaviour hypothesis* which holds that regular use of alcohol and cigarettes—relatively rare yet highly visible rule-breaking behaviour among early adolescents—confers elevated peer standing on individuals, and the *person hypothesis* which holds that central, popular, more highly visible youth are more likely to evidence novel rule-



or norm-breaking behaviours, including regular early substance use, were evaluated. Their findings found stronger support for the *person* hypothesis than the behaviour hypothesis (Killeya-Jones et al., 2007).

Bogg and Finn (2009) conducted a quantitative studying which focused on using insights from Ecological Systems and Reinforcement Sensitivity Theory to assess the utility of a series of hypothetical role-based alcohol-consumption scenarios that varied in their presentation of rewarding and punishing information. According to Bogg and Finn (2009), there has not been a comprehensive model or theory regarding the ecology of alcohol consumption of licit and illicit substances in general. Bogg and Finn (2009) suggest that this is due, in large part, to the consensus understanding that patterns of alcohol use and substance-use behaviours are explained by the dynamic interplay of genetic and environmental factors. According to Bogg and Finn (2009), the lack of an ecological model of alcohol consumption also is the result of research approaches that have relied heavily on factorial designs to parse differences between alcohol dependent and non-alcohol dependent individuals on assorted personality, motivation, cognitive, and task performance constructs. Implicit in such designs is an emphasis on individual difference factors, rather than situational factors, as being critical to understanding alcohol use and abuse (Bogg & Finn, 2009)

A quantitative study conducted by Cleveland, Feinberg and Greenberg (2009), focused on factors occupying the micro-system of the ecosystemic framework. The primary aim of the study was to examine how family protective factors influence adolescent alcohol, tobacco and other drug use (ATOD). They were especially interested in determining whether the influence of family level protective factors varied across different school contexts (Cleveland et al., 2009). Results provide evidence that this effect of family processes on adolescents' ATOD use outcomes. They also found that individual family-level and school-level aggregates of parental protective factors interacted to predict ATOD use (Cleveland et al., 2009). According to Cleveland et al. (2009), the nature of the cross-level interaction consistently indicated that the benefit of belonging to a well-functioning family, relative to others in your school, was more influential for students attending schools characterized by higher-than-average aggregate levels of protection compared to students attending schools of lower-than-average protection.

A quantitative study conducted by Mason (2010) tested a mediation model of the relationship with school problems, social network quality, and substance use. The main aim of the study was to investigate the role of social network quality, conceptualized along a risk/protective continuum, in mediating the influence of school problems (Mason, 2010). They found that urban adolescents, social network quality partially mediates the effects of school problems on substance use while accounting for internalizing problems and relations with parents. Their findings also support the social hypothesis that the negative influence of school problems on substance use can be partially mediated by protective social networks (Mason, 2010).

### **3.3.2. Meso-system**

In an effort to identify factors that might predict the use and abuse of harmful substances, Lo (2009) conducted a quantitative study to assess the relationship between familial and socioeconomic associated factors and the use of tobacco, alcohol and marijuana. According to Lo (2009), the associated factors were placed on a structure following the ecological model. Family conflict, a micro-system level variable, was tested along with family income and parent education, eco-system level variables, in a regression model with differing modes of substance use as dependent variables. Lo (2009) found that an exo-system level variable moderated the relationship between the micro-system variables and marijuana use. In particular, high levels of family conflict and low levels of family income were related to the highest levels of marijuana use.

Lopez et al. (2009) conducted a quantitative study examining the risk and protective factors for substance abuse involving the family-peer and family-school meso-systems (relationships between the adolescent's worlds) as well as the school micro-system (in which the adolescent participates directly) in order to identify partial targets of preventative intervention. The Eco-developmental theory formed their theoretical framework, which is based on Bronfenbrenner's (1979) ecological perspective. In addition to Bronfenbrenner's work, Eco-developmental theory also incorporates a social interaction theory (Lopez et al., 2009). Consistent with studies conducted on general population samples, parental monitoring has been found to influence risk for substance use in Hispanic youth both directly and indirectly. Furthermore, Lopez et al. (2009) found that immigration status, parental academic involvement, school functioning, perceived peer substance use, and parental monitoring accounted for over 60% of the variance in early substance use, with peer substance use

having the greatest association with early substance use. Moreover, they found that adolescents' perception of their peers' substance use significantly mediated the association between school problems and adolescents' reports of their substance use.

### **3.3.3. Exo-system**

According to Mason et al. (2009), a small body of research has demonstrated that subjective ratings of the physical and social characteristics of home neighbourhoods have been found to be important and strong predictors of behaviour such as substance use and mental health outcomes. Furthermore, qualitative studies have shown that perceptions of particular places are thought to influence health and health related behaviours and are particularly suggestive of causal pathways linking place with health outcomes (Mason et al., 2009). Based on Bronfenbrenner's more recent Bio-ecological Systems Theoretical Framework, that understands individuals through an interaction of the developmental processes and social and environmental contexts that produce outcomes of competence or dysfunction, they conducted a quantitative study to integrate data reflecting the meaning adolescents ascribe to risky and safe activity (Mason et al., 2009). They found that environmental characteristics influence urban adolescents' perceptions of safety and risk and that these perceptions vary between substance users and non-users. Important to their findings is that they found no differences between safe and non-safe places with regard to geographic character for substance users. In contrast, non-substance users had significant differences between their safe and non-safe locations with regard to certain geographic characteristics (Mason et al., 2009).

Snedier et al. (2009) conducted a study focusing on whether neighbourhood disadvantage and instability influence adolescent substance use behaviours either directly or as a moderator of specific personal, family, and peer characteristics. Their general framework which attained that neighbourhood context has direct and/or moderating effects on alcohol and marijuana use was supported in their findings. According to Snedier et al. (2009), neighbourhood disadvantage does not act to increase alcohol and marijuana use, but instead, significantly associated with lower substance use among adolescents. Furthermore, they found no direct effects for residential instability on either adolescent alcohol or marijuana use (Snedier et al., 2009).

### 3.3.4. Chrono-system

Hulpern, Kaestle and Hullfers (2007) conducted a quantitative study focusing primarily on individual factors, more specifically on early pubertal timing and advanced physical maturity for age. Their findings indicate that early timing and advanced status for age are associated with a greater likelihood of risk behaviour for both boys and girls, and that these associations, although sometimes satisfied, have implications for adult health and adjustment (Hulpern et al., 2007).

A quantitative study conducted by Sutherland and Shepherd (2001), aimed at exploring the relationship between various social aspects of young people's lives and substance use and the differences in the degree of influence exerted by the different social factors as a function of age. Their work was based on a risk factor approach to substance abuse. A risk factor approach assumes that there are multiple, and often overlapping, associated factors in an individual's background that lead to substance use. The models and relationships presented in this study indicated that a constellation of behaviours are related to adolescent substance use, such as trouble with the police, suspension from school, academic achievements and expectations, religious beliefs, family structure, and family versus peer influence. Furthermore, they demonstrated that behaviours cannot be considered in isolation, but need to be examined from a holistic biopsychosocial standpoint. According to Sutherland and Shepherd (2001), these relationships are complex and future research should consider not only causality of adolescent substance use, but also of the aetiology of the dependency behaviours, in other words they should also consider the causes, origins, evolution and implications of dependency behaviours. .

Durr, Small and Dunlap (2010) conducted a qualitative study examining African American women's substance abuse as a response to stressful life events grounded in adolescence, drawing in part on the cognitive transactional approach and distal stressor model to discuss the effects of stressors on mental health and substance abusing behaviour. According to Durr et al. (2010), most respondents viewed their adolescent experiences and the associated stress as tribulations or lessons to be lived through rather than a signal of needed change in their social, cultural, and ecological life circumstances. The effect of exposure to constant stressors early in the life course coupled with proximal stressors often resulted in negative active responses to stress (Durr et al., 2010). Findings from this study have advanced and informed

the development of the new model for understanding African-American adolescent girl's responses to stressful life events and use of illicit substances (Durr et al., 2010).

### **3.3.5. Associated factors on all levels**

Hong, Huang, Sabri and Kim (2011) conducted a review to understand the risk and protective factors that are associated with substance use among Asian American youth using Bronfenbrenner's (1994) ecological systems theory. They examined how individual characteristics (age, gender, psychopathology, genetics, and ethnic differences), micro- (family and peers), meso-/exo- (relations between family and peers, cultural norms, and economic stress), macro- (academic achievement and cultural influences), and chrono-systems (acculturation) level factors influence or inhibit substance use among Asian American youth. In addition, this review highlighted major implications for practice and policy to prevent substance misuse and to improve outcomes for substance abusing Asian American youth. According to Hong et al. (2011), while some of these factors (e.g., depression) may place Asian youth at risk for substance misuse, others (e.g., positive relationship with parents) may protect them from developing substance use problems. According to Hong et al. (2011), early identification of associated factors for substance misuse may help develop prevention strategies for at-risk Asian American youth. Hong et al. (2011) state that further studies must consider the heterogeneity among Asian Americans unlike earlier studies and reports that failed to recognize ethnic differences. Furthermore, research is needed to develop evidence-based, culturally appropriate interventions to address treatment needs and to substantially enhance the quality of services provided to Asian American youth.

A review conducted by Randolph (2004) on risk factors associated with adolescent drug use, indicates that much of the research on understanding substance use among teenagers takes a risk factor approach, testing models that explore variables associated with the onset, continuation, and escalation of use in general. Randolph (2004) further states that generally these models are informed by ecological theories in that clusters of risk factors are categorized by particular environmental domains that are relevant during adolescence. The review builds on previous literature reviews (Hawkins, Catalano & Miller, 1992) by examining studies that focused on the dynamic nature of risk factors. Hawkins et al. (1992) suggest that the most promising route to effective strategies for the prevention of adolescent

alcohol and other drug problems is through a risk-focused approach. This approach requires the identification of risk factors for drug abuse, identification of methods by which risk factors have been effectively addressed, and application of these methods to appropriate high-risk and general population samples in controlled studies (Hawkins et al., 1992). The study focused on how the influence of these risk factors changed over time (Randolph, 2004). According to Randolph (2004), the research showed that risk factors associated with adolescent substance use are dynamic in that their relationship to substance use changes over time. Randolph (2004) further states that these changes can be characterized by at least five time-related mechanisms: 1) the changing nature of risk-related norms and expectations that are tied to certain historical periods or eras; 2) individual development which leads to changes in certain risk factors; 3) the notion that drug use progresses and escalates over time; 4) the chain of influence, or chain risk, that begins in early or middle childhood; and 5) the co-occurrence of risk factors, known as cumulative risk. Each of the five mechanisms was shown to be representative of changing risk factors related to adolescent substance use. According to Randolph (2004), although these factors appear to be dynamic and to be related to individual behaviour, little is known about the process underlying their changes in individual behaviour such as substance use, independent of other more proximal influence. Feinberg et al. (2007) later conducted a study to facilitate research on adolescent risk and protection regarding behaviour problems, and to facilitate community decision-making regarding resource allocation for intervention programs, by creating a reduced set of coherent aggregate indices of adolescent risk and protection factors. The study makes use of a combination of theoretical conceptualization and empirical analysis to arrive at a reduced set of theoretically meaningful, empirically coherent, and useful aggregate indices. Feinberg et al. (2007) found that the construction of theoretically meaningful and empirically defensible aggregate measures of adolescent risk and protective factors is possible, although analysis of other data sets and further discussion are warranted.

#### **3.4. South African research on substance use and the social environment.**

In South Africa only a few studies investigated contextual factors associated with substance abuse (Brook et al., 2006; Flisher, Parry, Evans, Muller & Lombard, 2003; Parry, Morojele, Sabin & Flisher, 2004). These studies consider different contributory factors that fall into one or more of the ecosystems of the Bio-ecological Systems Theoretical Framework.

### **3.4.1. Individual**

Swarts (2009) conducted a qualitative study that explored the perceptions and experiences of youth currently, or who has in the past, engaged in activities that may influence their use of methamphetamine. The research was conducted through a social ecological discourse. The study uncovered many variable factors in relation to the risk and protective factors of drug use. Within the geographical location where the research was conducted, these factors take on the form of hardship, struggle, and endurance for its local inhabitants. According to Swarts (2009), these risk and protective factors cannot merely act as subjects for reflection, but must be able to assist in contributing to an environment where the inhabitants no longer have to feel that failure is inevitability.

### **3.4.2. Micro-system and Meso-system**

A quantitative study by Parry et al. (2004) aimed to identify social and neighbourhood correlates of drunkenness among adolescents falling within the micro-system. The neighbourhood and social factors that it assessed included presence of drunkenness, exposure to drunkenness, and reactions to drunkenness by neighbourhood members. The factors included peer influence, neighbourhood and recreational activities. They found that being exposed to drunken behaviour increases the risk of drunkenness in adolescents.

Jantjies (2011) conducted a narrative study aimed at providing an understanding of the interaction of the social and historical contexts in relation to the life experiences and perceptions of the youth residing in the Cape Flats. The research study highlighted the important theme of consequences of crystal methamphetamine that located itself in the micro-system and the meso-system of the ecological systems theory. According to Jantjies (2011), these consequences were located in the economic, social, family and psychological dimensions. Furthermore, she states that the understanding of crystal methamphetamine use should be understood in the historical context of South Africa.

### **3.4.3. Exo-system**

Plüddemann et al. (2008) conducted a quantitative study investigating involvement in substance use and sexual activities among adolescents in Cape Town. Plüddemann et al. (2008) also focused on factors that account for most levels of the Bio-ecological Systems Theoretical Framework. However, they were mainly for demographic characteristics largely

related to the socio-economic status of the individual or their family. They found that students that had used substances, such as methamphetamine, were more likely to have engaged in risky sexual behaviour.

#### **3.4.4. Associated factors on all levels**

Flisher et al. (2003) conducted a quantitative study, focusing on the individual factors as well as factors that relate to the various levels of the Bio-ecological Systems Theoretical Framework, such as the microsystem (school), the mesosystem (area of residence) and the exosystem (neighbourhood drinking). These factors, however, include mostly demographic factors related to increased risk of substance abuse. Furthermore they investigated whether substance use is associated with urbanization, high school drop-out rates, absenteeism, economic disadvantage, poor scholastic progress and family structure in Cape Town youth. They found that some factors are associated with substance use only for certain groups.

Furthermore, Florence and Koch (2011) conducted an exploratory quantitative study to determine whether there is a difference in subjective well-being as measured by the KIDSCREEN-52, in adolescent substance users and non users. The study with its limited focus on aspects of the levels of the eco-systemic theory, succeeded in helping to explore and understand some of the factors that distinguish adolescent users from non users. They further suggest more research on these specific aspects is needed. The study provides a strong rationale for further research using the same approach to subjective well-being with regards to contextual factors and to include other, more relevant aspects as well as levels in these studies.

Rule (2010) conducted a qualitative study exploring school learners' perceptions of the factors that influence methamphetamine use in Manenberg. Specifically focusing on 1) exploring school learners' knowledge and understanding of methamphetamine use, 2) exploring school learners' perceptions of methamphetamine and its uses, and 3) exploring school learners' perceptions of the factors that influence methamphetamine use. The study was informed by the ecological systems theory as proposed by Bronfenbrenner (2005). It was found that parents perceptions, attitudes and also behaviour inform those of their children, peers may influence decisions regarding using methamphetamine; the relationships between the microsystems such as parental views and schooling may influence an individual's



perception and understanding of substance use, how structures of the exo-system such as poverty, policy makers and community leaders influence development or decisions regarding methamphetamine use and, how cultural norms may also contribute to decisions based on methamphetamine use.

### **3.5. Research related to instruments used for substance abuse**

Ciesla and Yao (2011) conducted a quantitative study using Item Response Theory (IRT) to evaluate a scale designed to measure the peer relations of adolescents treated for substance use disorder and to suggest a possible association of the construct of peer relationships to the literature on social support. According to Ciesla and Yao (2011), research in the area of drug and alcohol use examining treatment outcomes for adolescents with Substance Use Disorders (SUDs) is relatively understudied. Moreover, what is known and published is mainly based on literature about adults. They further state that the current research based on the adult population has identified many risk and protective factors relevant to substance abuse. These are: Socio-demographic characteristics, severity of addiction, involvement in risky behaviours, co-occurring psychological disorders and other risk factors that relate to treatment outcomes (Ciesla & Yao, 2011). However, they further state that although issues identified for adults undoubtedly have implications for adolescents, care should be taken not to generalize indiscriminately from the adult to the adolescent populations due to social developmental factors unique to adolescence. Furthermore, where theory or consensus exists about the variables that predispose adolescents to relapse and factors that prevent relapse, there are few standards for operationalization measuring and analysing these variables. Thus, difficulty arises for the academic community to identify and describe the dynamic of relapse therefore making it difficult to draw conclusions about best practice in the treatment field. According to Ciesla and Yao (2011), one area that differs in risk and protective factors between the adult and adolescent population is the role the relationships the adolescents have with their friends' plays as a possible protective or buffering factor. In other words, the "peer relations" of adolescents treated for SUD seems to be protective of relapse to alcohol, tobacco other drugs, post treatment.

According to Arthur, Hawkins, Pollard, Catalano and Baglioni (2002), risk and protective factors predictive of adolescent problem behaviours such as substance abuse and delinquency are promising targets for preventative intervention. Their study describes the development,

reliability, and validity of a self-report survey instrument for adolescent's aged 11 to 18 years that measures an array of risk and protective factors across multiple ecological domains as well as adolescent problem behaviours. According to Arthur et al. (2002), the instrument can be used to assess the epidemiology of risk and protection in the youth populations and to prioritize specific risk and protective factors in specific populations as targets for preventative intervention. The survey development process included five stages: 1) formation of a pool of items hypothesized to measure the constructs of interest, 2) cognitive pretesting of potential survey items, 3) pilot testing of the survey instrument and classroom administration procedures, 4) selection of items and scales for the final instrument using data from a state-wide probability sample of public school children in grade 6, 8, and 11 in Oregon, and 5) assessment of the reliability and validity of the resulting risk and protective factor scales. The initial results indicate that the survey does, in fact, measure the identified risk and protective factors that have been shown in other studies to predict adolescent antisocial behaviour, including delinquency, substance abuse, and violence (Arthur et al., 2002).

### **3.6. Conclusion**

To summarise, previous research focus extensively on risk and protective factors on various levels of the Bio-ecological Systems Theoretical Framework, however very few studies contextualize the issue of substance abuse holistically in a 'community' framework. These studies merely focus on the individual or the community as separate bodies, rather than focusing on these aspects as interwoven and influencing each other (Ravens-Sieberer et al., 2001; Rajmil et al., 2004; Robitail et al., 2006; Hong et al., 2007; Ravens-Sieberer et al., 2007; Haraldstad et al., 2010;). There is also a lack of instruments to adequately measure all possible factors associated with adolescent substance use, that are continuously highlighted in research, within a South African context. An instrument therefore needs to be developed that successfully measures all levels of the community within an appropriate framework, namely the Bio-ecological Systems Theoretical Framework and that is appropriate for adolescents (Merikangas et al., 1998). Although factors relating to substance abuse within adolescents have been extensively researched, it generally centred on personal factors or the community as separate bodies using instruments adapted from international studies. It is therefore important to develop an instrument that successfully measures factors associated with adolescent substance abuse within a Bio-ecological Systems Theoretical Framework relating

to a South African context. In the following chapter I discuss the methodology employed in conducting this study.



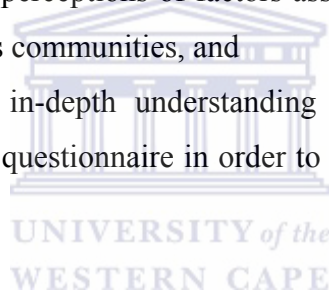
## CHAPTER 4: METHODOLOGY

### 4.1. Introduction

The following chapter focuses on various aspects of the methodology. This includes the research approach, research design, the sample size as well as the sampling procedure. Furthermore, it includes the instrument that was used to collect data and procedures that were used to reach participants.

The overall purpose of the current study was to evaluate the content validity of the dimensions of the proposed self-administered questionnaire in terms of the Bio-ecological Systems Theoretical Framework, which will measure the factors associated with youth at risk of substance abuse in low socio economic status communities in the SA context. The specific aims were:

- 1) to quantitatively evaluate the content validity of the dimensions in terms of the community stakeholders' perceptions of factors associated with substance use in two low socio-economic status communities, and
- 2) to qualitatively gain an in-depth understanding of the themes presented in the blueprint of the proposed questionnaire in order to explore the content validity of the dimensions.



The instrument (referred to as the proposed questionnaire) will serve two purposes:

- 1) To assess an individual for risk of substance use from a Bio-ecological Systems Theoretical Framework perspective.
- 2) To evaluate the risk of high prevalence rates of substance use in a community from the Bio-ecological Systems Theoretical Framework perspective of adolescents in that community.

Here it is important to note the different aims of the study as this in turn shapes the methodology. Furthermore, the framework of the dimensions and how it was derived is also of importance; this will be discussed more comprehensively under data collection.

The study was conducted in the field of psychometric test theory focusing specially on the procedures for content validation. According to Anastasi and Urbina (1997), it is being increasingly recognized that the development of a valid test requires multiple procedures,

which are employed sequentially, at different stages of test construction. Validity is thus built into the test development from the outset (Please refer to the validation theoretical framework section). It is important to note that, for the scope of this study, qualitative analysis as well as quantitative analysis has been employed for analysing the data.

## **4.2. Participants**

Participants were selected by means of purposive sampling. Purposive sampling refers to the sampling method whereby the researcher uses people who fit a particular criterion (Neuman, 2000; Henning, 2004). In this study the sampling method was deemed appropriate since the participants were required to meet certain inclusive criteria, that is, they had to be community leaders within the specific communities on the Cape Flats or members of organisations associated with drug use within the respective communities. The participants comprised of two groups of various community leaders and stakeholders from two low socio-economic areas on the Cape Flats. The communities were labelled community 1 and community 2 for ethics and administrative purposes.

### **4.2.1. Participants from community 1**

Participants from the first community consisted of community stakeholders in the community. They were selected by means of purposive sampling as they needed to be community leaders of the specific community in which the research was conducted. In the first group the community leaders were typically members of a local drug action committee. The committee was commissioned and set up by the Western Cape Department of Social Services and consists of members of all government organisations (police, social services, schools, etc.), local non-government organisations (NGO's) and non-profit organisations (NPO's), businesses and the religious sector (Ministers Fraternity) working in the community. The parent study has been maintaining ongoing contact with the community leaders since 2009; these community leaders played a pivotal role in the setting up of interviews with the various members of the community that made up the participants in the first phase of the parent project.

### **4.2.2. Participants from community 2**

The second group of community leaders were typically members from major organisations and forums in the second community of interest. These forums comprised of various

institutions such as social services, religious forums, governmental organisations (local Day Hospital and schools) and key figures in the community.

### **4.3. Procedure**

Permission and ethical clearance from the University of the Western Cape (UWC) was obtained to conduct research for the parent study. Permission was thus gained from the principal researcher to conduct the current study (appendix 1). Participants identified to participate in the study were contacted telephonically to determine interest and telephonic consent was obtained. A formal letter, including all the relevant information regarding the researcher and the research project, as well as the relevant letters granting us permission to do this study was provided for participating individuals (see appendix 2). Formal consent was then obtained, research was then conducted (see appendix 3). All the consent forms were signed, thus the study could proceed.

### **4.4. Method of data collection**

The study, as mentioned previously, centred on factors associated with adolescent substance use. These factors were framed within the Bio-ecological Systems Theoretical Framework and are presented in the blueprint of the proposed questionnaire. The data collection for this study was thus twofold and is in line with the aims of the study as well as the Validation Theory as recognised within the psychometric test theory. These methods will be elaborated upon as the chapter unfolds. When looking at the blueprint of the proposed questionnaire (Table 4.1) it is evident that the domains represent each level of the Bio-ecological Systems Theoretical Framework. The dimensions and sub-dimensions are merely the factors that were identified thematically in the parent study from the qualitative data collected from the community members that were deemed important factors associated with adolescent substance use. These community members included community leaders, parents, adolescents both attending and not attending school, as well as substances users within the community.

**Table 4.1: Blueprint of the proposed questionnaire**

<b>DOMAINS (ECOSYSTEMS)</b>	<b>DIMENSIONS (FACTORS)</b>	<b>SUB-DIMENSIONS</b>
<b>INDIVIDUAL LEVELS</b>	Racial/cultural identity	Alienation
	Self –identity	Self-efficacy Ambitions and plan for the future Coping mechanisms/ability to cope/resilience
	Desirable effects of drugs	
<b>MICROSYSTEM</b>		
<i>Family</i>	Family functioning	Violence & conflict* Divorce and step-parenting* Parental criminal activity Single parenting
	Parenting	Monitoring* Tolerance of substances Communication & social support* Economic pressure
	Parental involvement with drugs	Drug use Drug trade
<i>Peers</i>	Peer acceptance & support*	
	Experimentation*	
<i>School</i>	Experience of school*	as supportive* as a stressor*
<i>Neighbourhood</i>	Access to after-school activities	Boredom*
	Drug accessibility	Ease of access and affordability* Exposure to trade
<b>MESOSYSTEM</b>	Anti drug messages versus parental use or tolerance of drugs*	Confusion based on desensitization*
	Community acceptance of gang culture confusing to children*	Feelings about community gang identity* Feelings about community tolerance of drugs*

<b>EXOSYSTEM</b>	Social transformation	
<b>MACROSYSTEM</b>	Family finances and unemployment	
	Tolerance of soft drugs	Contradictory values
<b>CHRONOSYSTEM</b>	Socio-political history	
	Hope for the future	

\*Dimensions and sub-dimensions that measure proximal processes as define by Bronfenbrenner’s Bio-ecological Systems Theoretical Framework.

**4.4.1. Research Aim One: To quantitatively evaluate the content validity of the dimensions in terms of the community stakeholders’ perceptions of factors associated with substance use in two low socio-economic status communities.**

A self-administered questionnaire (will be referred to as the “Content Validity Questionnaire” (CVQ) from this point forward) served the cornerstone for soliciting specific information about a content area from the participants. The CVQ with various factors associated with adolescent substance use as identified in the parent study based on qualitative interviews with community members as well as factors identified in the literature was administered (see table below). According to Hayes (2000), a questionnaire is a very general method of obtaining information from people and it can be quite useful in providing factual information about people’s behaviour or habits.

**Table 4.2: Content Validity Questionnaire (also see appendix 4)**

<b>Factors</b>	<b>Not important</b>	<b>Somewhat important</b>	<b>Fairly important</b>	<b>Very important</b>	<b>Extremely important</b>
<b>Racial/cultural identity</b>	1	2	3	4	5
<b>Self –efficacy</b> i.e. a person’s belief in their ability to do something successfully	1	2	3	4	5
<b>Ambitions and plan for the future</b>	1	2	3	4	5
<b>Coping mechanisms/ability to cope/resilience</b>	1	2	3	4	5
<b>Desirable effects of drugs</b>	1	2	3	4	5
<b>Family violence and conflict</b>	1	2	3	4	5
<b>Divorce and step parenting</b>	1	2	3	4	5



<b>Factors</b>	<b>Not important</b>	<b>Somewhat important</b>	<b>Fairly important</b>	<b>Very important</b>	<b>Extremely important</b>
<b>Parental criminal activity</b>	1	2	3	4	5
<b>Single parenting</b>	1	2	3	4	5
<b>Parental monitoring of teens</b>	1	2	3	4	5
<b>Communication and support from parents</b>	1	2	3	4	5
<b>Poverty and unemployment</b>	1	2	3	4	5
<b>Parental drug use</b>	1	2	3	4	5
<b>Peer acceptance and support</b>	1	2	3	4	5
<b>Experimentation</b>	1	2	3	4	5
<b>Experience of school as a supportive environment/school as a stressor</b>	1	2	3	4	5
<b>Access to after-school activities</b>	1	2	3	4	5
<b>Boredom</b>	1	2	3	4	5
<b>Ease of access to and affordability of drugs</b>	1	2	3	4	5
<b>Exposure to drug trade</b>	1	2	3	4	5
<b>Confusion about parental use or tolerance of drugs</b>	1	2	3	4	5
<b>Confusion about community acceptance of gang culture</b>	1	2	3	4	5
<b>Social transformation</b>	1	2	3	4	5
<b>Family finances and unemployment</b>	1	2	3	4	5
<b>Tolerance of soft drugs</b>	1	2	3	4	5
<b>Socio-political history</b>	1	2	3	4	5
<b>Hope for the future</b>	1	2	3	4	5
<b>Religiousness</b>	1	2	3	4	5
<b>Academic ability</b>	1	2	3	4	5

<b>Factors</b>	<b>Not important</b>	<b>Somewhat important</b>	<b>Fairly important</b>	<b>Very important</b>	<b>Extremely important</b>
<b>Genetics</b>	1	2	3	4	5
<b>Affluence</b> – i.e. the state of having a great deal of money	1	2	3	4	5
<b>Physical fitness</b>	1	2	3	4	5
<b>Assertiveness</b>	1	2	3	4	5
<b>Moods and emotions</b>	1	2	3	4	5
<b>Resilience</b> – i.e. the capacity to recover quickly from difficulties	1	2	3	4	5

The CVQ made use of a rating scale. A rating scale involves the rating of a statement, a participant is required to rate the degree to which they agree or disagree with a statement, these scales usually make use of five to seven points (Breakwell, Hammond, Fife-Schaw & Smith, 2006; Isaac & Michael, 1971). The study made use of a five point rating scale, where factors associated with adolescent substance use were formulated as statements. Participants were asked to rate the statements from 1-5 (with 1 being not important and 5 being extremely important) to what extent they think the following factors are important contributors to adolescent substance use in their community. The CVQ consisted of the following main sections:

- Demographic questions and questions relating to personal attributes or characteristics affecting substance use. This was to gain insight on what factors are deemed important on an individual level relating to adolescent substance use.
- 23 items related to factors derived from the parent study consisting of:
  - 16 items related to the micro-system, of which included family functioning (1), parenting (8), peers (2), school (2) and the influences of the neighbourhood (3).
  - 2 items related to the meso-system, this mainly focused on anti drug messages versus parental use or tolerance of drugs as well as the community acceptance of gang culture.
  - 3 items related to the exo- and macro-system, which generally referred to social transformation, family finances and unemployment and tolerance of soft drugs, and

- 2 items related to the chrono-system which referred to social political history and hope for the future.
- 8 items related to factors identified in the literature that was not captured in the parent study such as religiousness, genetics, academic ability, affluence, assertiveness and so on were also included in the questionnaire (Section 2: dimensions present in the literature).
- Lastly the participants were given the option to add additional factors that have not been identified on the sheet provided. This formed section 3: open ended questions of the CVQ.

**4.4.2. Research Aim Two: to qualitatively gain an in-depth understanding of the themes presented in the blueprint of the proposed questionnaire in order to explore the content validity of the dimensions.**

An adapted version of the nominal group technique method was employed to elicit information for this research aim. The nominal method was used for both groups of community leaders. According to Van Teijlingen, Pitchforth, Bishop and Russel (2006), the nominal group technique offers a structured, transparent and replicable way of synthesising individual judgements from target groups who are most closely associated with a problem area and analysing this information. Their emphasis is placed on the production of immediate solutions to problems (Fink et al., 1984). This method is normally used in community needs assessments.

According to Van Teijlingen et al. (2006), this method was developed to avoid the problems of group interaction that may occur in focus groups. Although modifications were made to suit the purpose of the study, there are generally 4-5 stages involved in the nominal group technique. Participants are typically asked to record ideas independently before meeting the group. These ideas are then shared in the group, after which they are collated and summarized and each group member is asked to rank these (Fink et al., 1984; Van Teijlingen et al., 2006).

#### **4.4.2.1. Nominal Method as adapted for Research Aim two**

The data collection for research aim two involved several steps:

- The first step was to contact the various community leaders that participated. They were informed about the purpose of the study and the background thereof. The process was then explained to them.
- Once commitment to participate was reached, the relevant information about the dimensions as well as operational definitions was discussed with participating individuals.
- The community leaders were invited to a meeting where further information was given about the study. The various aspects concerning factors impacting on substance use in the community, based on the matured version of Bio-ecological Systems Theoretical Framework (family, peer groups, community etc.), was presented.
- A discussion was then stimulated to determine whether or not it covers all aspects of factors impacting on substance use in this community. The community leaders were required to determine whether or not the dimensions successfully cover all factors impacting on substance use within the particular community. The broad question of interest was discussed and explained, while a number of specific questions related to the first aim of the study were included. These questions were open-ended and included questions such as:
  - “Do these factors cover all aspects that play a role in adolescent substance use in this community as you understand it?” etc. (Appendix 5).
- Once their responses were captured, the researcher collated and summarized the information. Thereafter, the data was then analysed and reported.

### **4.5. Data Analysis**

#### **4.5.1. Research Aim One: to quantitatively evaluate the content validity of the dimensions in terms of the community stakeholders’ perceptions of factors associated with substance use in two low socio-economic status communities.**

Data acquired from research aim one (CVQ, sections 1 and 2) was analysed by means of basic frequency tests. This was done using the windows-based version of SPSS 19 (Statistical Package for the Social Science). According to Fielding and Gilbert (2006), one of the first things you might want to do with the data is to count the number of occurrences that fall into

each category of each variable. Kurtz (1999) defines a frequency as the number of observations with a common property. Fielding and Gilbert (2006) state that this provides you with frequency distributions which allow you to compare information between groups of individuals. In other words, a frequency distribution shows all the frequencies of an interrelated set of observations. They allow you to answer basic information between groups and it allows you to see what the highest and lowest values and the value around which the most scores cluster. This form of analysis was deemed appropriate as it fulfils the basic needs of the main objective of the study which is to determine whether or not the dimensions correspond with the community leaders' understanding of factors that impact on substance use.

The data collected from the two communities was firstly analysed together focusing on the factors identified from previous interviews and factors identified by the literature separately (i.e. section 1: dimensions from the parent study presented in the blueprint of the proposed questionnaire, and section 2: dimensions present in the literature). Thereafter, analysis was done on the data from each community separately. For the scope of this study only the collective analysis was reported on.

The open-ended questions of the CVQ questionnaire (section 3) was analysed by using thematic analysis. As it overlaps with method of analysis for research aim 2, this method of analysis will be fully explained in the section below.

#### **4.5.2. Research Aim Two: to qualitatively gain an in-depth understanding of the themes presented in the blueprint of the proposed questionnaire in order to explore the content validity of the dimensions.**

Data from research aim two was analyzed by means of a thematic analysis. According to Gibson (2006), the essential idea in thematic analysis is that it deals with data involving the creation and application of 'codes' to data. More specifically thematic analysis focuses on identifiable themes and patterns of living, and/or behaviour and ideas (Aronson, 1994). Themes are identified by "bringing together components or fragments of ideas or experiences, which often are meaningless when viewed alone" (Leininger, 1985, p. 60). Themes that emerge from the informants' stories are pieced together to form a comprehensive picture of their collective experience. According to Aronson (1994), the 'data' being analyzed

might take any number of forms – an interview transcript, field notes, policy documents, photographs, video footage. Due to its inductive nature, it is proposed that this method of analysing data has served to complement the exploratory nature of this study.

#### **4.6. Ethical Considerations**

Permission and ethical clearance was obtained from the University of the Western Cape to conduct this research (see appendix 2). Consent was also obtained from participating organisations. Information sheets were issued to all the stakeholders identified, explaining the purpose and nature of the research as well as how they fit into the study. Consent forms were also issued to participants to be signed by participants as proof of their permission to participate in the project. The values of the researchers, as far as possible, were not imposed on the community leaders and they were not coerced to participate in the project or to behave in a particular way in order to please the researchers.

Once the data had been collected and transcribed the tapes and transcriptions were stored in a locked cabinet together with the completed questionnaires. Only the principal researcher and supervisors had access to this cabinet throughout the analysis. Once the analysis of the larger project will be completed these documents and audio tapes will be destroyed in order to protect the identity of the participants and to keep the information confidential. The nature and sensitivity of the research has been taken into account, thus confidentiality was maintained by not including identifying data such as names or pictures. Participants were made aware of the fact that their involvement in the research is fully voluntary and that they could withdraw at any stage in the data collection process. Therefore, anonymity and confidentiality was of importance to avoid any complications (Hayes, 2000; Shaughnessy, Zechmeister & Zechmeister, 2006). Protection of the participant was ensured by no harm of any sort being done to the participant. If any harm was done, necessary precaution would have been taken.

#### **4.7. Conclusion**

This chapter provided an overview of how (methodology), where and with whom this study was conducted. The chapter was further aimed at trying to give an accurate account of each step in the research design and also to provide a rationale for the particular methods and

techniques that was selected out of the range of alternatives. In the following chapter the results and findings of the study will be presented.



## CHAPTER 5: RESULTS, FINDINGS AND DISCUSSION

### 5.1. Introduction

This chapter outlines the results of the quantitative component as well as the thematic analysis of the qualitative component, in relation to the aims and objectives of the study. As discussed in the methodology chapter, to fully meet the overall purpose of the study, a Content Validity Questionnaire (CVQ) was administered firstly, to determine the extent to which the participants regard the identified dimensions as important and secondly, to see whether or not they wanted to add any additional dimensions. Secondly, focus groups (following the nominal method technique) were conducted on the dimensions to get an in depth understanding of the participants' understanding and perceptions of the factors.

The results and analysis will be done in terms of the specific research aims which are:

- 1) To quantitatively evaluate the content validity of the dimensions of the questionnaire in terms of the community stakeholders' perceptions of factors associated with substance use in two low socio-economic status communities.
- 2) To qualitatively gain an in-depth understanding of the themes presented in the blueprint of the proposed questionnaire in order to explore the content validity of the dimensions.

### 5.2. Research Aim One: to quantitatively evaluate the content validity of the dimensions in terms of the community stakeholders' perceptions of factors associated with substance use in two low socio-economic status communities.

The following section contains the results of the factors associated with adolescent substance use in a low socio-economic status community. These findings are based on the first research aim of the study.

The results will presented in terms of the three main sections of the CVQ: *Section 1* presents the dimensions developed from the parent study that is presented in the blueprint of the proposed questionnaire; *Section 2* presents the dimensions present in the literature that was not found in the parent study; and *Section 3* presents the open-ended questions of the CVQ. While sections 1 and 2 present information concerning the frequencies of the proposed dimensions relating to adolescent substance use, section 3 highlights the qualitative responses of the questionnaire that have been thematically analysed.



### 5.2.1. Section 1: Frequencies pertaining to the importance of the dimensions

The responses in terms of the dimensions analysed here are those that are presented in the blueprint of the proposed questionnaire presented in the methodology. As mentioned in the previous chapters, these were found to be relevant factors associated with adolescent substance use. Furthermore, these dimensions were placed into Bronfenbrenner's Bio-ecological Systems Theoretical Framework to ensure that all systems are measured adequately.

The various domains will be presented in each table highlighting the responses of the participants for the dimensions and sub-dimensions (as described in the previous chapters).

#### 5.2.1.1. Individual level

**Table 5.1:** Results for Frequencies for the Individual domain

	Extremely important		Very important		Fairly important		Some what important	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Racial/cultural identity	9	28.1	11	34.4	9	<b>28.1*</b>	2	6.3
Self-efficacy	19	59.4	9	28.1	3	9.4	1	3.1
Ambitions and plan for the future	15	46.9	10	31.3	4	12.5	2	6.3
Coping mechanisms	11	34.4	14	43.8	3	9.4	3	9.4
Desirable effects of drugs	16	50	7	21.9	5	15.6	2	6.3

\*Indicates extreme percentages

Table 5.1 above, represents the frequencies from the dimensions identified by the parent study within the individual domain. There is a general trend that participants view these dimensions as important factors associated with adolescent substance use. The frequencies showed that most of the statements were regarded as extremely important or very important by almost all of the participants. Although 28.1% of participants indicated that racial/cultural identity is only fairly important, more than a third (34.4%) of the participants viewed racial/cultural identity as a very important factor associated with adolescent substance use. Therefore, these factors were deemed important factors associated with adolescent substance use.

### 5.2.1.2. Micro-system

**Table 5.2:** Results for Frequencies for Micro-system domain

	<b>Extremely Important</b>		<b>Very Important</b>		<b>Fairly Important</b>		<b>Some what important</b>		<b>Not important</b>	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Family violence and conflict	21	65.6	8	25.0	1	3.1				
Divorce and step parenting	14	43.8	12	37.5	5	15.6	1	3.1		
Parental criminal activity	17	53.1	12	37.5	2	6.3	1	3.1		
Single parenting	11	<b>34.4*</b>	5	<b>15.6*</b>	15	<b>46.9*</b>			1	3.1
Parental monitoring of teens	20	62.5	10	31.3	1	3.1				
Communication and support from parenting	21	65.6	7	21.9	2	6.3	1	3.1		
Poverty and unemployment	21	65.6	7	21.9	4	12.5				
Parental drug use	22	68.8	4	12.5	4	12.5	2	6.3		
Parental drug trade	17	53.1	5	15.6	4	12.5	3	9.4		
Peer acceptance and support	14	43.8	11	34.4	5	15.6	2	6.3		
Experimentation	7	21.9	12	37.5	8	25.0	4	12.5		
Experience of school as a supportive environment/ school as a stressor	12	37.5	11	34.4	6	18.8	2	6.3	1	3.1
Access to after-school activities	16	50	9	28.1	2	6.3	2	6.3	1	3.1
Boredom	6	18.8	15	46.9	8	25.0	1	3.1		
Ease of access to and affordability of drugs	21	65.6	6	18.8	4	12.5				
Exposure to drug trade	19	59.4	7	21.9	5	15.6	1	3.1		

\*Indicates extreme percentages

Table 5.2, above, represents the frequencies from the dimensions identified by the parent study within the micro-system domain. There is a general trend that participants view these dimensions as important factors associated with adolescent substance use. The frequencies showed that most of the statements were regarded as extremely important or very important by almost all of the participants. Although 46.9% of the participants regarded single parenting as fairly important, half of the participants either stated that it was an extremely important factor (34.4%) or a very important factor (15.6%). Therefore, it was concluded that all the dimensions within the micro-system domain are regarded as important factors associated with adolescent substance use.

### 5.2.1.3. Meso-system

**Table 5.3:** Results for Frequencies for Meso-system Domain

	Extremely important		Very important		Fairly important		Some what important	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Confusion about parental use or tolerance of drugs	14	43.8	9	28.1	7	<b>21.9*</b>	1	3.1
Confusion about community acceptance of gang culture	16	50.0	10	31.3	6	18.8		

\*Indicates extreme percentages

Table 5.3 (above) highlights the dimensions from the meso-system domain. The frequencies indicate that almost all of the participants agreed that these dimensions were either extremely important or very important factors associated with adolescent substance use. Although 21.9% of the participants indicated that confusion about parental use or tolerance of drugs is a fairly important factor associated with adolescent substance use, almost half of the participants (43.8%) indicated that it is an extremely important associated factor. These dimensions were thus deemed as important factors associated with adolescent substance use.

#### 5.2.1.4. Exo-system and Macro-system

**Table 5.4:** Results for Frequencies for Exo-system and Macro-system Domain

	Extremely important		Very important		Fairly important		Some what important	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Social transformation	12	37.5	11	34.4	7	<b>21.9*</b>	2	6.3
Family finance and unemployment	17	53.1	11	34.4	3	9.4		
Tolerance of soft drugs	14	43.8	12	37.5	4	12.5	2	6.3

\*Indicates extreme percentages

Table 5.4 highlights the relevant dimensions from the exo-system and macro-system dimensions. Although 21.9% of the participants indicated that social transformation is a fairly important factor; more than a third of the participants (37.5%) indicated that it is an extremely important factor associated with adolescent substance use. Similar to the other domains, the frequencies indicate that the general trend was that most of the participants agreed that these dimensions are either extremely important or very important factors associated with adolescent substance use.

#### 5.2.1.5. Chrono-system

**Table 5.5:** Results for Frequencies for Chrono-system

	Extremely important		Very important		Fairly important		Some what important		Not important	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Socio-political history	9	<b>28.1*</b>	8	<b>25.0*</b>	7	21.9	7	<b>21.9*</b>		
Hope for the future	18	56.3	8	25.0	5	15.6			1	3.1

\*Indicates extreme percentages

Table 5.5 (above) highlights the relevant dimensions from the chrono-system domain. Although 21.9% of the participants indicated that socio-political history is some what important, 28.1% indicated that it is an extremely important factor and a quarter of the participants (25.0%) indicated that it is a very important associated factor. Thus, the frequencies indicate that more than half of the participants agreed that these are either extremely or very important factors associated with adolescent substance use.

### 5.2.2. Section 2: Dimensions from literature

The dimensions analysed here are those identified in the literature that was not identified in the qualitative findings of the parent study. These were found in other studies with different populations than the current study's population. These factors were found to be relevant factors associated with adolescent substance use. Table 6 shows that participants generally indicated that religiousness, academic ability, genetics, affluence, physical fitness, assertiveness, moods and emotions and resilience, were important factors associated with adolescent substance use.

**Table 5.6:** Results for frequencies from literature

	Extremely important		Very important		Fairly important		Some what important		Not important	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Religiousness	13	40.6	8	25.0	6	18.8	5	<b>15.6*</b>		
Academic ability	11	34.4	8	25.0	6	18.8	5	15.6		
Genetics	7	21.9	5	15.6	10	31.3	9	<b>28.1*</b>		
Affluence	5	15.6	11	34.4	10	31.3	5	15.6		
Physical fitness	13	40.6	5	15.6	9	28.1	4	12.5	1	3.1
Assertiveness	9	28.1	11	34.4	8	<b>25.0</b>	1	3.1	1	3.1
Moods and emotions	11	34.4	10	31.3	5	15.6	6	18.8		
Resilience	9	28.1	10	31.3	12	<b>37.5</b>	1	3.1		

\*Indicates extreme percentages

Table 5.6 (above) shows that participants indicated that these dimensions are important factors associated with adolescent substance use to consider. The frequencies indicate that most of the participants either indicated that these factors were extremely important or very important factors associated with adolescent substance use. Although, for dimensions such as genetics, affluence and resilience almost a third of the participants indicated that these factors are fairly important factors, however, almost two thirds of the participants rated these dimensions within the first two columns (extremely important or very important). Thus, these factors were also regarded as important factors associated with adolescent substance use.

### **5.2.3. Section 3: Open-ended questions of the Content Validity Questionnaire**

This section will illustrate the findings of the qualitative component of the CVQ in the form of various themes. The various themes will be discussed in terms of Bronfenbrenner's Bio-ecological Systems Theoretical Framework. These themes were additional themes highlighted by the participants.

#### **5.2.3.1. Individual**

From the individual domain which highlights the person with his or her individual collection of biological, cognitive, emotional and behavioural characteristics, a number of additional factors were highlighted by participants such as deprivation, psychological factors and sexual activities. Participants referred to deprivation as emotional, financial and psychological deprivation that may also have undesirable impacts on the individual. Furthermore, psychological factors highlighted mainly referring to depression, secrets that were devastating to the person as a young child, undetected personality disorders, and psychological trauma – for example a traumatic event or experience. Furthermore, sexual activities were highlighted as a possible associated factor. This mainly referred to teenage pregnancy and unwanted pregnancies.

#### **5.2.3.2. Micro-system**

The micro-system is seen as the closest level to the child which encompasses relationships and structures within the child's immediate environment (Berk, 2000). Structures in the micro-system include family, school, neighbourhood, or childcare environments. Various additional factors were highlighted such as awareness/education, school dropout, and disappointment from partner, isolation, family dysfunction, and religiosity. Furthermore, no recreation facilities and lack of role models were also highlighted as important factors associated with adolescent substance use.

Participants referred to awareness/education as general awareness of substances, access to information, ongoing workshops, communication and life skills, teaching adolescent's morals and principles, and the need for more education for children, e.g. school outings, as well as teaching children anger management and what is going on in their environment or community at large specifically in relation to drugs and alcohol (awareness). School dropout was also another factor emerging from the micro-system domain. Many surveys conducted

within the school environment generally do not account for dropouts and absentees; however, it was found that rates of substance use are usually higher for these subgroups (Flisher et al., 2003).

Another factor emerging from the micro-system domain included disappointment from a partner. This included disappointment from a lover and adultery. Isolation also emerged as a key associated factor. This included isolation – within the family unit as well as amongst peers – as well as loneliness. Family dysfunction was also highlighted as a key factor associated with adolescent substance use. This included, lack of support from dysfunctional parents, family structure being changed, dysfunctional families, and father's not playing their part, thus, much left for mothers to do. Furthermore, abuse by children to family members, especially to old people, as well as parental education, single parents, parental responsibilities and education, family problems, and mothers/ parents are in denial. Lastly, religiosity was also found to be an important associated factor. This was described as firstly, the need for the religious platform to be very consistent in their way forward. Secondly, there is a need for the church to be empowered where counsellors are concerned to reach out to young people in the community. And lastly, the church (sleeping giant) needs to awaken in the community and become more active in young people's lives. Furthermore, participants emphasised the lack of recreation as a factor associated with substance use. Furthermore, roles models referred to the breaking down of role models in front of young people as well as the need for mentors and role models within the communities.

### **5.2.3.3. Macro-system**

The macro-system forms a layer that does not directly influence the child and forms the outermost level of the child's environment. While not being a specific framework, this layer is comprised of cultural values, customs, and laws (Berk, 2000). Factors emerging here included the governmental responsibilities and financial burden. Governmental responsibilities were referred to as 'government' or municipality not doing enough for the community in terms of the needs of the community. This referred to the judicial system for example the police as well as policies not being enforced. Financial burden on the other hand referred to unemployment and poverty.

#### 5.2.3.4. Chrono-system

The chrono-system encompasses the dimension of time as it relates to an individual's environments. It refers to the historical context as it occurs within the different systems and the changes that take place throughout the child's development. Elements within this system can be either external, such as the timing of a parent's death, or internal, such as the physiological changes that occur with the aging of a child. This could also include changes within the macro-system overtime as in SA, with reference to the Apartheid era (Berk, 2000). Thus, the current socio-economic status of various communities within South Africa is largely related to the social transformation from Apartheid to a "new democratic" South Africa. Since adolescents are of school going age there financial state depends largely on their parents' income. Their parents' level of income in turn depends largely on the socio-economic status of the community in which they reside. This could be due to various factors such as level of education. However, this phenomenon is further discussed in the next chapter. Important to note here is how financial state influences substance use on various levels in different forms, according to these community participants

#### **5.3. Research Aim Two: to qualitatively gain an in-depth understanding of the themes presented in the blueprint of the proposed questionnaire in order to explore the content validity of the dimensions.**

The current section is based on the second aim of the study. This section will illustrate the findings of the qualitative component of the study in the form of various themes. As the previous section provided an examination of the various identified associated factors, the current section provides an in-depth exploration of participants' perceptions of these factors. The following themes were uncovered within the findings of the present study. These themes will be illustrated and elaborated on. The overall purpose of this section is to provide a rich understanding of the participants perception of the dimensions put forward as a support to the findings in the previous section. The main dimensions, again as conceptualized by Bronfenbrenner's Bio-ecological Systems Theoretical Framework, are as follows: the individual, the micro-system, the meso-system, the exo-system, the macro-system and the chrono-system. Here it is also important to note the importance of this section in the validation process as this section aims to confirm and elaborate on the previous section. This section is thus important in evaluating the content validity of the dimensions.



### 5.3.1. Individual

The first domain, namely the individual, describes the person with his or her individual collection of biological, cognitive, emotional and behavioural characteristics (Adamsons et al., 2007). The major themes emerging within this domain from previous research, as presented in the blueprint of the proposed questionnaire (see Table 4.1 in methodology section), from the parent study were racial/cultural identity, self-identity, and desirable effects of drugs.

Racial/cultural identity was found in the parent study, as presented in the blueprint of the proposed questionnaire, to be an important factor associated with adolescent substance use. However, the participants in the focus groups did not put much emphasis on this during the interviews in the current study; even though it was rated as important in the CVQ (see Table 4.1 in methodology section). In contrast, self-identity was the central theme that emerged in the individual domain. The key constituents emerging from self-identity were linked to personal characteristics of the individual as well as the genetic predisposition of the individual. Personal characteristics were described by the participants as the ability not to fall victim to substance use regardless of their surroundings. They also link the ability to make informed decisions, to the child's personal characteristics. In other words, if the child is able to make sound decisions they will be less likely to fall victim to substance use. Genetic predisposition was described as a characteristic inherited from parents. More specifically, it refers to side effects resulting from parental substance use, such as Foetal Alcohol Syndrome. These findings are presented below:

You know I'm born and bred and raised here in "Community 2" now my whole life I've been in this area and uhm I don't need to use drugs you know. (C2: 1)

But wat van die kind wat nie eens kan estimate hier's iets verkeerd nie hy gaan val in die trap. (C1: 3)

That is talking about decision making, and thinking. Jy weet werk op hulle self-esteem those kind of things that they can learn to say no. (C1: 3)

Ja ma jy sien that can also be its like, ok this is the nature versus nurture (*Researcher 1: Exactly*) you know, it's about how that child grows up also. Do you grow up in that environment... (C1: 23)

And does that also has to do with, to do with the alcoholism where we get this uhm..what is this Alcohol Foetal syndrome babies, FAS children. And so when they go to school...(C1: 19)

Together with self-identity, the second major theme that emerged from the individual domain was desirable effects of drugs. Here participants highlighted the fact that increased sexual desire motivated substance use. This finding is expressed below:

Die dokter het vir ons ge-explain. Ek was by 'n workshop. Dit bring daai sexdrang....(*rambling*)  
daai heavy feeling, it bring dit maak dit los... (*rambling*)...(C1: 17)

In summary, although racial and cultural identity was found as an important factor associated with adolescent substance use, the current study found no evidence supporting this finding. Self-identity, however, emerged as the central theme with personal characteristics of the individual and genetic predisposition of the individual as key constituents. Furthermore, desirable effects of drugs emerged as the second major theme associated with adolescent substance use. The micro-system is the next domain that will be discussed.

### **5.3.2. Micro-system**

The second domain, namely the micro-system, is seen as the closest level to the child which encompasses relationships and structures within the child's immediate environment (Berk, 2000). Structures in the micro-system include family, school, neighbourhood, or childcare environments. The major themes emerging within this domain, from the parent study as presented in the blueprint of the proposed questionnaire, were 1) family functioning, which included the family, parenting and parental involvement with drugs, 2) peer influence, which included peer acceptance and support as well as experimentation, 3) experience of school, which referred to low education, school dropout and school system, and 4) the neighbourhood influence which included access to after school activities and drug accessibility.

#### **5.3.2.1. Family Functioning**

##### **5.3.2.1.1. The Family**

The family was one of the major themes that emerged during the interviews as well, from the family functioning domain within the micro-system. This theme had three emerging constituents, namely family influence, domestic violence and family support. These themes are presented in the blueprint of the proposed questionnaire (see Table 4.1 in the methodology section). Participants merely elaborated on these themes giving us an in-depth view of what they consider to be important factors associated with adolescent substance use within this domain. Family influence was described by the participants as the amount of

knowledge about a specific topic the family has to positively contribute to their children's development. In other words, they reported that if the family has the correct information about substance use, this information can be carried over to the children. Furthermore, the functioning of the family also contributed to the influence from the family. This was highlighted as a key issue in family influence as participants highlighted the fact that, families within the community were highly dysfunctional, thus when children are faced with problems they cannot seek help from the family. Family support also emerged as a key theme; this was described as the amount of positive support young people receives from parents. Furthermore, it also included whether or not parents condone sibling drug use. Lastly domestic violence also emerged as a theme within the family domain. These findings are presented in the following extracts:

As n mens die, die hoof of die ouers van die huis gesin dan die regte inligting gee, ek glo dat inligting bemagtig jou. So dat n mens werklik inligting van die liewe oorspoel, en ek glo dit sal oorspoel na, na die, die kinders toe.(C2: 3)

Erh ons sit met n probleem van dysfunctional families, erh en die ding wat gebeur binne die huwelik? Erh, ons is in die bediening jy hoor baie snaakse dinge. (C2: 5)

...okay in this community is the families are mostly is dysfunctional. Dysfunctional families, so the child doesn't have errh or if the child encounters the problem it's difficult to, to go to the family with the problem. (C1: 2)

Like my neighbours child opposite me it's like the whole family is net nie lekker nie (*showing to her head*) and the child is on the street the whole day. And nobody cares! And the child comes home at, at, at night. Enters the house at nine o'clock, ten o'clock in the evening. Nobody cares! (C1: 2)

Because how do you, help also a good child when the, the parents say for instance there are about five siblings in the house, two of the siblings is on drugs the parents condones it. How do you, how do you assist and help that child that do not wants to go in that house...(C1: 4)

En, die rede, wat is die, domestic violence erh, eenvoudig net opgereek. (C2: 5)

#### **5.3.2.1.2. Parenting**

Although the family and its functioning emerged as a leading factor in adolescent substance use, parenting emerged as a central theme during the interviews. In other words, the risk of adolescent substance use centred upon the role of parenting within the adolescents life. This theme included seven constituents, namely: parental figure, parental control, foster parenting, and parental denial, parenting skills, uninvolved parents and parental neglect.

Parental figure highlighted the importance of having a parent figure in order to minimize the substance use, more specifically a mother figure. As one participant stated:

I mean she's a motherly figure for those children. (C2: 4)

Although the parental figure is emphasized, parental control is also seen as an important factor in adolescent substance use. Parental control was described as the amount of control parents have over the child, their friends and other activities they may be involved in. Moreover, this theme included the absence of parents on a daily basis, minimising supervision among adolescents and their friends. These findings are presented in the following extracts:

It's ...you know at some stage in the child's life the, the, the, the parents have no control over the child and then the friends and stuff...(C1: 5)

My neighbour isn't speaking to me, you know why? When I was at home I saw the school kids coming into her house, as a parent I went into her house I hit them out of the house, because why my neighbour isn't here, you can't do this in her house and while she isn't here I will hit you...(C1: 3)

Furthermore, foster parenting was described as adopted parents not caring enough. This is presented below:

...but he said his adopted mother doesn't care who are, I to tell him. (C1: 2)

Coupled with the parental figure and parental control, parental denial emerged as an important factor. Parental denial was described as parents not wanting to acknowledge the fact that their children are abusing substances this resulting in parents making excuses for their children's behaviour. As participants stated:

But also then there's a factor towards parents or foster care parents or whoever that is in denial of the...(C1: 2)

...and then also the factor of denial of parents that...(C1: 2-3)

Kom spend ń dag in my pad, jy hoef niks te sê nie, vat net ń stoeltjie dan sit jy daar.... en observe. Dan hoor jy hoe die een Ma die ander Ma uitskel altwee se kinders is verkeerd maar altwee soek justification om te sê dis reg. (C1: 5)

Ek het gesien hy, die klong het uit gekom met die jacket en ek sê, die Ma skel in die pad ek sê vir die Ma "kom hier so. Jou kind het hier uit geloop met die jacket", twee mense sê "ma hy't met niks uit gekom nie." Maar ek het sê "maar hy het uitgegaan met die jacket" toe sê sy "ja jy wil net iets sê jy't oek net" ek het niks gesien nie toe sê eke "vra vir hom net ek en hy weet". Maar kon nie gedog het hy't die jacket gesteel nie (gesteel nie ja) en, en toe sê die neighbour vir haar "moenie hoor wat sy het om te sê nie". (C1: 5)

En hy weet die Ma gaan op cover vir hom. Wat ek try om vir haar te sê "ophou saam buite kom skel, van sodra jy kom skel dan kry hy al die benefit van om weg te kom met die goed"

(C1: 5)

And she knows...she knows that the children is stealing the stuff out of the house. (C1: 6)

Massive problem is the fact that the parent doesn't want to accept that the child. (C1: 6)

Parental figure, parental control and parental denial all emerged as important factors relating to adolescent substance use. However, the correct parental skills emerged as an important factor tying these constituents together. Parenting skills highlighted the issue of parents not having adequate skills in raising their children. Being an observant parent was highlighted as being important. An uninvolved parent was described by the participants as parents not showing interest in their child's well-being. Participants highlighted the example of an open day where various services were explained to parents; however, there was a poor turnout especially of those parents who had children abusing substances. The issue of parental neglect was described by the participants as parents not caring about their children thus, leaving highly influential drug dealers to act as surrogate parents. These findings are presented below.

You know and, and, and, daai is die ding oek jy moet focus is to look at how you can get parent interventions. (C1: 6)

En ek sê altyd : “you must be an observant parent”. (C1: 14)

Right..open day ons het glad door to door gegaan to invite the parents to come and see, look at the type of services that are available for children who are on drugs. Daar het nie vir jou een parent uitgesteek nie. (C1: 6)

But what stood out for us was the fact that the parents wasn't there ne. There wasn't a lot of parents and basically the end of the day, (just a lot of grannies) parents weren't there the youth that we actually wanted to get to was on the street that was standing on the corner that was not going to school but he may not, ma but hy's nog nie op die drugs nie. So how do you get to them? (C1: 6)

Toe sê die man “Wel julle kan vir hom vat, as julle vir hom vat dan waantoe gaan julle vir hom neem? Van sy Ma wil hom nie hê nie. Sy ouma en die Ma baklei oor mekaar”. (C1: 9)

### **5.3.2.1.3. Parental drug involvement**

As established until this point, the influence of parenting greatly influences adolescent behaviour. Thus, parental drug involvement was also one of the major themes that emerged from the Family domain. The key sub-themes emerging from this theme included parental drug use and parental drug trade. The effects of parental drug use are seen as a negative outcome. Participants reported that the effects of parental drug use leads to physical abuse and neglect of children. As participants stated:

ń Ma ek een aan toe gee sy haar kind ń klap hier voor my toe klap ek vir haar grond toe, toe sê ek vir haar: “nou gaan haal jy die law vir my dan sê jy vir die law ek het vir jou geklap vir wat jy daai kind klap wat nie eers sy self kan defend, geslaat het nie, van wat soek jy op die straat met die kind. Jy is ń Ma moet vir jou kind ń storie book gelees het daar in die kooi, laat jou kind lekker gevoel het. Maar jy is lekker van jou wyn nou kom klap jy jou kind”. Dink, dink jy, sy, sy groet baie mooi. (C1: 10)

My Ma was n Alcoholic. Ons was in foster care in. Sy drink nie meer nie man (participants laughing). Maar ma, ma ons was nie in foster care, gevat van my Ma af. Maar ek het n baby broer sy later na almal daai drama. Toe het sy my broer, my baby broer gekry. Toe is ek nou alondag, ek is al getroud, ek werk en ek baklei vir die kind. Nou ek gaan vir julle sê, ons kan ma vertrou het in die social workers en die law system. They not going to help you. Daar is dai laaitie vandag verdrink in die drugs. (C1: 10)

Contrary to parental drug use, parental drug trade is viewed as either a positive or negative influence. With regard to the positive aspect they reported that the children of known drug dealers reap the benefits of their parents drug trade in that they are materially satisfied thus minimising the possibility of substance use. However, on the other had, as a result of parental drug trade, children are exposed to drugs thus maximising the possibility of substance use. This is evident in the following extracts:

Daar is successes, maar dan kry jy die wat, wat lyk as of daar iets in jou viens is...(C1: 19)

...some of these laaities parents are in, selling the drugs they actually live the good life. They, they, they reap the benefits. But I mean in my, from what I've seen, they not into the drugs but they driving the car that the daddy bought (and dress smart) and the druij, and its bangles and what, what... but they not on the drugs. That is in my experience. (C1: 18)

Ek wil net U aandag bring aan n 4 jarige klonkie. Hy word ge-bandage met die drugs om sy ligaam. It word aan hom geplak dan word hy ge-bandage en hy loop die "Community 1" plat. Ons was by sy Ma en vir sy Ma gevra weet sy waarmee haar kind bedryf is. Sy sê haar kind is nie by haar nie die kind is by die ouma. Ons het na die ouma toe gegaan die ouma het gesê maar daai Der-der (*swearing imitations*) Ma sy word betaal vir daai kind wat so rond loop met die drugs (*mumbling of other participants*). (C1: 8)

Nie in my experience nie, hulle gaan nou. Is n generational thing wat nou gebeur and it's actually sad because why. Ek, ek so bly my kinders vat note because why hulle het nou die ander aand gesê "Mummy, wat kan ons doen". Toe sê ek "Ons kan eintlik niks nou meer doen nie, van die koel is deur". Die parents het dit begin, die voor ouers, the, the great grandma started it, it went down to their parents the parents gave it over to them. Hulle is nou so hardkoppig hulle hoor oek nie vir jou nie. Dit het nou gegaan na kdie kinders. (C1: 18)

Similarly to the parent study, family functioning emerged as a major domain in the micro-system. The family emerged as one of the major themes associated with adolescent substance use within the family functioning domain. The family includes family influence, domestic violence and family support. Coupled with the family, parenting also emerged as one of the major themes within this domain. Unlike the family with three constituents, parenting consisted of seven constituents namely: parental figure, parental control, foster parenting, and parental denial, parenting skills, uninvolved parents and parental neglect. Lastly, parental drug involvement emerged as one of the factors associated with adolescent substance use. This included parental drug use and parental drug trade.

### **5.3.2.2. Peer influence**

Peers were also one of the major themes that emerged from the micro-system as presented in the blueprint of the proposed questionnaire of the parent study. This theme had two emerging constituents, peer acceptance and support, and experimentation. Peer acceptance and support included peer influence. This was described by the participants as peer pressure, in that adolescents seek the “truth” by their peers thus leaving their peers as their primary source for advice and so forth. This is presented below:

...the other thing is, is, is the, the, the issue of peer pressure and, and uhm and for me most important is, is... (C1: 2)

...so you go to your friends for the truth. (C1: 2)

Peer influence is seen as an important factor associated with adolescent substance use because peers are seen as primary “informers” outside of the family.

### **5.3.2.3. Experience of School**

The experience of school also emerged as one of the major themes from the micro-system. This theme emerged from previous interviews of the parent study and is presented in blueprint of the proposed questionnaire. This theme consisted of the following constituents namely: low education, school dropout, and the school system. Participants indicated, with regard to low education, that children are not able to read and write thus, not having the mental capacity to make informed decisions thus they are influenced more. As participants stated:

With that I can also add in terms of our kids can't write and read. That's, that's they got a low educational level, this is with decision making, it's also because it's becoming a big problem. (C1: 3)

But the other factor is more and more of our kids is getting influenced, they not educated. (C1: 3)

Low education levels of parents emerged as a constituent from the current interviews. Participants reported that low education levels of parents also contributed to low decision making skills of young people as parents are not able to effectively guide them. School dropout was also seen as an important factor as children are then less stimulated. Participants also stated that the schooling system is not doing justice to the children leaving them not motivated to further their schooling career, thus maximising the possibility of substance use. These findings are presented below:

But that is now just for the, for the children but for the parents as well. We sit with this lack of education in our parents (C1: 16)

Extract: 40

He dropped out! (C1: 16)

And it is tough on the school. Let me tell you, because I know. With my son I had this experience. He went from an Afrikaans school he took his subjects all in English when he went to high school. (C1: 16)

The experience of school generally centred on low education, which referred to low education levels of parents, school dropout, that indicated that children who drop out of school are less stimulated, and the school system, which generally referred to the schooling system not doing any justice to the schooling career of children.

#### **5.3.2.4. Neighbourhood influence**

The neighbourhood also emerged as one of the major themes from the micro-system in previous interviews conducted by the parent study based on qualitative interviews with community members and is presented in the blueprint of the proposed questionnaire. This theme had two emerging constituents namely; access to after school activities, and drug accessibility. Access to after school activities included two key themes namely volunteering programmes and recreational activities. Participants reported that volunteering programmes keep young people stimulated thus leaving little room for delinquent behaviours. Participants also stated that there is a lack of recreational activities within the communities' thus leading young people to partake in various destructive behaviours. These findings are presented below:

But ja maybe I should just mention what they are doing is the volunteers with us they, she, she's got meetings with them every week, once a week I think. And if there is duties they cover first aid duties at sports events, different big events sometimes we even do ambulance duties and they will form part of our support team, crew. And that's how they just keep busy, because she's got a programme for them. They do some training, they, they, we've got competitions and things so those are things that keep them interested actually and it keeps them busy and I think that's what she's busy doing. (C2: 3)

There's another thing I want to add. If you work in Coloured areas, in our Coloured communities, there is no recreation for our young people. That's a good way of keeping our young people busy, there is almost no recreation in our Coloured areas. You can go in any Coloured community you can just check it out. (C2: 4)

Drug accessibility included two key themes namely; Easy Access, Exposure and Affordability. Participants indicated that substances are easy to locate, thus it maximises the use of substances. Furthermore, participants also indicated that since the substances are so easily accessible, young people are more exposed to the substances, thus, making it a norm. Children are exposed to these substances from a young age. Coupled with easy access and



exposure, participants indicated that substances are very affordable, thus making it even easier to attain. These findings are evident in the following extracts:

...very easy access... to the drugs. Any type of drug that you, ok the stuff that (coughs) is the top ten the dagga, and the tik, very easy access. (C1: 1)

But it's easy access to the stuff...(C1: 1)

So it's easy access...(C1: 2)

Even though it is easily accessible...(C1: 2)

Jy sien Shanna die ding is oek is, the, the, the, because the stuff is so freely available (emmm) right...(C1: 4)

That's the number one thing you can buy it in Lusanta street...there's how many drug merchants there? six? (C1: 2)

Six?! Jy tel nie. Jou tel is min, There's 32! (C1: 2)

Now if you looking at that the street that she's living in is nog nie eers 500 meters lank nie. It's a short street I'm telling you. Van hier vanaan af tot daar anekant right. But now how do you get to the good kids in that street. And if you look at the street die dysfunctionality wat daar aan gaan in that particular street and how you gonna get to, as jy vir haar sien...tog nie in die trap val nie but dis oral soe. (C1: 4)

Sy Ma het hom matriek laat gaan en daai but op die einde van die dag hy het gebly in Sherwood Park maar hy't gegaan leer verderer in die Jo'berg. Hy hey dai geotes opgetel daar van daar is dit mos freely running about. (C1: 7)

...because sy uncles het gedrug voor hom toe hy kliener was. They took him to the merchants here and that is what was followed up en nou sit sy Ma vandag met dai problem. (C1: 8)

But there's a, but, but, but I think also what Christine is saying is that it's cheaper also. The dagga and the stuff has become cheaper.(C1: 2)

The neighbourhood influence centred on after school activities, and drug accessibility. After school activities generally referred to volunteering programmes and recreational activities to keep young people stimulated, thus decreasing delinquent behaviours. Drug accessibility, however, centred on easy access to substances and exposure and affordability thereof. Participants generally viewed substances to be easily accessible, overly exposed and very affordable.

In sum, the micro-system could be seen as the most important level within the adolescent's environment. Important themes emerging here include 1) family functioning, 2) peer influence, 3) experience of school, and 4) neighbourhood influence. Family function included the family, parenting and parental involvement with drugs as key constituents. This finding is consistent with findings from the parent study. The current study shows how participants

emphasize this finding. Peer influence included peer acceptance and support, and experimentation. This was seen as important factors especially when there are dysfunctions within the family. The experience of school generally centred on low education, school dropout, and the school system. The experience of school, as participants describe it, has a negative impact on adolescents, increasing the risk of adolescent substance use. The neighbourhood influence, to a large extent, centred on after school activities and drug accessibility. Consensus was reached that a lack of volunteering programmes and recreational activities increases adolescent delinquent behaviours. Furthermore, drug accessibility in terms of easy access, and exposure and affordability negatively influences adolescents, as participants reported that substances are easily accessible, greatly exposed and very affordable. Thus, the micro-system could be seen as a major level associated with adolescent substance use.

### **5.3.3. Meso-system**

The third domain, namely the meso-system, involves the connection between the structures of the individual's microsystem with each other (Berk, 2000). Examples of the meso-system include the connection between a child's teacher and his parents, between his church and his neighbourhood, etc. The major themes emerging within this domain from the parent study were 1) Anti-drug messages versus parental use or tolerance of drugs, 2) Community acceptance of gang culture confusing to children. These themes are also presented in the blueprint of the proposed questionnaire.

A further theme emerging from interviews of the parent study included anti drug messages versus parental use or tolerance of drugs. This theme included a constituent, as presented in the blueprint of the proposed questionnaire, which was "confusion based on desensitization". Although these themes were found in the interviews conducted by the parent study no evidence supporting this finding was found in the current study to indicate these themes as important associated factors to adolescent substance use.

Community acceptance of gang culture confusing to children emerged as one of the major themes from the meso-system, as presented in the blueprint of the proposed questionnaire. This theme had two emerging sub-themes namely; Community acceptance and influence of drug dealers. Drugs are seen as a big problem in these communities since almost in all households at least one person abuses substances. As one participant states:

And uhm, in this area the biggest problem is drugs in “Community 2”. Now wherever you go your neighbour, every second house in “Community 2”, every second house. We surveyed, every second house in “Community 2” our children is doing drugs. (C2: 1)

This behaviour is to some degree encouraged in the community either directly or indirectly. Drugs are so common that the entire community is viewed as toxic especially for recovering drug addicts. Furthermore, participants stated that community members do not “look after” children as they did in the past. These findings are evident below:

And that is it, our community encourages those things (yes, yes), so but now-a-days our community encourages also but then our children go over to the lane (The junction..) they going over to over (the lane) Nyanga Junction then they can go sell it there. Those are, (Oh) yes. And they freely walk over as if they are well known on the opposite lane. They go freely over they don’t care... (C1: 5)

My neighbour se kind het nou sieke 3 jaar gekry vir steel en drugs. Van wat hy vir sy Ma sê sy Ma elke keer vir hom gaan visit dan vra ek wat maak Hoosien, dan sê sy “hy sê dit gaan goed en hientoe en soentoe, maar hy wil nie weer terug kom “Community 1” toe nie (community). Hy sê hy wil nie meer in “Community 1” toe kom nie. Nou vra ek wat is vout met “Community 1”. Hy sê die drugs is te heavy binne in die plek. (C1: 11)

Maar hy sê die environment reg rond om hom gaan maak laat hy weer daar in val. (C1: 11)

En dai is wat ons in die community sit. Luister hier, oh. Maak die kind geheg aan jou, van die kind gaan maak laat daai Ma moet weet hier is poliese van die community wat staan en kyk. Hulle almal weet die. My neighbour hier aan die kante they know already gaan roep vir antie Sanda sy gaan dit uitsort. (C1: 11)

Uhm daar was twee drug dealers in die pad. En die winery, die winery het ek daar gekry wat ek daar kom in trek toe was die mense biesag smokkel. Maar die drugs, ek het in gegaan by die drug dealer in hy was nie ’n groot drug dealer nie en ek het vir hom gesê: “luister! Jy kan pakkies chips verkoop, lekkers verkoop, maar hier in die straat gaan jy nie drugs verkoop nie”. (C1: 12)

Participants viewed the influence of drug dealers as a major associated factor; in that the drug dealers have a great influence on young people since they offer a “better life”, however, at a cost. They first get young people hooked in order to make their businesses grow. This is evident below:

What needs to be done about the drug dealers. Because at the end of the day the drug dealer doesn’t call nobody. They goes to the drug dealer. Or if you don’t go to the drug dealer he will make a point to have you as a drug addict because you need to sell it for him. So the problem lies with those who are actually selling the drug and the alcohol in our communities. So a stop needs to be put there by die drug dealers. (C1: 11)

The major themes emerging within this domain included 1) anti-drug messages versus parental use or tolerance of drugs, and 2) community acceptance of gang culture confusing to children. Although anti drug messages versus parental use or tolerance of drugs was found as an important factor in the parent study, the current study provides no evidence supporting this

finding. Community acceptance of gang culture confusing to children, however, was described as a big problem within the community as it is greatly associated with adolescent substance use.

#### **5.3.4. Exo-system**

The fourth domain, namely the Exo-system, defines the larger social system in which the individual does not function directly. The structures in this layer impact the individual's development by interacting with some structure in his/her micro-system (Berk, 2000). The major theme emerging within this domain from the parent study was social transformation. Social transformation was described by the participants, in the current study, in terms of urbanisation. As one participant states:

Ek dink hiers n̄ magdom van probleme in "Community 2". Ek dink uhm miskien nie net in die Wes Kaap nie, maar van urban, die problem van urbanisation. (C2:4)

Although, very little information was found within the exo-system, social transformation was emphasised as an important factor associated with adolescent substance use.

#### **5.3.5. Macro-system**

The fifth domain, namely the macro-system, forms a layer that does not directly influence the child and forms the outermost level of the child's environment. While not being a specific framework, this layer is comprised of cultural values, customs, and laws (Berk, 2000). The major theme emerging within this domain from the parent study was 1) Family finances and unemployment and 2) Tolerance of soft drugs. Additional factors included the media and the judicial system. These themes are presented in the blueprint of the proposed questionnaire.

Family finances and unemployment is viewed as a key factor since the rate of unemployment is so high. This then leads to selling of substances as this serves as an income for most households in these communities. This is evident in the following extracts:

Die ander ding is so hier deur die flatse gaan en kyk jy ons se mense daar n̄ groot werkloosheid, unemployment. (C1: 5)

Kyk hê, because why at the day sit dai brood op die tafel dais die kind of issues. (C1: 4)

Hy het maar net vir my gesê hy doen dit vir n̄ stukkie brood vir sy kinders. Toe sê ek: "nie drugs nie". (C1: 12)

Tolerance of soft drugs is also viewed by the participants as an important factor. The community accepts the use of softer drugs not realizing that it is the stepping stone for more addictive and harmful substances. This is presented below:

By ons is daar n kind en, en dit is wat ons nou gesien het vir die afgelope tyd wat ons in die community. Die okka pyp. Die kinders is op die okka pyp. Maar wat van die oka pyp gebeur is so gevaarlik now-a-days. Dit is hoe ons kinders ook vandag op die drugs kom. Daars n kind by ons wat biesag is met n okka pyp. Hy..die winkels verkoop nou die flavours nie. Dan verkoop hulle mos die ding, hoe call jy die ding wat hulle op (kool), die kool. Nou hy verkoop nou die kool en hy verkoop die flavour, maar wat doen hy met die flavour hy swaai dit nou af in balle met dagga. En hulle call dit nou die smoorkie. Nou se vir my as dai kind daar vandaan af kom, nou net maar voel hy nou hy gaan n beer drink en as hy nou voel die beer kan hom nou nie lekker kick nie dan gaan hy gou na die merchant toe dan koop hy vir hom n pakkie tik, wat nou baie cheap is en dan net ma is ons se kinders high. En nou so kom ons se kinders op drugs. Ek het al gepraat met ons se kinders by ons se huis al. Ons het al gepraat met die ouers, die ouers se ek het al gekom met die pamphlets, gewys wat maak okka pyp. Hou ontstaan ontstaan kanker in jou liggaam en al dai dinge. Mans het gesê kom praat met die kinders. Wat doen die kinders? Hulle sit nou op die hoek met dai okka pyp. Hulle doen dit nie meer by hulle huis om dit aft e swaai nie. Daars n huis nou in ons se flat in wat nou vir hulle allow hulle is about 10 stuks wat elke dag daar in gaan om dit aft e swaai. Praat jy dan is dit n kwaad. Hoe kan jy praat, van jy wil graag wil help. Ek is ook n Ma. You see. So ons prober al hiedie dinge. Ons praat maar dit seems nie, maar die ouer allow nog steeds die kind om dit te doen. Nou hoe kan jy die kind help as jy dit nie gaan stop sit nie? (C1: 14)

Media is also viewed by participants as an important additional associated factor. They reported that children and young people see what happens on television and the glamour attached to it and thus incorporate it in their own lives. As one participant states:

And that's what's happening. You see things on the T.V. You've seen the American Films how the African guy sells the drugs on the street they are walking there now with their lollies and the police can drive there then they will tell will tell you R15, R10 that is how our kids, it's a norm. (C1: 3).

Lastly, the judicial system was also highlighted as an important factor associated with adolescent substance use. This generally referred to the police not doing their job. Participant agreed that police aren't doing enough to prevent drug activity within the community as complaints aren't taken seriously. Furthermore, the issue of confidentiality is not strictly followed, thus preventing people from reporting drug activity in fear of their lives and well-being. This in turn contributes to adolescent substance use as it is seen as "no real consequences" are faced. This is evident in the following extracts:

Whether as ek as die neighbour, en hulle se ons moet kyk na mekaar en ek gaan poliesie stasie toe. As daai poliesie man dink niks om vir die neighbour te se nie "Jou neighbour was daar bo gewees nie daaroor is ek hier" (*Participants agree*). Dan het ons n fight. So dan waste ek eintlik my tyd om poliesie stasie toe te gaan van ek kan haar self se. (C2: 10)

En die tip of word gegee by die poliesie stasie.(*Participant 7: Ja*). Die Captain se vir naand gaan ons nou, vandag gaan ons nou huise skid en dai. Die poliesie kry vir hulle so die information. Hulle gaan nou dan se hulle vir die merchants van hulle kry, hulle word getax (C2: 10)

Family finances and unemployment, and tolerance of soft drugs was found in both the parent study and the current study to be important factors associated with adolescent substance use.

Additional factors associated with adolescent substance use included the media and the judicial system.

### **5.3.6. Chrono-system**

The last domain, namely the chrono-system, refers to the historical context as it occurs within the different systems and the changes that take place throughout the child's development (Adamsons et al., 2007). The major themes emerging within this domain from the parent study were socio-political history and hope for the future. These themes are presented in the blueprint of the proposed questionnaire and were regarded as important factors associated with adolescent substance use.

Socio-political history, a central theme emerging from the chrono-system domain highlights two key themes, namely; social transformation and violent history. Social transformation refers to the transformation from apartheid to the new democratic South Africa. This highlights the importing of drugs into the so called "Coloured" communities as a result of the forced removals from District Six in 1966, which helped scatter substances throughout the Cape Flats. This history also contributed to the current violence in the communities since South Africa is renowned for their violent history. Hope for the future was found in the qualitative interviews from parent study to be an important factor associated with adolescent substance use. However, no evidence supporting this finding was found in the current study.

This is presented in the following extracts:

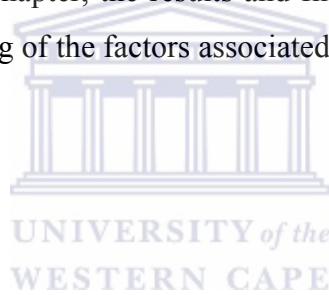
Now you know we always wanna go back to blame the apartheid government and all that stuff. I am blaming them because they put the drugs in the first place in our Coloured communities. They put the drugs in our Coloured communities, and they got our people addicted. Our apartheid government! And now they doing nothing about it! (C2: 2)

Ons wil nie terug gaan na die apartheid jare nie maar ek onthou as die vane, ek onthou nog die eerste nommer van die Black Meraai wat hier gekom het, die nommer was 895. En as Black Meraai of die side kar in die pad af gekom het, het almal gespat. En dai mense het powers beyond wat gehad het. Hulle kon jou optel en in die trunk in smyt. En baie mense word gevang, baie van ons bruin mense was binne en dai ouens het criminals uitgekom en hulle is hier tussen ons uitgelaat. En dit is nie 'n vandag probleem nie, dis 'n probleem wat aan kom. Misdaad was tussen ons ingebring. En die ding sien vier vandag, hoogtyd. (C2: 5)

Socio-political history, a central theme emerging from the chrono-system largely refers to social transformation and violent history. The social transformation from apartheid to the new democratic South Africa and South Africa's violent history is seen as factors associated with adolescent substance use.

## 5.4 Conclusion

The overall purpose of the study was to evaluate the content validity of the dimensions of a self-administered questionnaire in line with of the Bio-ecological Systems Theoretical Framework, that will assess or measure the factors associated with adolescents at-risk for substance use and addiction in a low socio-economic status community in the South African context. In this chapter the study thus, looked at both the quantitative results of the CVQ, as well as the qualitative analysis of the data collected from the nominal group technique. The quantitative data was tabulated in a manner representing the participants' responses in each level of the environment. A brief overview of the results on each level was also provided. Secondly, a full analysis of the data from the open-ended questions of the CVQ was also provided. Lastly, a full thematic analysis of the qualitative data collected was given. Furthermore, an in-depth account of the participants' views on the subject matter was given while highlighting the factors they reported as important factors associated with adolescent substance use. In the following chapter, the results and findings will be integrated to give a clearer and in-depth understanding of the factors associated with adolescent substance use.



## CHAPTER 6: SUMMARY AND CONCLUSION

### 6.1. Introduction

This section will discuss and interpret the major themes of the study as presented in chapter 5. The quantitative component of the study was complemented by the qualitative component. The complete procedures for content validation of a test compensated for the weaknesses and complemented the strengths of each component in this framework in order to illustrate the construct relevance of our selected dimensions and whether there are additional dimensions that were regarded as important by the participants. The overall aim of the current study was to evaluate the content validity of the dimensions of the proposed self-administered questionnaire, which will assess/measure the factors associated with youth at risk of substance abuse in low socio economic status communities in the South African context.

The main focus of the study was on the content validity of the dimensions in terms of the community stakeholders' perceptions of factors associated with substance use in two low socio-economic status communities; and to gain an in-depth understanding of the themes presented in order to explore the content validity of the dimensions in more depth. The factors were based on the dimensions that were highlighted as important factors from the parent study (Jantjies, 2011; Florence & Koch, 2011; Rule, 2010; Swarts, 2009). Furthermore, these factors were placed into the matured version of the Bio-ecological Systems Theoretical Framework as proposed by Bronfenbrenner (2005). This chapter summarises and concludes the major findings of the study.

### 6.2. Overview of findings

The results of the study, from the first aim, suggest that community stakeholders agree that the dimensions put forward are important factors associated with adolescent substance use. Some more than others were regarded as very important. The majority of the community stakeholders agreed that factors from the micro-system, as proposed by Bronfenbrenner (2005), such as the family, peers, school and neighbourhood, above all are the most important associated factors. Furthermore, findings from the qualitative component complemented this finding as well as adding additional dimensions they deemed important. Moreover, they regarded the family as a key associated factor.

Thus, consistent with other studies (Bryant, Schulenberg, O'Melley, Bachman & Johnston, 2003; Elliot-Erickson, Lane & Ranson, 2009; Flisher et al., 2003; Hallfors et al., 2002;



Harker et al., 2008; Russell et al., 2008), our study found that these factors highlighted in chapter 5 are regarded as important factors associated with adolescent substance use and important to include in the blueprint of the proposed questionnaire.

Furthermore, factors highlighted in literature that were also included as possible factors associated with substance use were religiousness, academic ability, genetics, affluence, physical fitness, assertiveness, moods and emotions and resilience. According to Rule (2010), factors such as peer influences, parental influences, socio-economic status, and culture and religion have been found to influence the development of substance use among adolescents. Religious influence was found to be a control measure for adolescent substance use behaviours. Furthermore, the religious affiliation has an impact on adolescent substance use (Gana, 2004). Consistent with previous research the current study found that these factors were also regarded as important contributors to adolescent substance use. Each of the levels of the theory will now be discussed separately.

### **6.3. Individual**

The individual level, as perceived by Bronfenbrenner (2005), is considered to be the most central and basic level of human development. Factors such as racial/cultural identity, self-efficacy, ambitions and plan for the future, coping mechanisms/ability to cope/resilience, and desirable effects of drugs, were all deemed as possible important factors associated with adolescent substance use. Consistent with this finding, findings from the qualitative component (second aim) highlights a common feeling among participants that individual factors primarily contribute to substance use. Racial/cultural identity, in the quantitative section, was deemed an important factor as a considerable amount of the participants indicated that it was as well as in the qualitative interviews with community members from the parent study. This result is consistent with previous research. According to Caldwell, Sellers, Bernat and Zimmerman (2004), the long term effects of apartheid has impacted on the development of these adolescents and continues to impact on their well-being. Coupled with this, these adolescents feel that getting involved with drugs is inevitable, leading to the belief that they lack internal strength to resist it.

In contrast, self-identity was the central theme emerging in the interviews (second aim) from the individual domain, rather than focusing on racial identity.

You know I'm born and bred and raised here in "Community 2" now my whole life I've been in this area and uhm I don't need to use drugs you know. (C2: 1)

However, it was not surprising that racial/cultural identity was not viewed as important in the qualitative component. This phenomenon is evident in previous research as Caldwell et al. (2004) stated that although some have argued that racial differences in substance use behaviours among urban high-school students may be a reflection of differential rates of school dropout, cultural factors are more often cited to explain observed racial differences in substance use behaviour between racial groups. Furthermore, ethnic or racial identity is often cited as a protection against the initiation of alcohol and drug use. It was also found that ethnic or racial identity was a moderator of the relationship between psychosocial factors and attitudes and behaviours related to alcohol use and attitudes. In South Africa it is often mistakenly stated that social and individual identities, including racial identity is 'given' and not constructed (Scottham, Sellers & Ngungen, 2008). According to Scottham et al. (2008), so called "White" South Africans were considered superior and thus the image of their racial identity is still perceived as superior by other South Africans, similarly so called "Coloured and Black" South Africans were seen as inferior to so called "Whites". Thus, these "groups" still consider their racial identity as given. Therefore, they do not see their racial identity as being a factor associated with adolescent substance use, as they cannot 'control' this factor.

As expected, self-efficacy was viewed as an extremely important factor associated with adolescent substance use, with only a minute percentage viewing otherwise. Together with this it was not surprising that ambitions for future and coping mechanisms/ability to cope/resilience were also deemed important factors in adolescent substance use. This is consistent with previous research as Elliot-Erickson et al. (2009) suggest that protective factors against the initiation of substance use include positive temperament, ability to self regulate, social competence, low risk-taking and negative experiences of substance use. Thus resilient youth tend to have higher self-esteem, self-efficacy and competence, and to set long term realistic educational goals. Complemented by the qualitative component, self-efficacy, and ambitions for future and coping mechanisms/ability to cope/resilience was viewed as important associated factors. Participants viewed personal characteristics, such as participant's susceptibility to drugs, and ability to make informed decisions, as important factors relating to substance use. As one participant states:

But wat van die kind wat nie eens kan estimate hier's iets verkeerd nie hy gaan val in die trap.  
(C1:3)

Wills et al. (1994, as cited in Swadi, 1999) identified five groups of adolescent personalities, of which one was referred to as ‘problem teens’. This personality trait was characterized by poor self-control, high levels of novelty seeking (a genetic predisposition towards exploring activity), risk taking behaviour, anger, independence, history of adverse life events, tolerance for deviance, and negative effect. A second personality type was ‘conventional teens’, they were characterised as teens who had low levels for all the above attributes. Furthermore, problem teens were found to have higher levels of substance use than conventional teens.

Although genetic predisposition was highlighted as an associated factor in the literature not much attention was given to this here. According to Dick and Agrawai (2008), family, twin and adoption studies have convincingly demonstrated that genes contribute to the development of alcohol and illicit drug dependence, with heritability estimates ranging from 50 to 60% for both genders. Furthermore, the desirable effects of drugs were also viewed as important. Participants reported that heightened libido and weight loss effects attract males and females, respectively to the use of substances.

Additional factors emerging from the interviews (open-ended questions of CVQ) in the individual level include factors such as deprivation, psychological factors and sexual activities. Participants referred to deprivation as emotional, financial and psychological deprivation that may also have adverse impacts on the individual. Furthermore, psychological factors were also highlighted, mainly referring to depression, secrets that were devastating to the person as a young child, undetected personality disorders, and psychological trauma – for example a traumatic event or experience. This finding is consistent with previous research (Bryant et al., 2003; Elliot-Erickson et al., 2009; Jantjies, 2011). Furthermore, Bryant et al. (2003) states that problem behaviours such as psychological distress and propensity to act out and misbehave are likely to co-occur during adolescence. Jantjies (2011) found that psychological well-being of an individual acts as a factor associated with crystal methamphetamine use. Furthermore, there is a strong relationship between substance use and mental health issues (Elliot-Erickson et al., 2009). According to Elliot-Erickson et al. (2009), youth who abuse substances and struggle with mental health issues are generally exposed to more associated factors such as problems with the family, school and community, and find it harder to stop abusing substances as opposed to youth that do not suffer from mental illness. Unpleasant feelings such as anxiety, anger, depression, guilt and retaliating thoughts,

especially when combined with an inability to express them may lead to substance abuse (Miller & Mastria, 1977). According to Russel et al. (2008), there is a significant association between children who experienced abuse and substance use. Gana (2004) further states that socio-economic status has an influence on adolescent substance use. However, this finding also relates to structures within the micro-system, macro-system and chrono-system. Here it is important to note the interrelatedness of the various levels and how it impacts on adolescent substance use.

Adolescent sexual activity was also highlighted in the open-ended questions of the CVQ as a factor associated with adolescent substance use. This could either be viewed as a consequence of substance use or as a factor that contributes as a result of stress or shame of teenage or unwanted pregnancies. This is consistent with previous research as Hallfors et al. (2002) states that adolescent drug behaviour also tends to cluster and co-vary with risky sexual behaviour. Research indicates that engaging in unprotected sex, engaging in unplanned sex under the influence of alcohol, and engaging in sexual intercourse with an alcohol intoxicated partner, was significantly associated with substance use. Thus, increasing the rate of unwanted pregnancies and sexually transmitted infections (Morojele et al., 2006).

#### **6.4. Micro-system**

The micro-system is considered to be the closest level of interaction to the individual (Bronfenbrenner, 2005). Factors here are more complex than the other levels as they include structures such as the family, peers, school and neighbourhood. Consistent with previous research our study found that the above mentioned factors are highly influential in substance use (Bryant et al., 2003; Elliot-Erickson et al., 2009; Flisher et al., 2003; Hallfors et al., 2002; Harker et al., 2008; Russell et al., 2008).

The family is seen as the primary care haven of adolescents. Thus, dysfunctions in the family will in turn lead to dysfunctions in the peer group, school environment and neighbourhood which will then enhance the possibility of substance use. As expected, the family and peer factors were deemed the most important associated factor, within the CVQ, with majority of the participants either indicating that it is very important or extremely important. This is consistent with previous research, as Elliot-Erickson et al. (2009) points out that interpersonal

risk and protective factors for alcohol, tobacco and other drug use include the impact of the adolescent's parents and family, friends and other social relationships.

The family domain included various dimensions such as family violence and conflict, divorce and step parenting, parental criminal activity, single parenting, parental monitoring of teens, communication and support from parents, poverty and unemployment, parental drug use and parental drug trade. These were all found to be important factors associated with adolescent substance use. Previous research confirms this finding as Jantjies (2011) found that explicit and implicit factors within the family were the most prominent factors that influenced drug use. Furthermore, previous research states that family influences contribute to an increase in the risk of substance use through family stress, disrupted family structure, impaired parenting, as well as social deprivation (Jantjies, 2011; Sutherland & Shepherd, 2001). Other studies highlight parental monitoring, parental involvement and family history of crime or drug use, as significant indicators of substance use (Bryant et al., 2003; Elliot-Erickson et al., 2009; Russell et al., 2008). The qualitative component of the study complimented this finding as one of the major themes emerging within this domain was family functioning. Family functioning was seen as a major contributing factor to adolescent substance use. As one participant states:

...okay in this community is the families are mostly is dysfunctional. Dysfunctional families, so the child doesn't have errh or if the child encounters the problem it's difficult to, to go to the family with the problem. (C1: 2).

Findings, from section 1 and 2 in the CVQ, in this domain showed that many of the participants agreed that the influence of the family, domestic violence and family support all impact on substance use among adolescents. Participants referred to family influence as the amount of knowledge about substance use the family has to positively influence their children. Furthermore, the amount of positive support adolescents receive from the family was viewed as a protective factor against adolescent substance use. This is consistent with previous research, as Kliewer and Murrelle (2007) stated positive family interactions, specifically family cohesion and communication, is associated with a range of positive behaviours during adolescence, including lower levels of substance use involvement. Furthermore, cohesive families provide support for adolescents, and a context in which to learn, and be reinforced for adaptive coping behaviour. Domestic violence was also viewed as an important associated factor within the family domain. As one participant states:

En, die rede, wat is die, domestic violence erh, eenvoudig net opgereek. (C2: 5)

According to Caballero, Ramos, Gonzalez and Saltijeral (2010), it is known that various types of violence occurring within the family environment may have mental health repercussions on its victims. Furthermore, adolescents' exposure to violence in the family has been associated with problems such as depression, post traumatic stress disorder, eating disorders, suicidal behaviour, and social isolation, as well as high-risk behaviour such as the consumption of alcohol and other drugs. As expected, family dysfunction emerged as a major factor associated with adolescent substance use from the qualitative component of the study. Family dysfunction included the lack of support from dysfunctional parents, family structure being changed, dysfunctional families, father's don't play their part, much left for mothers to do, abuse of children towards families, especially of old people, parental education, single parents, parental responsibilities and education, family problems, and mothers and parents are in denial. This finding is evident in the literature as previously mentioned (Bryant et al., 2003; Gana, 2004; Swarts, 2009).

Further findings, also located in sections 1 of the CVQ questionnaire, the family theme included parenting. Parenting, which included parental figure, parental control, foster parenting, parental denial, parenting skills, uninvolved parents, and parental neglect, were major themes within the findings from the micro-system. To a large degree participants agreed that when parents or a parental figure is not visible in a child's life, negative consequences usually arise. As Gana (2004) states adolescents from two-parent families are less likely to engage in deviant behaviours than those from single parent families. Furthermore, these visible parents and parental figures should have a positive influence on their children, in other words they should monitor their children's daily activities, positively support their children and show an interest in their children's lives. According to Swarts (2009), the family represents a critical part of an individual's life. It can further be argued that the family can play a key role in assisting drug users to cease their drug use. Participants agree that active parents could be seen as a positive factor in relation to adolescent substance use. Thus, parents that are not actively involved in their children's lives may be considered to be a major factors associated with adolescent substance use. Previous research supports this finding as Benson and Haith (2009) report that authoritative parents (parents that show equal warmth and discipline) are inclined to have children that are socially responsible, competent, self-assured, adaptive, creative, curious, independent, assertive, successful in school, friendly,

cooperative with peers and parents, and are generally happy children. Furthermore, it leads to the development of mature reasoning, pro-social behaviour, and high-self-esteem. They are more inclined to show less depressive and anxious behaviours, and have lower amounts of antisocial behaviours and substance use. On the other hand, children of authoritarian parents (parents that are generally very strict) tend to be more dependent on their parents (particularly girls), submissive, less socially adept, lack in confidence, less intellectually curious, and are less committed to achievement compared to the children of authoritative parents. These children have a tendency to be shyer with peers and exhibit higher levels of hostility and aggression (Benson & Haith, 2009). Thus, increasing the risk of substance abuse.

Further themes relating to parenting involves parental drug involvement. This was widely referred to as either parental drug use or parental drug trade. Participants viewed parental drug use as a negative outcome, as it increases the exposure of substance use to children. Furthermore, participants reported that parental drug use more often than not leads to physical abuse of children and childhood neglect. Parental drug trade on the other hand was viewed as either a positive or a negative. Positive in the sense that materialistically adolescents are satisfied, money is not a problem. Parental drug trade was viewed as negative, in the sense that it increases the exposure to these substances which in-turn maximises substance use. Overall, parental drug use was also considered to be an important factor associated with adolescent substance use.

An additional theme emerging, from section 3 of the CVQ, within this domain was awareness and education. Awareness/education to a large degree focused on adolescents and their parent's awareness and knowledge of substance use. According to Bryant et al. (2003), adolescents' academic achievement and skills have been significantly associated with substance use. Rule (2010) states that "it is important to acknowledge and understand youth's perceptions as positive perceptions of methamphetamine could lead to use of substances while acknowledgement and emphasis on negative consequences could lead to a decrease in use or decrease in probability of initial use occurring" (p.16). Furthermore, lack of education by both parents and adolescents were seen as important factors relating to substance use. Furthermore, participants argue that the education level of parents greatly impact on adolescent behaviour, for example, if parents' level of education is low they do not have the necessary knowledge to effectively guide their children. According to Bryant et al. (2003),

adolescent's perceptions of their parents' provision of school help and their peers' attitudes regarding misbehaviour were associated with concurrent substance use and change in use over time.

Although adolescents' perceptions of their families are important for educational outcomes, the perceptions of their peers, such as peers' substance use in particular, may be more strongly associated with substance use outcomes (Bryant et al., 2003). Furthermore, Jantjies (2011) also found that peer influence was a primary influential factor. She further states that it was found that direct persuasion and the exposure of substances by peers lead to curiosity and experimentation. Bryant et al. (2003) further states that adolescents who perceive that their friends use substances and skip school are more likely to use substances and misbehave in school than students who perceive that fewer of their friends are involved in deviant behaviours. Furthermore, social support from friends may be a more important protective factor against substance use (Bryant et al., 2003). This is consistent with the findings of the current study which found that peer acceptance and support, and experimentation was viewed as important factors associated with child and adolescent substance use. According to Gana (2004), peer influence on adolescent substance use appears to be a major influence in increasing the likelihood of this behaviour. Furthermore, when adolescents are strongly connected to their peers they are more likely to partake in activities that their friends are involved in, for example substance use. Similarly, findings from the study suggest that adolescents seek the "truth" by their peers, therefore, leaving their peers as their primary source for advice and so forth. Thus, peer influence was seen by participants as an important factor associated with substance use among adolescents. As one participant states:

...the other thing is, is, is the, the, the issue of peer pressure and, and uhm and for me most important is, is... (C1: 2)

Furthermore, findings from the micro-system, in section 1 of the CVQ confirm experiences of school as a factor. According to Bryant et al. (2003), adolescents' beliefs about school and their academic expectations appear to be related to problem behaviours. Furthermore, youth with high levels of achievement, motivation and positive attitudes, who are interested in school and have high self-perceptions of academic competence and academic values, as well as those who view school as an important factor and communicate well with teachers and peers are less likely to engage in substance use as opposed to those who do not possess these qualities (Bryant et al., 2003). Similarly, the current study found that the way adolescents



experience school significantly contributes towards adolescent substance use. According to Elliot-Erickson et al. (2009), youth who participate in positive activities in their community are more likely to have a purpose when they meet with friends and are less likely to initiate alcohol, tobacco and other drug use. This is consistent with the current study's findings as participants noted that access to after-school activities are important in contributing to adolescent substance use (refer to section 1 of CVQ). Participants reported that adolescents experiences at school greatly impacts on their substance use. According to Elliot-Erickson et al. (2009), adolescents spend a large part of their lives in school. Thus, the school environment not only contributes to their academic skills but also to their social as well as emotional skills which in turn contributes to their decision making abilities. Participants further relate the experience of school to low education, school dropout and the schooling system. Furthermore, participants stated that when children drop out of school they are less stimulated, increasing the chance of delinquent behaviour. Participant also emphasise the fact that the current schooling system does not do enough for children leaving them unmotivated.

The neighbourhood was also one of the factors emerging from the micro-system (refer to section 1 of CVQ). This generally referred to influences of the community as a whole, access and affordability of substances, no recreation and active role models within the community. According to Elliot-Erickson et al. (2009), opportunities for positive, constructive involvement in the community and recognition for this involvement are seen as protective factors for youth from alcohol, tobacco and other drug use. Furthermore, for youth, lower levels of community engagement in positive, constructive community activities and increased levels of inactive pastimes, such as hours spent watching television, listening to music, or playing video or computer games, are associated with increased substance use. Similarly the current study found that boredom is a very important factor associated with adolescent substance use.

Consistent with the current study, Elliot-Erickson et al. (2009) states that youth living in communities where substances are readily available are at greater risk for alcohol, tobacco and other drug use. Furthermore, youth living in neighbourhoods where drugs are manufactured and traded with ease are more likely to come into contact with various substances and also may be exposed to a culture that promotes and accepts the use of substances.

Similarly, the neighbourhood also emerged as an important associated factor from the qualitative findings (second aim). This theme generally referred to access to after school activities and the availability of drugs. Participants reported that if there were sufficient volunteering programmes and recreational activities it will minimize delinquent behaviours. Youth who participate in positive activities are less likely to engage in deviant behaviours such as substance use and violent behaviours (Elliot-Erickson et al., 2009). Similarly Donaldson and Ronan (2006) state that organised sport influences the development of important behaviours such as cooperation, unselfishness, positive attitudes toward achievement, stress management, perseverance, appropriate risk-taking, and ability to tolerate frustration and delayed gratification. Furthermore, increasing opportunities for meaningful participation in groups may increase social bonding and decrease the tendencies to engage in deviant behaviours, specifically alcohol consumption by youth (Ferron, Narring, Cauderay & Michaud, 1999). As one participant states:

There's another thing I want to add. If you work in Coloured areas, in our Coloured communities, there is no recreation for our young people. That's a good way of keeping our young people busy, there is almost no recreation in our Coloured areas. You can go in any Coloured community you can just check it out. (C2: 4)

Furthermore, participants reported that ease of access, exposure and affordability of drugs directly links to adolescent substance use. Participants stated that substance abuse has become a norm due to the level of exposure and availability of drugs. Coupled with this, participants report that the affordability of drugs makes it easier to attain these drugs. This is consistent with previous research, it was found that perceived drug use in the community and neighbourhood toughness were associated with increased substance use (Lambert, Brown, Phillips & Jalongo, 2004). Thus, the neighbourhood emerged as an important factor associated with adolescent substance use. This is evident in the following extracts:

In one street there's 32 drug dealers! In one street!(C1: 2)

...but it's cheaper (C1: 2)

Religiousness was also highlighted as an additional factor (refer to section 2 of the CVQ). This is consistent with previous research which states that religious affiliation to some degree impacts on adolescent substance use (Gana, 2004). According to Gana (2004), religious influence was found to be a control measure for adolescent substance use behaviour.

Furthermore, role models referred generally to the breaking down of role models in society and to the lack of role models in the community (section 3 of CVQ). As in the extended family and school contexts, the presence of one or more positive role models within a community may provide youth with the opportunity to connect with support outside of their family unit. The lack of positive role models within the community implicitly leads to an increase in adolescent substance use (Elliot-Erickson et al., 2009). Furthermore, positive role models are a protective factor against substance use by youth as they often encourage social cohesion and the realization of high academic expectations.

### **6.5. Meso-system**

The meso-system, which is describe by the Bio-ecological Systems Theoretical Framework as the interrelation between an individual's micro-systems (Bronfenbrenner, 2005). This domain included confusion about parental use or tolerance of drugs, and confusion about community acceptance of gang culture. These factors, as expected, are seen as important factors relating to substance use (section 1 in CVQ). The disjuncture between what children learn at school and what they see at home confuses them. Children feel conflicted because parents and neighbours are doing what schools and community organisations tell them not to do (Bryant et al., 2003; Elliot-Erickson et al., 2009). Furthermore, drug use and gangster culture are implicitly socialised at all levels and affects the community at all levels (Jantjies, 2011). Thus, making it difficult for these adolescents to conclude that they should avoid drugs at all costs.

Furthermore, an influential theme emerging from the meso-system, in section 1 of CVQ, includes community acceptance of gang culture confusing children. Participants related two major factors emerging from this theme, namely community acceptance and influence of drug dealers. Participants reported that many households have at least one person involved in substances. They report that this behaviour is either directly or indirectly influenced by the community. Since drugs are so readily available, the community is viewed as toxic especially to recovering addicts (qualitative component – second aim). Furthermore, participants report that the community does not “look after” children as they did in the past. Coupled with this finding, participants stated that the influence of drug dealers is tremendous. As drug dealers offer these children a better life, however, at a cost, generally leaving these youngsters

addicted to drugs in order to expand their businesses. Thus, factors emerging from this domain were deemed important factor associated factors with adolescent substance use.

### **6.6. Exo-system**

An important finding from the exo-system, was social transformation (section 1 of CVQ). According to Jantjies (2011), the aspect of gangsterism, drug abuse and other social evils on the Cape Flats should be understood within the context of the series of historical events entrenched in the Apartheid era. The forced removals of so called “Coloureds” from District Six in 1996, helped scatter gangsterism and drugs throughout the Cape Flats (MacMaster, 2007). Many communities have become despondent on illegal and sometimes dangerous activities of gangsters. According to MacMaster (2007), despite the threatening outcomes, community members would not readily expose these gangsters, either out of fear, or because they would have nowhere to go to obtain their monthly loans. The current study found that social transformation is an important factor associated with adolescent substance use. This includes the lack of attempts at dealing adequately with the salient issues of economic difficulties and social integration. This finding is consistent with the current research mentioned (Jantjies, 2011; MacMaster, 2007).

### **6.7. Macro-system**

According to Jantjies (2011), the history of substances (specifically crystal methamphetamine) on the Cape Flats should be viewed in relation to the culture and ubiquity of gangsterism, entrenched decades ago, largely as a result of apartheid. Gangsterism is maintained largely as a result of unemployment and household income (MacMaster, 2007). Furthermore, children are more at risk of gang involvement if they experience one or more of the following in their society. (1) Cities have pockets of poverty within them. (2) There are a high proportion of young people in the population, together with low levels of education and high levels of unemployment. (3) Limited state services (for instance, a lack of policing). (4) State corruption. (5) The state itself is violent. (6) Access to illicit economies. (7) Access to small arms (Cooper & Ward, 2008). Similarly, the current study found that family finances and unemployment, tolerance of soft drugs and contradictory values, are important factors associated with adolescent substance use. Lastly, findings from the chrono-system included social political history (largely referred to the poverty leading to drug trade as a survival mechanism) and hope for the future (since there has been no real advancement in the

community as a whole, there is a feeling of being alienated and left out completely). This is evident in research highlighted in the macro-system (Cooper & Ward, 2008; Jantjies, 2011).

Additional dimensions emerging from the macro-system included governmental issues and financial burdens as important factors associated with child and adolescent substance use (qualitative component - second aim). Participants reported that governmental institutions do not do enough for the community. This referred to judicial systems and laws not being fully enforced. According to Elliot-Erickson et al. (2009), the risk and protective factors associated with public policy include federal and provincial policies on age restrictions, enforcements, advertising and legislation of substance use. Furthermore, studies have found that youth perceptions of laws and social norms influence their use of illicit substances. As one participant states:

Whether as ek as die neighbour, en hulle sê ons moet kyk na mekaar en ek gaan poliesie stasie toe. As dai polisie man dink niks om vir die neighbour te sê nie “Jou neighbour was daar bo gewees nie daaroor is ek hier” (*Participants agree*). Dan het ons n fight. So dan waste ek eintlik my tyd om poliesie stasie toe te gaan van ek kan haar self sê. (C2: 10)

Furthermore, unemployment and poverty are viewed as additional factors associated with adolescent substance use. According to Niazi, Zaman and Ikram (n.d.), poverty is a worldwide phenomenon, and is distinctly noticed in developing countries. Poverty deprives people from material resources due to lack of sufficient income and as a result they lose prestige and status in the community. The relationship between poverty and drug involvement is a complex phenomenon and is affected by many associated factors. Furthermore, poverty is not only related to the insufficiency of money, but also it develops certain mind sets, activities, behaviours and life conditions. Moreover, these attitudes and conditions can contribute toward drug activity. Thus, as a result of living in a poverty stricken community, people adopt different lifestyles and value systems than richer people (Niazi et al., n.d.). According to Dew, Elifson and Dozier (2007), unemployment and poverty are crucial factors in the prevalence of substance abuse in any community (as cited in Swarts, 2009). According to Swarts (2009), poverty, comprising of unemployment, resource deprivation, disempowerment, indignity, lack of opportunities, and a segregated self are all associated factors that erode an individual's ability to make sound choices with regard to his/her own life.

## **6.8. Chrono-system**

Findings from the chrono-system largely focused on South Africa's socio-political history. This was directly linked to social transformation and South Africa's violent history. Participants reported that the shift from apartheid to a new democratic South Africa left room for many uncertainties for less privileged communities. Participants stated that the forced removals from apartheid era greatly contributed to the spread of substances across the Cape Flats. Coupled with that, participants reported that the current violence experienced in these communities are directly linked to their violent past. These findings are consistent with the quantitative findings within this domain.

## **6.9. Factors highlighted in the literature**

According to Bryant et al. (2003), school failure has been well documented as a factor associated with problem behaviours in general and for substance use specifically. Consistent with this finding, the current study found that academic ability is a very influential factor associated with adolescent substance use.

As expected genetics was also found to be a relevant factor associated with adolescent substance use, however, this finding was not as significant to other factors. This phenomenon is explained in previous research as, Miller and Mastria (1977) states that some experts claim that it is mainly a function of socio-cultural variables while others claim it to be genetic. Furthermore, Judge (2000) states that genetics play a significant role in alcohol abuse however; this is not inevitable.

Affluence was also highlighted as an important factor associated with adolescent substance use. This refers to the state of having a great deal of money. This finding is consistent with previous research as Gana (2004) indicates that the socio-economic status of the community has a negative influence on adolescent substance use as adolescent from average or higher earning families are more likely to drink or smoke than those who come from poorer families. Furthermore, richer families have more resources to access alcohol or tobacco or other hard drugs.

Further findings included physical fitness as an important factor associated with adolescent substance use. According to Thom, Louw, van Ede and Ferns (1998), the age at which

adolescents reach physical maturity affects their psychological development, especially when they reach maturity either much later or much earlier than the expected age. Furthermore, boys who mature earlier could find it difficult to measure up to what is socially expected of them. Girls who mature late also have negative effects socially.

According to Elliot-Erickson et al. (2009), the personality significantly impacts on adolescent substance use. They further describe the initiation of substance use in childhood as a result of a child's "difficult temperament". This is consistent with the current findings that highlight assertiveness as an important associated factor. Bryant et al. (2003) states that problem behaviours such as psychological distress and propensity to act out and misbehave are likely to co-occur during adolescence. Furthermore, it was found that truancy and psychological distress are linked to adolescent substance use and abuse. Elliot-Erickson et al. (2009) personality factors associated with substance use include early onset of conduct disorder, sensation-seeking, lack of impulse control or dis-inhibition, aggression, antisocial patterns and social withdrawal. This finding is consistent with the current findings in that moods and emotion were found to be relatively important factors associated with adolescent substance use. A key feature of resiliency is the ability to cope actively with change in circumstances, therefore, most intrapersonal protective factors for alcohol, tobacco and other drug use are innate and learned coping behaviour. Consistent with this research the current study found that resilience is a significant factor associated with adolescent substance use.

## **6.10. Conclusion**

The overall purpose of the current study was to evaluate the content validity of the dimensions of the proposed self-administered questionnaire in terms of the Bio-ecological Systems Theoretical Framework, which will assist the factors associated with youth at risk of substance abuse in low socio economic status communities in the South African context.

### **The specific research aims are:**

- 1) To quantitatively evaluate the content validity of the dimensions of the questionnaire in terms of the community stakeholders' perceptions of factors associated with substance use in two low socio-economic status communities.

- 2) To qualitatively gain an in-depth understanding of the themes presented in the blueprint of the proposed questionnaire in order to explore the content validity of the dimensions.

The aims were set as the current study wanted to evaluate whether or not the dimensions of the proposed questionnaire were valid in terms of content validity. The construct tested for was factors associated with adolescent substance use. This was achieved by the specific aims one and two as listed above. For the first aim a CVQ was used with all relevant factors as identified in the qualitative interviews with community members in the parent study as well as factors most commonly highlighted in literature not identified in the qualitative interviews with the community members conducted in the parent study. Participants were asked to rate the importance of each of the factors as factors associated with adolescent substance use. From the CVQ it was found that all these factors were considered important factors associated with adolescent substance use. In line with the Validation Theory, as Messick (1989) states content validity involves determining whether the content of the measure covers a representative sample of the behaviour domain to be measured, an additional component in the form of aim two was developed. This aim was to 'confirm' findings from aim one and also to determine whether or not there are extra factors to consider. This is in line with the Validation Theory, with specific reference to content validity as it states that content validity is a non-statistical type of validity and rather refers to a specific procedure in constructing a psychological measure (Messick, 1989). According to Sireci (1998), it must be shown that the items and tasks composing the test are representative of the targeted content domain. In all testing situations, the content domain measured must be clearly understood, and it must be demonstrated that the test adequately measures the domain (Sireci, 1998).

Through the process of validation, the current study, the dimensions from the blueprint of the questionnaire that were derived from the qualitative interviews conducted in the parent and dimensions highlighted in the literature were confirmed as important factors associated with adolescent substance use.

### **6.11. Limitations**

The study aimed to evaluate the content validity of the dimensions of a questionnaire associated with factors relating to substance use by adolescents in low socio-economic status communities. Participants for this study included the community leaders of the two areas



selected to participate. Due to the scope of the study experts in this field of adolescent substance use were not included. This could be a possible limitation as those who have experience in this field and with the theories used in this field could have provided a more in-depth viewpoint of the factors associated with adolescent substance use, within the Bio-ecological Systems Theoretical Framework.

Furthermore, data for the current study was collected in two separate communities; however, the qualitative data conducted in the parent study was predominantly from one of the two communities. Although, these communities are similar in demographics and status, experiences are often unique to certain environments as clearly explained by the Bio-ecological Systems Theoretical Framework. Thus, if data was collected in both communities, it would possibly have yielded more in-depth information.

Another limitation presents itself within using focus group discussions. Although, the aim of the focus group is to get closer to participants' understandings and perspectives on certain issues and it is a forum in which to explore people's opinions, attitudes, beliefs, values, discourses and understandings of things, as valid in their own right, people can also influence each others' thoughts (Vaughn, Schumm & Sinagub, 1996). Thus, when looking at validity, as the current study did, this could become problematic.

## **6.12. Recommendation**

The rationale for conducting the study was two fold. Firstly, to evaluate the content validity of the dimensions of a questionnaire associated with factors relating to substance use by adolescents in low socio-economic status communities. Secondly, to use the gathered information to inform the item writing of a questionnaire that will be used to further investigate substance use among adolescents in the two areas used in the study. The recommendations that follow are thus based on providing key focus areas, especially for the two areas used, regarding methamphetamine use as well as recommendations for future endeavours in these areas.

Based on the findings of the current study the dimensions as listed in the blueprint of the proposed questionnaire and the dimensions highlighted in the literature; were deemed important factors associated with adolescent substance use. Throughout this paper, scholarship has been noted that would support these findings. These dimensions are then

proposed for both the item writing of the proposed questionnaire and as recommendations for focus areas for future intervention and prevention strategies.

Furthermore, it is recommended that research be stimulated to investigate the protective factors for adolescent substance use in low socio-economic communities. Knowing what would decrease the probability of an individual using drugs, would once again pin point areas one could focus on with interventions, which will empower those in need of intervention as opposed to educating only.



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## APPENDIX 1: LETTER OF PERMISSION



**UNIVERSITY *of the* WESTERN CAPE**

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**DEPARTMENT OF PSYCHOLOGY**

Private Bag X 17, Bellville 7535, South Africa, Telephone: (021) 959-2283/2453  
Fax: (021) 959-3515 Telex: 52 6661

28 February 2011

TO WHOM IT MAY CONCERN

**RE: Permission to conduct study**

I hereby give permission to Cassandra Carels (student number: 2614996) to conduct a study of **“Evaluating the content validity of the dimensions of a questionnaire measuring factors associated with substance use in adolescents in low socio-economic status communities”**. This study will be located in a bigger study called “A multi-method study of substance use in low socio-economic status communities in the Cape Metropolitan and West Coast areas of South Africa”. The data that this student will collect and analyse will inform the instrument development aim of the bigger project.

Yours sincerely

**M.A. Florence**

## APPENDIX 2: INFORMATION SHEET



# UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

*Tel: +27 21-959 2283, Fax: 27 21-959 3515*

E-mail: [skoch@uwc.ac.za](mailto:skoch@uwc.ac.za)

### INFORMATION SHEET – Community Leaders

**Title of Research Project:** Evaluating the content validity of the dimensions of a questionnaire measuring factors associated with substance use in adolescents in low socio-economic status communities.

#### **What is this study about?**

This research project is being conducted by Ms Cassandra Carels of the Psychology department at the University of the Western Cape. We are inviting you to participate in this research project because of your knowledge of substance use in your community and the work that you have done in the area. The purpose of this research project is to test the relevance of the newly developed dimensions and instrument to test quality of life based their knowledge of the dynamics around substance use in their community. The purpose of these discussions is to inform the development of new dimensions for an instrument that will be used to assess the factors that are associated with substance use in adolescents in low socio-economic Cape Flats communities. This research will contribute to a better understanding of the problem in this area of the Western Cape and South Africa, and could lead to better preventive and treatment programmes being implemented.

#### **What will you be asked to do if you agree to participate?**

You will be asked to participate in discussions around the nature of substance use in your community. All the questions will be related to this issue. The discussion will be led by trained researchers at a time that is convenient for you – these arrangements will be made once you agree to participate in the study.

#### **Would my participation in this study be kept confidential?**

We will do our best to keep your personal information confidential. We will need to tape record information in the discussions. The researchers will be the only people who will have access to the recordings and these tapes will be destroyed once the information is captured. If we write a report or article about this research project, your identity will be protected to the maximum extent possible.

#### **What are the risks of this research?**

There are no known risks associated with participating in this research project. We are not doing research on your organization specifically or to affect you in any way. You are only

being questioned so that we could collect information about quality of life and substance use in general.

**What are the benefits of this research?**

This research is not designed to help the adolescents that you have worked with specifically, but the results may help the researchers learn more about the factors in the community that influence substance use. We hope that, in the future, other people might benefit from this study through improved understanding of this problem.

**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 not to take part at all and if you decide to participate in this research, you may stop at any time. If you decide not to participate in this study or if you stop participating at any time, there will be no consequences.

**Is any assistance available if I am negatively affected by participating in this study?**

Should you be negatively affected by this research, you can contact Ms Maria Florence who will do everything possible to refer you for support and assistance.

**What if I have questions?**

This research is being supervised by Ms Maria Florence at the University of the Western Cape. If you have any questions about the research study itself, please contact her: The University of the Western Cape, Ms Maria Florence, 021-9592827, [mflorence@uwc.ac.za](mailto:mflorence@uwc.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:

Head of Department: Prof K. Mwaba (021-959 2839)

Dean of the Faculty of Community and Health Sciences: Prof R. Mpofu

University of the Western Cape

Private Bag X17

Bellville 7535

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



APPENDIX 3: ASSENT FORM



UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Tel: +27 21-959 2283, Fax: 27 21-959 3515

E-mail: skoch@uwc.ac.za

**Title of Research Project:** Evaluating the content validity of the dimensions of a questionnaire measuring factors associated with substance use in adolescents in low socio-economic status communities.

The study has been described to me in language that I understand and I freely and voluntarily agree to participate. My questions about the study have been answered. I understand that my identity will not be disclosed and that I may withdraw from the study without giving a reason at any time and this will not negatively affect me in any way.

**Participant's name**.....

**Participant's signature**.....

**Date**.....



**Witness' name**.....

**Witness' signature**: .....

**Date**: .....

Should you have any questions regarding this study or wish to report any problems you have experienced related to the study, please contact the study coordinator:

**Study Coordinator's Name: Maria Florence**

**University of the Western Cape**

**Private Bag X17, Belville 7535**

**Telephone: (021)959-2827/2283/2453**

**Fax: (021)959-3515**

**Email: mflorence@uwc.ac.za**

**APPENDIX 4: CONTENT VALIDITY QUESTIONNAIRE**



**UNIVERSITY *of the* WESTERN CAPE**

**DEPARTMENT OF PSYCHOLOGY**

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**RATING SCALE OF POSSIBLE FACTORS THAT PLAY A ROLE IN DRUG USE  
 AMONGST MANENBERG YOUTH**

**Name:** .....

**Organisation:** .....

**Email address:** .....

**Contact number:** .....

**Please rate from 1-5 (with 1 being not important and 5 being extremely important) to what extent you think the following factors are important contributors to adolescent substance use in this community.**

<b>Factors</b>	<b>Not important</b>	<b>Somewhat important</b>	<b>Fairly important</b>	<b>Very important</b>	<b>Extremely important</b>
<b>Racial/cultural identity</b>	1	2	3	4	5
<b>Self –efficacy</b> i.e. a person’s belief in their ability to do something successfully	1	2	3	4	5
<b>Ambitions and plan for the future</b>	1	2	3	4	5
<b>Coping mechanisms/ability to cope/resilience</b>	1	2	3	4	5
<b>Desirable effects of drugs</b>	1	2	3	4	5
<b>Family violence and conflict</b>	1	2	3	4	5
<b>Divorce and step parenting</b>	1	2	3	4	5

<b>Factors</b>	<b>Not important</b>	<b>Somewhat important</b>	<b>Fairly important</b>	<b>Very important</b>	<b>Extremely important</b>
<b>Parental criminal activity</b>	1	2	3	4	5
<b>Single parenting</b>	1	2	3	4	5
<b>Parental monitoring of teens</b>	1	2	3	4	5
<b>Communication and support from parents</b>	1	2	3	4	5
<b>Poverty and unemployment</b>	1	2	3	4	5
<b>Parental drug use</b>	1	2	3	4	5
<b>Parental drug trade</b>	1	2	3	4	5
<b>Peer acceptance and support</b>	1	2	3	4	5
<b>Experimentation</b>	1	2	3	4	5
<b>Experience of school as a supportive environment/school as a stressor</b>	1	2	3	4	5
<b>Access to after-school activities</b>	1	2	3	4	5
<b>Boredom</b>	1	2	3	4	5
<b>Ease of access to and affordability of drugs</b>	1	2	3	4	5
<b>Exposure to drug trade</b>	1	2	3	4	5
<b>Confusion about parental use or tolerance of drugs</b>	1	2	3	4	5
<b>Confusion about community acceptance of gang culture</b>	1	2	3	4	5
<b>Social transformation</b>	1	2	3	4	5
<b>Family finances and unemployment</b>	1	2	3	4	5
<b>Tolerance of soft drugs</b>	1	2	3	4	5
<b>Socio-political history</b>	1	2	3	4	5
<b>Hope for the future</b>	1	2	3	4	5

Please rate the extent to which you think the following factors should have been included using the same scale.

<b>Factors</b>	<b>Not important</b>	<b>Somewhat important</b>	<b>Fairly important</b>	<b>Very important</b>	<b>Extremely important</b>
<b>Religiousness</b>	1	2	3	4	5
<b>Academic ability</b>	1	2	3	4	5
<b>Genetics</b>	1	2	3	4	5
<b>Affluence</b> – i.e. the state of having a great deal of money	1	2	3	4	5
<b>Physical fitness</b>	1	2	3	4	5
<b>Assertiveness</b>	1	2	3	4	5
<b>Moods and emotions</b>	1	2	3	4	5
<b>Resilience</b> – i.e. the capacity to recover quickly from difficulties	1	2	3	4	5



**Please list any additional factors that you think does impact on adolescent substance use in this community that has not been mentioned above.**

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**UNIVERSITY *of the*  
WESTERN CAPE**

## APPENDIX 5: BROAD QUESTIONS OF NOMINAL METHOD

### PANEL: COMMUNITY LEADERS

#### Background information:

On this project we have talked to different community members to try to get an understanding of why young people in this community use drugs. We want to see whether there is a difference between those who use drugs and those who don't on these factors. The information will then be used to develop programmes that will be more effective in addressing the drug problem in this particular community. In order to do this we need to develop a questionnaire that can measure these factors. We would like you, as a leader of this community, to comment on the extent to which the factors listed is associated with drug use amongst young people in this community.

#### Participants:

This panel will include stakeholder in the community of interest that the larger project has been maintaining ongoing contact with since 2009. People working for The Local Drug Action Committee (i.e. local community leaders committed to ridding the community of substance abuse) were engaged as informants in the initial stages of the data collection for this phase of the parent project. Through contact with them, other community leaders and participants were identified for the study. This sample also included parents of adolescent children, who reside in the area, as well as adolescents between 15 and 18 years of age who either attend school or do not.

#### Purpose:

To assess whether community stakeholders agree or disagree that the factors included in the list of possible factors reflect the actual factors that are associated with substance use amongst adolescents in this community.

#### Questions:

1. Do these factors cover all aspects that play a role in adolescent substance use? In this community as you understand it? In other words, can you think of any factors that still need to be included?
2. Does it cover any aspects that you feel does not contribute to adolescent substance use in this particular community? In other words, are some factors irrelevant?
3. In your opinion as a community leader, do you think that the youth in this community will respond truthfully if asked about their experiences and feelings with regard to substance use?