THE ROLE OF EXPOSURE TO SUICIDE AND COPING STRATEGIES IN THE SUICIDAL IDEATION OF ADOLESCENTS

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STATEMENT

I, Sonja Loots, declare that the dissertation submitted by me for the Magister Societatis Scientiae degree (Psychology) at the University of the Free State is my own independent work and has not previously been submitted by me at another university or faculty. I furthermore cede copyright of the dissertation in favour of the University of the Free State.

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S. Loots Date

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ABSTRACT

Both international and national research, indicate that adolescent suicide rates have steadily increased during the past few decades. As a result, the importance of investigations concerning risk and protective factors that influence adolescents is highlighted. The current study investigates the role of one such potential risk factor, namely exposure to suicide, as well as the role of coping strategies as possible protective factors in the levels of suicidal ideation of adolescents. A non-experimental research design, including both correlational and criterion group components was implemented. The group of participants consisted of 590 grade 11 and 12 adolescents from the Northern Cape Province. The measuring instruments included the Suicidal Ideation Questionnaire (Reynolds, 1988), a self-compiled biographical questionnaire, the Coping Orientations to the Problems Experienced Questionnaire (COPE) (Carver, Scheier & Weintraub, 1989), and a self-compiled Guttman-scale containing two items to establish whether participants had been exposed to suicidal behaviour. A product moment correlation was calculated between exposure to suicidal behaviour and suicidal ideation. This was followed by a multivariate analysis of variance to determine whether significant differences existed between a group of participants with low levels of suicidal ideation, a group with high levels of suicidal ideation, and their use of different coping strategies.

Results from the study indicate that the measuring instruments have acceptable internal consistency coefficients; however, the COPE questionnaire obtained

lower alpha coefficient scores than the alpha coefficients found for an American sample (Carver, Scheier & Weintraub, 1989). No significant correlational relation was found between exposure to suicide and levels of suicidal ideation. The univariate analysis of variance revealed that this group of participants most frequently made use of problem-focused and emotion-focused coping strategies, however, the results also indicate that the participants, especially those portraying high levels of suicidal ideation, frequently use less functional strategies, such as denial and behavioural disengagement. Thus, it seems as if adolescents with high suicidal ideation more often engage in inappropriate coping strategies, such as denial and behavioural disengagement. Similarly, Lewis and Frydenberg (2002) found that adolescents tend to move toward suicidal behaviour when they have inadequate abilities to implement efficient coping strategies. In the light of these findings, adolescents would certainly benefit from intervention programmes that urge the development and use of more effective coping strategies.

Keywords: Suicide, Attempted suicide, Suicidal behaviour, Suicidal ideation, Coping strategies, Coping resources, External stressors and resources, Internal stressors and resources, Exposure to suicide, Adolescence, Developmental phase, Northern Cape Province.

OPSOMMING

Beide internasionale sowel as nasionale navorsing dui aan dat adolessente selfmoordgedrag gedurende die afgelope paar dekades toegeneem het. As gevolg hiervan word die belangrikheid van navorsing rakende relevante risiko- en beskermende faktore beklemtoon. Die huidige studie stel ondersoek in na die rol wat een potensiële risikofaktor speel in adolessente se selfmoordgedrag, naamlik blootstelling tot selfmoordgedrag, sowel as die rol van copingstrategieë as moontlike beskermende faktore in die vlakke van adolessente se selfmoordideasie. 'n Nie-eksperimentele navorsingsontwerp bestaande uit beide korrelasionele en kriterium-groep komponente, is gebruik. Die steekproef het bestaan uit 590 graad 11 en 12 leerlinge vanuit die Noordkaap Provinsie. Die meetinstrumente het bestaan uit die Selfmoordideasie vraelys (Reynolds, 1988), 'n biografiese vraelys, die Coping Orientation of Problems Experienced (COPE) vraelys (Carver, Scheier & Weintraub, 1989) en 'n self-saamgestelde Guttman-skaal, bestaande uit twee items, om te bepaal of deelnemers voorheen blootgestel was aan selfmoordgedrag. Die produkmoment-korrelasiekoëffisiënt tussen blootstelling aan selfmoordgedrag en selfmoordideasie is bereken. Hierdie berekening is deur 'n meerveranderlike analise van variansie opgevolg om vas te stel of beduidende verskille bestaan tussen 'n groep deelnemers met lae vlakke van selfmoordideasie, 'n groep met hoë vlakke van selfmoordideasie en hul gebruik van verskillende copingstrategieë.

Resultate van die studie dui aan dat die meetinstrumente aanvaarbare interne konsekwentheidskoeffisiënte toon, alhoewel laer alfakoëffisiënte vir die COPE vraelys bereken is as wat in 'n Amerikaanse studie bevind is (Carver, Scheier & Weintraub, 1989). Geen betekenisvolle korrelasie tussen blootstelling aan selfmoord en vlakke van selfmoordideasie is gevind nie. Uit die enkelveranderlike variansieontleding het dit geblyk dat die totale groep meer gebruik maak van probleem-gefokusde en emosioneel-gefokusde copingstrategieë, alhoewel die resultate ook weergee dat die deelnemers, veral die wat hoë vlakke van selfmoordideasie toon, dikwels minder funksionele strategieë, insluitend ontkenning of gedragsonttrekking gebruik. Dit blyk dus asof adolessente met hoë vlakke van selfmoordideasie meer gereeld ongepaste copingstrategieë, insluitend ontkenning en gedragsonttrekking toepas. 'n Soortgelyke bevinding is deur Lewis en Frydenberg (2002) gemaak. Adolessente in hul studie was meer geneig om selfmoordgedrag uit te voer wanneer hulle onvoldoende vermoëns het om effektiewe copingstrategieë te implementeer. Aan die hand van hierdie bevindinge, is dit duidelik dat adolessente baat sal vind by intervensieprogramme wat meer effektiewe gebruik van copingstrategieë bevorder.

Sleutelwoorde: Selfmoord, Selfmoordpoging, Selfmoordgedrag, Selfmoordideasie, Copingstrategieë, Coping hulpbronne, Eksterne stressors en hulpbronne, Interne stressors en hulpbronne, Blootstelling aan selfmoord, Adolessente, Ontwikkelingstydperk, Noord-Kaap Provinsie

TABLE OF CONTENTS

APPENDICES

TABLES

FIGURES

CHAPTER 1

OUTLINE OF DISSERTATION

1.1 INTRODUCTION

This chapter serves as an introduction to the dissertation and highlights the problem statement, goals of the study, and provides a definition of the constructs under investigation.

1.2 ORIENTATION AND PROBLEM STATEMENT

Globally, adolescent suicidal behaviour has received increasing professional and research attention over the past two decades. Although the occurrence of adolescent suicide is more prevalent in South Africa than in many developed countries, it has received relatively little attention from researchers (Pillay & Wassenaar, 1997; Schlebusch, 2005). George (2005) reports that the South African suicide rate is 1.2% higher than the world average of 16% of the total number of deaths. Apart from this disconcertingly high number of suicides among the general population, suicide amongst adolescents seems to be increasing at an alarming rate. According to the findings of the South African National Injury Mortality Surveillance System (NIMSS), the highest fatal suicide rate in 2002 was in the 15-19 year age group (Matzopoulos, Cassim & Seedat, 2003). Suicidal behaviour not only jeopardises the health of adolescents, but

also impacts negatively on their psychological and social well-being and their ability to master normal developmental tasks. It is therefore important to investigate aspects contributing to suicidal behaviour and to explore the role of factors such as coping, which may help to reveal personal and contextual stress buffering factors. The latter, in turn, may reduce the risk of health compromising behaviour such as suicide attempts among adolescents (Wild, Flisher, Bhana & Lombard, 2004).

Suicidal behaviour amongst adolescents is a complex phenomenon with a wide range of factors contributing to the onset and maintenance of self-destructive behaviour. Besides the stress related to the major physical, psychological and social changes adolescents have to deal with, South African adolescents also have to face many additional contextual stressors associated with the sociopolitical and economic landscape. Children and adolescents in South Africa are frequently exposed to high levels of violence and crime that erode their sense of security and increase their vulnerability to psychological problems (Louw, Louw & Ferns, 2007). Due to high levels of parental unemployment and the lack of sufficient infrastructure such as housing, water and medical care, many South African children and adolescents are exposed to severe economic hardships (UNICEF, 2005). Rising economic inflation and unemployment also lead to fierce competition for employment amongst school leavers and often result in high levels of anxiety about the future. As South Africa is still in a process of socio-

political transition, many individuals continue to struggle with insecurities about their place in society and the ongoing conflict between changing cultures. These incessant stressors all contribute to increased levels of stress, feelings of hopelessness, helplessness, and possible suicidal ideation among many young South Africans (Meehan, Peirson & Fridjhon, 2007).

The potential risk factors that are associated with suicide attempts by adolescents include psychopathology, a previous suicide attempt, suicidal ideation, hopelessness, poor problem solving and coping skills as well as recent stressful life events (Schlebusch, 2005). Exposure to suicidal behaviour such as the attempted or completed suicide of family members, friends and peer group members is often neglected as a potential risk factor for suicidal ideation and behaviour, even though there appears to be sufficient scientific evidence that exposure to the suicidal behaviour of others may contribute to suicidal behaviour in an individual who is already vulnerable (Lewinsohn, Rohde & Seeley, 1994). In a study of the prediction of future suicide attempts, Lewinsohn, Rohde and Seeley (1996) found that certain risk factors, such as exposure to attempted or completed suicides of family members or friends made a unique contribution. Family-related factors (for instance being born to a single mother, family dissolution, and violence), school-related and academic problems as well as personal factors including low self-esteem and a depressed mood are also considered important contributory factors influencing adolescent suicidal

behaviour (Lewinsohn et al., 1996; Schlebusch, 2005). Although risk factors play an important contributory role in suicidal behaviour, Schlebusch (2005) points out that resorting to suicidal behaviour is often used as an inappropriate coping strategy.

Coping strategies and resources can play a determining role in health compromising or health enhancing behaviour when individuals who already experience high levels of stress, anxiety and hopelessness are confronted with additional stressors such as the suicide of a close friend or family member (Spirito, Overholser & Stark, 1989). Further investigation into the possible mediating role of coping is therefore important for the future planning and development of intervention programmes for high risk individuals.

Most research to date centres around suicidal behaviour with much less attention focusing on suicidal ideation (Wilburn & Smith, 2005). Jeammet (1989) proposes that the rationale behind the infrequent study of suicidal ideation is that it is more complicated to measure objectively than suicidal behaviour. For this reason, many researchers prefer to work with the observable suicidal behaviour which is considered to be more reliable. However, Reynolds (1988), as well as Shea (1998), found that suicidal ideation has a strong correlation with suicide and should therefore be considered the first warning sign of more serious suicidal behaviour.

The rising numbers of adolescent suicides both in South Africa and internationally necessitate the urgent identification of potential risk and resiliency factors such as exposure to suicide, as well as further research into the nature and extent of coping strategies that might influence suicidal ideation and behaviour. In order to address these concerns, the current study aims to determine the level of suicidal ideation of adolescents from the Northern Cape Province, and to explore the relationship between exposure to suicide, coping strategies, and suicidal ideation amongst this group of adolescents.

1.3. RESEARCH QUESTIONS

The following research questions were formulated for this study:

1. What level of suicidal ideation is present in the group of participants?
2. Is there a significant relationship between exposure to suicide and the suicidal ideation of this group of participants?
3. Does the group of participants with low levels of suicidal ideation differ significantly from the group with high levels of suicidal ideation with regard to their use of coping strategies?

1.4 RESEARCH DESIGN AND METHODOLOGY

By using an existing data pool consisting of approximately 600 adolescents from the Northern Cape Province who completed four questionnaires related to coping, suicidal ideation, and exposure to suicide, an analysis of variance will be implemented to calculate the extent of exposure to suicidal behaviour in relation to suicidal ideation. Coping resources and strategies will then be assessed in terms of the role they might have played in the adolescents' suicidal ideation.

1.5 DEFINITION OF KEY TERMS

This section provides a short definition of concepts frequently used in this dissertation, including suicidal behaviour, suicide, suicidal ideation, risk factors, stressors, coping, coping resources and coping strategies, and adolescence.

1.5.1 Suicidal behaviour

Suicidal behaviour encapsulates self-destructive behaviour originating with thoughts about ending one's life, developing a plan concerning method, location and a time-frame to commit suicide, and which could possibly lead to suicide attempts and/or suicide completion in due course (Krug, Dahlberg, Mercy, Zwi & Lozano, 2002).

1.5.2 Suicide

Bridge, Goldstein and Brent (2006, p.372) describe suicide as “a fatal self-inflicted destructive act with explicit or inferred intent to die”.

1.5.3 Suicidal ideation

Suicidal ideation constitutes one aspect of suicidal behaviour and is defined as thoughts about death, suicide and serious self-injurious behaviour. Thus, it includes thoughts around the planning and execution of suicidal behaviour (Reynolds, 1988). Cole, Protinsky and Cross (1992) refer to suicidal ideation as a preoccupation with the thought of ending one’s own life.

1.5.4 Risk factors

Stillion, McDowell and May (1989) refer to factors that increase the individual’s vulnerability to suicide as suicide risk factors. Frequently, suicidal behaviours in adolescents originate from experiencing adverse life events in which multiple risk factors combine to increase the risk for suicidal behaviour (Beautrais, 2000).

1.5.5 Stressors

A stressor refers to any event or object that is subjectively perceived as stressful by an individual (Folkman & Lazarus, 1984).

1.5.6 Coping

Coping refers to perceptual, cognitive or behavioural responses that are used to defuse situations regarded as frustrating or problematic (Folkman & Lazarus, 1984; Moos, 1994; Zeidner & Endler, 1996). Coping can be subdivided into coping resources and coping strategies.

1.5.7 Coping Resources and coping strategies

According to Diener and Fujita (1995, p.926), “resources are material, social, or personal characteristics that a person possesses that he or she can use to make progress toward his or her personal goals”. Coping strategies, in turn, refer to efforts used to alleviate stress by either focusing on solving the problem (problem-focused strategies), or to regulate emotional responses brought on by the stressor (emotion-focused strategies) (Judge, 1998).

1.5.8 Adolescence

Adolescence is defined as the developmental phase between puberty and adulthood. Different cultures attribute different physical ages to this period. In the Western culture it is accepted that the age of onset is between 11 and 13 years and ends between the ages of 17 and 21 (Louw et al., 2007).

1.6 OUTLINE OF CHAPTERS OF THE DISSERTATION

Chapter 2 will review the available literature on suicidal ideation and behaviour, as well as coping and the role of coping in adolescent risk behaviour. This is followed by an exposition of the research methodology used in this study (Chapter 3). The results of the statistical analysis and associated research findings will be presented and discussed in Chapter 4. Finally, Chapter 5 will re-examine the literature in light of the research findings, consider the limitations of the current study, and offer recommendations relevant to future research and practice.

CHAPTER 2

REVIEW OF LITERATURE

2.1 INTRODUCTION

The focus of this chapter is to clarify the concepts of suicidal ideation and behaviour, as well as to explore factors contributing to suicidal behaviour. The international prevalence of adolescent suicides in comparison with South African reports will also be highlighted. The Integrated Stress and Coping Model of Moos and Schaefer (1993) serves as guiding theoretical model of the current study and will be explained by applying relevant contributory factors, personal and contextual stressors, and coping strategies and resources to the model. The role of exposure to suicidal behaviour will then be examined as a contextual factor that might be of specific coping relevance to adolescents.

2.2 CONCEPTUALISATION OF SUICIDE

In order to adequately conceptualise suicide, a brief historic overview of the phenomenon, as well as factors closely related to suicide, will be discussed.

2.2.1 Historical overview of suicide

Suicide has been part of human existence for a very long time and diverse attitudes toward taking one's own life can be identified in most cultures. Hunting tribes perceived self-sacrifice, while acting as a distraction to prey, as an honourable way to die because it was for the greater good of the tribe (Stillion et al., 1989). Suicide among the ancient Greeks and Romans was also deemed acceptable if it was done for the maintenance of one's honour. The spread of Christianity though, lead to a discouragement of suicide and the act was condemned by many Christian churches because of their belief that life is sacred (Perlin, 1975). Following Christianity's lead, most Western countries illegalised the act of suicide, dispensing harsh punishments to surviving individuals and their family members. In the 18th century, when convicted of suicide, bodies were desecrated through public hanging and unceremoniously disposed of (Dunne, McIntosh & Dunne-Maxim, 1987). Suicide was only decriminalised in the 1960's and 1970's (Hawton & Van Heeringen, 2000).

Although suicide is still condemned by virtually all cultures, the growing prevalence rates of suicidal behaviour cannot be ignored. For this reason suicidal behaviour is getting more attention in different parts of the world.

Before contributory and protective factors can be investigated, the different concepts related to suicide have to be distinguished.

2.2.2 Concepts associated with suicide

Suicide is defined as an act of self-inflicted, intentional taking of one's own life (Sneidman, 1981). However, as can be inferred from literature on suicide, several concepts exist that relate to the act but do not necessarily imply the taking of one's own life. Therefore, it is important to distinguish between these concepts, which include suicidal behaviour, suicidal ideation, attempted suicide, and completed suicide.

2.2.2.1 Suicidal behaviour

Cole et al. (1992) explained suicidal behaviour as behaviour represented in a continuum beginning with suicidal ideation, followed by a suicide attempt, and finally completed suicides. Other authors view suicidal behaviour as a paradoxical phenomenon, highlighting its extremely personal nature on the one hand, and the similarities of suicides throughout the ages on the other (Diekstra, 1992). These statements give rise to the idea that suicidal behaviour is a complex entity which includes a variety of factors, each of which is playing a role in the etiology of suicidal behaviour.

2.2.2.2 Suicidal Ideation

Suicidal ideation is probably the most common example of suicidal behaviour. Suicidal ideation refers to thoughts of killing oneself, in varying degrees of intensity (Krug et al., 2002). It is also viewed as the starting point in self-destructive behaviour, although the majority of individuals who confess to suicidal ideation, do not progress to suicide attempts or completed suicide (Simons & Murphy, 1985). According to McAuliffe (2002), all suicide attempters and completers experience suicidal ideation at one stage, but not everyone with ideation continues on to attempted or completed suicide. Therefore, it is necessary to identify links between thoughts of suicide and acting on those thoughts. McAuliffe (2002) believes that one important link between suicidal thoughts and acts is the degree of the individual's intent.

2.2.2.3 Attempted suicide/Parasuicide

Inconsistencies with the conceptualisation of certain factors related to suicide have been noted. Although the term attempted suicide seems self-explanatory, suicide researchers disagree about whether parasuicide and attempted suicide are synonymous. Pretorius and Roos (1993) express the opinion that there is a difference in intent between the two phenomenons. Thus, the term parasuicide was put into practice to explain cases of attempted suicide where no intent was present (Kreitman, Phillip, Greer & Bagley, 1969), while the term attempted

suicide is used where a suicide attempt is “with the explicit or inferred intent to die” (Bridge et al., 2006, p. 372).

2.2.3 Conclusion

Because this study does not focus exclusively on attempted suicide, but rather the relationship between exposure to suicide and suicidal ideation, for the sake of this dissertation, suicidal behaviour will thus encompass suicidal ideation, attempted suicide (with intent to die), and suicide.

2.3 EXPLANATORY THEORIES OF SUICIDE

Theorists from various disciplines have developed a wide range of possible explanations for suicidal behaviour. The fields of psychology and sociology were two of the most prominent in trying to uncover the causes of suicidal behaviour (Bradatan, 2007). Emile Durkheim, a sociologist, was the first to study the relationship between suicide and individuals’ integration into society (Berman, Jobes & Silverman, 2006). Durkheim’s work had such an impact that it later lead to the forming of the study field suicidology. Historically, the study of suicide from a psychological perspective was not treated as a field of study on its own (Lester, 1988). Instead, theories on depression and already existing psychological theories and knowledge were applied to suicidal behaviour in an attempt to explain the phenomenon. Only during the second half of the twentieth century,

did psychological theorists realise the importance of studying suicide as an entity on its own. Although several other disciplines also contributed to the study of suicidal behaviour, sociological, psychological and biological perspectives are the most applicable in this study, therefore only these three fields will be focused on briefly.

2.3.1 Sociological perspective

Both Emile Durkheim's and Urie Bronfenbrenner's theories revolve around societal influence on the individual. When societal pressures become unbearable, the individual might resort to suicidal behaviour.

2.3.1.1 Emile Durkheim's theory

Durkheim (1951) argued that suicide is determined by the degree of social integration the individual experiences. Thus, societal pressures and influences play a pivotal role in the individual's engagement in suicidal behaviour (Gilliland & James, 1997). Durkheim (1951) identified the following four basic types of suicide to explain the differences in the patterns of suicide:

a) Egoistic suicide

When individuals struggle to integrate into society and find it difficult to connect with or be dependent on the community, they could resort to egoistic suicide. This type of suicide might be particularly relevant in South African adolescents,

especially among black adolescents being placed in former predominantly white schools. The differences in cultures may lead to feelings of isolation, which is a known risk factor for adolescent suicidal behaviour (Stillion et al., 1989).

b) Altruistic suicide

Altruistic suicide takes place when the person is overly integrated into a group and feels that no sacrifice is too great for the well-being of the larger group. One of the most relevant examples of current altruistic suicides is the occurrence of suicide bombings, which have been especially prominent in Palestine, Israel, and Russia since the 1980's, and escalated in countries like Iraq, Pakistan, and Saudi-Arabia after the declaration of war against terrorism by the United States of America in 2001 (Hafez, 2005). In explaining the occurrence of suicide bombings, Hafez (2005) adds that military groups encourage the act by claiming it to be unparalleled heroism, opportunities for redemption, and imperative for the liberation and conservation of their religion. Thus, young, passionate, and eager individuals volunteer to participate in these acts with the belief that it is for the greater good of their society.

c) Anomic suicide

When an individual struggles to deal with a crisis in a rational manner, a sudden alteration in the relationship between themselves and society causes even more stress. Unable to solve the escalating problem, the individual resorts to suicide

as a means to escape. This particular type of suicide has the most relevance to this study. When adolescents are faced with the suicide of a family member or friend, they are challenged to successfully cope with the feelings of shock, anger, and guilt.

d) Fatalistic suicide

This type of suicide is caused by excessive societal regulation that restricts an individual's freedom. The victims feel they have no viable future and therefore lose hope. This type of suicide has relevance in Indian South African adolescents' suicidal behaviour, where the strict social regulation of Indian females by their parents might increase their vulnerability to suicidal behaviour (Pillay & Schlebusch, 1987).

2.3.1.1.1 Limitations of Durkheim's theory

Although Durkheim's perspective on suicide seems to be applicable even in current societies, the theory has been criticised for excluding variables such as social support and dispositional variables, including personality characteristics, psychopathology or individual coping that may have an influence on suicidal behaviour (Gilliland & James, 1997; Maris, Berman & Silverman, 2000).

2.3.1.2 Urie Bronfenbrenner's theory

Bronfenbrenner (1979) focused on interaction between the individual and the environment, claiming that behaviour is the result of interplay between these systems. An illustrative view of Bronfenbrenner's systems is provided in Figure 2.1. Bronfenbrenner explained this interplay by identifying several social systems that individuals form part of, including:

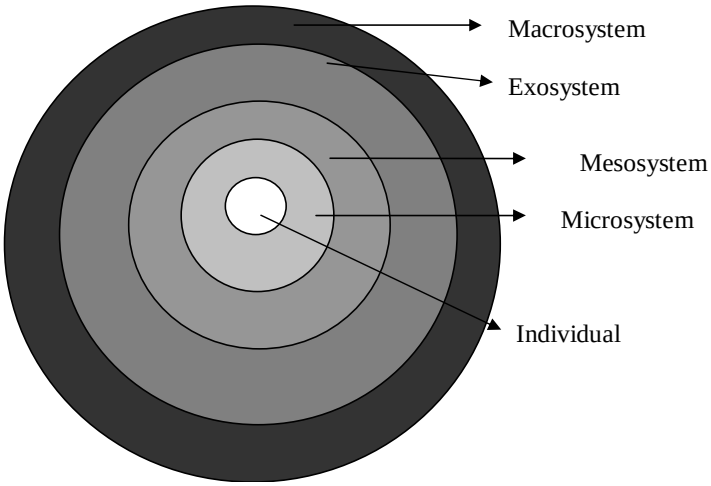
a) The Microsystem which includes interpersonal relationships, activities, and roles the individual is directly involved with.

b) The Mesosystem which represents interactions between different systems the individual is part of, such as work, neighbourhood, and social life.

c) The Exosystem which represent settings in which the individual is not directly involved, yet is still indirectly influenced by these systems, such as a spouse's work environment.

d) The Macrosystem which includes the greater society or culture the individual forms part of.

In short, the individual is seen as an actively participating entity that has to accommodate and reciprocate influences from these various systems. When the individual struggles to adapt to changes in system formats or struggles to cope with pressures from these systems, he/she might become vulnerable to risk factors associated with suicidal behaviour.



Urie Bronfenbrenner's theory (Bronfenbrenner, 1979)

Figure 2.1: Bronfenbrenner's systems

2.3.1.2.1 Limitations of Urie Bronfenbrenner's theory

Other than Durkheim, Bronfenbrenner does include the importance of interpersonal relationships as a means of support, and describes the individual as "a growing, dynamic entity that progressively moves into and restructures the milieu in which it resides" (Bronfenbrenner, 1979, p. 21). This inclusion however, does not compensate for the lack of in depth consideration of individual characteristics that might influence adaptation, coping, and interrelations between the individual and the relevant systems.

2.3.2 Psychological perspectives

Because the psychoanalytic and behaviouristic perspectives form the basis of psychology, only these two perspectives will be discussed briefly.

2.3.2.1 Psychoanalytic perspective

Although Sigmund Freud never studied suicide as an entity on its own, he did make several contributions to the understanding of suicidal behaviour through his work.

Freud (as cited in Stillion et al., 1989) suggested the existence of a death instinct, or “thanatos”, an instinctual drive toward death, as opposed to the life instinct, or “eros”. Throughout an individual’s life, there is constant friction between the life and death instinct, each yearning to either survive or return to an inorganic state (Lester, 1988). The death instinct is primarily masochistic and the individual attempts to externalise the instinct in the form of aggression, turning the masochism into sadism. When cultural norms oppose the aggression, the instinct is turned back into the self, and becomes self-destructive, which may then progress into suicidal behaviour (Lester, 1988).

Some of Freud’s earlier work outlines the psychological mechanisms involved in turning hostility against the self. He argued that people identify with, and internalise the objects of their love ambivalently, which means they may direct

their own aggressive impulses against the internalised love-object whom they both love and hate (Berman et al., 2006). This causes dissonance accompanied by great psychological stress within the person and may increase the individual's vulnerability to engage in suicidal behaviour (Gilliland & James, 1997).

Another contribution Freud made to the study of suicide is the greater emphasis on the human personality, which he argued consists of three interacting entities, namely the id, ego, and superego. While the id represents pleasure and basic needs for survival, like aggression and reproduction, the superego represents the conscience and the ideal self. The third entity plays a mediating role between the two opposites and is known as the ego (Lester, 1988). From the psychoanalytical perspective, suicidal behaviour is thus explained by an overdeveloped superego that brings about perfectionism in attempting to embrace the ideal self. This in turn, leads to severe feelings of failure and guilt when the attempt fails, and may cause the individual to resort to suicidal behaviour (Stillion et al., 1989).

2.3.2.2 Behavioural perspective

The fundamental assumption of the behavioural perspective is that behaviour is learned or acquired (Louw, Van Ede & Louw, 1998). In studying the behavioural learning capability of college students, Seligman (1975) and his colleagues discovered that the impact of major loss or failure to solve a problem leads to the

onset of depressive symptoms, making the students more vulnerable to suicidal risk. Thus, according to the behavioural perspective, failing to employ efficient coping strategies when confronted with a stressor might increase the individual‘s vulnerability to suicidal behaviour.

2.3.3 Biological perspective

From a biological perspective, physiological changes in the brain as well as hereditary factors may contribute to suicidal behaviour. Several adoption, twin, and family studies have confirmed that suicidal behaviour is familial and heritable (Brent & Mann, 2005). In studying the causal factors of depression, several studies have discovered links between depressive symptoms and deregulation of neurotransmitters, dysfunctions in the endocrine system, and even irregular sleep and circadian rhythms (Barlow & Durand, 2005). A large number of depressive symptoms have been identified as suicide risk factors, however not all depressed individuals commit suicide (Stillion et al., 1989). Thus, further investigation into biological contributory factors to suicide has to be undertaken.

2.3.4 Conclusion

Although these perspectives all view the onset of vulnerability and possible suicidal behaviour from different angles, a consistent trend can be seen throughout, namely that the individual’s vulnerability to engage in suicidal

behaviours is increased by either external or internal stressors, with which the individual struggles to cope. Suicide is a complex issue, with biological, cultural, sociological, interpersonal, and intrapsychic elements present in varying degrees (Dunne et al., 1987). For this reason, individual perspectives from different disciplines of the humanities cannot adequately explain this phenomenon on their own, but should rather use a holistic approach when studying suicide.

The following section focuses on national and international prevalence rates of suicidal behaviour.

2.4 PREVALENCE OF SUICIDE

Differences in suicide statistics are not uncommon, mainly because no single, structured, reliable system is used to create an interconnected database. The reasons for this vary from disputes over classification of suicides to the inaccessibility of information resources (Krug et al., 2002). Unfortunately, as a result of insufficient record keeping of suicidal acts and limited research on suicide, very little is known about the suicide rates in Africa, including South Africa (Schlebusch, 2005). The lack of suicide statistics in Africa can also be explained by the lack of systematic epidemiological studies on suicide rates. Research during the apartheid era mainly focused on the minority racial groups (white, coloured and Indian), while little attention was paid to suicides among the

black population. This led to misconceptions about the actual suicide rates among the different races in South Africa (Schlebusch, Vawda & Bosch, 2003). In more recent South African studies, it is reported that between 8% and 10% of all deaths due to unnatural causes can be attributed to suicide, and statistics available for 1994 for example, revealed that suicide was one of the leading causes of death for South Africans (Penden & Butchart, 1999). South Africa experienced major political and social changes in 1994, when the apartheid regime finally gave way to a more democratic nation. Although the transformation was relatively peaceful, increased stress due to unfulfilled expectations of prosperity among the previously disadvantaged groups as well as fear of losing their privileged positions among the white people still separated the different racial groups. White people in particular, were, and still are today, more negative about their future in South Africa than any other race (Norris et al., 2008). In 2003, urban suicide rates ranged from 11 per 100,000 in the population of Cape Town to 15 per 100,000 in the population of Johannesburg (Harris, Sukhai & Matzopoulos, 2003). The National Injury Surveillance System (NIMSS) (2004), a system that produces descriptive epidemiological information regarding deaths due to non-natural causes, determined that approximately 10% of all non-natural deaths in South Africa during 2004 were because of suicide. Since the current study focuses on adolescent suicide, the following discussion of international and national suicide prevalence rates only reflect the prevalence of adolescent suicides.

2.4.1 Global prevalence of adolescent suicide rates

Although suicide rates have been mostly prevalent among the aged, several countries have recently reported higher suicide rates among younger people than older people (Krug et al., 2002). In recent years several international studies on adolescent suicidal behaviour have emerged, reflecting the increased recognition of the seriousness of this epidemic across several countries (Christl, Wittchen, Pfister, Lieb, & Bronisch, 2006).

2.4.1.1 United States of America (USA)

Throughout the 20th century, adolescent suicide rates in the United States have fluctuated, with clearly observable increases during some periods and some noticeable decreases in other periods, for instance Hawton (1986) reports a decrease in adolescent suicides from the early 1900's to the 1950's, after which a consistent upward trend, irrespective of increases or decreases is noticed (Berman et al., 2006). In a study of suicide among different cultural groups, Rutter and Behrendt (2004) found a dramatic increase in rates among Native American, Hispanic, and African American adolescents in the past decade. Despite some contrasting reports and the obvious fluctuations in adolescent suicide rates, evidence suggests that adolescent suicide rates have more than tripled since the 1950's, while the average population's suicide rate has remained more or less the same (Valois, Zullig, Huebner & Drane, 2004).

2.4.1.2 United Kingdom (UK)

Similar to the USA, the adolescent suicide rate in the UK has fluctuated throughout the previous century (Hawton, 1986). While England and Wales reported a decrease in adolescent suicides since the 1990's, Ireland, Northern Ireland and Scotland reported an increase (De Leo & Evans, 2004). Ireland experienced the most dramatic increase in adolescent suicide, while crime rates, alcohol dependency, and divorce rates increased simultaneously (Diekstra, 1992).

2.4.1.3 Australasia

The World Health Organization (WHO) reports an overall decrease in suicides during the twentieth century in New Zealand (Krug et al., 2002). In contrast, a large and rapid suicide increase in adolescent males was reported in the few years before the turn of the century (De Leo & Evans, 2004). Although not as swift as New Zealand, Australian adolescents, particularly males, have shown a constant increase in suicide rates from the mid-1970's (De Leo & Evans, 2004; Hawton, 1986).

2.4.1.4 Europe

In a summary of the data on European suicide rates by Diekstra (1992) and Hawton and Van Heeringen (2000), the following trends in male adolescent

suicide rates were noticed. From the early 1960's to the early 1990's, countries in Southern Europe, Greece, Italy, Portugal, and Spain had uniformly low suicide rates among adolescents (below 10 suicides per 100 000 of the population), while Western European countries including Austria, Belgium, France, Germany, and Switzerland all had uniformly high adolescent suicide rates (ranging from 20 to 43 suicides per 100 000 of the population). Scandinavian countries, including Denmark, Norway and Sweden, all showed moderately high adolescent suicide rates, except for Finland, where the rate was reported to be particularly high, and Norway, where the rate rose four-fold from 1960 to 1992. More recent data still shows a slight increase in Norwegian and Swedish adolescents' suicides after a fluctuation in rates during the last few years of the century, while Denmark reports a slight decrease in recent rates (De Leo & Evans, 2004). Of all the countries reporting to the WHO, Eastern European countries have the highest overall suicide rates (Krug et al., 2002). Similar to other countries though, adolescent suicide rates tended to fluctuate. Although cohort studies in some European countries have linked the fluctuation of adolescent suicide rates to prominent social and cultural events that preceded the increase or decrease in suicides, correlations between these studies are difficult to obtain because of the differences in timeframes and ages of the participants (De Leo & Evans, 2004).

2.4.1.5 South Africa

In South Africa today, only vehicle accidents and homicide kill more adolescents and youths, aged between 15 and 24, than suicide (South African Depression and Anxiety Group [SADAG], 2005), but a lack of continuous, systematic data collection throughout the years has left South Africa with very little data on suicidal behaviour, and existing data mostly originates from recent ad hoc studies (Burrows, 2005). Because of a variety of cultures, different racial groups, and the extreme differences in socio-economic circumstances of South Africans, it could be argued that available data does not represent South African adolescents as a whole. According to the WHO, the overall suicide rate in South Africa in 1990 was higher than the world average (Schlebusch, 2004). Schlebusch (2000) found that one third of all suicide attempts by South Africans could be attributed to adolescents. In fact, suicidal behaviour in South Africa appears to be more common among young people than older adults, with rates rising sharply from the age of 15 and peaking between the ages of 20 and 34 years (Reddy et al., 2002). The age-group responsible for the most suicides ranged from 25-39 in the year 2000 to 20-34 in 2004, with the 15-19 year age group also showing a significant increase during this time (Matzopoulos, 2004; 2005). Schlebusch (2005) concluded that approximately 9. 5% of all non-natural deaths among young people in South Africa are due to suicide. Compared to other countries, the occurrence of adolescent suicide is equally prevalent in South Africa but has received very little attention (Pillay & Wassenaar, 1997). Even less attention was

given to black, coloured, and Indian suicidal behaviour during the apartheid years (Schlebusch, 2004), which explains the lack of data regarding intercultural suicide rates. Suicide research, in determining the suicide rate among different racial groups, points to a significant increase in suicides among white South African youths between 1968 and 1990 (Flisher, Liang, Laubscher & Lombard, 2004). Meel (2003) found an increase of suicide through hanging among black people in the Transkei, of which 64% were younger than 30 years. Similarly, Madu and Matla (2003) studied suicidal behaviour among predominantly black adolescents in the Limpopo Province and report that 37% of the sample had reported significantly high levels of suicidal ideation, 17% had threatened to commit suicide, 16% had made plans to take their lives, but had not followed through, and a further 21% of the adolescents had actually attempted to take their own lives. Laubscher (2003) found a significant increase in suicide among young coloured men living in the Western Cape Province and interprets it as a "cultural phenomenon within a post-apartheid context" (p. 133). Harris et al. (2003) compiled a national fatal injury profile with data supplied by the National Injury Mortality Surveillance System (NIMSS). The profile indicated that out of 2205 reported cases of suicide, 200 were between the ages of 15 and 19, which represents 9% of the total number of suicides. According to the 6th annual report of the NIMSS, the suicide rate for adolescents remained similar in 2004, representing 200 cases out of 2462 reported suicides (8.1%). In one of the few studies concerning attempted suicide, Schlebusch (2004) states that an increase

in non-fatal suicidal behaviour has seen an increase of up to 58% over a ten year period among Black South African adolescents.

Because of the heightened awareness of the increasing incidence of suicidal behaviour among children and adolescents, the search for explanations and early warning signs has intensified (Davidson & Linnoila, 1991).

2.4.2 Conclusion

Despite fluctuations in most countries, a steady increase among adolescent suicides is apparent. Similarly, South African adolescent suicides and attempted suicides have increased among all races. This clearly warrants careful monitoring and preventive interventions. Only until we know the reasons for the escalated suicide rates in continuously younger age groups, will we be able to implement sufficient preventative and intervention strategies. To aid the investigation into contributing and preventative factors associated with suicidal behaviour among adolescents, the following model will be applied as guiding theoretical model to the study of suicidal behaviour.

2.5 THE INTEGRATED STRESS AND COPING MODEL

Moos and Schaefer (1993) developed the Integrated Stress and Coping Model, which will be used as guiding theoretical model for this study to explore the

factors that play a contributing role in suicidal behaviour. The model is based on the assumption that personal and environmental stressors and resources, as well as life crises and transitions of the individual, combine with each other to shape coping responses, which in turn determine the health and well-being of the individual. The model is explained by using five interrelated panels each representing personal or external stressors or resources, and how they influence the health and well-being of the individual.

Panel 1 of the model comprises of the external life stressors and social resources, or lack thereof, which influence the levels of stress of the individual. In this study, the focus of the empirical study will be mainly on one of these stressors, namely exposure to suicide but the discussion will also incorporate other relevant stressors South African adolescents are confronted with. The importance of social resources, especially relationships with family, friends, and peers in relation to suicidal behaviour will also be focused on.

Panel 2 represents the individual's personal system and consists of demographic characteristics, and internal stressors or resources that might contribute to, or create resilience against suicidal risk.

Panel 3 represents life crises and transitions. Adolescence is the age-group between childhood and adulthood, where the developmental changes, compared

to other age groups, are unusually high (Seiffge-Krenke, 2000). This is also a period of rapid physical, emotional, cognitive and social change that demands acquiring and implementing coping strategies and resources (Rathus, 2003). Adolescents endure several transitions, including the transition into puberty, and transitions involving family relationships, school, peers and the development of cognitive and emotional abilities (Ben-Zur, 2003). South African adolescents are also exposed to additional life crises which influence them directly or indirectly.

Panel 4 represents cognitive appraisal and coping styles used by the individual. Gutierrez (2006) believes that the ambivalence witnessed in suicidal individuals originates from dissonance between the individual's protective factors (coping resources and use of strategies) and exposure to suicide risk factors (i.e. depression). This implies that the individual either leans towards suicide or coping, depending on which factor has more weight.

Panel 5 focuses on the health-related outcome of the stress and coping process and includes both positive and negative outcomes. In the current study the criterion variable will be suicidal ideation, which is considered to be a negative outcome of the stress and coping process.

The discussion of internal and external stressors and resources, as well as coping will be presented with regards to the structure of the Stress and Coping Model. External stressors and resources will be discussed first.

2.5.1 Environmental System

External life stressors include all environmental demands that the individual may encounter (Lepore & Evans, 1996), while external resources refer to material or social relationships that a person has to his/her disposal in order to use in the coping process (Diener & Fujita, 1995). The following section will focus on each of these variables and how they influence the individual in relation to suicidal behaviour.

2.5.1.1 Social resources

Social resources mainly include relationships with family, friends, and other significant others. Rutter and Behrendt (2004) found that social support is related to less feelings of isolation, higher levels of resilience, and healthier adolescent functioning. Similarly, Delongis and Holtzman (2005) found that individuals used a greater variety of coping strategies when they felt supported by significant others. Social resources can be further subdivided into relationships with family, peers, and the greater social environment.

2.5.1.1.1 Family relationships

Several studies have confirmed that family relationships are the most central source of support for adolescents (Anderson, 2002). Morano and Cisler (1993) also found that family support can act as a buffer against serious vulnerability, however with family structures changing because of divorce, single parenting and separation, many adolescents lack sufficient supportive relationships that are available when they need it most. Family disruptions, including death, divorce, separation, and unstable relationships have been a common occurrence in adolescents who have attempted or committed suicides (Hawton, 1986). Changes in the traditional family system can be considered as one of the main contributing factors in adolescent suicidal behaviour. When parents divorce, a parent leaves, or a parent loses his/her job, the adolescent may feel guilty and can resort to self-destructive behaviour as a form of punishment (Fergusson, Woodward & Horwood, 2000; Krug et al., 2002; Pillay & Wassenaar, 1997). Morano and Cisler (1993) found that adolescents who engaged in self-destructive behaviour commonly grew up in families characterised by greater conflict and turmoil than non-suicidal adolescents. In a study on adolescent suicide attempters, more than 75% of the subjects reported to have had conflict with their parents in the 12 hours preceding the self-destructive acts (Pillay & Wassenaar, 1997). This might be explained by the findings of Greeff (2000), who reported that mutual satisfaction with family relationships originates from

effective skills and abilities to solve conflict successfully, thus efficient problem-solving and conflict resolution skills are vital for good family functioning.

Loss of a parent to death or divorce, or living apart from both biological parents, was also found to increase the risk for completed suicide (Agerbo, Nordentoft & Mortensen, 2002; Davidson & Linnoila, 1991; Morano & Cisler, 1993). When faced with such turmoil and conflict in the family setting, "adolescents feel a sense of powerlessness and hopelessness, resorting to suicidal behaviour as a means of temporarily escaping the prevailing stress and at the same time communicating their emotional distress" (Pillay & Wassenaar, 1997, p. 159).

Apart from the changing family systems that might create conflict in relationships, a lack of perceived familial support also seems to influence adolescents' susceptibility to engage in suicidal behaviour (Lewinsohn et al., 1994/1996; Morano & Cisler, 1993; Pillay & Wassenaar, 1997). Simons and Murphy (1985) found emotional problems to be a strong predictor of suicidal ideation, and parental support has a considerable impact on the extent of emotional problems. Inadequate social support from family and friends has been linked to hopelessness and suicidal ideation (Choquet & Kovess, 1993; Kerr, Preuss & King, 2006). Sun and Hui (2006) found that adolescents who do not feel connected to their family have a higher likeliness to develop low self-esteem, which in turn promotes depressive symptoms, and could eventually lead to

suicidal ideation. Bridge et al. (2006) highlight the fact that older adolescents have more autonomy and less supervision and social support from parents, which may lead to disconnection. The stress adolescents experience when a lack of familial support is present can significantly reduce their self-esteem, leading to an even further increase in stress and possible suicide risk (Wilburn & Smith, 2005). Turner, Kaplan, Zayas and Ross (2002) also found that adolescents who perceived their family to be uncaring, distant and controlling, had a higher tendency to commit suicide. However, familial support can also play an important role as a stress-buffering factor. Wagman-Borowsky, Ireland and Resnick (2001) identified parent-family connectedness as a protective factor against suicide attempts, irrespective of ethnic or gender differences. Moosa, Jeenah, Pillay, Vorster and Liebenberg (2005) also state that family and peer support could be helpful resources in decreasing attempted suicides.

Other additional factors in the familial world of the adolescent that may contribute to suicidal behaviour, include parental history of psychiatric disorder (King et al., 2001; Schlebusch, 2005), and abuse (Fergusson et al., 2000; Johnson et al., 2002; Schlebusch, 2005). In South Africa, cultural factors may also play a role in adolescent suicide. Pillay and Schlebusch (1987) found that parental restriction among South African Indian adolescents, especially females, contributed to their attempts at suicide.

2.5.1.1.2 Relationships with peers

Problems with peer relations as well as school changes/difficulties have been found to play a contributory role in adolescent suicidal behaviour (Beautrais et al., 1997; Johnson et al., 2002). In studying factors contributing to suicide attempts by adolescents, Pillay and Wassenaar (1997) determined that conflict with siblings, peers, relatives, teachers or boy/girlfriends increases adolescents' vulnerability to engage in suicidal behaviour. In a New Zealand study on adolescent suicide attempters, Beautrais, Joyce and Mulder (1997) found that more than half the participants reported relationship breakdowns, interpersonal problems, and difficulties with family or friends as the reason they attempted suicide. Similarly, two of the most common precipitating factors leading to adolescent suicidal behaviour were found to be interpersonal conflict and loss, particularly when combined with substance abuse (Beautrais et al., 1997; Brent, Baugher, Bridge, Chen & Chiappetta, 1999; Gould, Fisher, Parides, Flory & Shaffer, 1996).

Apart from familial and peer relationships, the relationship between teachers and students also seems to be an important social resource. Paulson and Everall (2001) found that teachers' positive reaction to students' suicidal thoughts helped them ease the pain of their distress, while negative reactions made it more difficult for them to cope.

2.5.1.1.3 Greater social environment

There has been some postulation of a relationship between suicidal behaviour and social and political transformations in several countries. Hungary, Kazakhstan, Latvia, Ukraine and the Russian Federation have been known to have had some of the highest international reported suicide rates during the 1990's (Krug et al., 2002). These Eastern European countries have gone through major social transformations, where the seemingly powerful and influential political systems collapsed, leaving the country's social system in a state of anomie, or a lack of social norms and social regulation (Huschka & Mau, 2006). The sudden breakdown of the old system left the majority of Eastern Europeans overwhelmed by changes, which they were not prepared for (Vladimiriv, Todorov, Katzarski & Badjakov, 1999). In a comparative study, Huschka and Mau (2006) found the prevalence of anomie to be more prominent in countries that underwent fundamental changes of the political and economical system. Thus, people are more dissatisfied with their living standard and have stronger feelings of dissatisfaction. By comparing suicide rates from eight Eastern European countries with seven Western European countries, Diekstra (1992) reports a definite increase in suicide rates in the Eastern European countries, as opposed to a decrease in suicide rates in the Western European countries during the same timeframe.

Ireland is also known for its political and religious struggles, Lorenz (1992) found that individuals engaged in suicidal behaviour in order to oppose the feelings of powerlessness brought on by unemployment, debts and overcrowded housing conditions. The feeling of powerlessness becomes internalised for these individuals, and, with a deficit in coping skills combined with external factors, they try to regain power by harming themselves, sending out the message that the injustice forced upon them is no longer bearable.

The social transformation, more prominent international influence, acculturation, and socio-political factors that South Africans have been exposed to in the past two decades may have contributed to elevated stress in adolescents (Meel, 2006; Schlebusch, 2000).

In 1994, South Africa went through major political and social changes with the fall of apartheid. The apartheid regime segregated the different racial groups, limiting the rights, resources and privileges of non-whites. With the fall of this regime in 1994, all South Africans were free and a democratic country was born. While this major social and political transformation has brought hope to many people, the majority of South Africans are still confronted with unemployment, poverty, health issues, availability of basic resources and high crime rates (Huschka & Mau, 2006).

Despite the tangible issues, the sudden social transformation also required individuals to establish new social identities. A study focusing on the rising suicide rates of coloured men in the Paarl district, Laubscher (2003) found that all of the 15 suicide cases were young men who originated from working class families and started a middle class existence after their studies. Most of their family and friends reported that they had difficulties adjusting to the sudden change, not knowing quite where they fit in, and with no apartheid regime to blame anymore, they were forced to look internally for answers to their distress.

Several suggestions have been made by researchers concerning the cause of the escalated adolescent suicide rate in South Africa. Burrows and Laflamme (2006) suggest that the development of health, social and economic sectors has taken place at different rates in different regions, which influenced the accessibility of basic services, and in turn caused lower living standards among certain social groups. Schlebusch et al. (2003) feel that factors, like social transformation, the HIV/AIDS epidemic, high violence and crime rates, high unemployment levels, socio-economic factors, self-esteem and aspirations, status integration and competitiveness in career advancement have not been adequately taken into account while trying to explain South African adolescent suicide rates.

2.5.1.1.4 The influence of the Human Immunodeficiency Virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS)

Along with life-changing political and social transformations in South Africa, the HIV/AIDS epidemic has escalated to gigantic proportions and is making a significant impact on the lives of many South Africans. The AIDS Foundation of South Africa states that an estimated 18.8% of the South African population is infected with HIV, making the HIV prevalence rate in South Africa sixth highest in the world (AIDS foundation South Africa, 2005). Hundreds of people die each day from AIDS-related illnesses, leading to the accentuation of already prominent problems, including poverty, unemployment and insufficient access to resources (Joint United Nations Programme on HIV/AIDS (UNAIDS), 2006). In addition to the existing problems, families lose income earners, money is spent on funeral arrangements and medical expenses instead of food, children are taken out of school to either take care of ill family members or because of lack of fees, and resources have to be shared with additional family members (AIDS foundation of South Africa, 2005). An estimated 2.2 million children were orphaned in 2004, meaning 13% of all children lost a mother or father (AIDS foundation of South Africa, 2005). Although most of the orphaned children are taken in by family or their community, it leads to overcrowding in houses and even more impoverished circumstances.

Many obstacles have hindered the process of creating awareness of HIV and treating AIDS-related illnesses, including discrimination, the stigma associated with being HIV-positive, and cultural beliefs (UNAIDS, 2006). Individuals are discriminated and stigmatised against when a family member is HIV-positive, and therefore refuse to participate in being tested for the virus or obtaining information on its effects. In some cultures women have little rights when it comes to choosing to have sexual relations with her husband, and having protective sex is not seen as an option because a man's wealth is often determined by his fertility.

2.5.1.2 Exposure to suicide

When something other than suicide is responsible for an individual's death, the survivors often report feelings of sadness, shock, disbelief, denial, and helplessness, which are known symptoms of bereavement. According to Kinsella, Greeff and Poggenpoel (1993), when a person commits suicide, guilt, anger, emotional remorse, as well as the fear of social stigmatisation further complicate the emotionally demanding bereavement process. The suicide of an adolescent is particularly tragic for those significant others who are left behind, not only because the person is so young, but also the violent and sudden way their life ends.

Thus, exposure to the suicide of a significant other is especially hard to deal with (Kalischuk & Davies, 2001). In studying the psychological effects of exposure to adolescent suicide, Brent et al. (1992), determined that exposure to suicide is significantly associated with major depression and symptoms of Post Traumatic Stress Syndrome (PTSD), of which at least one is a known risk factor for suicidal behaviour. Lewinsohn et al. (1994; 1996) also found exposure to suicide, or suicide attempts by peers to be a significant risk factor for future suicide attempts. Other researchers have found that the acute loss of a source of social support, including a friend, may create a sudden crisis in ego functioning, which affects the adolescent's impulse control, judgement, cognition and fantasies (Davidson & Linnoila, 1991), which in turn may lead to feelings of depression (Krug et al., 2002). Wagman-Borowsky et al. (2001) report that having a friend attempt or complete suicide significantly predicted suicide attempts among adolescent girls. Gould et al. (2004) report that students are significantly more likely to develop depressive symptoms, abuse substances, and have suicidal ideation when they have a first-hand experience with a suicidal peer. Similarly, Gutierrez, King and Ghaziuddin (1996) found a relationship between exposure to death and suicide, attitudes about life and death, and level of suicidality in adolescent psychiatric inpatients. Recently, Bridgend, a small town of 139 000 inhabitants in Wales, has received increased media attention after 17 adolescents and youth committed suicide by hanging themselves, within a year (Booth, 2008). The first three adolescents who committed suicide and two

subsequent pairs were known to each other, which might suggest that the exposure to the suicides of other adolescents contributed to their suicides. Possible further links between the suicides are still being investigated, and include internet websites, media exposure, and imitation of others' suicidal behaviour (Booth, 2008).

In contrast, Brent, Moritz, Bridge, Perper and Canobbio (1996) state that a friend's suicide had an inhibitory effect on other adolescents after realising what emotional devastation it caused to family and friends. Marcenko, Fishman and Friedman (1999) also found no noticeable increase in suicidal ideation in adolescents who had lost a significant other through suicide.

2.5.1.3 Other environmental risk factors

The increasing pressure placed upon adolescents to succeed leads to escalated levels of stress and depression. This may cause physical and emotional problems and a greater vulnerability to suicidal thoughts (Beautrais, 2000).

Some risk factors that may directly contribute to the suicidal behaviour of South African adolescents, are problems with acculturation, acute stress, high crime and violence rates, a history of human rights and transformation and socio-economic pressure (Schlebusch, 2005). With increases in prices of educational and living costs, and increased levels of unemployment and poverty, South

Africans are under tremendous financial pressure. A lack of medical care, housing problems and criminal acts also contribute to the daily stressors that have to be dealt with (Schlebusch, 2005). Exposure to these stressors and adverse circumstances, as well as difficulties experienced in the academic domain plays a contributory role in the suicidal behaviour of adolescents (Beautrais, 2000; Butler & Novy, 1994).

A multicultural South African study by Marcenko et al. (1999) found that adolescent suicidal ideation was most prominent within low-income families. An international study also confirmed that risk for suicidal behaviour was found to be double among individuals with low socio-economic status, limited educational achievement and poverty, compared to individuals from more advantageous backgrounds (Bucca et al., 1994).

2.5.1.4 Conclusion

Although many researchers have focused on suicide risk factors, there is still a lack of research identifying specific familial and social factors that may provide protection against suicidal behaviour (Beautrais, 2000). In general, social relationships, and especially relationships with family members and friends, have a significant influence on adolescents' well-being. This emphasises the importance of social support when adolescents are exposed to suicide. Apart from the powerful emotions experienced by individuals who have lost a

significant other through suicide, Kinsella et al. (1993) found that survivors also feel the need to express their experience in order to make sense out of the incident. Similarly, while studying adolescents' grief reactions following the death of a sibling, Balk (1983) discovered that family support plays a pivotal role in coping with the trauma. The participants reported feelings of shock, fear, anger, guilt, loneliness, confusion and depressive symptoms. Without the much needed emotional support from family, adolescents have to confront these intense feelings alone, often resorting to using inappropriate coping strategies.

Although researchers have found differing results concerning the effect exposure to suicide has on adolescents, Gutierrez, Muehlenkamp, Konick, and Osman (2005) state that exposure to suicide alone does not necessarily lead to suicidal behaviour, and urge the study of exposure in conjunction with protective factors, or lack thereof, to determine possible risk. Brent et al. (1992) also found that most of the participants in their study, who were vulnerable after exposure to suicide, either had a previous personal or familial encounter with psychopathology. This may lead to the conclusion that exposure to suicide on its own does not necessarily lead to suicide risk, but the combination of exposure to suicide and other risk factors, or lack of protective factors, might increase the individual's vulnerability. In agreement with these statements, Gutierrez et al. (2005) express the possibility that a lack of life experience and more limited

coping resources could make adolescents more susceptible to the effects of exposure.

2.5.2 Personal system

The following discussion incorporates individual stressors and protective factors that may influence the vulnerability of the individual to engage in suicidal behaviour. These factors include tangible demographic aspects, such as gender and race, but also unique dispositional factors.

2.5.2.1 Demographic factors

Gender and race are the related demographic factors for this study and will be discussed in the next section. Certain dispositional factors that might play a role in adolescents' suicidal behaviour will then be highlighted.

2.5.2.1.1 Gender differences in adolescent suicide

According to Diekstra (1992), women have higher levels of suicidal ideation and make more suicide attempts than men, but men commit suicide more often than women. The same pattern can be seen with adolescents. In all countries where data is systematically collected, with the exception of China, adolescent boys have a much higher suicide rate than girls, whereas girls have a higher prevalence of suicidal ideation and suicide attempts (Bridge et al., 2006). While

studying suicidal ideation in adolescents, Marcenko et al. (1999) found gender to be a significant predictor of ideation, with females doubling the males' acknowledgement of having suicidal ideation. This finding is supported by Simons and Murphy (1985), who found females to have significantly higher suicidal ideation than males. Considering the difference in prevalence between female and male suicidal behaviour, Beautrais (2003) questions whether research on suicidal ideation and attempts emphasises the known risk factors which contribute to female suicidal behaviour, and focus on risk factors that contribute to male suicidal behaviour when studying completed suicides.

A consistent trend concerning gender differences in South African adolescent suicides was also noticed throughout the early turn of the 21st century. The NIMSS reported a ratio of 4.6 male deaths by suicide for every completed female suicide (Matzopoulos, 2005). Burrows and Laflamme (2006) obtained similar results, finding significantly higher suicide rates for male adolescent South Africans in all the participating cities.

2.5.2.1.2 Racial and cultural factors

South Africa's cultures are plentiful and diverse, but Westernisation, especially in urban areas, is causing people to slowly move away from some of the more traditional aspects of their cultures, replacing them with more western practices. According to Bridge et al. (2006), these rapid transitions between cultures may

cause individuals to feel alienated, cause intra-generational conflict, and may play a contributory role in adolescent suicide rates.

Historically, race has been a very prominent basis of division for the South African population (Burrows, 2005). By comparing the suicide rates by race, Burrows and Laflamme (2006) reported that white South Africans, especially men, had a higher suicide rate than any other race in the country. Similarly, Flisher et al. (2004) stated that higher suicide rates among whites exist, explaining the trend by pointing out that white people generally have a higher standard of living, enjoying more optimism and have higher self-esteem. This causes them to lack having built up resilience, which explains why they struggle to cope with difficulties in life. This lack of resilience and struggle to cope with daily hassles may eventually lead to the consideration of suicide (Breetzke, 1988). Because of racial segregation in South Africa, researchers have mainly focused their attention on white samples, hence the lack of data on black, coloured, and Indian suicidal behaviour. However, recent studies have indicated that suicidal behaviour among adolescents of all races in South Africa has shown a definite increase (Flisher et al., 2004; Laubscher, 2003; Meel, 2003). Differences in suicide rates among different races in South Africa are said to be caused by a lack of external sources to blame, combined by expectations for a high quality of life, particularly for whites, religious prohibition for Indian and

coloured individuals, and close family ties, together with cultural restrictions for black people (Flisher et al., 2004).

2.5.2.1.3 Dispositional factors

Because the focus of this study is mainly centered on exposure to suicide, which is considered an external factor, the following dispositional factors, including hardiness, locus of control, self-efficacy, optimism, sense of coherence, self-esteem, and certain psychiatric factors related to suicidal behaviour, will be discussed briefly.

Dispositional factors refer to the unique characteristics each individual possesses that influence their degree of resilience to stressors (Compton, 2005). The presence of factors that increase the individual's resilience, contribute to the overall well-being of the individual, while other factors (or the absence of certain factors) might hinder the process of successful coping and increase vulnerability. Factors that might increase or decrease resilience in adolescents include:

a) Hardiness

The first factor considered a contributor to resilience is hardiness, which comprises of commitment, control, and challenge (Kobasa, Maddi & Kahn, 1982). In other words, adolescents who perceive to be in control of and use challenges as a means to grow, might be able to cope better with life stressors, and have a

better overall sense of well-being than those who lack hardiness (Beasley, Thompson & Davidson, 2003).

b) Internal locus of control

The perception that events are controlled by external factors, including such factors as luck, fate, and coincidence, refers to having an external locus of control, whereas having an internal locus of control implies that the individual perceives his/her behaviour as the determinant of the outcome of events (Smith, 1993). Previous studies have linked the possession of an external locus of control to suicidal behaviour (King et al., 2001). Stillion et al. (1989) state that learning and implementing an internal locus of control alleviates learned helplessness, thereby decreasing the possibility of developing related depressive symptoms. This, in turn, might reduce the vulnerability of the adolescent to engage in suicidal behaviour.

c) Self-efficacy

Self-efficacy refers to the way individuals perceive their abilities to perform (Smith, 1993). High self-efficacy expectancies can contribute to the individual's willingness to take on challenges and promote effective performance, while a low sense of self-efficacy might discourage the individual to accept a challenge, believing that he/she would not be able to successfully negotiate the problem.

d) Optimism

While optimistic thinking (expectation of positive results) has also been identified as an important element in individuals who display resilience, a pessimistic outlook on life may cause a regression to the use of inappropriate coping strategies (Carver, Scheier & Weintraub, 1989). Kraaij et al. (2003) found that positive reappraisal is a personal resource against depressive symptoms, of which most have been found to increase the risk of possible suicidal behaviour.

e) Sense of coherence

Antonovsky (1987) describes a sense of coherence as the individual's perception of his/her world as understandable, manageable, and meaningful. If adolescents could make sense out of the challenges they face and learn from them, it might decrease their vulnerability to the influence of suicidal risk factors and other stressors.

f) Self-Esteem

Negative self-esteem has been found to predispose adolescents to depression and other psychiatric difficulties (Wilson et al., 1995). Sun and Hui (2006) argue that self-esteem is a significant mediator between social factors and suicidal ideation, implying that adolescents with a positive self-esteem would be more resilient to social stressors. Wilburn and Smith (2005) conducted a study on

adolescent suicidal ideation and found that negative stress and low self-esteem are significant predictors of suicidal ideation.

g) Neuroticism

Neuroticism is a trait characterised by the tendency to experience a longer and more severe range of negative affect in response to stress (Bridge et al., 2006). Several studies have linked neuroticism to adolescent suicidal behaviour (Beautrais et al., 1999; Fergusson et al., 2000).

h) Depression

Several studies have identified depression as the most common psychiatric factor related to suicidal risk and a great majority of attempted and completed suicides are preceded by depressive symptoms (Fergusson et al., 2000; Hawton & Van Heeringen, 2000; Krug et al., 2002; Lewinsohn et al., 1994; 1996; Schlebusch, 2005). In fact, suicidal ideation is regarded as a criterion for some forms of depression (Diagnostic and Statistical Manual of Mental Disorders, 2000). Similar to completed suicides, Schlebusch et al. (2003) discovered that the diagnosis of depression was also applicable in nearly two-thirds of non-fatal suicidal adolescents.

i) Hopelessness

Hopelessness, which entails a desire to escape from what an individual considers an insolvable problem, is a key variable linking depression to suicidal behaviour (Beck, Kovacs & Weissman, 1996; Goldston et al., 2001; Shaffer et al., 1996). Hopelessness itself is also a known symptom of depression, and has been directly linked with adolescent suicidal behaviour (Lewinsohn et al., 1996; Rutter & Behrendt, 2004).

j) Substance abuse

Gould et al. (1998) found that suicide attempters are more likely to engage in substance abuse or have substance related disorders than suicidal ideators, which may suggest that substance use could facilitate the transition from suicidal ideation to suicide attempts, and possibly suicide itself (Bridge et al., 2006). In a study by King et al. (2001), it was reported that all participating adolescents with suicidal ideation or those who have attempted suicide had either engaged in substance abuse, including cigarettes, marijuana, and alcohol, or experienced the onset of a sexual relationship/s during the preceding year. Other studies have also confirmed that substance abuse could play a contributory role in suicidal behaviour (Gould et al., 1998; King et al., 2001; Lewinsohn et al., 1996).

2.5.2.2 Conclusion

It seems that similar trends are shared nationally and internationally concerning the differences in male and female adolescent suicidal behaviour. While females are more prone to suicidal ideation and suicide attempts, males are more likely to commit suicide (Bridge et al., 2006; Marcenko et al., 1999). The other demographic factor the study focused on was race. A lack of research on South African adolescents' suicidal behaviour, especially concerning black, coloured and Indian adolescents, has made it difficult to adequately compare the differences between the races and their suicidal behaviours. Researchers have only recently begun to investigate the prevalence of suicidal behaviour among black, coloured and Indian adolescents, discovering that these groups also portray elevated levels of suicidal behaviour (Flisher et al. 2004; Meel, 2003).

Several dispositional factors contribute to, or promote resilience against suicidal risk. The presence or absence of factors such as hardiness, self-efficacy, optimistic thinking, and sense of coherence might determine whether an adolescent will confidently challenge a stressor or feel beaten before even attempting to solve a problem. The latter option might increase the adolescent's vulnerability to suicidal behaviour. Similarly, depression, substance abuse, and hopelessness are only some of the psychiatric factors that have been directly connected with an increased risk to engage in suicidal behaviour (Bridge et al., 2006; Lewinsohn et al., 1996; Schlebusch, 2005).

The previous section focused on the external and internal stressors and resources that may have an influence on adolescents' vulnerability. The following section will focus on the developmental phase of adolescence and other life crises adolescents might encounter that might influence their vulnerability.

2.5.3 Life transitions and crises

Apart from external and internal stressors and resources, adolescents are also challenged with different types of crises and developmental transitions. The different levels of development, including cognitive, emotional, and social development amongst others, are probably the most important transitions the adolescent has to master. Therefore, this discussion will focus on the developmental phase of adolescence and the additional life crises they might encounter.

2.5.3.1 Adolescence as developmental phase

The developmental phase connecting childhood to adulthood is known as adolescence and consists of a complex interaction between biological, psychological, and social forces, all contributing to unique transformations in individual development. As these forces influence each other, they lead to a diversity of developmental paths and coping behaviour (Hauser et al., 1991).

Defining adolescence by means of age has proven difficult, primarily because each individual follows his/her own unique developmental path, though it is mostly accepted that adolescence has its onset between the ages of 11 and 13, and draws to an end at ages 17 to 21 (Gouws, Kruger & Burger, 2000). On the path to successful adulthood, adolescents have to master certain developmental tasks, including development of an own identity, accepting physical changes, developing socially responsible behaviour, and the development of both cognitive skills and independence (Louw et al., 1998). In the light of these developmental tasks, adolescent development will be discussed under the headings of physical, cognitive, personality, emotional, and social development.

2.5.3.1.1 Physical Development

The most noticeable physical changes in early adolescence are rapid growth and the onset of puberty, or sexual maturation (Louw et al., 2007). Pubertal changes do not only differ in rate of development between individuals, but also between the sexes. In male pubertal development, the hormone testosterone is primarily responsible for sexual maturation, firstly causing enlargement of the testes, scrotum and penis, and later stimulates facial, pubic, and under arm hair growth. The lengthening and growth of the larynx produces a deepened voice and some adolescents, especially males, might develop skin problems such as acne because of the increased levels of hormones (Rathus, 2003). The first seminal

emission is probably the most symbolic sign of sexual maturation in males (Louw et al., 2007).

In female pubertal development, the pituitary gland stimulates the increase of estrogen, which causes breast tissue to enlarge and promotes the increase of fatty tissue around the hips and buttocks (Rathus, 2003). The hormones estrogen and androgen are both responsible for the development of the female reproductive organs, while the latter stimulates under arm and pubic hair growth. The most symbolic sign of female sexual maturation is the onset of the first menstrual cycle (Louw et al., 2007).

Because adolescents undergo such dramatic physical changes during puberty, they often find it difficult to master the developmental task of accepting the physical changes, especially when they develop prematurely or at a belated stage compared to their peers. In a study on adolescents' perception of body image, females were found to be more dissatisfied with their body image and weight than males, however both males and females were found to be more susceptible to feelings of depression when dissatisfied with their body image (Holsen, Kraft & Roysamb, 2001).

2.5.3.1.2 Cognitive development

Cognitive development during adolescence entails the evolution of concrete thoughts to a more analytical way of thinking as well as the development of abstract thoughts (Rathus, 2003). Hacker (1994) states that adolescents often focus their developing abstract thoughts on themselves. This newfound self-awareness might increase concerns about meaninglessness, conflict and choice, which in turn may lead to possible feelings of being overwhelmed, hopelessness and suicidal behaviour. In contrast, when adolescents embrace the self-awareness, it might lead to a better understanding of empathy, and might have a positive effect on their developing self-concepts. The completion of cognitive development causes adolescents to increasingly question the meaning of life and death in order to instill a sense of hope and meaning in living (Berman & Jobes, 1991).

2.5.3.1.3 Personality and emotional development

One of the most influential theorists in personality development is Erik Erikson, who believed that there are special developmental periods when specific psychosocial lessons are most likely to be learned, thus he divided the human lifecycle into eight stages of development. In explaining personality development in adolescence, Erikson (as cited in Marcenko et al., 1999, p. 122) mainly focuses on identity formation. Some adolescents may struggle with this concept and find themselves in, what Erikson called a “moratorium”, where they withdraw

from their social responsibilities (Louw et al., 2007). Further failure to develop an own identity may result in “role confusion”. In order to overcome this crisis, adolescents have to develop a feeling of identity, which includes being able to determine who they are, to which group they belong, and what they want to achieve in life (Louw et al., 1998). Thus, successful identity formation includes exploring oneself and developing relatively firm commitments.

Adolescents have often been described as emotionally “unstable”. Their likeliness to have mood swings and emotional outbursts has mostly been exaggerated and might be explained by the rise in hormonal levels, increasing pressure to conquer self-consciousness about their physical appearance, and confusion about their identities (Louw et al., 1998).

2.5.3.1.4 Social development

Adolescents face a broad spectrum of social changes they have to master. During this time, adolescents gradually move away from their parents being the primary influence in their lives, to greater involvement with their peers (Jackson & Rodrigues, 1993). Some conflict may arise between parents and adolescents, because of their changing relationship. The feeling of belonging to a group is important to adolescents, thus the importance of their social relationships with their peers. Males and females start to interact through these groups, and rejection from a group might have a severe influence on the adolescent’s already

vulnerable self-concept (Louw et al., 2007). Other social stressors that may cause stress in adolescence include conflicting and transformational relationships, social pressure to conform, differences in socio-economic status, heartache when a relationship fails, and feelings of inadequacy (Hauser, 2001). South African adolescents have come into more contact than ever with Western culture through media channels. This acceptance of a more globalised culture particularly affects black adolescents by disconnecting them from their families and the more traditional cultural roles they were meant to play (Stevens & Lockhat, 1997). Yoder (2000) stresses that adolescents exposed to such major social and political changes could find it significantly more difficult to develop and embrace their psychosocial identities. The rapid and extreme changes that adolescents face during this developmental stage, as well as their every day experiences, place a lot of stress on them, which makes the development of coping strategies and utilisation of coping resources imperative (Chapman & Mullis, 1999; Seiffge-Krenke, 2000).

Another form of social development that is particularly relevant to current adolescents is advancements in technology, which have had a profound effect on adolescent socialisation (Anderson, 2002). Interactions with people across the world are made possible with the push of a button through the internet and cellular phones. Even shopping can be done from their homes. Although these unlimited sources of information are very useful, it also brings new problems with

ethical and legal issues to light (Smith, 1993). Games with violent content, pornography, and gambling are but a few of the areas adolescents are free to explore without parental supervision. In conclusion, parental involvement in the use of technology is a crucial factor in the responsible upbringing of an adolescent.

2.5.3.2 Life crises

Johnson et al. (2002) found that stressful life events mediated the association between childhood adversities and suicidal behaviour during adolescence, and that youths who experience numerous adversities during childhood and adolescence are at a particularly elevated risk for suicidal behaviour. Similarly, Davidson and Linnoila (1991) established that most adolescents had experienced one or more stressful life events in the weeks preceding the suicide attempt or ideation. Other studies have also found significant associations between suicidal ideation and/or attempts and stressful life events (Beautrais, 2003; Fergusson et al., 2000; King et al., 2001; Lewinsohn et al., 1996). Paulson and Everall (2001), as well as Moosa et al. (2005) state that adolescents are at greatest risk for suicidal behaviour when being subjected to major negative life events, including death, divorce or extreme difficulty in school, experiencing daily stress that leads to feeling overwhelmed, physical or sexual abuse, and having few or no social resources.

South Africa has undergone great social and political transformations, which might have an influence adolescents' suicidal behaviour. In a longitudinal study regarding the development of children into adolescents in the new South Africa, Norris et al. (2008) found black and coloured adolescents to be more positive and altruistic about their lives, while white and Indian adolescents tended to be more individualistic and negative about their futures in this country.

2.5.3.3 Conclusion

The developmental phase of adolescence entails considerable physical, emotional, cognitive, and social changes, each providing separate developmental tasks that have to be mastered. Along with other life crises, including loss, abuse, and other perceived negative life events, these different levels of transition place tremendous pressure on the adolescent, which makes the development of coping strategies and utilisation of coping resources imperative (Chapman & Mullis, 1999; Seiffge-Krenke, 2000). The following section will thus explore the concept of coping.

2.5.4 Cognitive appraisal and coping responses

Adolescents' cognitive perception of stressors determines which method of coping they use. Folkman and Lazarus (1980) argue that the stress process consists of three components, namely perception of a possible threat, planning what to do about the threat, and the process of acting out the plan, which refers

to coping. There is a general consensus that coping includes the handling of stressors with the use of certain strategies and resources (Govender & Killian, 2001). Although resources, such as interpersonal relationships or psychological services are generously available, they can only be useful tools against stressors when they are actively pursued. Coping strategies, on the other hand, are determined by the cognitive evaluation of the stressor, including the rationality and flexibility of the individual's judgement, as well as the expectation of a certain result (Moos & Schaefer, 1993). Coping is considered as an important mediator between negative life events and psychological well-being, consequently coping may be an important determinant of successful adaptation among adolescents (Folkman & Lazarus, 1984; Herman-Stahl, Stemmler & Petersen, 1995).

Coping resources have already been discussed as an external influence on the adolescent, thus the process of coping will be discussed under the headings of coping styles, and coping strategies.

2.5.4.1 Coping styles

Coping strategies are mainly divided in two groups or styles of coping, namely problem-focused and emotion-focused strategies. After cognitively assessing the stressful situation or problem, the individual decides which coping style or strategies to use. Problem-focused strategies are used to solve problems or to attack the source of the stress, while emotion-focused strategies help relieve

emotional distress, which is caused by, or associated with, the stressful situation (Folkman & Lazarus, 1980). Emotion-focused strategies can be subdivided into cognitive emotion-focused and behavioural emotion-focused strategies. Cognitive emotion-focused coping involves changing the way the individual thinks about the problem at hand, e.g. committing to positive thoughts or employing selective attention, whilst behavioural emotion-focused strategies entail doing something to feel better, but not solving the problem, e.g. venting anger or exercising (Folkman & Lazarus, 1984). A study by Lewis and Frydenberg (2002), revealed that adolescents using problem-solving strategies, tend to cope better, compared to those who used emotional-focused coping techniques. Similarly, Herman-Stahl et al. (1995) proclaim that adolescents who generally use a problem-focused style of coping reported fewer depressive symptoms compared to those who continually avoided or denied problems. Although several other studies on adolescents have also indicated that the use of problem-focused strategies promotes positive mental health, and that emotion-focused strategies are associated with poor psychological adjustment, emotion-focused strategies have been found to be more effective when challenged with an unsolvable problem, such as the death of a significant other (Compas, Malcarne & Fondacaro, 1988).

2.5.4.2 Coping strategies

Coping strategies are defined as "…*behavioural or cognitive attempts to manage those demands that are appraised as taxing or exceeding the resources of the person*" (Kraaij et al., 2003, p. 186). Because stressors vary in degree and context, it is extremely difficult to categorise coping strategies in adaptive and maladaptive groups, for a certain strategy may be maladaptive in one situation, but perfectly adaptive in the next (DeLongis & Holtzman, 2005). In certain situations, certain coping strategies serve as protective components by regulating the negative effects brought on by stressful events, and creating alternatives to solve the problem, while others may worsen the effects of stress and become risk factors themselves (Seiffge-Krenke, 2000).

In a study on the relationship between adolescent self-esteem and coping, Chapman and Mullis (1999) discovered that seeking diversions, developing social support, developing self-reliance and engaging in demanding activities, were the coping strategies adolescents used most, while seeking professional support, using humour, investing in close friends, and seeking spiritual support, were identified as the strategies they least used. Kraaij et al. (2003) state that adolescents using positive refocusing and positive reappraisal when faced with a stressor, had significantly fewer depressive symptoms than those using self-blame, rumination, and catastrophising as coping strategies. Adolescents seem to turn to non-productive coping strategies when their attempts at problem-

solving coping are unsuccessful, and those who employ more productive strategies also tend to use more non-productive strategies (Lewis & Frydenberg, 2002).

Poor coping skills and deficits in problem-solving behaviours have been known to increase the risk for suicidal behaviours, thus it can be assumed that adequate or good coping skills and problem-solving behaviours, as well as a range of other individual and adaptive skills, including positive beliefs and high self-esteem may act as a buffer against suicidal behaviour (Beautrais, 2000). Yang and Clum (1996) state that, the use of inappropriate coping skills by suicidal adolescents might play a mediating role between the effects induced by life events and the adolescent's cognitive appraisals. Adolescents tend to move toward suicidal behaviour when they have inadequate abilities to cope with stressors, thus using the chosen form of suicidal behaviour as a means to reach out to others (Lewis & Frydenberg, 2002; Schlebusch, 2004). Studies have also found that adolescents with poor problem-solving skills, specifically those who fail to perceive alternatives or solving difficulties, are more vulnerable to suicide (Wilson et al., 1995), and that a significant relationship between coping and suicidality exists among adolescents (Kidd & Carroll, 2007). Using emotion-focused coping alternatives, could mediate the effects of stressful life events, and ultimately lead to hopelessness (Goldston et al., 2001), and depressive symptoms (Seiffge-Krenke, 2000), both of which are strong predictors of suicidality. Gould et al.

(2004) found that adolescents with suicidal ideation and depressive symptoms often make use of isolative coping strategies, including thinking that people should be able to handle their own problems. Similarly, Gould et al. (2004) discovered that suicidal adolescents with high levels of suicidal ideation would be less inclined to using help-seeking as a coping strategy. Spirito et al. (1989) also found social withdrawal to be the only difference in coping strategies used between suicidal and non-suicidal adolescents, with both groups reporting similar stressors but in varying degrees.

2.5.5 Health and well-being

As the Integrated Stress and Coping Model implies, influences from various internal and external sources determine which coping strategies are used, and eventually what the outcome of the process will be. If the influences are managed correctly, a positive outcome to the process is obtained, which includes successful implementation of coping resources or strategies. However, when coping strategies and resources are not successfully implemented, a negative outcome will follow. In this study, the particular outcome of the interaction between stressors, resources, and insufficient coping is suicidal ideation. More specifically, exposure to suicide as an external stressor possibly influences the levels of suicidal ideation, depending on the successful implementation of coping strategies and resources. The level of suicidal ideation, in turn, plays a determining role in adolescents' engagement in attempted suicides (McAuliffe,

2002). If no intervention takes place, suicidal ideation might lead to suicide attempts, and suicide attempts might lead to completed suicide (Hawton, 1986). Several other studies have also highlighted the connection between suicidal ideation, attempted suicides and completed suicides, reporting that the strongest predictor of future suicide attempts or completion is previous suicidal ideation and suicide attempts (Brent et al., 1999; Bridge et al., 2006; Lewinsohn et al., 1994/1996; Schlebusch, 2005; Simons & Murphy, 1985).

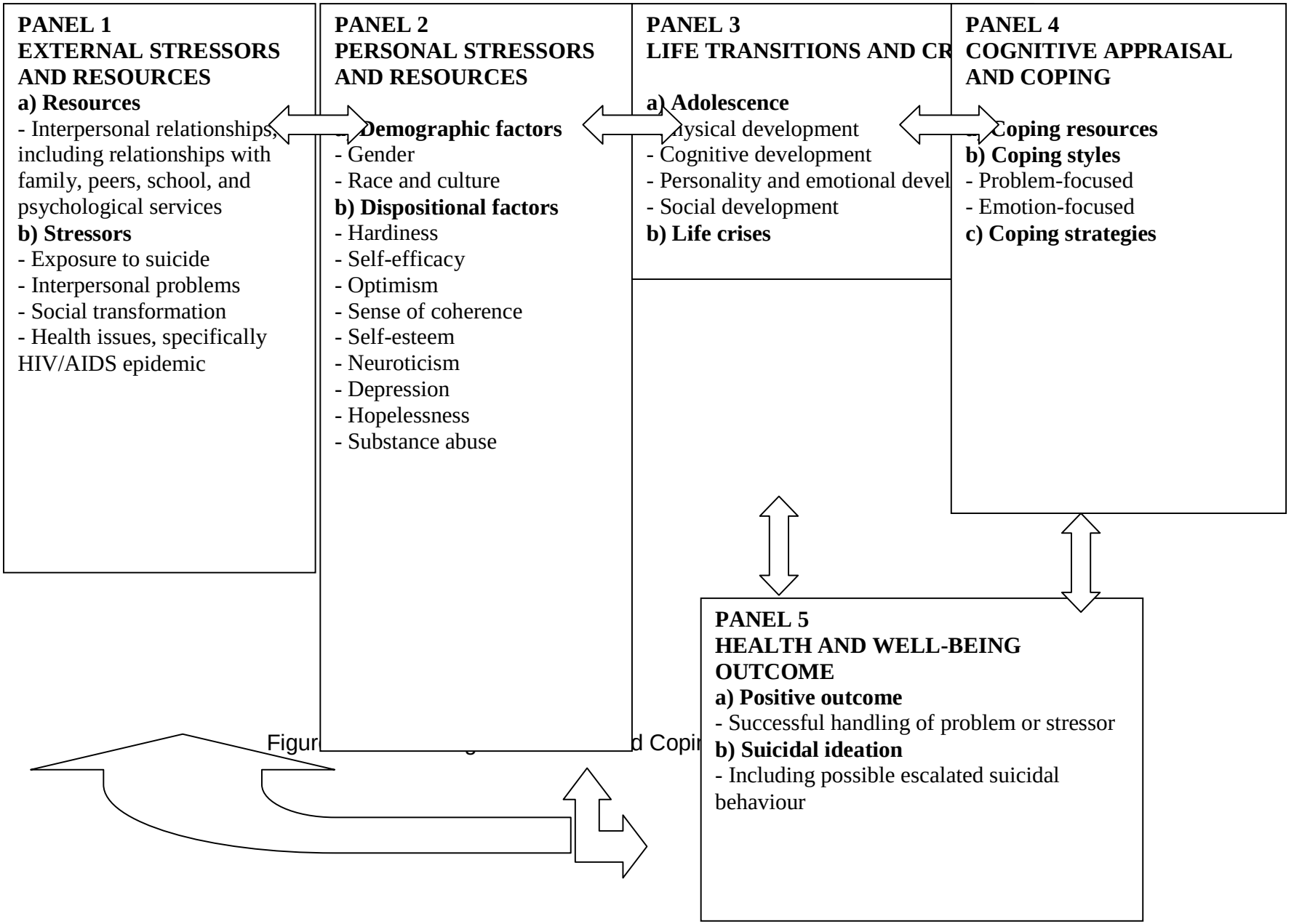
2.6 CONCLUSION

A summation of the literature is presented in Figure 2.2. The Integrated Stress and Coping Model (Moos & Schaefer, 1993), which serves as a guiding model for this study, highlights the interconnectedness between external and internal stressors and resources, coping styles and strategies, as well as the positive or negative health outcome of the stress and coping process. In Panel 1, which represents external stressors and resources, the dichotomous qualities of interpersonal relationships are revealed. Although interpersonal relationships are important resources for adolescents, they can also turn into stressors when conflict occurs. Interpersonal conflict, especially between adolescents and their parents, might contribute to the vulnerability of adolescents (Pillay & Wassenaar, 1997).

Exposure to suicide is another external stressor that might influence the health outcome of adolescents. The suicide of a significant other leads to feelings of shock, guilt, and anger, which can escalate to symptoms of depression and possible suicidal ideation when inappropriate coping strategies are implemented, or in the absence of support from others (Lewinsohn et al., 1994; 1996). The second panel represents dispositional factors, including self-esteem, hardiness, and optimism, among others. The presence of these factors either protects against, or increases the risk for suicidal behaviour. Demographic variables, such as gender, race, and culture also form part of the personal factors that either has a positive or a negative influence on the individual. The third panel represents life transitions and life crises. Adolescents have to master different developmental tasks on several levels of development, including physical, social, cognitive, and personality and emotional development (Louw et al., 1998). The fourth panel represents coping styles and strategies, which are imperative to the positive health outcome of adolescents (Seiffge-Krenke, 2000). Problem-focused strategies are often associated with a more positive outcome than emotion-focused strategies, although both styles could contribute to a positive outcome, depending on the stressor or problem that has to be coped with. Inappropriate coping strategies, such as social withdrawal have been associated with suicidal behaviour (Gould et al., 2004). The last panel represents the health outcome of the stress and coping process. Positive outcomes would include the successful

use of appropriate coping strategies for the given situation. A negative outcome, in this case, would be suicidal ideation.

The positive or negative outcome of this process influences the way in which subsequent stressors or problems are appraised, thus even the positive or negative outcome of the process might protect against, or increase the adolescent's vulnerability to suicidal behaviour.


PANEL 1
EXTERNAL STRESSORS AND RESOURCES
a) Resources
- Interpersonal relationships, including relationships with family, peers, school, and psychological services
b) Stressors
- Exposure to suicide
- Interpersonal problems
- Social transformation
- Health issues, specifically HIV/AIDS epidemic
PANEL 2
PERSONAL STRESSORS AND RESOURCES
a) Demographic factors
- Gender
- Race and culture
b) Dispositional factors
- Hardiness
- Self-efficacy
- Optimism
- Sense of coherence
- Self-esteem
- Neuroticism
- Depression
- Hopelessness
- Substance abuse
PANEL 3
LIFE TRANSITIONS AND CR
a) Adolescence
- Physical development
- Cognitive development
- Personality and emotional devel
- Social development
b) Life crises
PANEL 4
COGNITIVE APPRAISAL AND COPING
a) Coping resources
b) Coping styles
- Problem-focused
- Emotion-focused
c) Coping strategies
PANEL 5
HEALTH AND WELL-BEING OUTCOME
a) Positive outcome
- Successful handling of problem or stressor
b) Suicidal ideation
- Including possible escalated suicidal behaviour

Figur d Copi

CHAPTER 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

In this chapter the research methods used to gather and analyse data for the study will be described. This description includes an explanation of the research design, research objectives, the sampling process and characteristics of the participants, the measuring instruments used, as well as the statistical procedures followed to analyse data. The ethical dilemmas that were considered in this study are also explained in this chapter.

3.2 RESEARCH DESIGN

A quantitative, non-experimental research design consisting of both correlational and criterion group components was used. Non-experimental research designs are often criticised for lack of control over additional variables that might have an effect on the outcome of the study. Another important limitation of non-experimental designs is that no inferences can be made about the causality of relationships found between variables (Huysamen, 1993).

Firstly the correlation between exposure to suicide and suicidal ideation was determined. This was followed by an investigation into the significance of

differences between high and low suicidal ideation groups with regard to the coping strategies used.

3.3 RESEARCH OBJECTIVES

The overarching objective of this study was to investigate the role of exposure to suicide and coping strategies in the suicidal ideation of a group of adolescents from the Northern Cape Province. This study formed part of a larger study, investigating the impacts of stressors, resources and coping strategies on the level of suicidal ideation of a group of adolescents.

The following specific objectives were formulated for this research study:

a) To determine the level of suicidal ideation of the group of adolescents.
b) To investigate the relationship between exposure to suicide and suicidal ideation.
c) To explore the role of coping responses in suicidal ideation of the group of adolescents.

3.4 RESEARCH QUESTIONS

In order to achieve the objectives of this study, the following research questions were formulated:

1. What level of suicidal ideation is present in the group of participants?

2. Is there a significant relationship between exposure to suicide and the suicidal ideation of this group of participants?
3. Does the group of participants with low levels of suicidal ideation differ significantly from the group with high levels of suicidal ideation with regard to their use of coping strategies?

3.5 RESEARCH PARTICIPANTS AND DATA GATHERING PROCESS

3.5.1 Defining characteristics of the group

The sample of 590 learners was selected with a stratified random sampling technique to ensure equal representation of gender and age groups. The sample consisted of Grade 11 and 12 learners from twelve schools in the Northern Cape Province. The mean age of the participants was 17.3 years, with a standard deviation of 1.66. Males accounted for 267 (45.2%) and females accounted for 323 (54.8%) of the total group. The participants were mostly from an urban background, with a total of 470 (79.7%) of the sample from urban areas, while 120 (20.3%) originated from rural areas. Although English was the primary means of communication of this survey, only 6.4% of the participants listed their home language as English, while 73% reported Afrikaans, 13% Setswana, and 7% reported Xhosa as their home language.

This province was selected after the local education department requested help from the University of the Free State to determine the particular risk and protective factors these learners portray that might contribute to suicidal behaviour. A marked increase in suicidal behaviour among adolescents was noticed throughout the province and the requested research forms part of an initiative to identify the possible risk factors involved in suicidal behaviour, as well as to plan and implement interventions aimed at reducing these risk factors.

Compared to other provinces in South Africa, the Northern Cape Province is the least populated and actually has a negative growth rate. The official census count in the year 2001, claimed the province to be home to 822 727 people, of whom approximately 435 000 were coloured, 279 000 were black, 112 000 were white, 2 300 were Indian and Chinese, and 12 000 were from other racial groups, including Nama, San, Khoi.Xu!, and Khwe (Statistics South Africa, 2001).

3.5.2 Data gathering

Questionnaires were only made available in English, as this is the official language of communication of the Education Department in the Province. To cross the language barrier all questionnaires were administered by psychologists and psychometrists from the Northern Cape Province Department of Education Support Services. Administration of the questionnaires occurred on a school day, determined by the Northern Cape Department of Education. The learners were divided into groups of twenty to ensure good rapport between test

administrators and learners. The administration of the questionnaires took place over a period of three hours, with a thirty minute refreshments break after an hour and a half.

3.6 ETHICAL CONSIDERATIONS

The following ethical issues were considered during the study. After selecting the participating subjects and obtaining the necessary consent from parents, learners (see Appendix A), and school principals, questionnaires were completed by the learners at their respective schools. All participants were informed about the purpose of the study, the anonymous and confidential nature of the survey, and what purpose the gathered information would serve. Participants were also informed about their freedom to decline or cease participation at any time, and what the procedure of the reporting of results would entail.

After completion of the study, reports containing recommendations for possible intervention programmes that may be implemented in identified schools were sent to the Director of the Education Support Services.

3.7 MEASURING INSTRUMENTS

To obtain information on the participants' levels of suicidal ideation, previous exposure to suicide and which coping styles they use, the following measuring instruments were used:

3.7.1 The Suicidal Ideation Questionnaire (SIQ) (senior high school version)

The SIQ (Reynolds, 1988) consists of 30 items and measures the frequency and intensity of suicidal thoughts. A total suicidal ideation score is computed by the sum of the scores completed on a 7-point Likert scale, with scores ranging from 0 to 6 per item. The maximum possible score on this questionnaire is 180. A high score is indicative of a high level of suicidal ideation, while a low score reflects a low level of suicidal ideation. Reynolds (1988) suggested a cut-off score of 41 to determine which participants revealed high levels of suicidal ideation (who had to be considered for referral for further evaluation), and which revealed lower levels of suicidal ideation. In this study, however, the participants were initially divided into three groups determined by their levels of suicidal ideation. Those who portrayed high levels of suicidal ideation (highest third of all the participants' scores; N = 225), and those who portrayed low levels of suicidal ideation (lowest third of all the participants' scores; N = 242) were selected to represent two groups that would participate in further calculations of differences. The group displaying average levels of suicidal ideation (N = 116) was excluded from the calculations of significance of differences.

3.7.1.1 Reliability and validity of the SIQ

Internal consistency coefficients of between 0.96 and 0.97 have been reported for this measuring instrument (Reynolds, 1988). In a South African study,

however, George (2005) determined an alpha-coefficient score of 0.95. The high reliability of this scale both in the USA and in South Africa implies that the current data can be used with confidence. Reynolds (1988) reports that construct, clinical and content validity have been proven to be sufficient.

3.7.2 A Self-compiled biographical questionnaire.

This questionnaire (see Appendix B) consisted of 11 items that served to gather information on participants' school, age, gender, school grade, language preference, and geographical location.

3.7.3 Exposure to suicide.

Previous exposure to suicide was determined through answering two self-formulated items:

a) "Do you know anybody who has committed suicide? If yes, what was your relation to the person?"

b) "Do you know anybody who has attempted suicide? If yes, what was your relation to the person?"

A value ranging from 1 to 4 was given to different levels of exposure to suicide, e.g. no exposure = 1, exposure to attempted suicide = 2, exposure to completed suicide = 3, and exposure to both completed suicide and attempted suicide = 4. Thus, higher scores indicate more exposure to suicidal behaviours.

3.7.4 The Coping Orientations to the Problems Experienced Questionnaire (COPE)

The COPE (Carver et al., 1989) was developed to evaluate various ways in which stressful situations are handled. The scale consists of 53 individual items which make up 14 subscales. Each subscale is made up of 4 items, except for the Alcohol and drug disengagement subscale, which only consists of 1 item. Items are completed on a 4-point likert scale scored from 1 to 4, thus a maximum score of 16 can be obtained for the remaining 13 subscales. The subscales are further divided into three broad categories, namely problem-focused strategies, emotion focused strategies, and dysfunctional strategies. The individual's scores on the subscales are determined by adding the scores on the items representing the subscales. A high score on a subscale indicates that the individual frequently uses the proposed coping style, where a low score would indicate a less frequent use of the coping style.

3.7.4.1 Subscales of the COPE scale:

a) Problem-focused subscales:

Subscale 1: Active Coping

This subscale reflects active efforts to do away with, get around or reduce the impact of the stressor.

Subscale 2: Planning

This subscale evaluates the cognitive processes used in the planning of dealing with a stressor, and includes thoughts about the problem, as well as generating active steps to solve the problem.

Subscale 3: Suppression of Competing Activities

In order to deal with the problem at hand, efforts are put in place to put other projects aside or to avoid becoming distracted by other activities.

Subscale 4: Restraint Coping

This measures the amount of restraint the individual uses in order to use the best strategy at the best possible time to solve the problem.

Subscale 5: Seeking Social Support for Instrumental Reasons

This subscale includes asking for help, looking for advice and gaining information from others when faced with a problem.

b) Emotion-focused subscales

Subscale 6: Seeking Social Support for Emotional Reasons

This subscale focuses on the amount of sympathy, understanding and moral support sought out from others when the individual encounters a stressful situation.

Subscale 7: Positive Reinterpretation and Growth

This subscale reflects the degree to which a person attempts to look for a more positive meaning in stressful events.

Subscale 8: Acceptance

This subscale measures the extent to which the individual tries to accept the reality of a stressful situation.

Subscale 9: Turning to Religion

This subscale measures an individual's tendency to turn to religion in stressful times, including praying, and searching for comfort and spiritual guidance in a religious relationship.

Subscale 10: Focus on, and Venting of Emotions

Measuring the tendency to focus on emotional discomfort and distress while experiencing problematic situations, as well as venting those emotions.

c) Dysfunctional, or less effective strategies

Subscale 11: Denial

Denial reflects the degree to which a person refuses to believe that a particular problem exists or ignores the problem.

Subscale 12: Behavioural Disengagement

This subscale reflects the degree in which a person ceases efforts to try and solve the problem and reach his/her goals.

Subscale 13: Mental Disengagement

The mental disengagement subscale measures the degree in which the individual attempts to distract him/herself from dealing with the problem by doing other activities, including daydreaming, sleeping or watching television.

Subscale 14: Alcohol-Drug Disengagement

This one item measures the tendency to resort to the use of alcohol, medication and/or drugs in an attempt to forget about the problem.

3.7.4.2 Reliability and validity of the COPE questionnaire

Carver et al. (1989) obtained Cronbach alpha coefficients of between 0.45 and 0.92 for the internal consistency of the subscales. In a South African study on an adult sample, Storm and Rothmann (2003) found coefficients varying between 0.25 and 0.65 for this questionnaire. The alpha coefficients for the COPE subscales of the current sample are presented in Table 3.1. The alpha coefficients reported by Carver et al. (1989) are also reported in Table 3.1 for purposes of comparison of the two sets of alpha coefficients.

Table 3.1: Discrepancies in alpha coefficients for the COPE questionnaire.

Subscales	Carver et al. (1989, p. 273)	Current sample
Active coping	0.62	0.47
Planning	0.80	0.59
Suppression of competing activities	0.68	0.43
Restraint coping	0.72	0.49
Seeking social support - instrumental	0.75	0.62
Seeking social support – emotional	0.85	0.65
Positive reinterpretation and growth	0.68	0.53
Acceptance	0.65	0.49
Turning to religion	0.92	0.65
Focus on and venting of emotions	0.77	0.46
Denial	0.71	0.54
Behavioural disengagement	0.63	0.49
Mental disengagement	0.45	0.44
Alcohol-drug disengagement (single item)		

The sizeable differences between the alpha coefficients of the two studies are clear. Almost all the subscales of the present study have significantly lower alpha coefficients than those obtained by Carver et al. (1989). While only the subscale Mental disengagement had a score below 0.6 in Carver's study, only the two subscales involving Seeking social support (both instrumental and emotional) and Turning to religion scored above 0.6 in this study. Nunnally and Bernstein (1994) state that lower alpha coefficients are acceptable when using non-cognitive measures. However, the results for the items with alpha coefficients lower than 0.6 should be interpreted with caution.

The dissimilarity in reliability might be explained by cultural differences. Carver et al. (1989) used an American sample of participants, where this study focused on a South African sample. The need for further research concerning the applicability of this questionnaire for South African samples requires careful scrutiny.

3.8 STATISTICAL PROCEDURE

A product moment correlation was calculated to explore the relationship between exposure to suicide and suicidal ideation. In the investigation of the significance of differences of the coping strategies of the two groups, a multivariate analysis of variance (MANOVA) was used. According to Howell (2007), a MANOVA analysis would be the most appropriate statistical analysis technique when bringing one independent variable (suicidal ideation) and several dependent

variables (14 scales of coping) into consideration. If the MANOVA analysis produces a significant result (*F*-value), it will be followed by a univariate analysis of variance of each dependent variable. Both the 5% and 1% level of significance were used as criterion of significance in the current study.

In order to comment on the practical value of statistically significant results of the study the practical significance of the results will be also be investigated. Effect size will be determined as a standard criterion of practical significance by using the following guideline values (*f*) suggested by Cohen (Steyn, 1999): 0.1 = small effect, 0.25 = medium effect and 0.4 = large effect in the case of correlations, and 0.2 = small, 0.5 = medium, and 0.8 = large effect for the different scores. The results were generated with the help of the SAS-programme (SAS Institute, 2003).

3.9 CONCLUSION

While this chapter focused on the research design, the participants, the data gathering process, and the measuring instruments of the study, the following chapter will encompass the results obtained in the study and a discussion of those results.

CHAPTER 4

RESULTS AND DISCUSSION OF RESULTS

4.1 INTRODUCTION

In this chapter the findings of the current study are reported. The discussion of the results includes the descriptive statistics of the variables and the correlation coefficients between exposure to suicide and levels of suicidal ideation. This will be followed by a comparison of the low and high suicidal ideation groups with regard to differences in the coping strategies they used.

4.2 DESCRIPTIVE STATISTICS

The descriptive statistics (averages and standard deviations) regarding the Suicidal Ideation Questionnaire are presented in Table 4.1, and the COPE scales in Table 4.2. The frequency distribution of the group with regard to their exposure to suicidal behaviour will be presented in Table 4.3.

Table 4.1: Mean scores and standard deviations for the Suicidal Ideation Questionnaire

Variables	$\overline{X}$	***s***
Suicidal Ideation	39.51	36.14

The mean score for the current sample was 39.51, which is much higher than the mean score of 17.79 that Reynolds (1988) reported, indicating that the group of adolescents participating in this study have higher levels of suicidal ideation than the participants in the study by Reynolds. The participants of the current study also showed greater variability in their responses, with a standard deviation of 36.14, compared to 26.78 reported by Reynolds (1988).

Table 4.2: Mean scores and standard deviations for the COPE scales

Variables	$\overline{X}$	***s***
Active Coping	11.63	2.40
Planning	11.98	2.52
Suppression of Competing Activities	11.01	2.33
Restraint Coping	11.19	2.42
Instrumental Support	11.10	2.82
Emotional Support	10.95	2.97
Positive Reinterpretation and Growth	12.16	2.41
Acceptance	11.53	2.48
Turning to Religion	12.67	2.69
Venting of Emotions	10.57	2.60
Denial	9.85	2.72
Behavioural Disengagement	9.55	2.61
Mental Disengagement	10.90	2.56
Alcohol and Drug Disengagement	1.58	0.98
Problem-focused coping	56.88	9.20
Emotional-focused coping	57.96	8.74
Dysfunctional coping	31.76	5.90

High mean scores for most of the subscales were obtained, except for two subscales related to Dysfunctional coping, Denial and Behavioural Disengagement. In contrast, Carver et al. (1989) reported much lower overall mean scores (ranging from 5.57 to 11.86) but also found significantly lower mean scores for the subscales of Denial (5.57), Behavioural Disengagement (6.03), and Turning to Religion (7.56). Compared to Carver et al. (1989), the standard deviations of all subscales, except for Denial and Behavioural Disengagement, of the current studies' participants were lower. Because of the smaller variance in responses, this finding indicates that the current study's participants used the same coping strategies more often, rather than resorting to different strategies.

The results obtained from this study indicate that participants tend to generally use more problem-focused coping strategies, although emotion-focused strategies are also used quite frequently, especially Positive Reinterpretation and Growth, and Turning to Religion. It seems the participants rely to a lesser extent on dysfunctional strategies, such as Denial and Behavioural Disengagement. This finding coincides with a study by Lewis and Frydenberg (2002), who found that adolescents using more problem-focused strategies were also using more emotion-focused strategies, depending on what the situation called for.

4.2.1 Intercorrelations of the COPE subscales

Most of the intercorrelations between the COPE subscales (as presented in Table 4.3), were either significant on the 1% or 5% level of significance, thus, for

practical reasons the discussion will only involve the intercorrelations displaying significance on the 1% level of significance, and only those with a medium to high practical significance (>0.3) (Howell, 2007). As could be expected, high intercorrelations were found between Active Coping and other problem-focused subscales as well as certain emotion-focused strategies, such as Positive Reinterpretation and Growth, Acceptance, and Turning to Religion. Surprisingly, Active Coping also correlates high with some of the dysfunctional strategies, such as Mental Disengagement and Alcohol and Drug Disengagement. Planning does not portray significant correlations with any other subscales, except Seeking Social Support for Instrumental Reasons. The very high correlation between Suppression of Competing Activities and Restraint Coping (0.584) is not unexpected because both of these strategies are passive and avoidant. Another very high correlation was found between Turning to Religion and Venting of Emotions, both of which are flaccid coping strategies. Positive Reinterpretation and Growth, and Acceptance (0.605) also correlated highly, which again is not an unexpected result, as both of these subscales also represent a passive way of coping with stressors. Another surprising finding was the high correlation between Acceptance and Mental Disengagement. Denial, on the other hand, had negative correlations with almost all the other subscales, indicating that when Denial is used as a coping strategy, other strategies are used less frequently, or vice versa.

Table 4.3: Intercorrelations of the COPE subscales

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Active coping		.209**	.412**	.300**	.093*	.239**	.500**	.509**	.369**	.074	-.091*	.416**	.433**	.374**
Planning			.244**	.295**	.316**	.262**	.180**	.247**	.207**	.214**	-.036	.260**	.190**	.138**
Suppression of competing activities				.584**	.195**	.377**	.453**	.447**	.369**	.090*	-.063	.348**	.335**	.299**
Restraint coping					.232**	.442**	.295**	.355**	.316**	.134**	-.123**	.234**	.245**	.230**
Instrumental support						.252**	.115**	.179**	.101*	.403**	.066	.240**	.118**	.132**
Emotional support							.269**	.302**	.156**	.316**	.128**	.236**	.246**	.289**
Positive reinterpretation and growth								.605**	.416**	.105*	-.111**	.470**	.388**	.456**
Acceptance									.343**	.186**	-.105*	.390**	.344**	.446**
Turning to religion										.71	-.170**	.329**	.251**	.247**
Venting of emotions											.110**	.241**	.190**	.156**
Denial												-.050	.024	.024
Behavioural disengagement													.369**	.403**
Mental disengagement														.343**
Alcohol and drug disengagement														

****** Correlation is significant at the 0.01 level; * Correlation is significant at the 0.05 level

4.3 CORRELATION BETWEEN EXPOSURE TO SUICIDE AND SUICIDAL IDEATION

The frequency of exposure to suicide is presented in Table 4.4. Of the 569 participants who answered these items, 28.5% had no previous exposure to attempted or completed suicides, 22.9% had previous exposure to attempted suicides, and 14.6% had previous exposure to completed suicides. An alarming 30.5% of the participants have been exposed to both attempted and completed suicides. In a much larger international study concerning the suicidal risk in American Indian adolescents, 18% of the 7241 participants reported that they had been exposed to attempted suicide, and 9% of the participants had been exposed to completed suicide (Grossman, Milligan & Deyo, 1991). In contrast, Mercy et al. (2001) found high frequencies of exposure to suicide among 513 adolescents and youth, ranging from 5.7% who were exposed to parental suicide, to 58% who were exposed to the suicidal behaviour of a friend or acquaintance. Despite searches on several dates in April 2008, and on different South African research databases, including Nexus and Biblioline, no study could be found that reported on the frequency of South African adolescents' exposure to suicidal behaviour.

Table 4.4: Frequency and percentage values for exposure to suicide

	Frequency	%
No exposure	168	28.5
Exposure to attempted suicide	135	22.9
Exposure to completed suicide	86	14.6
Exposure to both attempted and completed suicide	180	30.5

N = 569

The following correlation coefficient was obtained between exposure to suicide and suicidal ideation:

Exposure to suicidal behaviour with suicidal ideation = 0.075 (p = 0. 0979).

As can be inferred from the level of significance of 0.0979, the correlation was not statistically significant. This finding does not support findings of studies that reported that exposure to suicide of a family member or friend significantly increases the risk for suicide and suicidal ideation of adolescents (Lewinsohn et al., 1994, 1996; Wagman-Borowsky et al., 2001). The current finding is consistent with the findings of Brent et al. (1992), Brent et al. (1996), and Marcenco et al. (1999), who also reported no significant correlation between exposure to suicide and suicidal ideation or behaviour. In fact, Brent et al. (1996) found that the suicide of a friend might have an inhibitory impact on suicidal behaviour of adolescents.

4.4 DIFFERENCES IN COPING STRATEGIES

In order to determine if differences concerning the coping strategies of high and low suicidal ideation groups, a one-way multivariate analysis of variance (MANOVA) was conducted. An *F*-value (according to the Hotelling-Lawley Trace) of 2.48 (v=14; 324) was found, which is significant on the 1% level of significance (p = 0.0024), thus a univariate analysis of variance could be applied to determine which coping subscales differed significantly between the high and low suicidal ideation groups. Because only two groups (high and low suicidal ideation) were dealt with, it was unnecessary to do post-hoc tests. The results are reported in Table 4.5.

Table 4.5: Mean scores, standard deviations, and F-values of the univariate analysis of low and high suicidal ideation groups on coping strategies.

	Low suicidal ideation (N = 242)		**High suicidal ideation (N = 225)**		***F***	***p***	***f***
Variable	$\overline{X}$	**s**	$\overline{X}$	**s**			
Active coping	11.56	2.46	11.59	2.36	0.02	0.8896	
Planning	12.01	2.86	11.88	2.57	0.30	0.5868	
Suppression of competing activities	10.93	2.38	10.96	2.35	0.01	0.9067	
Restraint coping	11.24	2.37	11.22	2.45	0.01	0.9421	
Instrumental support	11.04	2.93	11.10	2.81	0.05	0.8216	
Emotional support	10.85	3.10	11.09	2.79	0.73	0.3942	
Positive reinterpretation and growth	12.24	2.36	12.01	2.53	0.98	0.3232	
Acceptance	11.61	2.48	11.26	2.46	2.22	0.1370	
Turning to religion	12.63	2.74	12.78	2.59	0.33	0.5636	
Venting of emotions	10.20	2.76	10.78	2.37	5.82	0.0162	0.10
Denial	9.44	2.73	10.48	2.68	16.45	0.0001	0.16
Behavioural disengagement	9.21	2.60	9.84	2.61	6.41	0.0117	0.10
Mental disengagement	10.76	2.50	11.14	2.58	2.50	0.1148	
Alcohol and drug disengagement	1.55	1.00	1.59	0.92	0.24	0.6247	
Problem-focused	56.72	2.70	56.64	9.02	0.01	0.9300	
Emotional focused	57.69	8.97	57.94	8.31	0.08	0.7735	
Dysfunctional	30.83	6.05	32.81	5.56	12.09	0.0006	0.14

* p <= 0.01

The results of the univariate analysis do not indicate vast differences in coping strategies between the two groups, however, although not practically significant, differences between the groups are noticed. The group with low levels of suicidal ideation tended to use Planning and Acceptance more often than the group with high levels of suicidal ideation, while Mental Disengagement and the subscale related to seeking emotional support were used more often by the group with high levels of suicidal ideation. This is not an unexpected result, given that seeking emotional support is only considered an appropriate coping strategy when the problem is insolvable (Gould et al., 2004), and Mental Disengagement is considered a dysfunctional coping strategy (Carver et al., 1989). It appears that there were statistically significant differences between the two groups (low and high on suicidal ideation) with regard to three subscales, including Focus on and Venting of Emotions, Denial and Behavioural Disengagement in the groups' mean scores on the 1% significance. The corresponding *f*-values show that the effect sizes of the subscales Denial and the Dysfunctional scale is indicative of small to medium practical significance (Denial 0.16 and Dysfunctional scale 0.14). The effect sizes of Focus on and Venting of Emotions and Behavioural Disengagement were very small, indicating that the findings are of low practical significance and should therefore be interpreted with caution.

In connection with the Denial and Dysfunctional subscales, adolescents displaying high suicidal ideation also display a higher mean score in these subscales than those who obtained a low suicidal ideation score. Thus,

individuals with a high suicidal ideation are more prone to use denial and other dysfunctional coping strategies than those with a lower suicidal ideation. Lewis and Frydenberg (2002) state that adolescents who use denial as an inappropriate coping strategy reject the severity of problems, and that this eventually leads to the avoidance of taking appropriate action.

4.5 CONCLUSION

Although a significant portion of the participants has been exposed to suicidal behaviour, the correlation between exposure to suicide and suicidal ideation was not statistically significant. Concerning the role of coping strategies in the levels of suicidal ideation, it seems that adolescents with high levels of suicidal ideation make more use of dysfunctional coping strategies, including denial, to cope with stressors than those with lower levels of suicidal ideation.

A conclusion of the results, the limitations of the study and recommendations for further studies will follow in the next chapter.

CHAPTER 5

CONCLUSION, RECOMMENDATIONS AND LIMITATIONS

5.1 INTRODUCTION

In this chapter a brief overview of important contributions of the literature review as well as the research findings are presented. This will be followed by a summary of the limitations of this study. The chapter will conclude with recommendations for future research and practice.

5.2 PERSPECTIVES FROM THE LITERATURE

South African adolescent suicidal behaviour has shown significant increases during recent years (Matzopoulos, 2004; 2005). Because of these increases, the Northern Cape Department of Education took the initiative to investigate the contributory factors related to adolescent suicidal behaviour in the Northern Cape Province (George, 2005).

In this study, the Integrated Stress and Coping Model (Moos & Shaefer, 1993) was used as a guiding theoretical model to explore potential risk and protective factors in suicidal ideation, as an example of health compromising behaviour. The proponents of this model theorise that a wide range of external and internal

influences, as well as coping styles and strategies are in constant interaction to determine whether the impact of the interaction between these factors will result positively or negatively. The developmental stage and positive and negative events are also considered in an explanation of the health enhancing or health compromising outcome. One of the external influences that might have an effect on adolescents' well-being is exposure to suicide. Media reports on "cluster suicides" (several suicides seemingly related to one another) and imitations of suicides, especially celebrity suicides, lead to more intense investigations on the effect of exposure to suicide on suicidal behaviour (Mercy et al., 2001). When a significant other commits suicide, feelings of bereavement are intensified with shock, anger, and guilt (Kinsella et al., 1993). Although the impact of these intense feelings can be overwhelming to an already vulnerable adolescent, Gutierrez et al. (2005) state that exposure to suicide alone does not necessarily lead to suicidal behaviour. The combination of exposure to suicide and other influencing factors, such as the implementation of inappropriate coping styles or strategies might lead to engagement in suicidal behaviour. Coping is viewed as an important mediator between the influence of stressors and well-being (Folkman & Lazarus, 1984). Coping resources are mainly considered to be interpersonal relationships, but are only effective as a protective factor when the individual actively pursues them. Coping strategies, on the other hand, are selected after a cognitive appraisal of the situation is done (Moos & Schaefer, 1993). The implementation of available resources, such as interpersonal relationships, and the most effective choice of coping strategies (depending on

the situation), would thus ultimately lead to a positive health outcome. However, if coping resources are ignored or perceived to be absent, and inappropriate coping strategies, such as denial, or other dysfunctional strategies are implemented, the outcome may result in suicidal ideation (Kidd & Carroll, 2007; Schneidman, 1996; Wilson et al., 1995).

5.3 FINDINGS OF THIS STUDY

This study was aimed at investigating the roles of both exposure to suicide, and coping strategies in adolescents' levels of suicidal ideation. Results from the study regarding the measuring instruments indicate that the Suicidal Ideation Questionnaire displays high reliability and is well suited to use among South African adolescents. In contrast, the COPE questionnaire displayed average alpha coefficients on 10 of the 14 subscales with scores below 0.6. The alpha coefficients of Turning to Religion, and Seeking Emotional Support (both for instrumental and emotional reasons) were good. One of the reasons for the low alpha coefficient on most of the subscales might include cultural differences between American and South African samples. Another possible explanation could be that the predominantly Afrikaans speaking adolescents did not quite understand some of the English statements presented in the items. The mean score and standard deviation for the Suicidal Ideation Questionnaire were both high in comparison with the scores Reynolds' (1988) participants obtained. This implies that the current study's participants not only reported to have higher suicidal ideation, but also more varied responses. Similarly, the mean scores for

the COPE subscales were higher than those of Carver et al. (1989), however, the standard deviations of this study were lower than those of Carver et al. (1989), indicating lesser variance in responses of the current study's participants.

The frequency of exposure to suicide indicated that almost a third of the participants had been exposed to attempted or completed suicides, though the findings of this study suggest that exposure to suicide does not have a significant effect on the current levels of suicidal ideation. This finding is confirmed by several other studies (Marcenco et al., 1999; Mercy et al., 2001). Some findings even indicate that the suicide of a significant other had an inhibitory effect on current suicidal behaviour (Brent et al., 1996; Mercy et al., 2001). In contrast, several studies found definite relations between exposure to the suicidal behaviour of others and current suicidal ideation and/or suicide attempts (Gould et al., 2004; Grossman, 1991; Gutierrez et al., 1996; Lewinsohn et al., 1994; 1996; Wagman-Borowsky et al., 2001).

The only significant findings concerning the role of coping strategies in the high and low levels of suicidal ideation groups were that participants with higher levels of suicidal ideation more often make use of denial, and other dysfunctional coping strategies. This finding might imply that the use of denial or other dysfunctional coping strategies could increase the individual's level of suicidal ideation.

5.4 LIMITATIONS OF THIS STUDY

The results of the study should be interpreted with consideration to the following limitations:

a) Although English is the official language of the Department of Education, it was not the first language of most of the participants. However, an effort to reduce the impact of this limitation was made by employing qualified psychologists and psychometrists to supervise the administration of questionnaires. The low alpha coefficients obtained from the COPE questionnaire indicate that language might have been a factor in how the items were interpreted.

b) The measurement of exposure to suicide did not specify the timeframe of the exposure, the relationship between the person who engaged in suicidal behaviour and the participant, or the level of exposure, e.g. did the adolescent witness the incident or hear about it. The more recent the exposure to suicide, the more it would affect the individual. Similarly, a person would be more affected by the exposure to suicidal behaviour if it was the behaviour of a brother or friend, rather than an acquaintance.

c) Although exposure to suicide was included, the study failed to incorporate other life events or stressors that might have contributed to their levels of suicidal ideation. Thus, the portrayal of the effect of exposure to suicide on suicidal

ideation lacked a complete portrayal of influences the participants might have had.

d) Using an existing data pool prevented the researcher to introduce additional measuring instruments, or to adapt existing measuring instruments. This limited the amount of information that could have been obtained.

e) One of the initial goals of this study was to determine if coping plays a mediating role between exposure to suicidal behaviour and current levels of suicidal ideation. Because of the lack of statistical significance of the correlation between exposure to suicidal behaviour and current levels of suicidal ideation, as displayed in the results, adaptations had to be made to rather investigate the role of coping in participants with high and low levels of suicidal ideation respectively.

f) Although Nunnaly and Bernstein (1994) indicate that alpha coefficients of 0.6 in non-cognitive measures are acceptable, the alpha coefficients of the COPE questionnaire in this study were low in comparison to those of Carver et al. (1989).

5.5 RECOMMENDATIONS FOR FURTHER RESEARCH

The following recommendations for further research are suggested:

- Investigating the reliability and validity of international questionnaires, specifically the COPE questionnaire, on South African participants will enable future researchers to gather information that is of more value to the South African population.
- An in-depth investigation into exposure to suicidal behaviour, while incorporating additional factors, including the timeframe of the exposure, the relationship with the person, and direct or indirect exposure to the suicidal behaviour.

5.6 RECOMMENDATIONS FOR PRACTICE

It is recommended that interventions should be aimed at the identification and use of more effective coping resources and strategies, especially identifying more effective alternatives for the use of dysfunctional coping strategies, such as denial, and mental and behavioural disengagement.

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Appendix A

PARTICIPANTS' CONSENT FORM

Dear Participant

Thank you for considering participation in this study. The purpose of this study is to determine the availability of resources and support systems to our youth when they are confronted with stressful events. Furthermore, this study aims to focus on how these factors contribute towards positive and healthy adolescent development.

Participation in this study is voluntary and any possible identifying data will be held in the strictest confidence. While the data obtained will be published, questionnaires will be completed anonymously. Should you wish to obtain individual feedback on your data, this will be available at your request.

Your participation in this study will serve to provide a better understanding of how certain factors can enhance or limit the healthy development of our youth, whom ultimately, are our leaders of tomorrow. This study has the support and backing of the Department of Education Northern Cape Province, as well as the University of the Free State. As previously stated, participation is entirely voluntary and should you feel the need, you may withdraw from the study at any time.

Please complete the following part if you are willing to participate in this study.

_____ _____

Signature of participant Date

Appendix B

BIOGRAPHICAL QUESTIONNAIRE

1. **School: .....**

2. **Grade: .....**

3. **Age: .....**

4. **Sex (circle which you are): MALE / FEMALE**

5. **Indicate the place where you live:**

a) town or village

b) suburb

c) farm district

6. **Home language:**

a) English

b) Afrikaans

c) Xhosa

d) Zulu

e) SeSotho

f) Setswana

g) Other (specify)

7. **Parents' education: How far did they study?**

a) Mother .....b) Father

8. **Marital status of parents:**

a) married

b) divorced

c) single parent

d) separated

e) common law marriage

9. Employment status of parents:

Father

a) permanent employment

b) temporary employment

c) self-employed (indicate formal or informal sector)

d) unemployed

Mother

a) permanent employment

b) temporary employment

c) self-employed (indicate formal or informal sector)

d) unemployed

10. State your religious affiliation:

a) Christian

b) traditional religion

c) other (specify)

d) no affiliation

11. If applicable, how often do you attend religious ceremonies?

a) weekly or more

b) monthly

c) occasionally

d) not at all