

**RISK AND RESILIENCE IN ADOLESCENT SUICIDAL IDEATION**

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## DECLARATION

I, Ancel Andrew George, declare that the thesis submitted by me for the Philosophiae Doctor (Psychology) degree at the University of the Free State is my own independent work and has not previously been submitted by me at another university/faculty. I further cede copyright of this thesis in favour of the University of the Free State.

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*27 November 2009*

Date

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## Abstract

The psychological and social impact of suicide is profound, as schools, or occupational environments, are significantly affected by merely a single suicide, and if no effective measures are taken, researchers fear society is heading for a dramatic rise in suicidal behaviour. Due to the multi-faceted nature of suicide, a range of factors, which can be divided/categorised into risk and protective factors, were found to contribute to suicidal behaviour. Psychosocial factors such as family instability (divorce, violence, and poor parental support) and socio-economic challenges impaired healthy adolescent development, thereby increasing the risk of self-destructive behaviour. The use of ineffective coping strategies is associated with an increased incidence of suicide risk. The focus of this study is to investigate the risk and protective factors underlying adolescent suicidal behaviour in the Northern Cape Province, as well as to explore the stressors experienced by adolescents that could contribute to them having a higher suicide risk.

A mixed-method approach was used to analyse data by employing both quantitative and qualitative methods. Quantitatively, a cross-sectional, correlational, and criterion-group design was used, while the *Interpretive Phenomenological Analysis* (IPA) was used for processing qualitative data. A total of 590 participants from ten schools representative of all six regions within the Northern Cape Province (NCP) have been selected from the NCP. As part of gathering data, the Suicidal Ideation Questionnaire for Adolescents, the Social Stressors and Resources Inventory - Youth Form, the Rosenberg Self-esteem Scale, the Cope Questionnaire, the Hope Scale, and a self-compiled biographical questionnaire were used. Various statistical analyses were conducted such as a variance of analysis that compared the significance of differences between coping strategies between different race groups, a hierarchical regression analysis that investigated the influence of coping strategies on suicidal ideation and a stepwise regression analysis that investigated the unique contributions of stressors, resources and coping strategies on suicidal ideation.

The qualitative data was gathered through the use of an open-ended question that asked respondents to write a short paragraph on factors that caused them to feel distressed. Responses were thematically analysed with the use of the IPA method. The qualitative

responses emphasised that adolescent's immediate environment played an important role as a source of stress, especially with regard to their inner experiences of emotion and behaviour regulation and family and friends, as these were reported by a large number of respondents. Stressors associated with the macro-system such as the influence of economic and political spheres were identified by a small number of respondents as a source of stress. Quantitative results indicated the current research samples' level of suicidal ideation was substantially higher when compared to an American sample. Participants who were previously exposed to suicide or had suicide attempts were identified as falling within the high suicide risk category. White participants reported a lower level of suicidal ideation when compared to Coloured and black groups. Emotion-focused coping strategies significantly contributed to the variance of suicidal ideation for Coloured and white groups, while dysfunctional coping strategies contributed significantly to suicidal ideation for the black group. In the stepwise regression analysis seven variables significantly (on the 1% or 5% level) contributed to the variance of suicidal ideation, explaining a combined variance of 19.27%. Variables that played a protective role (decreasing suicidal ideation) were self-esteem, acceptance as a coping strategy and seeking support for instrumental reasons (seeking tangible support such as advice from others or financial assistance), while variables associated with increased risk (increasing suicidal ideation) were denial, restraint coping, romantic relationships and negative life events.

From this study it is recommended that future research focuses on identifying risk and protective factors between specific socio-economic groups as well as the use of longitudinal studies to explore the developmental course of risk and protective factors. The implementation of capacity building programs that will enhance adolescent coping and interpersonal skills was recommended.

As a limitation the use of non-South African instruments within a South African context are also further discussed.

*Keywords: Suicidal ideation, adolescence, risk factors, protective factors, suicide attempts, completed suicide, coping, emotion-focused coping, problem-focused coping, dysfunctional coping, stressors, resources*

## Opsomming

Die psigologiese en sosiale impak van selfmoord is verreikend, veral op skole en ander sosiale omgewings. Effektiewe voorkomingsmaatreëls is daarom noodsaaklik om die hoë koste ten opsigte van menslike lyding te beperk. Die oorsprong van selfmoordgedrag is multidimensioneel, met 'n verskeidenheid faktore wat as potensiële risiko- of beskermende faktore beskryf word. Psigososiale faktore soos gesinsverbrokkeling (egskeiding, geweld en onvoldoende ouertoesig) asook sosio-ekonomiese uitdagings en persoonlike risikofaktore soos gebrekkige selfvertroue verhoog die risiko vir selfvernietigende gedrag. Oneffektiewe copingstrategieë word ook geassosieer met verhoogde risiko vir selfmoordgedrag. Die fokus van hierdie ondersoek was om ondersoek in te stel na die risiko- en beskermende faktore wat 'n rol speel by adolessente selfmoord onder 'n groep leerlinge van die Noordkaap Provinsie asook om die stressors wat hierdie leerlinge ervaar verder toe te lig.

'n Gemengde metode benadering (kwantitatiewe en kwalitatiewe metodes) is gevolg. Ten opsigte van die kwantitatiewe ondersoek is 'n dwarsdeursnee-onderzoekontwerp gebruik wat 'n korrelasionele en kriteriumgroepontwerp ingesluit het, terwyl die *Interpretatiewe Fenomenologiese Analise*(IPA) gebruik is vir die ontleding van kwalitatiewe response. 'n Steekproef van 590, graad 10 tot 12 leerlinge is met behulp van gestratifiseerde steekproeftrekking uit tien skole van die Noordkaap Provinsie gekies. Data vir die kwantitatiewe ondersoek is met behulp van die Selfmoordideasie Vraelys vir Adolessente, Selfgatingsvraelys, die Hoopskaal, Sosiale Stressors en Hulpbronne Vraelys (Jeugvorm), die COPE Vraelys en 'n biografiese vraelys versamel. Verskeie statistiese ontledings is uitgevoer, insluitende 'n variansie-ontleding wat die beduidendheid van verskille tussen copingstrategieë van verskillende rassegroepe vergelyk het, 'n hiërargiese regressie-ontleding wat die invloed van copingstrategieë op selfmoordideasie ondersoek het en 'n stapsgewyse regressie-ontleding wat die unieke bydrae van stressors, hulpbronne en copingstrategieë op selfmoordideasie bereken het.

Die kwalitatiewe data is versamel deur 'n oop-einde vraag in die vraeboekie wat respondente versoek het om 'n paragraaf te skryf oor die faktore wat bydrae tot die stres

wat hulle daaglikks ervaar. Hierdie response is tematies verdeel met behulp van die IPA metode.

Die kwalitatiewe response beklemtoon die rol van die adolescent se onmiddellike omgewing as belangrikste bron van stres, veral innerlike ervarings ten opsigte van emosionele en gedragsregulering asook konflik met gesinslede en vriende is deur 'n groot aantal deelnemers as bron van stres gerapporteer. Stressore wat voortspruit uit die makrosisteme soos die ekonomiese en politieke lewensdomeine is deur min respondente uitgewys as stressore. Kwantitatiewe resultate toon aan dat die huidige onderzoekgroep se vlak van selfmoordideeasie aansienlik hoër was as 'n vergelykbare Amerikaanse groep s'n. Respondente wat voorheen aan selfmoord blootgestel was of wat self vorige selfmoordpogings aangewend het, was geïdentifiseer binne die hoë selfmoordrisiko kategorie. Wit respondente se vlak van selfmoordideeasie was beduidend laer as swart en Kleurling respondente s'n. Emosioneel gefokusde copingstrategieë het 'n beduidende bydrae gelewer tot die variansie in selfmoordideeasie van Kleurling en Wit leerlinge, terwyl die gebruik van disfunksionele copingstrategieë 'n beduidende rol gespeel het by swart deelnemers. In die stapsgewyse regressie-ontleding het sewe veranderlikes 'n beduidende bydrae (minstens op 5% peil) gelewer tot selfmoordideeasie en gesamentlik 19.27% (statisties beduidend op die 1% peil) van die variansie in selfmoordideeasie verklaar. Die veranderlikes sluit in selfagting, aanvaarding as copingstrategie en verkryging van sosiale ondersteuning vir instrumentele redes, wat 'n beskermende rol gespeel het (laer selfmoordideeasie) asook ontkenning en weerhouding as copingstrategieë, romantiese verhoudinge en negatiewe lewensgebeure as stressore wat as beduidende risikofaktore (hoër selfmoordideeasie) geïdentifiseer is. Aanbevelings is gemaak ten opsigte van verdere navorsing oor die identifikasie van risiko- en beskermende faktore vir spesifieke sosio-ekonomiese groepe asook longitudinal studies wat die verloop van beskermende en risikofaktore kan naspur. Die implementering van kapasiteitsbouprogramme vir adolescentte wat hulle copingvaardighede en interpersoonlike vaardighede uitbou, is ook gemaak. Tekortkominge van die ondersoek ten opsigte van die gebruik van buitelandse meetinstrumente word ook bespreek.

*Kernwoorde: Selfmoordideasie, adolessensie, risikofaktore, beskermende faktore, selfmoordpoging, stressore, hulpbronne, coping, probleemgefokusde coping, emosioneel gefokusde coping, disfunsionele coping*

## **TABLE OF CONTENTS**

<b>ABSTRACT</b>	<b>4</b>
-----------------	----------

### **CHAPTER 1: ORIENTATION AND PROBLEM STATEMENT**

1.	Introduction	2
2.	Problem statement and orientation	2
3.	Focus of research	7
4.	Methodology	8
	1. Pilot study	8
	2. Research design (Quantitative)	10
	3. Measuring instruments	10
	4. Research design (Qualitative)	11
	5. Ethical considerations	13
5.	Concept clarification	13
6.	Delineation of the study	15
7.	Researcher's comment	17

### **CHAPTER 2: ARTICLE 1**

#### **ADOLESCENT SUICIDE: THE INFLUENCE OF RISK AND PROTECTIVE FACTORS.**

Abstract	19
Introduction	20
Risk and protective factors in suicidal behaviour	22
Social factors	23
Personal factors	26
Coping responses	28

Health related factors	29
Demographic factors	31
Conclusion	32
List of references	34

## **CHAPTER 3: ARTICLE 2**

### **SUICIDE RISK: A COMPARISON BETWEEN LOW AND HIGH RISK GROUPS**

Abstract	49
Introduction and literature review	50
The effects of demographic factors on suicide behaviour	52
Research methodology	57
Research goals and questions	57
Research design	57
Participants and data gathering	58
Measuring instruments	58
Statistical procedure	60
Results and discussion of results	60
Demographic factors and suicide risk	62
Recapitulation and discussion	67
Recommendations and limitations	69
List of references	72

## **CHAPTER 4: ARTICLE 3**

### **THE EXPERIENCE OF PSYCHOSOCIAL STRESSORS AMONGST AN ADOLESCENT POPULATION**

Abstract	84
Introduction and literature review	85
Stressors experienced by adolescents	86
Research methodology	92
Research objective	92
Research design	92
Participants	93
Data gathering	94
Measuring instruments and method of analysis	94
Results and discussion of results	95
Personal-dispositional factors causing dissatisfaction in adolescents	96
Contextual factors causing dissatisfaction in adolescents	100
Recapitulation and discussion	104
Recommendations and limitations of study	108
List of references	110

## **CHAPTER 5: ARTICLE 4**

### **RACIAL DIFFERENCES IN COPING AND SUICIDAL IDEATION AMONG ADOLESCENTS FROM THE NORTHERN CAPE PROVINCE**

Abstract	118
Introduction and literature review	119
Definition of coping	120
Modes of coping	121
Efficacy of coping	121
Coping and suicidal behaviour	122
Methodology	126
Research design	126
Participants	126
Data gathering	127
Measuring instruments	127
Statistical Procedure	128
Results	129
Results of intercorrelations	137
Results of the hierarchical regression analysis	137
Recapitulation and discussion	142
Recommendations and limitations of the study	146
List of references	148

## **CHAPTER 6: ARTICLE 5**

### **THE INFLUENCE OF PSYCHOSOCIAL VARIABLES ON ADOLESCENT SUICIDAL IDEATION**

Abstract	159
Introduction and literature review	161
Methodology	170
Research design	170
Participants	170
Data gathering	171
Measuring instruments	172
Statistical analysis	173
Results and discussion of results	174
Intercorrelations	176
Results of stepwise regression analysis	179
Recapitulation and discussion	181
Recommendations and limitations	184
List of references	187

<b>CHAPTER 7: CONCLUSION</b>	
7.1 Summary of literature	200
7.2 Summary of empirical findings	201
7.2.1 Suicidal ideation	201
7.2.2 Stressors	202
7.2.2.1 Quantitative findings	202
7.2.2.2 Qualitative findings	202
7.2.2.3 Integration of quantitative and qualitative findings pertaining to stressors	203
7.2.3 Resources	204
7.2.4 Coping	204
7.2.5 Discussion of stepwise regression analysis	205
7.3 Contributions of this study	206
7.4 Limitations	206
7.5 Recommendations	207
LIST OF REFERENCES: ORIENTATION AND PROBLEM STATEMENT	210
LIST OF REFERENCES: CONCLUSION	217

## LIST OF TABLES

### ARTICLE 2

Table 1	Chi square ( $\chi^2$ ) results of attempters and non-attempters with regard to suicide risk	60
Table 2	Chi square ( $\chi^2$ ) results of proportional differences between demographic variables and high and low suicide risk	64
Table 3	Exposure to someone who has committed suicide and attempter status	66

### ARTICLE 3

Table 1	Personal-dispositional and contextual factors causing dissatisfaction	96
Table 2	Psychological stressors in adolescents: Personal-dispositional domain	97
Table 3	Social factors causing dissatisfaction in adolescents: Personal dispositional domain	98
Table 4	Economic and current affairs contributing to dissatisfaction in adolescents (personal-dispositional)	99
Table 5	Social factors causing dissatisfaction in others (contextual)	101
Table 6	Psychological factors causing dissatisfaction in others (contextual)	102
Table 7	Spiritual factors causing distress in others (contextual)	103

#### **ARTICLE 4**

Table 1	Descriptive statistics for all variables	130
Table 2	Means, standard deviations and <i>f</i> -values of the one-way ANOVA	132
Table 3	Intercorrelations between predictors and suicide ideation among Coloured adolescents	134
Table 4	Intercorrelations between predictors and suicide ideation among black adolescents	135
Table 5	Intercorrelations between predictors and suicide ideation among white adolescents	136
Table 6	Contribution of different coping variables to the variance in suicide Ideation in ( $R^2$ ) of Coloured participants	138
Table 7	Contribution of different coping variables to the variance in suicide Ideation in ( $R^2$ ) of black participants	140
Table 8	Contribution of different coping variables to the variance in suicide Ideation in ( $R^2$ ) of white participants	141

#### **ARTICLE 5**

Table 1	Means and standard deviations for the research group as a whole	175
Table 2	Intercorrelations between different variables	178
Table 3	Stepwise regression analysis	179

## **LIST OF FIGURES**

### **ARTICLE 5**

Figure 1	The Integrated Stress and Coping Process model	163
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# **CHAPTER 1**

## **ORIENTATION AND PROBLEM STATEMENT**

## 1. INTRODUCTION

The present study is a continuation of a previous study by George (2005) in which the influence of psychosocial factors on suicidal ideation was investigated in a group of adolescents. The research report is presented in the form of five articles (according to the academic requirements). The current chapter serves as an introduction to the five articles to provide the reader with an holistic view of the study.

## 2. PROBLEM STATEMENT AND ORIENTATION

Over the past 50 years great strides have been made with the identification of risk and protective factors for suicide, unfortunately adolescent suicide still remains a major concern for health scientists as adolescent suicide rates have shown an unabated increase (WHO, 2005). The cost of suicide can not only be assessed in terms of escalating health care costs as the human cost of suicide is often immeasurable (Call, Riedel, Hein, McLoyd, Petersen & Kipke, 2002; Yang & Clum, 1996). The potential psychological and social impact of suicide is profound as even one suicide can have a significant impact on a school community. According to researchers society is heading for a dramatic rise in suicide behaviour if prophylactic measures do not become an issue of immediate concern especially in the light of increasing concerns that the current economic crises can lead to an increase in global suicide statistics. (World Health Organisation [WHO], n.d., 2005).

Society appears to underestimate the global pervasiveness of suicide behaviour as a global emergency. Current suicide statistics clearly indicate that researchers should be concerned about the well-being of the adolescent population as adolescents are currently the age-group having the highest risk for suicide behaviour globally, with at least 100 000 adolescents committing suicide each year (WHO, n.d.). In first world countries the compilation of statistics shows a more realistic representation of suicidal behaviour,

unlike developing countries where significant underreporting is still a problem due to the absence of systematic, comprehensive recording systems (Schlebusch, 2005).

In the United States (US) more than 30 000 individuals committed suicide each year. According to National Institute of Mental Health (NIMH) (2004), the incidence of suicidal behaviour has trebled in the US since 1952 and has now become the third leading cause of death amongst the 15 to 24 year age-group. Suicide in the US accounts for 12% of all deaths among adolescents with an estimated ratio of 50 suicide attempts for 1 completed suicide reported. These statistics emphasise that self-harming and self-destructive behaviours are clearly an issue of concern (NIMH, 2004; Sadock & Sadock, 2003). These alarming statistics are endorsed by the United Nations as an average reflection of suicide in industrialised countries (Sadock & Sadock, 2003).

In 1990 South Africa's statistics reported higher incidences of suicide than industrialised nations. According to the Non-Natural Mortality Surveillance System (Statistical Notes, 2000) the average suicide rate during 1990 in South Africa was 17 200 persons per 100 000 of the population, which is 1.2% above the world average of 16 000 persons per 100 000 of the global population. NMSS statistics also reveal a cause for concern regarding the suicide rate among those 15 to 24 years old, which rose from 1300 in 1984 to 8000 persons per 100 000 in 1999 (Statistical Notes, 2000). Statistics compiled between 1997 and 2001 (Statistics South Africa, 2005), also reflect a steady increase in the adolescent suicide rate, including a significant increase of suicidal behaviour amongst the under 14 year age-group. The most recent statistics indicate an overall suicide rate of 25.3 per 100 000 persons, for men and 6.8% per 100 000 persons, for women (NIMSS, 2007).

A newspaper article drew national attention to the Northern Cape Province as a spate of suicide incidents alerted South Africans to the plight adolescents are experiencing

(Monare, 2003). In the absence of any formal research, statistics released from Kimberley Hospital Complex, have indicated that adolescent suicide behaviour has continued to show a steady increase (Van der Berg, 2006). According to Monare (2003) between the period April 2002 and January 2003 at least 40 persons were seen at Kimberley Hospital Complex each week for suicide attempts. Most of those seen were aged between 14 and 19 years.

Theorist from various theoretical disciplines has suggested different explanations for suicide behaviour. The fields of psychology and sociology were fundamental pioneers in helping to gain an understanding of the dynamics of suicide (Bradatan, 2007). Historical causes of suicide were initially linked to problematic adjustment to progressive societal changes as catalytic influences in suicidal behaviour (Durkheim, 1951). With the introduction of Psychodynamic theories at the end of the twentieth century practitioners and researchers postulated that suicide was determined by personal or dispositional factors experienced that contribute to self-destructive tendencies (Lester, 1988). At present researchers, appear to agree that both social and dispositional factors appear to contribute to the prevalence of suicidal behaviour (Beautrais, 2000). A complex array of psychosocial, individual as well as environmental factors has been implicated as potential contributory causes in adolescent suicide behaviour (Beautrais, 2000). Some of these identified factors have been associated with increasing an individual's vulnerability towards suicide behaviour and are consequently described as risk factors. Another group of factors that are associated with decreasing the tendency towards self-harming behaviour are collectively identified as protective factors. Protective factors are associated with resilience in individuals facing adversity. In this study resilience is considered to be part of a combination of personal and contextual resources that enable an individual to adjust effectively to challenges and life situations (Walsh, 2002). The Integrated Stress and Coping model (Moos & Schaefer, 1993) is exemplary of a model that includes personal and social factors and the interaction between these factors to explain health outcomes such as suicidal behaviour. This model is used as guiding theoretical model of the current study. The basic assumption of this model posits that personal and environmental stressors and

resources, life crises and developmental stages (transitions) experienced by the individual as well as cognitive appraisal and coping responses interact in a bidirectional manner to determine the health outcomes of an individual. In offering greater clarity and understanding of the terms stressor and resources that are used in Moos and Schaefer's model (1993), the Conservation of Resources model (Hobfoll, 1988) will be used to explain whether certain conditions, events or objects will exert a positive(resource) or negative(stressor) impact on a person's ability to deal with life.

The quality of relationships between adolescents, their family and friends is considered to be a crucial factor that influences their well-being. Contextual stressors such as family instability (divorce, violence and poor parental support) and socio-economic challenges impair healthy adolescent development, thereby increasing the risk of self-destructive behaviour (Hall & Torres, 2002). According to Larson, Wilson and Mortimer (2002) the family is seen as the central resource of support for adolescents worldwide. These authors further posit that a positive parenting style acts as a protective factor, thereby enhancing the general well-being of adolescents. Poor or otherwise ineffective parenting approaches are perceived as a risk factor, as it evokes symptomatology that predisposes individuals towards suicidal behaviour (De Man, Labreche-Gauthier & Leduc, 1992; WHO, 2000b; Van Wel, Linssen and Abma, 2000). A study of adolescent learners found a lack of social support and problems in their relationship with their parents, teachers and peers contributed to an increased tendency towards suicidal ideation (George, 2005). According to Sebate (1999), positive peer experiences among high school learners was identified as having a buffering effect against suicidal behaviour. Considering the developmental nature of humans, it can be argued that various psychosocial factors may be more salient at different developmental phases. Knowing which factors are more salient in adolescents lives can provide greater impetus in the development of adolescent preventative programs.

Individual factors such as a diminished sense of hope, low self-esteem, as well as personality factors have been identified as factors influencing suicide behaviour. Sebaste (1999) found hopelessness to have a meaningful relationship with an increased incidence of suicidal behaviour among children as young as 8 years old. Hopelessness in contrast to hopefulness appears to be a risk factor for suicidal behaviour as it can lead to an overall negative sense of self in almost all life domains (Fritsch, Donaldson, Spirito and Plummer, 2000). Another personal factor, low self-esteem was also found to show a strong correlation with the development of a negative attributional style in interaction with the environment, thereby predisposing individuals towards acts of self-blame and self reproach (Brown & Dutton, 1995; Dutton & Brown, 1997). Rigby (2000) also notes that self-esteem can be negatively affected by social factors such as poor parental and peer relations. In a survey concerning the prevalence of suicidal behaviour in the Free State Province, Mashego, Peltzer, Williamson and Setwaba (2003) concluded that a high level of self-esteem acted as a protective factor against suicidal behaviour in adolescents. In a study of high-school learners, McCullough, Heubner and Laughlin (2000) reported, that learners who experience life as satisfying display a healthier self-concept, and appear more positive about their futures.

Demographic factors such as gender, age as well as religious orientation have also been found to exert an influence on adolescent well-being and suicide behaviour (Hall & Torres, 2002; Madu & Matla, 2003; Rothmann & Van Rensburg, 2002).

Coping can be viewed as a stabilizing factor that assists individuals in adjusting to stressful situations (Hobfoll, 1988, 1998). Coping is defined as efforts made by individuals in managing situations that are appraised as potentially harmful or stressful (Kleinke, 1998). The choice of coping strategies was found to influence behavioural outcomes, as adolescents who model adaptive coping skill reported a lower prevalence for suicidal ideation (Hobfoll, 1988; Israelashvili, Gilud-Osovitski & Asherov, 2006). Effective coping

strategies such as seeking social support networks were found to be more useful as persons who were able to access social support faced a smaller risk of becoming isolated from needed resources that can contribute towards decreasing the risk for negative health outcomes (Kleinke, 1998, Lazarus & Folkman, 1984). Adolescents, who experience difficulty in coping with stressors, show a greater propensity for suicidal behaviour as a means of reaching out to others and to escape from unpleasant circumstances (Lewis & Freydenberg, 2002).

Adolescence today is unfortunately not only a period of preparation for and transformation to adulthood (Louw & Louw, 2007), but has become a period in which adolescents increasingly facing many new challenges which they are often ill-prepared for. Exposure to alcohol, drugs, sexually transmitted diseases, and an increasing incidence of teenage depression as well as suicidal behaviour have become an obliterating threat to adolescent well-being (Heaven, 1996; Larson, Wilson & Mortimer, 2002). Another major challenge adolescent's have to face is the tremendous responsibility of living with HIV/AIDS. Being either directly infected or affected by HIV/AIDS places undue stressors on often ill-prepared adolescents, thereby increasing their risk towards negative life outcomes (Larson et al., 2002; Whiteside & Sunter, 2001). Literature has primarily focused on understanding suicidal behaviour by exploring risk factors and their impact on adolescent well-being (Evans, Hawton & Rodham, 2004).

The multidimensional nature of suicide necessitates the consideration of a variety of risk and protective factors when trying to understand the dynamics of suicidal behaviour. Many authors emphasise the importance of exploring protective factors to gain a better understanding of suicidal behaviour (Wagman-Borowsky, Ireland & Resnick, 2001; Evans, Hawton & Rodham, 2004).

### **3. FOCUS OF RESEARCH**

The overarching aim of this study is to investigate the risk and protective factors underlying adolescent suicide behaviour in this group of adolescent participants from the Northern Cape Province (NCP).

The specific goals of this study are:

- To determine the incidence of suicidal behaviour amongst adolescents in the NCP.
- To investigate the relationship between suicide ideation and suicide behaviour with regards to adolescents in the NCP.
- To determine the influence of demographic variables associated with high suicide risk such as marital status of parents, parents' employment status, parents' level of education, geographical location of the family, religious factors and previous exposure to suicide.
- To explore the nature of stressors experienced by adolescent learners in the NCP.
- To determine the influence of coping strategies on the suicidal ideation of adolescents' in the NCP.
- To investigate the influence of risk and protective factors including psychosocial, individual and contextual factors, as well as coping strategies on the suicidal behaviour amongst this group of adolescents participants from the NCP.

### **4. METHODOLOGY**

This research study was preceded by a pilot study and an introductory study which the researcher

submitted as part of the requirements of a Master's degree in clinical Psychology. See George (2005). The data collected as part of the George (2005) study were also used for the current study. Even though the research report is presented in the form of 5 articles, the investigation was planned and implemented as one, integrated process.

#### **4.1 Pilot study**

A pilot study was conducted on pre-selected learners who were schooling within the Kimberley area. A total of 10 learners from grades 10, 11 and 12 were selected to determine if they have problems with questions or any other problems with the data gathering process. Refreshments were served during two breaks, while the researchers remained at hand to clarify any questions and concerns from the learners. These learners were automatically excluded from the data-gathering process which followed.

A mixed-method approach was used which allowed the researcher to combine the strengths of both qualitative and quantitative research. This approach enables a larger spectrum of divergent views to be obtained from participants (Schulenberg, 2006). Using both positivistic (describing and predicting behaviour) and constructivist (understanding how people make sense of what happens) approaches the mixed method enables a richer collection of data. The purist's epistemological argument points out that the mixed-method approach does not adhere to the orthodox tenets of research and is view as futile as it may lead to contradictory finds given the different epistemological background of the two research methods (Sale, Lohfeld & Brazil, 2002; Schulenberg, 2006). In order to realise the objectives of this study the following procedure will be followed:

## **4.2 Research design (quantitative study)**

A non-experimental, cross-sectional and criterion-group design will be used.

### **Participants and data gathering**

Ten schools representative of six regions within the NCP will be selected by means of a purposive, stratified sampling technique. The sample will be demographically representative of the population of the NCP. Sixty participants from each school (twenty per grade) will be selected from Grades 8 to 12, to constitute a sample of 600 learners. In conjunction with Education Support Services NCP, permission will be obtained from the department of Education (NCP) and relevant schools principals.

Informed consent (including conditions of voluntary participation, confidentiality and anonymity) will be obtained from parents and learners. Testing will take place over a period of 3 hours with a break of 30 minutes to be given halfway through the testing period. The researcher as well as psychologists and psychometrists from the Department of Education (NCP) will be involved in the data collection process. Professional staff will furthermore be available to provide support should learners require emotional support during and after the process of data collection

## **4.3 Measuring instruments**

The following questionnaires will be used to gather data on the variables included in this study:

### **Criterion variable**

*The Suicidal Ideation Questionnaire for Adolescents* (Reynolds, 1988) measures the frequency and intensity of suicidal thoughts.

### **Predictor variables**

*A self-compiled biographical questionnaire* with questions about the demographic characteristics of learners such as age, marital status of parents, parents' employment status, parents' level of education, geographical location of the family, religious factors and previous exposure to suicide.

*The Rosenberg Self-esteem Scale* (Rosenberg, 1989): This measure gives an indication of the participants' sense of self-worth.

*The Life Stressors and Social Resources Inventory, Youth Form* (Moos & Moos, 1994) measures a wide range of stressors, as well as the social resources to which learners have access to.

*The Hope Scale* (Snyder *et al.*, 1991) measures the participants' sense of hopefulness.

*The Cope Questionnaire* (Carver, Scheier & Weintraub, 1989) measures the participants' coping strategies.

#### **4.4 Research design (Qualitative study)**

An Interpretive Phenomenological Analysis (IPA) approach will be used to explore participant's subjective experiences of the stressors they experience in their daily lives (Smith & Osborn, 2003). The IPA offers a clear methodological approach, is based on a solid theoretical foundation and provides a detailed description of the analytical process to be followed which has allowed the IPA to become a growingly more attractive choice of

research method with psychologists (Chapman & Smith, 2002; Smith & Osborn, 2003). The IPA lends itself well to applied research because it shares with the social cognitive paradigm; 'a belief in, and concern with how verbal feedback, cognitions and physical state' (Smith, Jarman & Osborn, 1999). The IPA approach offers a linkage between contributions from participants' experiences, cognitions and behaviour, in contrast with some other qualitative approaches such as discourse analysis and grounded theory (Willig, 2001) that implicitly theorises the role of cognition. As a relatively new methodological approach IPA offers a viable option to grounded theory which appears to be associated with many debates and controversies (Willig, 2001). Limitations identified within the IPA as research method are linked to issues such as the role of language and suitability of accounts. According to these concerns language is view as a restrictive tool in that your language determines how you relate your experience, while limited language further impoverishes how an experience is related. Language at times appears unable to capture the subtleties and nuances of individuals' physical and emotional experiences, making it a less suitable tool of communication (Brocki & Wearden, 2006; Willig, 2001).

Qualitative information will be obtained from an open ended question (included in the biographical questionnaire) that requests participants to write a paragraph about their exposure to stressors. The open-ended responses will be analysed with the aim of identifying critical themes that will assist the researcher to understand the factors that appear to play a role in adolescents' experience of life stressors.

The findings of the qualitative and quantitative parts of the study were integrated in Chapter 7 as part of a conclusion of the study.

#### 4.5 Ethical considerations

At the time when this studies research proposal was submitted and approved the faculty research committee was the only authorising body at our institution. As such, this research committee also considered the ethical implications of our study. A faculty ethics committee has since been established however they do not work retrospectively.

### 5. CONCEPT CLARIFICATION

In facilitating a more holistic understanding of the study, various key terms and concepts used frequently in the study, will be clarified:

*Suicidal behaviour* can be viewed as an umbrella term which incorporates varying degrees of self-destructive or self-harming acts, which result from emotional distress (Schlebusch, 2005; Rutter, 1995).

Suicidal behaviour can further be divided into fatal and non-fatal suicide behaviour. The term completed or fatal suicide is used when the victim's intent was to bring an end to his/her life and ultimately achieved this (Schlebusch, 2005).

Non-fatal suicidal behaviour for the purposes of this study include three concepts namely:

a) *Attempted suicide* is described as acts where the intention is to bring about death, however the victim was unsuccessful (Schlebusch, 2005).

b) *Parasuicide* which refers to individuals engaging in self-harming acts without the explicit intent to end their lives but rather attract attention from significant others (Moore, 2000).

c) *Suicidal ideation* which refers to the experience of thoughts, ruminations or fantasies about committing suicide or verbalising threats to commit suicide (Reynolds, 1988).

*Protective factors* are circumstances that increase the probability of achieving positive outcomes (Schoon, 2006).

*Risk factors* are factors that signify an elevated probability for the attainment of negative outcomes (Schoon, 2006).

*Coping* is defined as the efforts that people make to manage situations that were appraised as potentially harmful or stressful (Caltabiano, Byrne, Martin & Sarafino, 2002).

A *stressor* is associated with either, a) a threat to the loss of resources, b) the total loss of resources, or c) the lack of resource gain following the investment of resources (Hobfoll, 1988).

*Resources* involve having access to the necessary means to ensure goal attainment would conversely be perceived as a resource (Hobfoll, 1988).

*Stress* is a condition that results when the person-environment transactions cause the individual to perceive a discrepancy between the demands required from a situation and the resources (biological, psychological or social) available to deal with the situations (Caltabiano & Sarafino, 2002).

Although suicidal ideation appears the least serious of all suicidal behaviour, it must not be assumed that suicidal acts are necessarily insidious starting from suicidal ideation and

progressing to more life threatening behaviour. Some research has indicated that no specific sequence exists in that your first suicide attempt may very well be a fatal suicide (Schlebusch, 2005).

## **6. DELINEATION OF THE STUDY**

The study is composed of an introductory chapter followed by the five main chapters which consist of five articles that are required for a PhD completed in articles format. Additionally a concluding chapter will be presented to summarise the general findings for the purposes of integration of results and recommendations across articles.

### **Chapter 1: Orientation and problem statement**

This chapter introduces the reader to the background and problem statement of the study giving a general background as to the need for further research in this area within a South African context. Furthermore the chapter outlines the research approach and research method intended to be used.

### **Chapter 2: Research article 1: Adolescent suicide: The influence of risk and protective factors**

The first article presents a review of literature on risk and protective factors associated with adolescent suicidal behaviour. The researcher will focus on dispositional and demographic factors, social and environmental factors as well as coping and how these factors interact to influence suicidal behaviour.

### **Chapter 3: Research article 2: Suicide-risk: A comparison between low and high risk groups**

The second article will focus on the relationship between suicidal ideation and suicidal behaviour as well as the differences between a group with high and low suicide risk (as reflected in suicidal ideation scores) with regard to certain of demographic factors.

### **Chapter 4: Research article 3: The experience of psychosocial stressors amongst an adolescent population**

The third article will focus on the qualitative data gathered on the factors that contribute to the adolescents' experience of stressors. The responses will be discussed against the background of the Biopsychosocial-Spiritual conceptual model (Winiarski, 1997).

### **Chapter 5: Research article 4: Racial differences in coping and suicidal ideation among adolescents from the Northern Cape Province**

In the fourth article the discussion will focus on suicidal ideation and coping strategies commonly utilised by the adolescent population. Literature and empirical findings pertaining to racial differences in the utilisation of coping strategies and in the relationship between suicidal ideation and coping strategies will also be presented in this article.

### **Chapter 6: Research article 5: The influence of psychosocial variables on adolescent suicidal ideation**

The fifth article will constitute an overview of risk and protective factors associated with suicidal ideation and a stepwise regression analysis that will investigate the influence of personal and contextual stressor and resources as well as coping responses on suicidal ideation in adolescents.

## **Chapter 7: Conclusion**

The researcher will present the conclusions of this study by integrating the results across the five articles and make recommendations for future research and practices. The limitations of the study will also be highlighted.

### **7. RESEARCHER'S COMMENT**

Lastly, the researcher plans to publish the articles from this PhD in accredited journals such as the South African Journal of Psychology (SAJP), Journal of Child and Adolescent Development and The Journal of Crisis Intervention and Suicide Intervention (CRISIS).

The American Psychiatric Association's reference format (APA, 2007 version) will be used throughout the study.

Due to the absence of research articles related to suicidal behaviour in the Northern Cape Province the researcher has to make use of personal communication and newspaper articles.

For convenience of the reader tables will be included in text. Once the articles are sent for publication the tables will be presented as an appendix.

The reference lists for the introduction (orientation and problem statement) and conclusion will be presented at the end of the conclusion section.

## **CHAPTER 2:**

### **ARTICLE 1**

# **ADOLESCENT SUICIDE: THE INFLUENCE OF RISK AND PROTECTIVE FACTORS**

## ADOLESCENT SUICIDE: THE INFLUENCE OF RISK AND PROTECTIVE FACTORS

### Abstract

*It is a well-known fact that adolescence is a critical period of transition in a teenager's development. Statistics have shown that there has been an increase in suicide among adolescents within the last decade. Consequently, research should consider current adolescent development in order to address this problem. This article reviews various studies within the literature in terms of the findings on the risk and protective factors that influence suicidal behaviour. More specifically, variables such as relationships within the family, with peers and teachers as well as the impact of negative experiences in life were examined as social factors affecting suicidal behaviour. Furthermore, personal factors (self-esteem, hope, and self-efficacy), coping responses used by adolescents, health factors (clinical conditions and HIV), and demographic factors (including age, unemployment, and religious affiliation) were explored. From the literature it appears that researchers should best adopt an integrative approach that incorporates both the investigation of risk and protective factors as their interactions appear significant in the outcomes of suicidal behaviour. The multi-faceted nature of suicidal behaviour has highlighted the need for a multi-variable approach in exploring this phenomenon, as the interaction of variables appears more plausible in explaining suicide. A question that needs further exploration would be to determine the extent to which risk and protective factors exist along a continuum or if they are qualitatively different. Using the theoretical model of Conservation of Resources (Hobfoll, 1988) it is hoped to gain greater clarity regarding this question. The need for longitudinal studies would help researchers observe the influential nature of developmental changes as well as the interaction of different variables during different developmental stages.*

**Keywords:** *Adolescence, personal and contextual resources, life transitions and crises, coping responses, risk factors, protective factors, resources, suicide, suicidal ideation, self-esteem, hope, negative life experiences.*

## INTRODUCTION

Adolescents face increased pressures from a demanding society to perform in multiple domains in life. Adolescence, a period of transition between childhood and adulthood, is viewed as the phase that requires considerable adjustments to personal and environmental changes (Louw & Louw, 2007) and in which adolescents' successful adjustment to societal demands is considered an indicator of society's wellness (Call et al., 2002). In reviewing Erikson's psychosocial theory of human development, Sigelman and Rider (2003) re-emphasise the need for adolescents' successful resolution of the developmental stage, *Identity versus Role of conflict*, as it provides a pivotal foundation for optimism and health. Effective adjustment may lead to adolescents' developing a clear sense of identity and future directedness which may enhance their ability to make the right choices in the interest of their own wellness. Alternatively, inadequate adjustment increases the risk of adolescents' making decisions that lead to outcomes that will affect their health negatively in the form of anxiety, apathy or hostility towards themselves (Louw & Louw, 2007).

Whether someone's health is affected positively or negatively is not a simple deductive process but rather an integrative process involving the interaction of the different variables at the particular stage of his/her life (Moos & Schaefer, 1993). The lack of adequate resources and high levels of stress create a situation that may predispose the adolescent to develop poor health (Peltzer, 2004). According to Moos and Schaefer (1993), one's state of health is part of an interactive process in which personal and contextual resources, life transitions and crises, as well as the coping responses of the person, interact in a bi-directional manner to determine the state of health. Earlier research by Moos and Schaefer (1993) views risk factors as stressors and protective factors as resources in their conceptualisation of health and well-being. Moos and Schaefer (1993) believe that health depends not only on the interaction between resources and stressors on personal and environmental levels, but also takes into account the transitions and life crises of the person as well as his/her associated coping responses. Environmental resources, such as an emotionally supportive environment in which adolescents can make informed decisions,

are integral to minimizing poor psychological health (Cummings, 1995; Horstmanshof, Punch & Creed, 2008). The failure to provide such supportive resources has been associated with the increased experience of stressors and maladjusted psychological development in adolescence such as self-destructive or suicidal behaviour (Hall & Torres, 2002).

Researchers have estimated that, since the year 2000, a significant portion of the approximately one million people who commit suicide annually, have been adolescents (World Health Organisation [WHO], n.d.). Suicide (referring to acts of self-destructive behaviour due to emotional distress (Schlebusch, 2005)) has increased threefold since the 1950s in the age-group 15-19 years, and has become the third most common cause of adolescent deaths in the world (American Psychiatric Association [APA], 2007; WHO, 2005). The rapid increase in adolescent suicide has become a major public concern as it is a growing financial burden on the health sector (Pelkonen & Marttunen, 2003; Sadock & Sadock, 2003). The South African Depression and Anxiety Support Group (SADAG, 2008) reports 22 suicides and 220 attempted suicides each day. This indicates that the trend is similar to global suicide rates for adolescents. Apart from the obvious concerns about the higher suicide rate among adolescents, researchers are increasingly alarmed by the increase in suicidal behaviour among children younger than 14 years (Statistics South Africa, 2005; Reddy et al., 2002).

Many factors have been implicated in this increased tendency towards suicidal behaviour among adolescents. Researchers have found contextual factors (family violence, divorce and lack of support from parents and peers, academic pressures, and substance abuse) as well as personal factors (reduced levels of hope, low self-esteem and self-efficacy) as contributing to an increased risk of self-destructive behaviour (Beautrais, 2000; George, 2005; Hall & Torres, 2002; Heaven, 1996; Larson, Wilson & Mortimer, 2002; Mhlongo & Peltzer, 1999). In reviewing this developmental phase (adolescence), the question arises as to how these identified factors affect the adolescent by either enhancing adolescents' adaptive abilities or decreasing their resistance to suicidal behaviour. In conceptualising

the etiology of suicide, researchers have identified a range of risk and protective factors that play significant roles in suicidal behaviour (Gutierrez, Rodriguez & Garcia, 2001; Sanchez, 2001). The aim of this article is to explore the literature describing risk and protective factors that are associated with the phenomenon of adolescent suicide.

## **RISK AND PROTECTIVE FACTORS IN SUICIDAL BEHAVIOUR**

Risk factors refer to factors that increase the chances of a negative result, while protective factors denote circumstances that increase the probability of positive outcomes. These two factors could be viewed as being on the same dimension (Schoon, 2006; Luthar & Cicchetti, 2000). Having a low self-esteem or being without hope is viewed as a risk factor, while high self-esteem or being hopeful is viewed as a protective factor. According to the Centre of Parenting and Research (2007), interaction between risk and protective factors eventually determines whether outcomes are negative or positive.

The availability and access to resources were found to be significant predictors of whether health outcomes were positive or negative (Hobfoll, 1998, 1988). Resources according to Hobfoll (1988) are viewed as, “(a) objects, personal characteristics, conditions or energies that are valued by the individual or (b) the means for attainment of those objects, personal characteristics, conditions or energies” (p 29). The interpretation of circumstances as a stressor or a resource can be explained further by using the tenets of the Conservation of Resources (COR) model (Hobfoll, 1998). Based on this model, a stressor is associated with either:

- *the threat of a loss of resources;*
- *the total loss of resources; or*
- *not obtaining resource gain following the investment of resources* (Hobfoll, 1988), while resource gain is associated with increased well-being. Having the necessary means to attain one’s goals would conversely be perceived as a resource. The mere presence of a resource does not in itself constitute a protective factor, since perceptions regarding the

availability of resources, as well as how they are utilised by the individual, determine the protective influence of resources (Hobfoll, 1988; 1998). In order to differentiate between risk and protective factors, the perspective of the COR model will be used in the subsequent overview of literature on factors influencing suicidal behaviour. Mashego, Peltzer, Williamson & Setwaba, (2003) view risk and protection as influencing the risk of suicidal behaviour. These risk and protective factors originate from the social environment, personal characteristics, and demographic characteristics of each individual.

## **SOCIAL FACTORS**

The social environment plays an important role in shaping individuals' behaviour and preparing them for life's challenges. The family as a social resource is viewed as an important regulating mechanism of society in that stable families contribute towards a stable society (Thomlison, 2002). Various researchers describe the powerful influence of the family as a predisposing factor in adolescent suicide while stable family relationships was found to be a strong protective factor (Beautrais, 2000; Compton, Thompson & Kaslow, 2005; George, 2005; Mpiana, Marincowitz, Ragavan & Malete, 2004; Peltzer, 2008). Studies of low-income, young African-American women who have been physically and emotionally abused, conclude that social support and family cohesiveness contribute to resources such as raising self-efficacy and the need for esteem while simultaneously decreasing their experience of depressive symptoms and self-harming behaviour (Centre for Parenting and Research, 2007; Compton et al., 2005; Thompson, Short, Kaslow & Wyckoff, 2002). Evans, Hawton and Rodham (2004) posits that good communication and understanding in the family, family harmony and cohesion and spending quality time with the family are considered protective factors while family discord, poor cohesion, and living apart from the family were viewed as risk factors.

A supportive parenting approach was found to protect adolescents from suicidal behaviour (Evans et al., 2004; Paulson & Everall, 2001). Adolescents with good cross-sexual relationships with their parents appear less intimidated by stressful experiences and better

equipped to manage negative situations. Consequently, their resistance to suicidal behaviour is increased (Liu, 2005). Conversely, adolescents who perceive that their relationships with their parents are problematic, report greater difficulties in forming relationships outside the family and express a negative outlook on life (George, 2005). Jackson and Nuttall (2001) as well as Mpiana, et al. (2004) found that adolescents who are affected by their parents' marital instabilities and discord report feeling isolated and rejected by their parents with a subsequent increase in their levels of distress and loneliness as well as their risk of suicidal behaviour.

Problems in relationships with peers have been implicated as increasing the risk of suicidal behaviour among adolescents (Fritsch, Donaldson, Spirito & Plummer, 2000; Sebate, 1999). South African and international researchers have found that poor relationships with peers affect adolescents' self-image and sense of self-worth negatively. This simultaneously increases their sense of social isolation and risk of suicide (Kocourková & Koutek, 2006; Sebate, 1999). Having a supportive social network as peers was found to enhance adolescents' sense of social identity, thereby enhancing resource gain which consequently protects against suicidal behaviour (Centre for Parenting and Research, 2007; Erwin, 2002). In a review study by Evans et al. (2004) it is suggested that poor relationships with peers constituted a risk factor, but that good relationships with peers did not necessarily protect adolescents from suicidal behaviour.

The competitive nature of modern society has extended into the school environment. Adolescents are pressured to achieve academically, while the fear of underachieving has burdened learners so much that suicidal behaviour becomes an escape from unbearable circumstances (Centre for Parenting and Research, 2007; Moore, 2000; Pillay & Wassenaar, 1997)). A supportive teacher-learner relationship can make a positive contribution by encouraging effective interpersonal, social and coping skills as the means for counteracting self-destructive behaviour in adolescents (Berk, 2002; Donald, Dower, Correa-Velez & Jones, 2006; Fergusson, Woodward & Horwood, 2000).

Exposure to negative experiences within the family (such as severe punishment, violence, sexual abuse, traumatic loss, and previous exposure to suicidal behaviour) was found to increase the risk of suicidal behaviour as such occurrences may exceed adolescents' coping abilities and resources (Gutierrez et al., 2001; Fergusson et al., 2000; Roy & Janal, 2005; Yang & Clum, 1996). Researchers investigating the effects of exposure to sexual abuse and other emotionally distressing experiences (such as death) have shown an increased tendency to depressive symptoms and suicidal behaviour as a result of a threat to the existing resources (Louw & Louw, 2007; Martin, 1996; Vajda & Steinbeck, 2000). Negative life experiences appear to reduce the individual's chances of obtaining the necessary resources such as academic qualifications or safe housing, thereby increasing the risk of exposure to poverty, social deprivation, and feelings of hopelessness (Kaslow et al., 2002; Larson et al., 2002; Mpiana, et al., 2004). Positive experiences increase adolescents' sense of identity, self confidence, self-esteem and access to needed resources, and may indirectly protect them from suicidal behaviour (Compton, 2005; Erwin, 2002; Sigelman & Rider, 2003). Exposure to suicide through either family or friends is one example of a negative life event that may enhance feelings of guilt and loss and could increase the risk of suicide (Gutierrez et al., 2001; Roy & Janal, 2005; WHO, 2000a).

Gutierrez et al. (2001) suggest that someone who has attempted or committed suicide may become an example of someone who has escaped from unbearable circumstances. Another concern for researchers is the phenomenon of secondary reinforcement when someone is contemplating suicide. The reactionary behaviours (such as offering emotional and psychological support) adopted by significant others (family, friends, partners or media) when someone has attempted suicide could reinforce maladaptive behaviour patterns (Gutierrez et al., 2001). Exposure to a traumatic situation does not necessarily lead to a negative outcome, but rather the degree to which the traumatic event influences the experience of resource loss in other areas of the individual's life (Hobfoll, Canetti-Nisim, Johnson, Palmieri, Varley & Galea, 2008).

In addition to risk factors caused by relationships, researchers have noted that a gradual erosion of traditional cultural beliefs and values, as well as the decreased reliance on social structures, such as family and religious influences, have affected how the youth cope with future challenges (Coleman & Hagell, 2007; Schlebusch, 2005; WHO, 2000b). According to Mhlongo and Peltzer (1999), an increase in suicide among black South Africans should be viewed in the context of the drastic and comprehensive societal changes experienced. Changing cultural values were found to influence adolescents negatively in the development of their identities and impair their ability to deal with conflict situations effectively (WHO, 2000b). The effects of rapid social change in South Africa's recent history have created many difficulties for adolescents who are not adequately positioned/equipped to cope with these social demands. The changes affect the youth negatively with consequences such as social degeneration and moral decline (Ramphela, 1992).

## **PERSONAL FACTORS**

Social factors cannot be viewed separately from individual factors as they interact with one another to enhance or decrease vulnerabilities further. Individual factors such as low self-esteem, a feeling of hopelessness, low self-efficacy as well as certain personality traits have been associated with the increased occurrence of suicidal behaviour amongst adolescents (Beautrais, 2000; Evans et al., 2004; Kaslow et al., 2002). Adolescents who reported a feeling of low self-esteem showed more negative self-appraisal and were more inclined towards developing distorted perceptions of themselves and others and more often held unrealistic expectations of themselves (Dutton & Brown, 1997, Moore, 2000, Yang & Clum, 1996). On the other hand, participants with high self-esteem were found to be more robust and emotionally resistant to stressful situations and generally reported more positive feelings and greater satisfaction with life (Dutton & Brown, 1997; McCullough, Heubner & Laughlin, 2000).

Similar to low self-esteem, hopelessness has been implicated in a high risk of suicide and is strongly associated with depressive symptoms (Donaldson, Spirito & Plummer, 2000;

Evans, et al., 2004). Goldston et al. (2001) concluded that hopelessness has a strong correlation with attempted suicide as well as significant predictive value for adolescents who have a history of previous suicidal behaviour. In two independent studies of adolescents, researchers found that negative life stressors, high stress levels and poorly perceived problem-solving abilities were strongly associated with hopelessness and suicidal behaviour (Dixon, Heppner & Anderson, 1991; Moore, 2000). Pillay and Wassenaar (1997) found that as parasuicidal participants' feelings of hopefulness increased, their future expectations about life became more positive.

In the same way that self-esteem and hope affect the inclination to want to commit suicide, self-efficacy showed a negative relationship with the incidence of suicidal ideation (Rothmann & Van Rensburg, 2002). Bandura (1997) found that self-efficacy greatly influences the thinking, emotional and motivational aspects of human functioning. Bandura (1997) therefore concluded that individuals with low self-efficacy were more inclined to magnify the merits of stressful situations and consequently more inclined to develop stress, anxiety as well as depression, and were unable to use their resources in a manner that would enhance their health. Even in the presence of negative life circumstances, a strong sense of self-efficacy was found to reduce the risk of attempted suicide in young African-American women (Thompson et al., 2002).

Personality traits such as whether one has a sense of coherence, the position of the locus of control, and neuroticism were found to have a significant influence on the increased risk of suicidal behaviour (Antonovsky, 1979; Khunou, 2000; McDevitt & Ormrod, 2004). Persons with a strong sense of coherence perceive their world as ordered and consistent and are able to manage stressful situations effectively and find meaning in life (Antonovsky, 1979; Antonovsky & Sagy, 2001). Research conducted on adolescents and young adults found a significantly negative relationship between a sense of coherence and suicidal behaviour (Antonovsky & Sagy, 2001; Rothmann & Strijdom, 2002; Rothmann & Van Rensburg, 2002).

The concept of a locus of control is quite contentious amongst researchers. This construct is divided into either an internal locus of control (where someone perceives situations to be under his/her control) or an external locus of control (when someone perceives circumstances to be beyond his/her control (Meyer, Moore & Viljoen, 1997). Having an internal locus of control has been described as being a protective factor against suicidal behaviour (Beautrais, Joyce & Mulder, 1997; Donald et al., 2006) but the lack of consistency in replicating the relationship between a high internal locus of control and low suicidal tendencies has led to this relationship remaining a debatable issue (Grafteo & Silvestri, 2006; Rothmann & Van Rensburg, 2002).

Bridge, Goldstein and Brent (2006) described neuroticism as a personality trait associated with a longer and more severe range of negative emotions than is usual. Researchers conclude that neuroticism may be associated with ineffective coping mechanisms and suicidal behaviour (Beautrais, 2000; McCrae & Costa, 1986). The combination of stressors and resources influence the choice of coping resources as well as the effects circumstances have on a person's health.

## **COPING RESPONSES**

Coping involves a set of behaviours that people use in their efforts to manage stressful situations (Rothmann & Van Rensburg, 2002). The choice of coping strategies appears to have a significant link with suicidal behaviour, as the use of effective coping strategies was found to decrease the incidence of suicidal behaviour (Goldston et al., 2001; Moore, 2000; Smith, 1993). Adolescents who have not acquired adequate coping skills reported higher levels of suicidal ideation and attempted suicide (Israelashvili, Gilud-Osovitzki & Asherov, 2006). The choice of coping strategies is influenced by the nature of the stressor and/or the availability of resources. Based on this, the person may feel that the stressor is manageable or alternatively that the resource is insufficient, which may make him/her inclined towards avoidant and maladaptive coping behaviour (Hobfoll, (1998). An individual may choose to

use either emotion-focused or problem-focused coping strategies (Hobfoll, 1988; Lazarus & Folkman, 1984; Moore, 2000; Rothmann, & Van Rensburg, 2002; Smith, 1993). Emotion-focused coping involves adjusting to or reducing their emotional responses to the problem, seeking emotional support, accepting the stressor or turning to religion (Carver Scheier & Weintraub, 1989).

If the person tries to alter or directly change the cause of the problem through active coping, prioritising needs or planning activities, the strategies employed are called problem-focused coping (Lazarus & Folkman, 1984). Carver et al. (1989) identified dysfunctional coping or maladaptive coping strategies (denial, avoidance or alcohol and drug disengagement) which are ineffective and associated with depression and suicidal behaviour (Meehan, Peirson & Fridjhon, 2007; Spirito, Francis, Overholser & Frank, 1996). The ability of adolescents to cope with stressful situations is largely affected by their ability to solve problems. Adolescents who are not confident about their abilities to solve problems (problem-focused coping) are more inflexible than normal and have maladaptive thinking patterns that are associated with an increased risk of suicidal behaviour (Donald et al., 2006; Mayekiso, 1992). Adolescents who are confronted with unchangeable situations or experience intense emotional situations from which they would rather escape, would benefit by adopting emotion-focused coping strategies as effective regulation, since through emotional adjustments problem situations can become more manageable and easier to bear (Carver et al., 1989; Lewis & Frydenberg, 2002).

## **HEALTH-RELATED FACTORS**

In addition to personal and contextual factors, health-related factors could contribute to suicidal behaviour. Although the concept of health is relatively broad, for the purpose of this review health refers to clinical conditions (mood disorders and anxiety disorders), substance abuse, and HIV as contributors towards suicidal behaviour. According to Beautrais (2000) and the WHO (2000a), retrospective studies have indicated that more than half of their clients who committed suicide had seen a physician for either medical or

psychological ailments a month prior to committing suicide. Mpiana, et al. (2004) and the WHO (2000a) concluded that the most common conditions associated with suicidal behaviour are mood disorders, personality disorders, and schizophrenia, with depression having the strongest association with suicide. Other conditions, such as substance abuse (alcohol or other substances), have been implicated in contributing towards suicidal behaviour (Donald, et al., 2006; WHO, 2000a). As a gateway substance, alcohol decreases personal inhibitions, thereby increasing impulsivity and altering the mood by inducing depression or manic-like states as it paves the way for the use of other substances (James & Gilliland, 2001; Sadock & Sadock, 2003). A survey of high school learners, by Prinsloo, Ladikos and Neser (2004), found an increase in the use of alcohol by young learners and that it was easily obtainable. Alcohol abuse contributes to an increased risk of suicide amongst younger learners.

Engaging in health-compromising behaviours such as risky sexual behaviours, alcohol abuse/misuse, and use of recreational substances can predispose adolescents to greater vulnerability for suicidal behaviour (Larson et al., 2002). Contracting health-related conditions may contribute towards adolescents developing negative perceptions towards their lives and becoming hopeless about their futures (Bereng, Cloete, Lenka, Marais & Ranoto, 2009; Louw & Louw, 2007). In addition, controversial beliefs about the causes of HIV influence adolescents' perceptions of their health status and are a cause for concern as HIV infection rates are steadily increasing amongst adolescents (Louw & Louw, 2007; Whiteside & Sunter, 2001). Researchers have expressed concern about the implications of HIV for the youth as the loss of valuable resources, such as a parent(s) as well as loss of subsequent social and other tangible resources, can lead to resource depletion as greater responsibilities are placed on adolescents, which increases their risk of suicidal behaviour (Hobfoll, 1988; Peltzer, 2008; Whiteside & Sunter 2001).

## **DEMOGRAPHIC FACTORS**

Another dimension to risk and protective factors is the demographic divisions within societies and communities. According to the WHO (2000a), it is generally accepted that more males commit suicide, while more females attempt suicide. (National Institute of Mental Health [NIMH], 2004; Sadock & Sadock, 2003). In studies by George (2005) and Madu and Matla (2003), no significant conventional gender distribution in terms of suicide or attempted suicide could be identified. In the rural areas of China, more females appear to commit suicide than males, while there seems to be no difference in gender distribution of suicide in the urban areas (WHO, 2000a). Recent South African statistics reported a decrease in the age when children first attempt suicide, with pre-adolescents (14 years and younger) showing a steady increase in suicidal behaviour (Statistics South Africa, 2005). The differing factors that influence suicidal behaviour in terms of ethnicity/race have not been extensively researched, particularly in South Africa. However, a survey into unnatural deaths reported that the highest suicide rate is among white males. Insufficient epidemiological data makes it difficult to draw conclusions about the differences in rates of suicide among various races (Schlebusch, 2005; Statistical Notes, 2000).

A strong correlation was reported between parental unemployment and suicidal behaviour (WHO, 2000a). Larson, Wilson and Mortimer (2002) concluded that the lack of equal opportunities and little access to resources limit the ability of economically disadvantaged people to develop economically. In a study of economically disadvantaged youth, Diekstra and Garnefski (1995) found a strong link between fathers' unemployment and the presence of depressive symptoms in their children. Although it has been found that there is no significant relationship between socio-economic factors and suicide in adolescents, Evans et al. (2004) reported that adolescents' concerns about their families' financial security was associated with an increased risk of suicide.

South African and international studies support the protective role that religion plays as a buffer against suicide by affording its members both internal (beliefs) and external

(practices) resources and enhancing their feelings of optimism about their futures (Aspalan, 2003; Madu & Matla, 2003; Rutter & Estrada, 2006).

## **CONCLUSION**

It appears that few South African studies used an integrative approach of variables to explain suicidal behaviour. Furthermore, most studies related to suicide have focused on exploring risk factors and trying to highlight their influences on suicidal behaviour. From the literature it seems that a more holistic and integrated approach that considers the interaction between risk and protective factors should benefit researchers in better understanding suicidal behaviour. Research has furthermore indicated that building and expanding protective factors or resources within adolescents will empower them to deal with problem situations more effectively.

Research findings have shown that suicide is a multi-faceted phenomenon that includes a wide range of personal, contextual, coping, demographic, and health-related factors. Suicidal behaviour can therefore not be restricted to a linear approach of one or two interacting factors as a multitude of factors interact to either increase or decrease the risk for suicidal behaviour. These factors originate either from within the individual or from environmental circumstances as well as from the interaction between the individual and contextual factors that will influence behaviour.

The question whether risk and protective factors exist along the same continuum or are qualitatively different needs to be further explored, as some literature views the presence or absence of variables as either risk or protective while apposing opinions appear to suggest a qualitative difference. By using the Conservation of Resources model, it is hoped that greater clarity can be obtained as risk and protective factors could be associated with resource loss, greater vulnerability or resource gain, and greater flexibility and buffering against suicidal behaviour could be achieved.

The use of longitudinal studies can offer greater insights into how developmental changes between different demographic and racial or ethnic groups can influence suicidal behaviour within plural societies such as South Africa. In addition longitudinal studies can highlight the saliency of particular variables at different developmental stages during an individual's development; for example, adolescents may make greater use of coping variables as they show greater independence and individuation from their parents when compared to pre-adolescents.

If any inroads are to be made into the deceleration of adolescent suicide statistics, researchers will have to increase their research into protective factors, as this will enhance adolescents' capacity to cope in a world of omnipresent stressors.

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## **CHAPTER 3:**

### **ARTICLE 2**

# **SUICIDE RISK: A COMPARISON BETWEEN LOW AND HIGH RISK GROUPS**

## SUICIDE RISK: A COMPARISON BETWEEN LOW AND HIGH RISK GROUPS

### Abstract

*An increasing number of researchers have challenged the notion of a progressive relationship between suicidal ideation and other forms of suicidal behaviour such as completed and attempted suicide. The aim of this study was twofold, firstly to investigate the relationship between suicide risk (as determined by the level of suicidal ideation) and more serious forms of suicidal behaviour such as suicide attempts, and secondly to compare different demographic characteristics of groups with regard to their level of suicide risk. A non-experimental, cross-sectional and criterion-group design was used. Learners between grades 8 and 12 were identified through the use of purposive stratified sampling to eventually constitute a sample of 583 participants from 10 schools in the Northern Cape Province. A biographical questionnaire and the Suicidal Ideation Questionnaire for Adolescents (Reynolds, 1988) were used to gather data required for the study. To explore suicide risk the chi-square test was used to compare attempter and non-attempter groups. The chi-square test for homogeneity (Howell, 2007) was furthermore used to compare suicide risk with certain demographic variables. The results indicated a significant difference on the 1% level of significance, between suicide risk and the attempter group of participants, as well as for suicide risk and previous exposure to suicide. From the results it could be concluded that some relationship could be found between suicidal ideation and other forms of suicidal behaviour. It is recommended that future studies be undertaken with the aim of exploring additional demographic factors such as the interaction between gender and race, as well as marital status and socioeconomic factors. Furthermore, the need for longitudinal studies should prove invaluable in the investigation of any critical period of heightened suicide risk following a suicide attempt.*

**Keywords:** *Suicide risk, suicidal ideation, suicide attempts, completed suicide, parental education, parents' marital status, previous exposure to suicide, parents' education, religious factors, employment status of parents*

## **INTRODUCTION AND LITERATURE REVIEW**

An inaccurate assessment of suicidal patients with regard to suicide risk can have detrimental consequences for clinicians and patients. Clinicians, who globally use assessment measures, need to know how accurate, valid and appropriate the instruments are that they use as screening tools with their clients (Packman, Marlitt, Bongar & O'Connor-Pennuto, 2004).

Suicidal behaviour is viewed by some authors as a progressive continuum of behaviour progressing from suicidal ideation to suicide attempts and eventually to the most serious form of behaviour, namely completed suicide (James & Gilliland, 2001; Reynolds, 1988). Sue, Sue and Sue (1997) and Sadock and Sadock (2003) have well documented the association between suicidal ideation and the clinical diagnosis of depression, creating the understanding that suicidal ideation, if severe enough, would progress into more serious suicidal behaviour. Recent publications appear to be challenging this notion and have raised concerns about making the direct inference that suicidal ideation leads to suicide attempts and/or completed suicide (Fergusson & Lynsky, 1995; Jin & Zhang, 1998). Wyder and De Leo (2007) as well as Witte et al. (2008) have described suicidal ideation as a fluctuating cognitive process that is not consistent and lasting. This fluctuating pattern makes it an unstable trait which casts doubt on the proposed progressive building approach assumed by theorists propagating the continuum approach to suicidal behaviour. International and South African researchers have indicated that a small percentage of those who experience suicidal ideation go on to attempting suicide (Ferguson & Lynskey, 1995; Reddy et al., 2002; Zhang & Jin, 1996). A high level of suicidal ideation can be considered a strong indicator of suicide risk only in the presence of other risk factors (Fergusson & Lynskey, 1995). Some self-destructive behaviour appears to follow a progressive pathway, but another more impulsive process noticed among adolescents is more likely to be without the intention of death and unlikely to be accompanied by depressive symptoms (Wyder & De Leo, 2007). In the light of differing opinions as to whether suicidal ideation is a strong predictor of more serious suicidal

behaviour, this article will firstly focus on investigating whether differences that may exist between suicide attempters and non-attempters with regard to their levels of suicidal ideation.

Many authors have described a number of demographic characteristics that could be interpreted as warning signs of suicide risk. Based on the above demographic factors this article's second focus will be to explore the risk effect of various demographic factors on suicidal behaviour. These demographic factors such as poor marital relationships and parent supervision were found to increase the risk of suicidal behaviour (Evans, Hawton & Rodham, 2004). Parental education served as a buffering factor against suicidal behaviour (Chen, Shiao & Gau, 2007), while the unemployment of parents was found to predispose families to greater tension, arguments and a generally negative environment for its occupants (Deonarian & Pillay, 2000). More demographic factors considered for this study will be discussed under the appropriate heading.

Suicidal behaviour is viewed as an umbrella concept describing various behaviours such as suicidal ideation (thoughts and cognitions about suicide), suicide attempts (attempting to inflict harm on yourself) and completed suicide, namely successful acts aimed at ending your life (Schlebusch, 2005; Shea, 1998; World Health Organisation [WHO], 2000a). Reynolds (1988) views suicidal ideation as existing along a continuum of behaviour with suicidal ideation reflecting the milder dimension of suicidal behaviour, which progressively translates into more serious forms of suicidal behaviour. This strong association between suicidal ideation and more serious forms of suicidal behaviour is supported by researchers such as Lewinsohn, Rodhe and Seeley (1996) and Shea (1998) who concluded that suicidal ideation is a strong predictor of more serious suicidal acts, and that the degree of self-harm was directly proportionate to the degree of suicidal ideation experienced. No South African studies exploring the relationship between suicidal ideation and suicidal behaviour could be found (The following databases were searched: EBSCO and associated databases, Google Scholar and NiPAD, 20 November, 2009).

Despite the predictive uncertainty surrounding suicidal ideation, no psychometric measuring instrument has been standardised for South African populations. (Schlebusch, 2005; WHO, 2000a). Based on an American population, Reynolds (1988) developed the Suicidal Ideation Questionnaire in which various items were identified as having a strong association with suicide attempts and completions. Drawing on these items and the relevant literature, various factors such as familial factors, previous exposure to suicide acts, socioeconomic factors, demographic factors, and religious factors were identified as potential predictors of suicide attempts and completions (Flisher, Liang, Laubscher & Lombard, 2004; Skegg, 2005; Stack, 2004; Quin, Agerbo & Mortensen, 2002; WHO, 2000b; Zhang, Conwell, Zhou & Jiang, 2004). The use of screening measures for suicidal behaviour as described by James and Gilliland (2001) and Naude (2006) may need careful scrutiny as Packman et al. (2004) have questioned the sensitivity and appropriateness of some of these signs such as previous attempts or exposure, signs of depression, unemployment of parents, recent losses, family support and suicidal ideation. Packman et al. (2004) suggested the need for a more comprehensive and accurate screening approach in the evaluation of potential suicide in clients.

### **The effects of demographic factors on suicidal behaviour**

Researchers have proposed a set of demographic factors (gender, parents' marital status, employment status of parents, parents' education, parents' geographical location, religious factors and previous exposure to suicide) as indicators of a higher suicide risk among adolescents. These demographic variables except gender will be discussed as gender did not yield a statistically significant difference in a previous investigation (George, 2005) based on the same sample.

One of the most widely known factors affecting suicidal behaviour is associated with the quality of parental and family relationships. A stable and responsive relationship between

parents ensures a secure and thriving environment in which a family can grow, even in the presence of difficult circumstances (Thomlison, 2002). Children who have been exposed to parental separation, divorce or marital discord appear more likely to acquire certain vulnerabilities or predispositions towards suicidal behaviour due to family stressors experienced (Skegg, 2005; Stack, 2004). However, it must be borne in mind that not all families divided by divorce will necessarily have traumatic repercussions for children involved, as many children have reported an improved quality of life after parental divorce settlements (Jansen van Rensburg, 2004). Researchers furthermore found that positive outcomes such as the discovery of one's identity, financial independence and a generally happier life for the children are possible after parental divorce (Garden, 2002; Jansen van Rensburg, 2004).

The degree of structure within the family set-up appears decisive in its influence on young members. Weakened family structures, often as a result of factors such as marital separation, neglect, abandonment and violence, have been associated with negative coping behaviours and poor adjustment by adolescents within such a family context. High levels of conflict that often precede marital separations may contribute to the development of negative self-perceptions, associated feelings of powerlessness, dejection and a perceived lack of parental support, thereby creating an environment in which negative thought patterns and maladaptive behaviours dominate the adolescents' responses to their environment (Naidoo, 2000; Sun & Hui, 2006). Studies specifically focusing on the relationship between single-parent homes and adolescent suicide found that single-parent families showed a significantly higher prevalence rate for adolescent suicide (Muehlenberg, 2002; Weitoft, Hjern, Haglund & Rosén, 2003). A lack of household resources such as adequate housing, inadequate supervision as well as a lack of support and emotional attention were some of the factors contributing towards greater social instability among families affected by marital separation (Weitoft et al., 2003).

Another risk factor, namely the parents' levels of education have been found to have an influence on the well-being of children. According to Chen, Shiao and Gau (2007) a positive

relationship was identified between parental education levels and more positive adolescent health outcomes. The children of parents who have a lower education are viewed to be at a higher risk of suicide as they may struggle to obtain the necessary resources needed to enhance positive growth and high levels of hope for their futures (Chen et al., 2007; Skegg, 2005; Yilmaz & Türküm, 2007). A review article by Evans et al. (2004) reported that it was the father's level of education that significantly influenced suicidal thoughts in adolescents.

In addition to the parents' level of education, religious factors appear to have a similar effect on suicidal behaviour. Identifying with a religion was associated with a decreased level of suicidal behaviour as is the case with the Christian and Islamic faith, where the religious doctrines act as a deterrent against acts of suicide (Aspalan, 2003; Dervic, Oquendo, Grunebaum, Ellis, Burke & Mann, 2004; Madu & Matla, 2003; Skegg, 2005). Eastern belief systems that support the philosophies of karma, cosmic justice and reincarnation share a different perspective on the finality of death and therefore show a greater tolerance towards acts of suicide (Ineichen, 1998). An extreme example of this philosophy is the Buddhist who has been practising the ritual of self-sacrifice as a means of making the ultimate sacrifice, which is considered highly honourable (Bandeira, 2005; Ineichen, 1998; Zhang et al., 2004). Bandeira (2005) further reported that an individual's personal experience of closeness to God made it easier in many ways to participate in suicidal acts as an expression of their religious devotion, thereby making suicidal behaviour appear much more acceptable.

A further benefit that involvement with religious institutions seems to offer is a degree of social connectedness, social structure and supportive networks which have been identified as reducing the risk of suicide (Hill & Francis, 2005; Peltzer, 2008). The greater frequency of church attendance implied greater levels of exposure to certain teachings, thereby reinforcing behaviour patterns directed at the preservation of life and seeking

forgiveness and salvation as strategies for dealing with life's challenges (Stack & Wasserman, 1992; Stack, Wasserman & Kposowa, 1994).

Another aspect known to influence perceptions, behaviours and choices in people's lives is their level of socioeconomic status. An indication of socioeconomic status, namely parental unemployment which was measured in this study, was found to have a strong association with suicidal behaviour (Simons & Murphy, 1985, WHO, 2000a). According to Skegg (2005), a lower socioeconomic status predisposes participants to higher levels of deprivation from much-needed resources, thereby increasing the levels of stress experienced in such households, which may contribute to a higher risk of suicide. Unemployment, especially of fathers, was found to significantly influence the development of depressive symptoms in adolescents, which added to an increased suicide risk of this age group (Diekstra & Garnefski, 1995). The effects of being unemployed may contribute to increased tensions, arguments and violence within families, which create an environment that increases susceptibility to depression, hopelessness, family disengagement and the risk of suicide (Deonarian & Pillay, 2000; Diekstra & Garnefski, 1995).

Proponents of the Social Cognitive Learning Theory hold the view that people learn from their environment. This is accomplished by being exposed to different environmental aspects and modelled behaviours from valued role models, as people shape their interactive behavioural repertoire with their environments (Meyer, Moore & Viljoen, 2003; Sigelman & Rider, 2003). A number of authors have concluded that a strong positive relationship exists between a history of previous suicide exposure and future acts of suicide (Gutierrez, Meuhlenkamp, Konick & Osman, 2005; Holmstrand, Niméus & Träksman-Benz, 2006; Noor Mahomed, Selmer & Lasich, 2000; Pienaar & Rothmann, 2005; WHO, 2000a; WHO, 2000b). Literature indicates that the contagion effect of exposure to the unexpected traumatic loss of significant others to suicide, may increase

stress levels and suicidal behaviour due to the possibility of complicated bereavement occurring in such instances (Beautrais, 2000).

It is a clinically known fact that a relationship exists between depression and suicidal behaviour. However, more recent studies have concluded that a family history of suicide appears to show a higher propensity for future suicidal behaviour, even in the absence of a family history of psychiatric illnesses (Rubenstein, Halton, Kasten, Rubin & Stechler, 1998; Quin, Agerbo & Mortensen, 2002). Suicidal acts are argued as providing a means of escaping problems through which adolescents could find quick solutions to painful problems. This pathway of behaviour is furthermore perceived as a coping strategy in times of distress, serving to legitimise suicidal behaviour as a means of gaining attention, help and the relief yearned for (Gutierrez, Rodriguez & Garcia, 2001; Rubenstein et al., 1998). Ineffective coping strategies are viewed as predisposing factors, not only in the development of depression but also as precipitants to suicidal behaviour (Meehan, Peirson & Fridjhon, 2007; Spirito, Francis, Overholser & Frank, 1996). Gutierrez et al. (2005) suggested that the increased attention observed around persons who attempted or completed suicide can serve as a reinforcing factor whereby previously deprived emotional and psychological needs could be satisfied. Furthermore, Gutierrez et al. (2001) concluded that exposure to attempted suicide in others has a contagion effect, which increases the short-term risk of suicidal behaviour in such persons as their reactive depressive symptoms are significantly high. Exposure to acts of completed suicide in others similarly elevates depressive symptoms and additionally increases their long-term risk of suicidal behaviour.

The presence of additional factors such as geographical location (living in a rural community or urban community) has been implicated as having an influence on suicidal behaviour (Flisher et al., 2004; Gutierrez et al., 2005; Judd, Cooper, Fraser & Davis, 2006; Zhang et al., 2004). According to Judd et al. (2006) young males living in small rural locations appeared to have a higher risk of suicidal behaviour than their urban

counterparts. The presence of potential risk factors such as a greater propensity towards poverty and lack of financial resources such as medical aid insurances were thereby found to contribute to these higher rates of suicidal behaviour (Hauenstein et al., 2006).

The focus of this article is twofold, firstly to compare a group of suicide attempters and non-attempters with regard to their level of suicidal ideation, and secondly to compare groups of low and high suicidal ideation with regard to a number of demographic factors associated with an increased risk of suicide.

## **RESEARCH METHODOLOGY**

In order to realise the objectives of this study the procedure used is as follows:

### **Research goals and questions**

The article focuses on the following goals:

- Exploring the differences between suicide attempters and non-attempters with regard to their level of suicidal ideation as determined by their total SIQ scores.
- Comparing high and low suicidal ideation groups with regard to demographic variables associated with high suicide risk such as marital status of parents, parents' employment status, parents' level of education, geographical location of the family, religious factors and previous exposure to suicide.

### **Research design**

A non-experimental, cross-sectional, criterion-group design was used. The benefit of this design is that group differences are identified with regard to different variables, while the reasons for those differences need another design approach.

## **Participants and data gathering**

Ten schools representative of all six regions in the Northern Cape Province (NCP) were selected

by means of a stratified sampling technique. Sixty participants from each school (twenty per grade) were selected from Grades 10 to 12 to constitute a sample of 583 (excluding 17 incomplete protocols) learners from the NCP. The defining characteristics of the participants were as follows:

- ❖ The group comprised four racial groups namely, black (172 or 29%), Coloured (280 or 47%), white (133 or 23%) and Asian (5 or 1%) participants.
- ❖ With regard to gender the sample consisted of 267 (45%) males and 323 (55%) females.
- ❖ The mean age of the group was 17.3 years with a standard deviation of 1.66.

The researcher in collaboration with psychologists and psychometrists from the Department of Education (NCP) were involved in the data collection process, which took place during school hours. Permission from the Department of Education, parents, school principals and participants was obtained. The participants were informed about the rationale and voluntary nature of participation. They were assured that all information would be managed in a confidential and anonymous manner. Psychologists were available to assist with any questions and appropriate referral assistance where necessary. The data was gathered at school during a 3-hour period, which included a break of 30 minutes.

## **Measuring instruments**

In quantifying the included variables the following instruments were used:

- *The Suicidal Ideation Questionnaire for Adolescents* (Reynolds, 1988) measures the frequency and intensity of suicidal thoughts. Internal consistency coefficients of between 0.93 and 0.97 have been reported for this measuring instrument (Reynolds,

1988). In line with the recommendations of Reynolds (1988) the SIQ total score > 31 was considered high with a highest possible score of 180. Reynolds further acknowledges that suicidal ideation is one of the risk factors and increases in clinical significance in the presence of other risk factors. For the purpose of this study, suicidal ideation is used as representative of risk.

- No South African studies could be found where this measure was applied to an adolescent group. A study by Pienaar and Rothmann (2005) using the adult version of the SIQ, reported an alpha coefficient of 0.97 for a group of adult participants. The researcher was of the opinion that the division of suicidal ideation risk according to Reynolds (high and low risk) did not discriminate sufficiently between high and low suicidal ideation-risk-group scores. With regard to the first research goal of determining the differences in the level of suicidal ideation of attempters/non-attempters, i.e. the suicidal ideation scores, the participants were divided into three groups, namely low risk ( $\leq 16$ ), average risk (17-31) and high risk ( $\geq 32$ ) suicidal ideation scores by using the criteria stipulated by Pienaar and Rothmann (2005). The ranges of scores for the adult and adolescent measures are the same. The second research-goal participants in the average suicide-risk group (17-31) were excluded from the analysis thereby allowing for greater distinction between high and low suicide-risk groups.
- *A researcher-compiled biographical questionnaire* with questions about the marital and employment status of parents, geographical location of learners (rural/urban), religious affiliation and attendance of ceremonies as well as exposure to suicide was collected from participants. Suicide exposure was assessed with the aid of three questions formulated by the researcher, namely 1) *Do you know anybody who has committed suicide? Yes/No. If yes, what was your relation to the person?* 2) *Do you know anybody who has attempted suicide? Yes/No. If yes, what was your relationship to the person?* 3) *Have you ever attempted suicide? Yes/No.* Participants were also divided into a group of attempters and non-attempters based on their response to the latter question.

## **Statistical procedure**

The SAS-programme (SAS Institute, 2003) was used to analyse the data. The chi-square test for two independent groups was used firstly to compare the attempter and non-attempter groups with regard to their levels of suicidal ideation and secondly to compare the level of suicidal ideation with the proportional distribution of demographic factors such as the marital status of parents, the parents' unemployment status, the parents' level of education, religious affiliation and previous exposure to suicidal acts.

The 1% level of statistical significance was used as criterion for significance in this investigation. The effect size of significant results was also calculated to determine the practical significance of results (Steyn, 1999). In the case of the  $\chi^2$ -test the effect sizes calculated were indicated by *w* with the following guideline values: 0.1 = small, 0.3 = medium, 0.5 = large effect.

## **RESULTS AND DISCUSSION OF RESULTS**

The results of comparing a group of suicide attempters and non-attempters are presented in Table 1 and will be discussed below. The sample was divided into two groups, namely attempters and non-attempters. These groups were further divided into low, average and high suicide-risk categories using the guidelines proposed by Pienaar and Rothmann (2005). Using the  $\chi^2$  values the attempter and non-attempter groups were compared with regard to the proportion of participants in the low, average and high suicidal ideation groups. As can be inferred from Table 1, the results indicated that 242 participants reported low risk, 116 reported average risk, while 225 participants were identified as

Table 1:  $\chi^2$ -results of attempters, non-attempters with regard to suicide risk

Suicide risk based on SIQ total scores	Non-attempters		Attempters		$\chi^2$	P	df
	N	%	N	%			
Low ( $\leq 16$ )	225	44,4	17	22,4	18,949	<b>0.0001*</b> <b>w =0,18</b>	2
Average (17-31)	103	20,3	13	17,1			
High ( $\geq 32$ )	179	35,3	46	60,5			
Row total:	507	87,0	76	13,0			

*w 0.1=small; w 0.3=medium; w 0.5=large*

*p  $\leq 0.01$*

being in the high suicide-risk group. The results furthermore indicated a statistically significant difference between the attempter and non-attempter groups and suicide risk on the 1% level of significance with 13% having had a previous suicide attempt.

The proportional division of attempters and non-attempters into suicide risk indicated that a significantly larger proportion of attempters (60.5%) than non-attempters (35.5%) was identified within the high-risk group. The accompanying effect size of 0.18 indicated a small practical significance for this result. Based on these findings, the participants who attempted suicide (attempters) showed a higher risk for suicidal behaviour than those who had not attempted suicide (non-attempters). Reynolds (1988) views participants falling within the high-risk group as being of serious concern since they manifest consistently high levels of suicidal ideation. Reynolds (1988) further emphasises the need for such participants to be thoroughly re-evaluated for suicidal thoughts, intentions and behaviour, as it is more desirable to make a false positive than false negative risk identification. The above results are supportive of findings by Szabo (1997) who concluded that having attempted suicide places the person potentially at risk, thereby carrying a heavier weighting in the prediction of future suicide attempts. Findings from Moore, (2000) and Lewinsohn, Rohde and Seeley (1996) concluded that persons who had attempted suicide previously showed functional difficulties and were more likely to have difficulties in areas such as finding support systems, achieving academic progress as well as experiencing greater amounts of interpersonal conflicts, thereby predisposing them to perceiving their environments more negatively. It is important to note that 22.4% of the

participants who had attempted suicide previously fall into the low suicide-risk group according to their SIQ scores. Taking into account that the SIQ is a screening instrument, an immediate question could be raised regarding the sensitivity of the SIQ as nearly a quarter of the participants (22.4%) who attempted suicide would not have been identified as at-risk individuals. On the other hand 35.3% of the participants who did not attempt suicide fell into the high-risk group. In understanding these findings that fell outside the expected scenario it is important to take into account that although some non-attempters were categorised in the high-risk group it is not possible to say if they were falsely identified as persons with a high suicide risk because of the time factor. No inferences could be made regarding the time at which they experienced an increased risk as participants were not requested to specify the time of their suicide attempt which implies that a suicide attempt may have occurred a long time ago. No clarity has been obtained regarding the time period within which an individual is deemed high suicide risk, following a suicide attempt or after being exposed to a traumatic incident (James & Gilliland, 2001; Jin & Zhang, 1998).

The results of the comparison of the two groups with regard to the demographic variables are now discussed.

### **DEMOGRAPHIC (RISK) FACTORS AND SUICIDE RISK**

The same division for attempters and non-attempters into low, average and high suicide-risk groups was used with the exclusion of participants who reported average suicide risk. Refer to Table 2 for the  $\chi^2$  results on all the demographic variables.

### **Marital status of parents**

Possible relationships between the high and low suicide-risk groups with regard to the marital status of parents were investigated. The chi-square value showed no significant difference (on the 1% level of significance) between the high and low suicide-risk groups with regard to marital status of their parents. These results contradict the findings of Meuhlenberg (2002), Skegg (2005) and Weitoft et al. (2003) who found that marital separation and discord as well as single-parent families were potential risk factors for suicidal behaviour. Jansen van Rensburg (2004) found that although marital separation is a significant stressor in families it does not necessarily result in negative outcomes such as suicide, as it may improve the quality of life for the separated members.

### **Employment of parents**

With regard to the high and low suicide-risk groups (classification of Pienaar & Rothmann, 2005) concerning the parents' employment status, possible differences were investigated. The results for both parents (father and mother) with regard to their employment status were calculated as indicated in Table 2. In regard to the parents' employment status, no significant proportional differences were found between low and high risk groups. The effects of unemployment were not in line with the findings of Simons and Murphy (1985), Skegg (2005) and WHO (2000a), where a strong relationship between unemployment and suicidal behaviour was found.

Table 2:  $\chi^2$ -Results of proportional differences between demographic variables and high and low suicide risk

Marital status of parents	Low risk		High risk		$\chi^2$	p	df
	N	%	N	%			
Married	143	60,1	123	55,7	1,852	0,7630	4
Divorced	21	8,8	21	9,5			
Single parent	45	18,9	51	23,1			
Separated	20	8,4	20	9,0			
Common law	9	3,8	6	2,7			
<b>Total:</b>	<b>238</b>	<b>51,9</b>	<b>221</b>	<b>48,1</b>			
<b>Employment: father</b>							
Permanent	116	54,7	116	61,4	5,391	0,1453	3
Temporary	22	10,4	20	10,6			
Self-employed	34	16,0	16	8,5			
Unemployed	40	18,9	37	19,6			
<b>Row total:</b>	<b>212</b>	<b>52,9</b>	<b>189</b>	<b>47,1</b>			
<b>Employment: mother</b>							
Permanent	87	39,7	75	35,2	3,829	0,2805	3
Temporary	28	12,8	22	10,3			
Self-employed	19	8,7	14	6,6			
Unemployed	85	38,8	102	47,9			
<b>Row total:</b>	<b>219</b>	<b>50,7</b>	<b>213</b>	<b>49,3</b>			
<b>Educational level of parents</b>							
Primary	30	14,1	32	16,7	5,622	0,1316	3
Lower secondary (8-10)	49	23,1	59	30,9			
Higher secondary (11-12)	93	43,9	76	39,8			
Tertiary	40	18,9	24	12,6			
<b>Row total:</b>	<b>212</b>	<b>52,6</b>	<b>191</b>	<b>47,4</b>			
<b>Geographical location of family</b>							
Rural	44	18,1	50	22,2	1,233	0,2669	1
Urban	199	81,9	175	77,8			
<b>Row total:</b>	<b>243</b>	<b>51,9</b>	<b>225</b>	<b>48,1</b>			
<b>Religious affiliation</b>							
Christianity	221	96,5	197	96,1	0,051	0,8214	1
Other religions	8	3,5	8	3,9			
<b>Row total:</b>	<b>229</b>	<b>52,8</b>	<b>205</b>	<b>47,2</b>			
<b>Attendance of ceremonies</b>							
Weekly	149	63,4	133	62,8	0,426	0,9349	1
Monthly	28	11,9	27	12,7			
Occasionally	41	17,5	34	16,0			
Not at all	17	7,2	18	8,5			
<b>Row total:</b>	<b>235</b>	<b>52,6</b>	<b>212</b>	<b>47,4</b>			
<b>Exposed to someone who completed suicide</b>							
No	148	62,2	99	44,6	14,29 4	<b>0,0002</b> <b>W=0,18</b>	1
Yes	90	37,8	123	55,4			
<b>Row total:</b>	<b>238</b>	<b>51,7</b>	<b>222</b>	<b>48,3</b>			
<b>Exposed to someone who attempted suicide</b>							
No	117	49,6	94	42,5	2,277	0,1313	1
Yes	119	50,4	127	57,5			
<b>Row total:</b>	<b>236</b>	<b>51,6</b>	<b>221</b>	<b>48,4</b>			

### **Education of parents**

The proportional differences between high and low suicide-risk groups with regard to the parents' educational status indicated no significant proportional differences between high and low risk groups. This finding does not concur with that of Chen, Shiao and Gau, (2007), Skegg (2005) as well as Yilmaz and Türküm (2007), who found a significant relationship between parental education levels and self-harming behaviours.

### **Geographical location of family**

Possible differences between the high and low risk groups in relation to their parental place of residence (urban/rural) are presented in Table 2. The results indicated no significant proportional differences between risk groups (high and low) and their family's location. These results contradict the findings of Hauenstein et al. (2006), where those living in rural areas were at a higher risk of suicidal behaviour because of a lack of certain tangible resources, such as access to health services and exposure to suicide prevention health initiatives.

### **Religious affiliation and attendance of religious ceremonies**

The differences between the high and low risk groups in relation to their religious affiliation and the attendance of ceremonies showed that religious affiliation and church attendance did not account for any significant proportional differences with regard to their level of suicide risk. The current findings are not in agreement with earlier findings which state that religion acted as a buffer against suicidal behaviour or alternatively increased the risk of suicidal behaviour (Aspahan, 2003; Ineichen, 1998; Madu & Matla, 2003). The sample indicates a strong Christian-based religious affiliation which makes it a very homogenous sample. This group similarity may have contributed towards the absence of a significant result for this variable.

## Exposure to suicide

The comparison between the high and low suicide-risk groups with regard to their exposure to suicidal behaviour (attempted/completed) was investigated. The results indicated a statistically significant proportional difference on the 1% level of significance, between the high and low risk groups and exposure to someone who has completed suicide. The effect size of this finding was small indicating that the results are of little practical significance. Earlier literature findings of Beautrais (2000) as well as Gutierrez, Rodriguez and Garcia (2001) were reaffirmed in this study indicating that suicide exposure contributes towards the increased risk of subsequent suicidal behaviour.

Due to the significant findings related to suicide risk and exposure to completed suicide behaviour the researcher deemed it necessary to further explore suicide exposure by means of cross-tabulating suicide attempters/non-attempters to the previously stated questions, namely exposure to someone who has committed suicide and someone who has attempted suicide. The results are reported in Table 3.

Table 3: Exposure to someone who has completed suicide and attempter status

Exposure to someone who completed suicide	Non-attempter		Attempted suicide		$\chi^2$	<i>p</i>	<i>df</i>
	N	%	N	%			
Non-exposure	99	62.7	1	20.0	3.72	0.054	1
Exposure	59	37.3	4	38.7			
Row total:	158	96.9	5	3.07			

According to these results no significant proportional differences were found between those exposed to completed suicides and participants who have attempted or not attempted suicide. Although significant differences were found between exposure and non-exposure to completed suicide with regard to the participants' level of suicidal

ideation, no significant differences were found between suicide attempters and non-attempters and their exposure to completed suicide.

## **RECAPITULATION AND DISCUSSION**

The objectives of this article were twofold, namely to investigate attempters and non-attempters with regard to their suicide risk as reflected by their total SIQ scores. Secondly, the article aims to compare the proportional representation of different demographic variables as reported by the high and low suicide-risk groups. With regard to the level of comparison of suicidal ideation by attempters and non-attempters, the results were consistent with the expected outcomes portrayed in literature as most participants who attempted suicide (60.5%) had reported a high level of suicidal ideation and were classified within the high suicide-risk group. It appears from the results that suicide risk is largely consistent with the expected outcomes which imply that attempters are inclined to report higher levels of suicidal ideation while non-attempters are expected to report lower levels of suicidal ideation.

The results show a significant difference in suicide risk as identified by Reynold's (1988) SIQ between adolescents who have attempted suicide and those who have not attempted suicide. According to the statistical findings, a majority of 60.5% of attempters were identified within the high suicide-risk group, which supported findings by Szabo (1997), namely that those who have attempted suicide are considered to be at higher risk of future suicide attempts. Lewinsohn et al. (1996) stated that adolescents who have previously attempted suicide show functional difficulties, making it difficult for them to access appropriate supportive resource systems or solve problems with satisfactory outcomes for themselves. Functional difficulties such as poorer social support systems, greater interpersonal conflict and poor academic adjustment abilities are some of the qualities that appear to increase the likelihood of negative feedback from the environment, which may lead to subsequent negative emotional responses from adolescents (George, 2005; Moore, 2000). Not having the necessary resources or being able to gain access to such

resources in order to manage negative life circumstances may increase the individual's levels of stress and consequently increases their risk of suicidal behaviour. Previous suicide attempts may be an indication of ineffective coping behaviour. If the individual does not learn more effective coping behaviours after the suicide attempt he/she may be at risk of future suicide attempts (Meehan et al., 2007; Spirito et al., 1996).

The exploration of suicide risk as determined by the SIQ scores revealed that 35.5% of the participants in the high suicide-risk group did not report a previous suicide attempt. When explaining this result it is important to firstly consider the passage of time as participants could have been identified correctly as a high suicide risk and may have been identified before they had the opportunity to attempt suicide. Secondly, the assessment instrument (SIQ) may have been too sensitive in placing participants into an incorrect suicide-risk category as unique South African factors related to language and cultural differences may have influenced the outcome of results. When such individuals have been identified as a high suicide risk, early interventions from a clinical perspective are needed to prevent any suicide attempts. A further statistical result to be noted is that 22.4% of the participants who were found to have a low suicide risk had attempted suicide before. This is inconsistent with the findings of authors such as Lewinsohn et al. (1996) as well as Szabo (1997) who found that previous suicide attempts placed the individual at a higher risk of suicide. An alternative explanation could be that such attempts may have taken place some time ago and that the person may have recovered from the attempt. Participants who received family or professional support, following a suicide attempt, may have worked through the traumatic experience and increased their coping skills in dealing with future challenges (Thomlinson, 2002; Sun & Hui, 2006). Another explanation could be that suicidal behaviour can occur impulsively without any warning symptoms of increased suicide risk.

In discussing the demographic variables, no statistically significant differences could be found between the groups with high and low suicidal ideation scores, except for exposure to suicide.

Consistent with previous research findings, the results in this study indicated that participants who were exposed to completed suicide were at a higher risk of suicidal behaviour. According to Noor Mahomed et al. (2000) as well as Pienaar and Rothmann (2005) a strong positive relationship exists between exposure to suicide and its predictive value in influencing future suicidal behaviour. The research findings by Gutierrez, Rodriguez and Garcia (2001) as well as Beautrais (2000) indicated more specifically that exposure to completed suicidal behaviour increases the risk of suicide in two ways. Firstly, the exposed individual's underlying clinical vulnerabilities such as hopelessness, despair and mood changes are triggered to the extent that they may develop into symptomatology and increase the risk of conditions such as depression. Secondly, exposure to completed suicide has been associated with increased long-term effects of suicide, meaning that the risk does not go away and if reinforced by additional negative life experiences, may later lead to suicidal behaviour. The experience of loss by adolescents can have a profound effect on them (Moore, 2000). In such situations adolescents often feel helpless, having no control over circumstances which may throw them into emotional turmoil as well as increase their risk of suicidal behaviour. When suicidal acts occur within a school setting the grief reactions are further complicated by group responses that may serve to reinforce the tragic and debilitating events. This may lead to adolescents becoming disillusioned with their world and being unable to cope with its dangers and or they may view their lives as meaningless, losing all hope in the future and seeing suicide as a solution to their immediate circumstances (James & Gilliland, 2001; Moore, 2000; Naude, 2006).

## **RECOMMENDATIONS AND LIMITATIONS OF THE STUDY**

The focus of this article was twofold. Firstly, it compared the differences between a suicide attempter and non-attempter group with regard to their level of suicide risk as determined by the total SIQ score. A second comparison explored the proportional differences between demographic factors (reported to correlate highly with suicide) and the level of suicide risk as determined by the suicidal ideation score.

It is suggested that additional demographic factors such as the interaction between gender and race as well as marital status and socioeconomic groups be investigated to determine their influence on suicide risk. Longitudinal studies may contribute valuable information about the interaction between demographic factors over an extended period of time following a suicide attempt or marital dissolution. By longitudinal observation researchers could measure the impact of different variables that may be prevalent at different developmental stages. Longitudinal studies can be complemented with focus-group studies that will allow participants to relate their experiences in addition to objective studies, thereby making data collection richer. A large sample will allow for greater group differentiation such as distinguishing between first-time attempters and re-attempters and cultural differences.

The use of an American instrument to measure suicidal ideation points to the need for a South African standardised screening instrument to ensure unbiased psychometric interpretations. Any screening process must accommodate a multifaceted approach that uses different types of information as the use of demographic characteristics may not be sufficient and needs to be supplemented with other processes of data gathering. In the absence of an alternative instrument it remains necessary to further evaluate the SIQ as a screening and clinical tool within the local context to maximise its use and efficacy as an interim or optional tool of choice.

It is hoped that the findings from future research will contribute to a meaningful understanding of how suicide risk is affected by different variables. This would allow for the implementation of prophylactic programmes at different levels of society. Both parents and adolescents can benefit from being proficient and empowered in building and developing skills to strengthen adolescents' resistance to suicidal behaviour. An additional outcome could be the training of gatekeepers at schools and youth centres to assist in the early detection and treatment of at-risk individuals.

It is important to interpret the results of this study in light of its limitations:

- a) The focus on learners in general rather than those who were directly involved in suicide attempts may have denied this study valuable information regarding the dynamics of suicide.
- b) The information for this study was primarily obtained through a self-compiled instrument, which focused on obtaining the basic information necessary for each identified demographic variable. The manner in which the questions were compiled may lend itself to subjective interpretation. The absence of structured questionnaires for specific variables measured such as religious influences or previous exposure to suicide may have contributed to an inadequate exploration of such variables, which could have increased the richness of information obtained from participants.
- c) Due to the small number of attempters, results may have influenced the outcome of demographic comparisons.

The findings of this study make some valuable contribution to exploring the link between suicidal ideation (suicide risk) and the relevance of certain demographic variables. It can be concluded from the results that having attempted suicide significantly increases an individual's risk of further suicidal behaviour. At the same time, being exposed to scenarios of completed suicide presents another significant factor that increases the individual's suicide risk.

Given these findings, it can be said that a relationship, however small, does appear to exist between suicidal ideation, suicide attempters and being exposed to suicide.

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## **CHAPTER 4:**

### **ARTICLE 3**

# **THE EXPERIENCE OF PSYCHOSOCIAL STRESSORS AMONGST AN ADOLESCENT POPULATION**

# THE EXPERIENCE OF PSYCHOSOCIAL STRESSORS AMONGST AN ADOLESCENT POPULATION

## Abstract

Adolescence is a period of marked change and often carries the burden of having to deal with the unseen pressures of society's expectations as well as of having to gain acceptance among peers. Failure to manage the demands and expectations placed on adolescents can lead to them experiencing their environment as stressful. The objective of this study was to explore and describe which psychosocial factors adolescents experienced as stressful. Interpretive Phenomenological Analysis (IPA) was used as a qualitative method in which respondents were asked to share their opinions with regard to factors they experienced as distressing. Using the IPA data was processed into various themes that were eventually presented in relation to the biological, psychological, social and spiritual dimensions of adolescents' experiences. A total number of 556 respondents provided a variety of responses from which various themes were identified for description. The most frequent stressors experienced by adolescents focused on having a low self-image, poor self-regulating abilities, poor interpersonal and peer relationships, as well as being treated with disrespect. By exposing learners to workshops and school programmes, the acquisition of interpersonal and social skills as well as emotional regulation can be promoted allowing adolescents to engage with their environments in a more positive manner.

**Keywords:** *resources, developmental tasks, adolescence, stressors, emotional regulation, personal dispositional factors, contextual factors, negative self-perceptions, social skills*

## **INTRODUCTION AND LITERATURE REVIEW**

The term “psychosocial moratorium” may merely be a figment of our imaginations, as adolescence has become a period typified by adolescents having to respond to growing demands from society while still having to integrate their personal development as they aspire to take their place within it (Call et al., 2002; Larson, Wilson & Mortimer, 2002; Sigelman & Rider, 2003). According to LaRue and Herrman (2008), society has increasingly neglected providing supportive space and structures to help adolescents successfully deal with societal demands, which may lead to high levels of stress in adolescents. Providing a supportive and protective environment in which adolescents can make informed decisions and choices is integral as it enhances effective adjustment in adolescents (Cummings, 1995; Horstmanshof, Punch & Creed, 2008).

Adolescents are faced with an increasing number of challenging situations which require an array of developmental tasks to be successfully completed (Louw & Louw, 2007; Swimmer, 1996). Adolescent development implies exposure to new and different experiences, the ability to integrate family values into your personal value system, forming your own identity and ultimately acquiring greater independence as an individual. Ineffective management of this stage can lead to adolescents feeling insecure and uncertain about themselves and their futures. The appraisal of events as either threatening or non-threatening ultimately guides behaviour. According to Peltzer (2004), the greater an individual’s levels of perceived stress, the more likely they are to develop psychological and depressive symptoms. The Conservation of Resources Model (Hobfoll, 1988; 1998) views stress as a process initiated by the presence of a real or potential threat to the person’s resources. According to Hobfoll (1988), resources are objects, personality traits, circumstances and energies that the individual views as useful in obtaining their desired goals. Resource availability increases an individual’s ability to survive or successfully adapt to their environment. People are constantly managing their resource levels. Situations

perceived as stressful threaten to deplete resources while stress-free periods can allow for resource replenishment. Increased exposure to stress-evoking stressful situations or inappropriate application of resources depletes current resources, leading to the experience of stress (Hobfoll, 1998). Additionally, the experience of higher stress levels may be linked to two additional factors. Firstly, adolescents have had limited exposure in dealing with challenging situations, as these are relatively new experiences, and secondly, adolescents lacking sufficient coping skills to draw upon in demanding situations. Lacking adequate coping skills predisposes adolescents to negative health consequences, such as self harming behaviour (Chong, Huan, See Yeo & Ang, 2006; Peltzer, 2004; Scales, 1999; Schlebusch, 1990). Hall and Torres (2002) emphasised how important it is for researchers to focus on adolescent research. In this way, a clearer understanding can be gained concerning aspects contributing to their stressors. This is essential if adolescent stressors are to be effectively managed.

If social scientists are to promote the well-being of adolescents, it is important to develop a better understanding of both the factors that cause distress in the youth, as well as of those that enhance the youth's resistance to self-destructive behaviour. Being able to understand the nature of these distressing factors would enable scientists to better appreciate what adolescents are experiencing and what support structures are needed to help them adjust effectively. The purpose of this article is to explore the nature of stressors in a group of adolescents.

## **STRESSORS EXPERIENCED BY ADOLESCENTS**

Adolescents are being confronted by a changing environment that requires them to respond to a growing number of internal and external demands, consisting of personal and family stressors within society's socio-political arena (Chong et al., 2006; Erwin, 2002; Hjern, Alfven & Östberg, 2008; McGraw, Moore, Fuller & Bates, 2008). From a developmental perspective, adolescents have to deal with changes in their physical, psychological, social and moral world of interaction. The resources adolescents are exposed to may either enhance their well-being or lead to the experience of stress and are

situated in different functional domains as indicated by the Biopsychosocial-Spiritual model (Winiarski, 1997). Using this model provides a meaningful explanatory structure that assists in understanding the variety of stressors adolescents' experience. Based on this model, stressors would be related to physical changes (health related issues), psychological changes (cognitive, emotional and behavioural issues), social (relationships with family, friends and significant others) as well as spiritual changes, such as moral values guiding behaviour. According to the Biopsychosocial-Spiritual model (which is based on a systemic perspective) the different dimensions are interrelated and changes in one dimension influence all other dimensions. Adolescence is a period of physical, psycho-social and moral maturation in which new identities, changing body images and personal value systems need to be integrated in a coherent self (Louw & Louw, 2007; Sigelman & Rider, 2003). Difficulty in accepting these changes may lead to poor self-image, raised levels of stress, poor academic achievement, poor peer relations and poor health outcomes such as anxiety, depression and behavioural problems (Louw & Louw, 2007; Myers, 2008). Myers (2008) and Wilson et al., (1995) concluded that a poor self-image affected participants' levels of self-esteem, thus enhancing a negative attribution style, which increased the risk of individuals participating in inappropriate behaviours, including negative health outcomes. Another factor that has an impact on development of identity and self-worth is negative experiences with peers and authority figures, which lead to feelings of rejection and insecurity (Barnow, Lucht & Freyberger, 2005). Adolescents reported feeling valued when treated with respect by others (peers, family and teachers) as this promotes greater tolerance for individual differences and provides personal validation to individuals, which promotes positive self-esteem development (Erwin, 2002). Another skill associated with a good sense of self, is the ability to be emotionally aware of your own and others' reactions. Adolescence is a phase of heightened emotional awareness (Louw & Louw, 2007) while a resurgence of egocentric thoughts appear to be the foremost manner of reasoning (Mayekiso, 1992). Appropriate emotional regulation allows individuals to anticipate their own and, importantly, others' emotional reactions, which assist in managing emotionally arousing situations in a manner that seeks to alleviate common stressors and adversities (Goldstein & Brooks, 2006). Adolescents who show poor emotional regulation are not able

to contain themselves in certain competitive environments and are more likely to react emotionally or to retaliate against others (Southam-Gerow & Kendall, 2002).

Literature emphasises the importance of family relations as a source of stress in adolescents. Changes associated with the adolescents' need for autonomy and exploration of their identities and values have often leads to conflict in family relationships (Sigelman & Rider, 2003). The degree of structure offered within families appears decisive in the adjustment of adolescents. Disrupted family structures have been associated with negative coping behaviours by adolescents, causing them to hold negative self-perceptions, feelings of powerlessness, dejection and of not being supported by their parents (Naidoo, 2000; Sun & Hui, 2006). As a primary support system, families who are unable to provide the necessary emotional support for adolescents, increase their risk for negative health outcomes (Larson, Wilson & Mortimer, 2002; McGraw et al., 2008). The choice of parenting styles was found to have an influence on adolescent behavioural outcomes (Finkernauer, Engels & Baumeister, 2005). Coercive and controlling parental styles have been associated with an increased incidence of poor social skills, behavioural and emotional problems, as well as stress related conditions (Finkernauer et al., 2005; Louw & Louw, 2007; Simões, Matos, Batista-Forguet, 2008). Adolescents who reported conflict in their relationships with their parents experienced feelings of hopelessness and powerlessness, thereby predisposing them towards developing stress-related conditions and even self-destructive tendencies (Larue & Herrman, 2008; Pillay & Wassenaar, 1997).

Unsatisfactory peer relationships also play an important role in the experience of stress by adolescents (Louw & Louw, 2007). Peer connectedness was found to be a strong predictor of adolescent well-being, as adolescents tend to judge their own value upon the reactions of others (McGraw et al., 2008; Louw & Louw, 2007). Adolescents who are unpopular, have poor peer relations, and who are emotionally insecure amongst their peers, show poor academic progress and planning abilities, which decreases their chances of achieving their goals and effectively reacting to the demands of the environment. Adolescents thus further

isolate themselves from their peers, which may increase their risk of developing emotional and psychological problems (Byrne & Mazanov, 2002; McGraw, Moore, Fuller & Bates, 2008). Although peer groups are a functional part of development, the pressure of participating in acts that may be personally unacceptable can lead to adolescents experiencing adolescence as a stressful period (Erwin, 2002). One domain of peer interaction that could be perceived as stressful is having romantic relationships (Haberyan & Kibler, 2008). Conflict in romantic relationships was found to significantly increase the risk of suicidal ideation (George, 2005) especially in females who appear to react in a more emotionally intense manner to breakups (Larue & Herrman, 2008). Parental disapproval of their choice of romantic partners is experienced by adolescents as a significant stressor (Aspalan, 2003).

The demand placed on adolescents with regard to school performance is perceived as another major stressor (Da Costa & Mash, 2008; Larue & Herrman, 2008). Pressure to perform, concerns about future studies and job opportunities, harassment by peers and feeling unsafe at their schools, all contribute to the experience of the academic environment as stressful (Da Costa & Mash, 2008; Hjern, Alfven & Östberg, 2008). Negative interaction with teachers, especially those with over-critical attitudes, contribute towards adolescents feeling frustrated, rejected and experiencing school as stressful (Livaditis, Zaphiriadis, Fourkiot, Tellidou & Xenitidus, 2002). Adolescents who did not excel in academics, in sports or other school-related activities may experience isolation and rejection which contributes to higher levels of distress (Erwin, 2002). Effective interpersonal and social skills as well as a supportive environment create a sense of security that promotes healthy adjustment in adolescents (Berk, 2002; Paulson & Everall, 2001).

Disrespect or violation of others' personal rights has been found to be equally rampant in adolescents' lives. Based on the explanation of Dodge's Social Information-Processing Model, exposure to negative environments, such as a history of violence or associating with

groups that value toughness and disregard of others, increases the likelihood that adolescents will disregard others' personal rights (Dodge & Price, 1994; O'Keefe, 1996; Poulin & Boivin, 2000). Adolescents not involved in such behaviours are often targeted as victims of bullying or abuse and they may be at an increased risk of developing feelings of depression, anxiety and loneliness, which could lead to their disengagement from school activities (Nishina, Juvonen & Witkow, 2005; Zani, Cicognani & Albannesi, 2001).

Another domain found to significantly affect adolescents' well-being was physical and health-related factors. An immediate concern to researchers is the fact that at least 50% of young people in South Africa are sexually active by the age of 16 years, which exposes them to health compromising conditions (Eaton, Flisher & Aaro, 2003). One of the consequences of the high number of sexually active teenagers in South Africa is the high HIV infection rate. Another consequence of the high HIV infection rate is the increasing emergence of adolescent-headed families. Having the added responsibility of caring for their siblings and ailing parents increases adolescents' levels of stress and the risk of suicidal ideation (Peltzer, 2008; Whiteside & Sunter, 2001).

A social phenomenon which presents a big challenge to adolescent well-being is teenage pregnancies. A retrospective study with adolescents who became pregnant indicated they felt remorseful, as had mistakenly idealised pregnancy. In reality, they were disillusioned by the stressful circumstances and lack of support from boyfriends and former schoolmates (Spear, 2004). Additional concerns experienced as distressing were the strained relationships with their parents, single parenthood, conflict with the child's father, and the financial implications surrounding the pregnancy (Pereira, Canavarro, Cardoso & Mendonca, 2005; Spear, 2004).

Alcohol abuse provides a gateway in accessing more dangerous types of substances, which places adolescents at greater risk for negative health outcomes (Diekstra & Garnefski,

1995; James & Gilliland, 2001). A national survey reported that one in four adolescent-learners acknowledged substance usage in the Northern Cape Province (where the current study was conducted), which was found to be the highest nationally. Society's growing tolerance, in addition to the easy acquisition of drugs, has colluded in creating an ideal opportunity for adolescents to be introduced to substances with unfortunate consequences (Elgar et al., 2003; Reddy et al., 2002).

Another social dilemma, namely poverty, places some adolescents at an immediate disadvantage in that they are denied certain valuable and necessary resources, which are otherwise easily accessible to the financially able (Larson et al., 2002). The effects of poverty, according to Goldstein and Brooks (2006), create a sense of helplessness and acceptance of circumstances which stifles their abilities to become ambitious, resilient and non-accepting of their circumstances. Children from lower-income families were found to have higher levels of depression and anti-social behaviours such as bullying, dishonesty and criminal acts, and showed a higher risk for engaging in alcohol and drug usage and other high-risk behaviour (Diekstra & Garnefski, 1995; Kuruvilla & Jacobs, 2007; Morojele, Brook & Kachieng'a, 2006). Larger societal issues such as violence and discrimination have impacted significantly on the well-being of adolescents (Erwin, 2002; Sigelman & Rider, 2003). Physical fighting and carrying of weapons to school as protection has become common practice in some schools, while increase in school gangsterism has become prevalent, especially amongst the earlier grades at high school (Reddy et al., 2002). A significant part of peer-violence takes place with dating relationships, where adolescents mistakenly believe that behaviours such as jealousy and being controlling are ways of showing affection (Haberyan & Kibler, 2008). Such incorrect assumptions were found to be typical of adolescents who learnt through incorrect association and then generalised these behaviours to other areas of their social interaction (Zahn-Waxler, Friedman, Cole, Mizuta & Himura, 1996).

Discrimination and political changes were found to be of significant concern to adolescents. Studies by Grootboom (2007) and Dawes and Finchilescu (2002) reported white, Coloured and to some extent Indian adolescents (East Indian descent) verbalized negative sentiments regarding social justice issues and their futures in South Africa. Adolescents reported events such as the escalating culture of personal violation, violence, aggression and corruption in public organisations as social issues that made them feel uncertain about their future and unsafe within the country (Grootboom, 2007). In terms of racial discrimination, all learners perceived discrimination within society to some extent, however the Coloured and white racial groups perceived the current political dispensation as having contributed to their sense of loss or deprived positions within which they currently function (Dawes & Finchilescu, 2002; Grootboom, 2007).

As can be seen from the discussion of stressors, adolescents appear to experience a wide variety of stressors on the physical, psychological, social and spiritual dimensions in society. The focus of this article is to explore the psychosocial factors leading to the experience of stress as reported by as group of adolescents.

## **RESEARCH METHOD**

The following procedure was followed in reaching the objectives of this article:

### **Research Objective**

The objective of this study is to explore the experience of physical, psychological, social and spiritual stressors by adolescents.

### **Research design**

An Interpretive Phenomenological Analysis (IPA) approach was used to articulate the subjective experiences of participants (Smith & Osborn, 2003). The IPA attempts to obtain an in-depth understanding of how individuals experience certain phenomena and of how

participants make sense of their world. In contrast to some of the other qualitative approaches, such as discourse analysis or grounded theory, that implicitly theorises the role of cognition, the IPA offers a linkage between participants' talk, cognitions and behaviour (Smith, 1996). The IPA offers a clear methodological approach and is based on a solid theoretical foundation (Chapman & Smith, 2002). The systematic nature of its analytical procedure and the provisions of detailed descriptions of the analytical process have portrayed the IPA as an increasingly attractive research method for psychologists. As a relatively new and developing approach which offers reasonable structure and uniformity the IPA is often preferred over Grounded theory, which has become tainted with debate and diverse opinions within the field of research (Willig, 2001). While researchers' interpretations are valued as insights rather than facts, it is important for a reflexive stance to be adopted, as researcher subjectivity can lead to clouding of the eventual research findings (Brocki & Wearden, 2006; Willig, 2001). Transcripts were categorised into fairly broad themes related to personal-dispositional and contextual factors, after the preliminary examination of data. The broad themes were then broken down into more specified themes of information. Themes across transcripts were then compared to each other to establish common themes that allowed insight to be gained regarding areas of similarity between responses. These final categories of theme selection were utilised within the context of the Biopsychosocial-Spiritual Model for both personal-dispositional and contextual stressors (Winiarski, 1997).

## **Participants**

A sample of 590 learners (Grades 10 to 12) was selected from 10 different schools in the Northern Cape Province (NCP). Due to incomplete protocols, 34 respondents were excluded. The sample was demographically representative of the NCP.

Defining characteristics of the group:

- ❖ The group was composed of four racial groups, namely black (172 or 29%), Coloured (280 or 47%), white (133 or 23%) and Asian (5 or 1%) participants.

- ❖ Gender and racial distribution consisted of 267 (45%) males and 323 (55%) females. Males constituted 127 Coloured, 83 black, 54 white and two Asian participants, while females consisted of 153 Coloured, 89 black, 79 white and three Asians.
- ❖ Subjects from a rural background numbered 120 (20.3%) compared to 470 (79.7%) from an urban background.
- ❖ The mean age of the group was 17.3 years, with a standard deviation of 1.66.

### **Data gathering**

As part of a larger study undertaken in the Northern Cape Province (NCP), this article will report on the qualitative component of that study. The researcher, in collaboration with a psychologist and psychometrists from the Department of Education in the NCP, were involved in collection of the needed data. Learners were requested to complete a biographical questionnaire which contained a section for open-ended responses concerning factors that caused distress in adolescents (question number 16). Permission for the study was obtained from the Department of Education and principals of selected schools. Parents and participants gave informed consent before the survey was conducted at their respective schools. The aims of the study, as well as its voluntary nature including their right to withdraw from the study at any time, were explained to participants. Participants were assured about the anonymity and the confidential manner in which information would be managed. Those who decided to participate were asked to complete a consent form, which appeared as the first page of all questionnaire booklets. Learners were assessed in groups of about 20 to maximise rapport. To comply with ethical standards of social research, professional staff was available to assist with any questions, they were able to offer emotional support and manage any intervention processes where the need arose.

### **Measuring instrument and method of analysis**

Participants were asked to provide a response to the following question: “*Describe in a few sentences the factors that make you feel frustrated and distressed about yourself, your life and your future*”. A total of 556 participants responded to the question. For the purpose of this

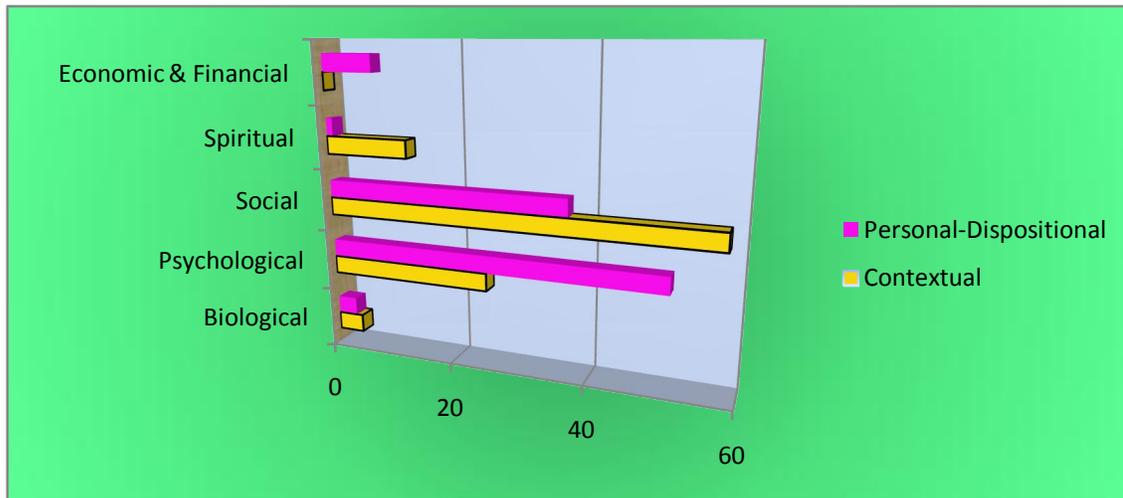
article, stressors related to the self (personal-dispositional) were referred to as events occurring within the person or personal attributes that exert an influence on others, such as a poor self-image or attributes which contribute to poor family relationships. Furthermore, these stressors are related to the dispositional experiences of adolescents as a cause of stress. Stressors attributed to others were referred to as contextual factors and were perceived as events outside the person that contributed to his/her experience of stress. Based on these two pathways of perceiving stress, data was compiled into relevant themes of information. These identified factors were further categorized along the dimensions of the Biopsychosocial-Spiritual model (Winiarski, 1997), for the purpose of presenting meaningful and coherent results. Economic and political factors were included as part of a larger social environment dimension. Apart from the researcher another group of independent researchers/consultants were involved in the process of identifying different themes. To ensure trustworthiness and validity of the research findings, experienced researchers played a significant role in the collection and analysis of data and had an opportunity to provide input as the process evolved.

## **RESULTS AND DISCUSSION OF RESULTS**

The results are presented while the discussion will be done in the discussion and recapitulation section. The responses provided by the participants were expressed as a percentage of the total number of responses. The results (as presented in Table 1) were interpreted along two pathways, namely personal-dispositional and contextual domain of factors causing dissatisfaction. The personal-dispositional domain as reflected in Table 1 indicates that the psychological factors (poor emotional regulation) made the greatest contribution (51%) towards the experience of stress, while social factors (such as poor family and peer interactions) contributed the second largest number of responses (37%). Economic and financial factors (political and future concerns) were found to offer some contribution (8%) towards the experience of stress. Spiritual factors (lying and deceiving) were mentioned by 1% of the respondents. For the purposes of this article spiritual factors

included adolescents' moral views and values in terms of acceptable or unacceptable behaviour.

Table 1: Personal-dispositional and contextual factors causing dissatisfaction



Contextual Responses = 570  
 Personal-dispositional responses = 877

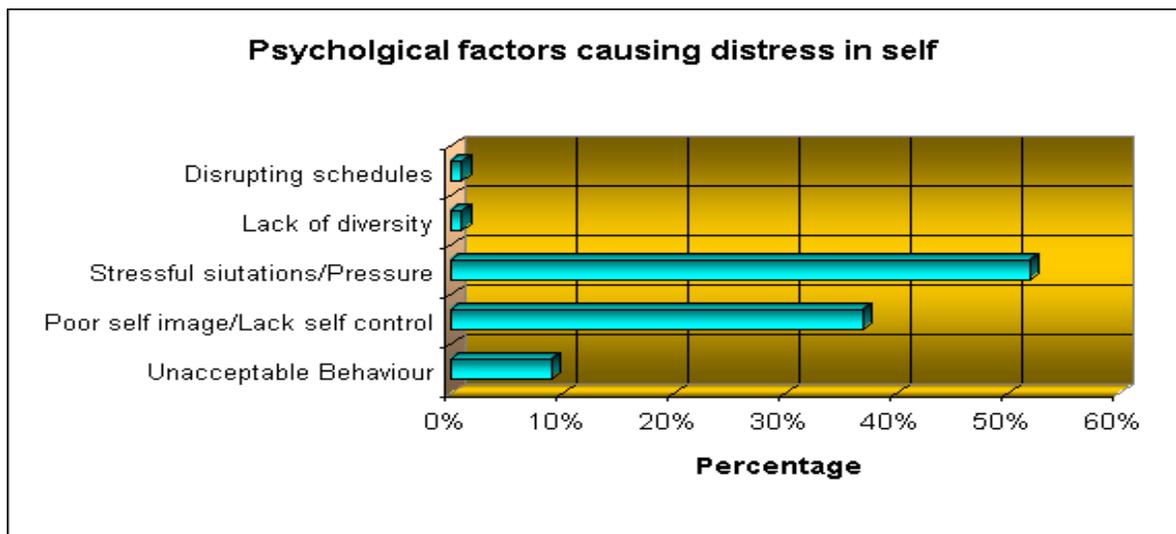
The contextual domain included social factors such as poor social interaction and conduct from family and friends (58%), psychological factors such as being emotionally broken down by others (25%) and spiritual factors such as disregarding the rights of others (13%), while only 1% of respondents attributed biological factors (sex-related and substance abuse) towards the experience of adolescent stress. The distribution of responses within the broader dimensions will now be reported on.

### **PERSONAL-DISPOSITONAL FACTORS CAUSING DISSATISFACTION IN ADOLESCENTS**

A total of 877 responses were provided by respondents from which 446 responses were on the psychological dimension. From Table 2 it appears that stressful and pressured situations, as well as the emotional and behavioural responses to this stress, are the most frequently reported factors contributing towards adolescents' experience of psychological distress. A total of 230 responses (52% of 446 responses) offered by participants were

related to issues concerning the experience of stress by adolescents. Stressful issues as experienced by adolescents included statements like these: *“When I’m stressed, I don’t feel good about myself and I become angry very quickly and lose my self-control,”* and *“There are days when I feel so stressed that I feel I don’t want to be here on earth. I want to climb up a mountain and jump off or drink a bunch of tablets and die, because my life is not worthwhile.”*

Table 2: Psychological stressors in adolescents: Personal-dispositional domain



Responses = 446

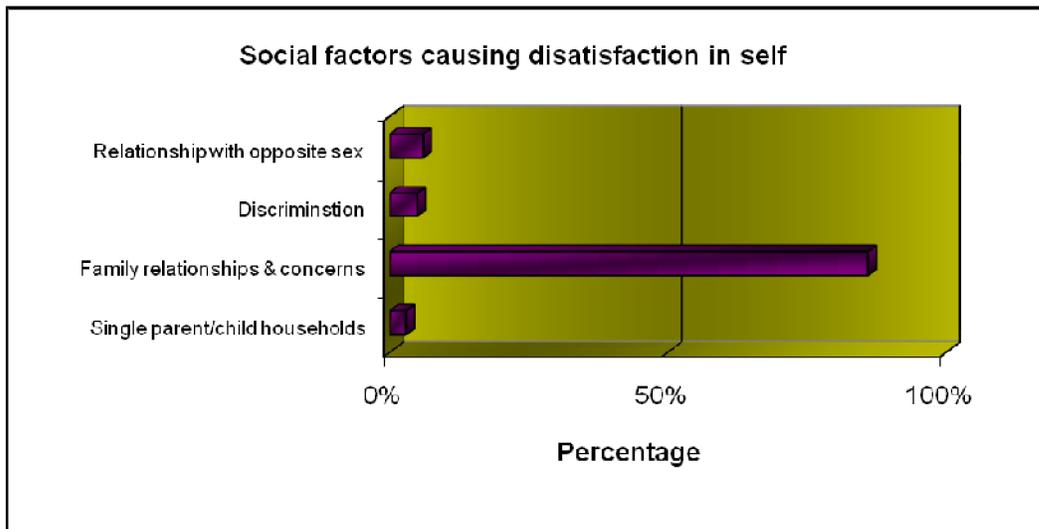
Stressors originating from poor self perceptions (self-image or lack of self-control) were reflected in the second largest tally of 165 responses towards adolescents’ experience of psychological dissatisfaction. Issues such as negative perceptions regarding their appearances and their decreased sense of self-esteem when being teased by their peers (37% of 446 responses) were found to be the most frequent causes for adolescent dissatisfaction. Statements such as, *“I sometimes feel extremely dissatisfied with my body. I blame myself for everything,”* (response 12) and *“A lack of self-esteem. When you get put down,”* (response 568), were reported by adolescents as reasons for their frustrations.

Unacceptable behaviour contributed a total of 40 responses (9% of 466 responses) towards the experience of distress in adolescents. Responses were indicative of poor behavioural regulation and personal attacks on others. One respondent sums it up with the

following statement: *“When there is no trust in a relationship. I’m particularly fond of destructive criticism and oppression of others,”* (response 487) and *“I enjoy arguing with other persons and will not accept correction from others,”* (response 46).

Factors that made a smaller contribution such as lack of diversity and disrupting of schedules (having limited choices and not being able to meet personal goals or deadlines due to poor management) contributed 2% of the total number of responses.

Table 3: Social stressors causing dissatisfaction in adolescents: Personal-dispositional



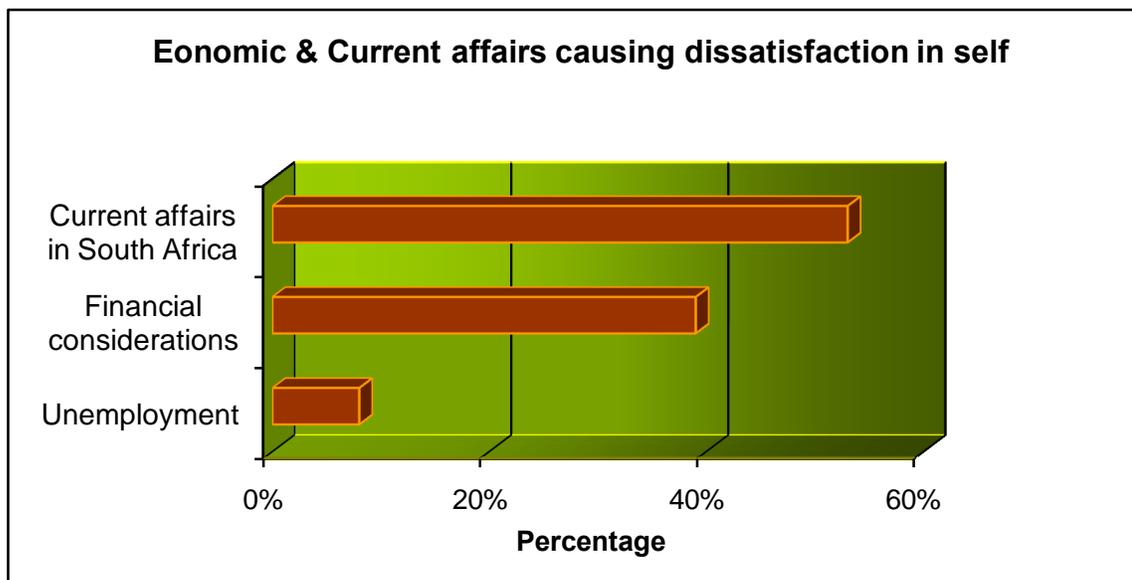
Responses = 325

A tally of 325 responses reflected the social dimension. Table 3 indicates family relationships and concerns as the overwhelming social factor reported by adolescents as a cause of dissatisfaction. A total of 280 responses (86% of 325 responses) from participants, related to issues of family and relationship concerns. Issues such as having family arguments, acting in ways that disappoints one’s parents or having to compromise in order to keep the peace in the family were reported as primary concerns leading to the experience of distress in adolescents. Statements such as, *“When I do something that I know disappoints them”* (response 171) and *“When there is a problem in the house and I perhaps*

*talk about it and my parents do not understand. I have to pretend that I'm happy in order for the family to be satisfied. However, I'm not really happy" (response 245).*

A smaller number of responses (14% of 325 responses) focused on relationships with the opposite sex (romantic relationships) which explained 6%, discrimination (cultural, racial and sexual) which contributed 5% and single or child-headed households (parents are not working or ill due to AIDS) which contributed 3%.

Table 4: Economic and current affairs contributing to dissatisfaction in adolescents (personal-dispositional)



Responses 72

The contribution of the factor economic and current affairs was comparatively small when compared to psychological and social factors, as responses tallied 8% (72 of 877 responses) of the total number of responses. From Table 4, results indicated that current affairs in South Africa were a primary contributor in the experience of adolescent dissatisfaction. Adolescents reported feeling uncertain about their futures, concerned about the escalating rates of violence, abuse, corruption and where they fit into the bigger picture of the new democratic dispensation as they still viewed racism and prejudice as active of the South African society. Respondents offered 38 responses (53% of 72

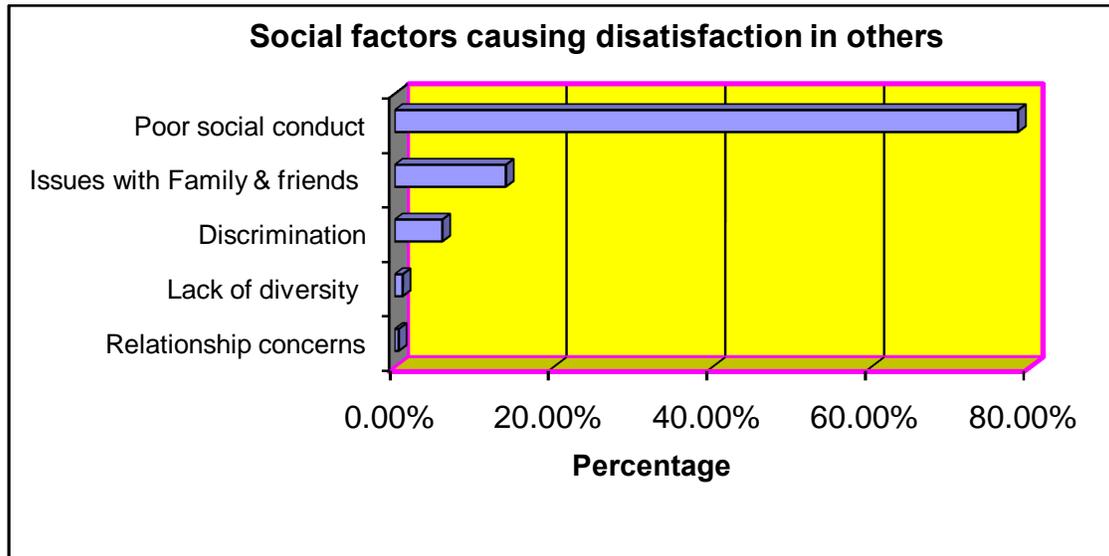
responses) as issues of concern regarding their future expectations. Statements such as, *“I worry if my studying is useful in our country, because what will happen to me if I get matric and I still can’t find a job”* (response 471) and *“The corruption and its negative influences on me”* (response 542) as well as *“South Africa does not give you opportunities”*(response 546) are reflective of the perceptions held by adolescents. Finance was another factor mentioned under the economic and current affairs dimension. A total of 28 respondents (39% of 72 responses) stated that financial issues contributed to adolescent distress. Statements such as, *“When I ask for money from my father he ignores me. This coming Friday we have a word-school in town and because of money I can’t go”* (response 29) and *“My mother does not earn enough money for me to further my studies next year...but there just is not enough money”* (response 560) reflected adolescents’ experiences regarding financial constraints in their lives. Unemployment was mentioned as a third factor contributing to economic and current affairs that causes dissatisfaction in adolescents. A small number of 6 responses (6% of 72 responses) reflected adolescents experiences of living in households with minimal or no income.

Biological factors related to the effects that substance abuse, sex-related incidents and teenage pregnancies (3%) has on adolescents, as well as the spiritual (1%) aspects such as lying and deceiving others, provided a small contribution to the overall dissatisfaction experienced by adolescents.

### **CONTEXTUAL FACTORS CAUSING DISSATISFACTION IN ADOLESCENTS**

Contextual factors reflected 570 responses related to various dimensions affecting adolescents. As can be inferred from Table 5, the social factors (328 of 570 responses) included five stressors caused by others which contributed towards adolescents’ experience of dissatisfaction. Poor social conduct was experienced as the primary contributor of adolescent dissatisfaction, contributing a tally of 256 responses (78.5% of 328 responses). Issues highlighted by participants focused on the lack of respect among peers or from significant others due to teasing, bullying and embarrassing each other without regard for the consequences of their behaviour.

Table 5: Social factors causing dissatisfaction in others

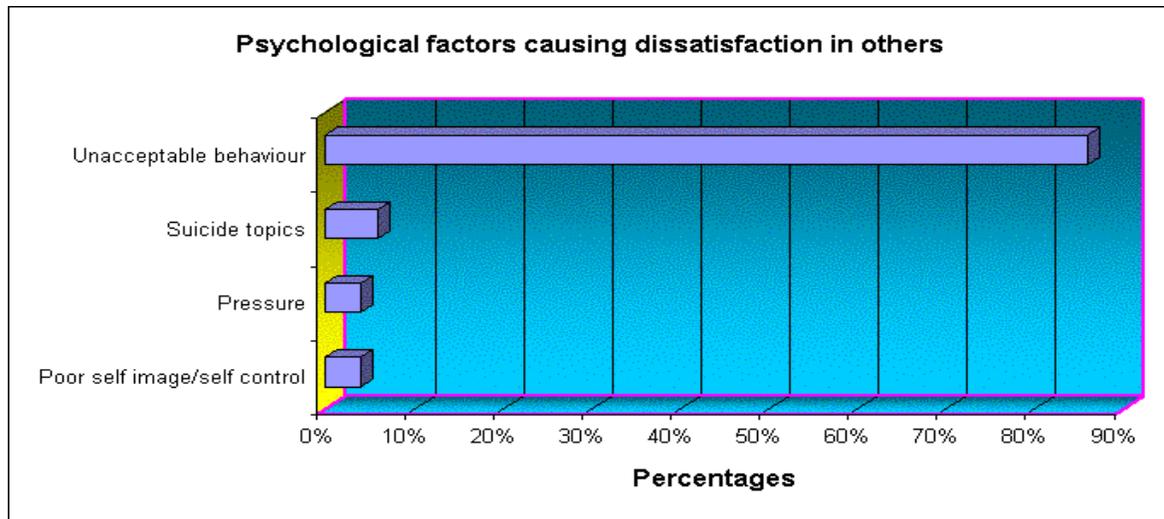


Responses 328

Examples of statements reflecting this type of behaviour included, “*Blackmailing, bullying, people that do negative things to others, people who do not care about others*” (response 74) and “*When people treat others badly, I start feeling bad too*” (response 80), as well as “*When the teacher says to me that I will not be a success in the future*” (response 84). Adolescents highlighted family issues and friendships as the second biggest social concern that contributed towards their experience of dissatisfaction. In total, 46 responses (14% of 328 responses) reflected why adolescents experienced dissatisfaction within the social dimensions of their lives. Statements such as, “*When my parents shout at me almost every day for something that I did not do...*” (response 230) and “*When things go wrong at home I feel like killing myself*” (response 246), as well as “*Undisciplined friends and pressure from friends*” (response 311), were some of the statements indicative of how adolescents are being distressed within their social environment. Discrimination between races and cultures as well as within the school environment contributed 7% or 23 responses, while relationship (concerns regarding how others treat you) contributed 1% (3 responses) towards adolescents’ experience of stress.

Regarding influences from important others, psychological experiences (140 of the 570 contextual responses) from adolescents identified the following four factors: Unacceptable behaviour, suicide topics, pressure from others and a poor self-image or self control (see Table 6).

Table 6: Psychological factors causing dissatisfaction in others (contextual)

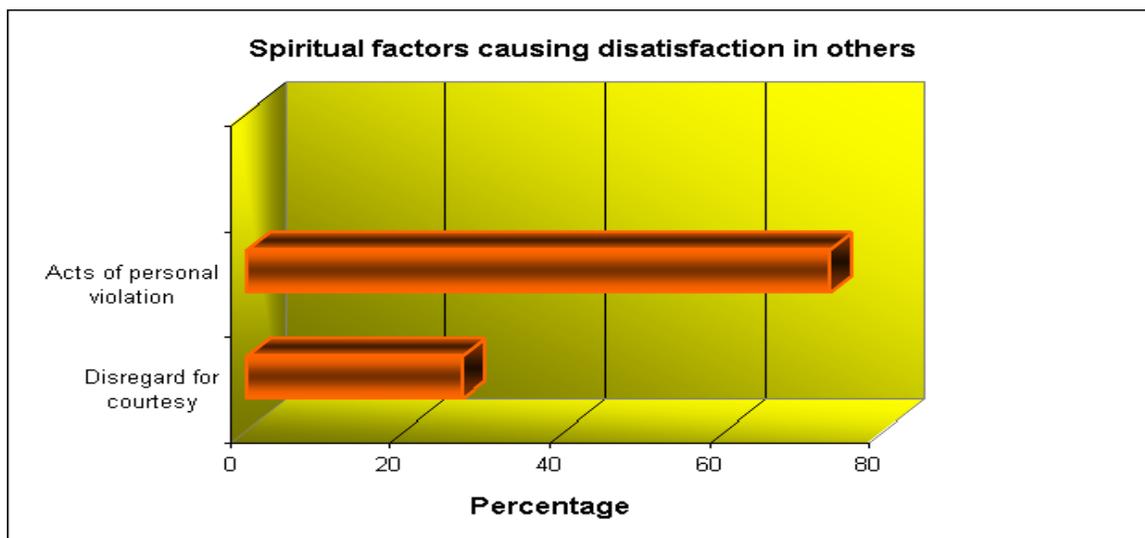


Responses = 140

Unacceptable behaviour offered the largest number of responses, totalling 120 (86% of 140 responses) in explaining the psychological dimension. The primary concerns associated with unacceptable behaviour related to how adolescents did not appreciate the way they are treated by their peers or by authority figures. Typical statements made by learners, such as *“When friends stab you in the back or suddenly start ignoring you”* (response 167) and *“People who tell me that I’m worth nothing. They tell me that I’m going to be like my parents”* (response 307) as well as *“When my friends say bad things to me”* (response 84) reflect adolescents’ psychological responses as influenced by others. A few adolescents reported on the psychological stressors associated with suicide topics (8 responses), feeling pressured by others’ expectations of them (6 responses) and having a poor self-image and feeling uncertain about themselves (6 responses).

As inferred from Table 7, spiritual factors reflected 75 of the 570 contextual responses. Spiritual factors which are value-based, moralistic principles concerning right and wrong, make a 13% (75 responses) contribution in the overall responses leading to dissatisfaction in adolescents as experienced from others. A tally of 55 responses (73% of 75 responses) indicated that acts of personal violation from others were experienced as dissatisfying by adolescents. Concerns highlighted were related to issues of moral violations experienced from other persons or against their property, violence or the potential consequences of violence, parental violence and child-parent violence. Statements reflecting adolescents experiences were as follows: *“When someone’s things are taken without his consent”* (response 92) and *“When a man hits a girl and says terrible things to her, I feel like killing him”* (response 348).

Table 7: Spiritual factors causing distress in others (contextual)



Responses = 75

Disregard for courtesy, a softer form of social violation, constituted 19 responses (27% of 75 responses) in explaining adolescent dissatisfaction from others. Primary issues focused on a lack of respect amongst adolescents or other significant figures as they commit minor violations such as passing bad remarks at each other, as well as being rude and unfriendly to each other. Responses reflecting values of personal disregard for others were

encapsulated in statements such as, *“People who are unfriendly or people who fight”* (response 162) and *“When everyone passes remarks about my appearance or when everyone speaks badly about me”* (response 220).

A small number of responses (4% of 570 responses) reflected the biological dimension, namely concerns that adolescents had about having sexual relationships (2 responses), the effects of pregnancy on young women, as well as the implications of HIV/AIDS (1 response).

## **RECAPITULATION AND DISCUSSION**

The focus of this study was to explore and describe which stressors adolescents viewed as contributing to their experience of distress. The general experiences reported by adolescents emphasised the importance of psychological and social factors as contributing to adolescent stress (Louw & Louw, 2007; Peltzer, 2008). From these diverse experiences, the following themes emerged as the most frequently cited factors that contributed to respondents' experience of stress.

Adolescent experiences of dissatisfaction were explained along two pathways, namely personal-dispositional and contextual. A comparison between the two pathways suggested that adolescents provided greater numbers of personal-dispositional responses which implied that adolescents experienced substantially more personal than contextual stressors. Having more personal stressors could be an indication of participants' developmental stage, as adolescence is a period of increased personal awareness in which the theme of egocentrism re-emerges (Mayekiso, 1992). Another possible reason would be related to the intensity at which adolescents experience emotions, that makes personal experiences more conspicuous and tangible than in other developmental stages (Louw & Louw, 2007). Lastly, those who do not have the necessary coping skills to regulate their emotions find it stressful to deal with negative emotions (Goldstein & Brooks, 2006).

On the psychological dimension of responses the following dispositional factors were reported by participants. Adolescents reported experiencing a high frequency of stressors,

such as generally feeling stressed, difficulty with accepting own identity, finding adolescence a difficult stage to manage, not feeling very positive about themselves and a tendency towards negative self perceptions. The findings are consistent with literature which indicates that challenges related to developmental tasks can negatively affect participants' self-image, academic achievements and social relationships, which increases the experience of stress on adolescents (Louw & Louw, 2007, McGraw et al., 2008; Sun & Hui, 2006). An unsupportive environment may contribute in delaying certain maturational processes within the adolescent, thereby creating a sense of insecurity or uncertainty within them regarding how to engage with their world (LaRue & Herrman, 2008; Horstmanshof, Punch & Creed, 2008).

Psychological responses pertaining to unacceptable behaviour towards others, such as poor self-regulation towards others (being overcritical or judgmental, not respecting others opinions and being generally argumentative) were identified as personal stressors. These results are supported by literature (Myers, 2008), which suggests that persons with a negative attributional style are more inclined to act in socially inappropriate ways towards others (Myers, 2008). An alternative explanation could be found in the fact that adolescents may be lacking the necessary coping abilities. Inadequate coping skills were found to exacerbate dealing with emotionally competitive situations in which case adolescents may act out emotionally or adopt an emotionally defensive attitude (Erwin, 2002; Scales, 1999; Southam-Gerow & Kendall, 2002).

The contextual contribution of psychological factors, such as being treated in a psychologically degrading manner and experiencing a lack of trust and respect within their peer groups, appeared to be of great concern to adolescents. Research findings indicate a lack of life-skills (assertive and communication skills), which adolescents need to effectively deal with others' actions. Concurring literature by Berk (2002) as well as Paulson and Everall (2001), found that where adolescents afforded each other the necessary respect and opportunities, they contributed towards increasing their skills in

dealing with stressful situations. Continued exposure to peer isolation and rejection conversely increases their levels of stress, as well as the chance of developing anxiety-related conditions (Barnow et al., 2005).

With regard to personal social factors, such as poor family bonding, behaving in antagonizing ways towards the family, and causing conflict in the family were identified as primary social stressors experienced by adolescents. Social concerns mentioned by participants appear consistent with literature, as family structures are functional havens of safety and the primary support base for family members. Weakening of supportive structures expose adolescents to increased levels of stress, conflict and a negative environment of blame, powerlessness and dejection (Larson et al., 2002; McGraw et al., 2008). Within such conditions adolescents are more likely to internalise and incorporate such perceptions as part of their daily interaction, thereby increasing their likelihood of initiating socially negative behaviours (Naidoo, 2000; Sun & Hui, 2007).

Social factors of a contextual nature such as poor social conduct provided a meaningful contribution to the experience of adolescent dissatisfaction. Concerns such as gossiping, bullying, passing inconsiderate and hurtful remarks as well as teasing from others, were mentioned as stressors. Findings indicate that adolescents experience interpersonal and social interaction as stressful experiences. These concerns agree with research findings which emphasise the importance of a supportive social environment (Barnow et al., 2005). Adolescents who possess inadequate coping abilities or resources are more likely to behave in socially inappropriate or defensive ways (Chong et al., 2006; Hobfoll, 1988, 1998; Scales, 1999).

Another social factor, family and friendships, provided further meaningful information concerning adolescents' experience of dissatisfaction. Experiences of dissatisfaction reported by respondents related to poor family relations, especially child-parent, romantic relationships plagued with mistrust and deception, as well as the pressure placed on adolescents to conform or face rejection, further increases their levels of stress. These

findings are in agreement with research that emphasised the fact that continued exposure to poor parent-child relationships was associated with poor social skills, which, if transferred to other interaction spheres, may increase the likelihood of problematic peer relationships (Finkernauer & Engels, 2005; Simões et al., 2008). Problematic peer relationships infuse a sense of peer disconnectedness which enhances feelings of rejection and non-acceptance between peers (McGraw et al., 2008)

A smaller number of personal-dispositional responses pertained to adolescents' concerns about economic factors and current affairs as a major cause of dissatisfaction. Uncertainty about their job security, discrimination, finances, violence, corruption in the country, as well as concern about reverse discrimination, were highlighted as stressful concerns. Dawes and Finchilescu (2002) as well as Grootboom (2007) are of the opinion that this is a common phenomenon in minority group contexts, as these groups may suffer from a sense of loss from a former, more favourable position. Although small in contribution, the result indicated that a considerable number of adolescents attributed some of their stress experiences as directly being influenced by the degree to which their needs are met. The debilitating effect of insufficient finances may contribute towards creating unstable home environments, which may in turn contribute to adolescents' experience of stress (Diekstra & Garnefski, 1995). In light of the NCP being one of the poorest provinces in South Africa, a higher response-rate to the lack of financial resources was expected. Comparing the large number of responses related to issues involving the self, family and friends the systemic perspective might explain why these systems have a stronger day to day impact on the experiences of adolescents. Respondents show decreased awareness of the larger socio-political systems, which they may perceive as more distant, thereby limiting its impact on their awareness. Another reason for this inconsistency could be related to narrow socio-economic strata, with little difference between the poor and the rich. Additionally participants may have learnt to accept their limited resources and level of poverty, thus not viewing it as problematic or overwhelmingly stressful (Goldstein & Brooks, 2006). Contextual factors related to the spiritual dimension (conduct which conflicts with adolescents' values) offered a small yet meaningful contribution in explaining adolescent

dissatisfaction. Adolescents raised concerns about persons who violated their person or properties and committed criminal acts, such as assault and theft. Supportive findings by O'Keefe (1996) indicated the importance of adolescents' home environments in influencing peer values either positively or negatively, as these values are carried into adolescents' wider social world. Another reason is the influence of peer-group pressure, where demands may be made on peers to behave in ways that morally transgress on others in their attempts to gain acceptance in peer groups (Dodge & Price, 1994; Poulin & Boivin, 2000).

### **RECOMMENDATIONS AND LIMITATIONS OF STUDY**

In cognisance of the information obtained from this study, the following recommendations should be considered. Results have indicated that adolescents have a need for greater emotional and behavioural regulation, as well as a need for improving their social skills. Social practitioners can help by drawing up intervention programs aimed at improving emotional awareness of own and others' emotions, as well as developing effective interpersonal and social skills. Additionally, such programs can be extended to parents and teachers, so that they can learn how to play a more positive role in adolescents' lives. This is also an opportunity for parents to gain greater understanding into the intensity with which adolescents experience emotions and how important internal processes are to them. This will hopefully create a greater understanding within parents regarding how their actions can affect adolescents and what they can do to minimise the negative emotional impact on their children.

Future research can contribute valuable information to the findings of our current study if further differentiation is made between adolescents from different socio-economic backgrounds, different genders as well as from different racial groups. It is further recommended that studies be undertaken that compares early and late adolescents with regard to which variables appear more salient at different developmental stages. This could be obtained with cohort studies or using a longitudinal investigation. Using more than one

qualitative method, such as following up narrative data with focus group discussions, would allow exploration of highlighted concerns that were mentioned by participants. Researchers should furthermore explore the possibility of comparing groups qualitatively with regard to different developmental stages to see if stressors differ between age-groups.

The IPA has been found to be a very useful design approach as it offers an in-depth understanding of individuals' subjective experiences of their environment. However, criticism, such as that the IPA does not sufficiently acknowledge the role that language plays in constructing, rather than just reflecting reality, must be kept in mind.

Using a qualitative method of research allowed a rich supply of data to be collected, which was a more natural and unassisted manner of data collection, allowing adolescents to have their voices heard. This information was meaningful as it presented concerns that were foremost to adolescents and presented a window into the world of adolescents' experiences. This study serves as a baseline data collection upon which further research can be done in the Northern Cape Province or elsewhere.

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## **CHAPTER 5**

### **ARTICLE 4**

# **RACIAL DIFFERENCES IN COPING AND SUICIDAL IDEATION AMONG ADOLESCENTS FROM THE NORTHERN CAPE PROVINCE**

## **RACIAL DIFFERENCES IN COPING AND SUICIDE IDEATION AMONG ADOLESCENTS FROM THE NORTHERN CAPE PROVINCE**

### **Abstract**

*Adolescents are being exposed to a myriad of environmental and socio-political changes with which they are expected to cope. The way that adolescents cope with such exposure plays an important role in determining their health and well-being, since an inability to cope effectively predisposes them to stress and suicidal thoughts. The aim of this article is to investigate the relationship between the coping strategies employed by adolescents from different racial groups and their level of suicidal ideation. A non-experimental and cross-sectional research design was used, as well as a criterion group design and correlation design. A stratified sample of 600 learners from grades 10-12 was gathered from ten schools in the Northern Cape Province. The Suicidal Ideation Questionnaire for Adolescents (Reynolds, 1988) and the Cope Questionnaire (Carver, Scheier & Weintraub, 1989) were used to gather information from the research participants. The results suggested that black participants reported the highest levels of suicidal ideation and that Coloured and black participants made greater use of dysfunctional coping strategies than white participants. A significant correlation emerged between suicidal ideation and emotion-focused coping in the case of the Coloured and white participants and between suicidal ideation and dysfunctional coping with regard to the black participants. The coping strategies of venting of emotions (+), denial (+), turning to religion (+), restraint coping (-) and acceptance (-) all showed a significant correlation with suicidal ideation. In conclusion, it appears that certain modes and strategies of coping are significant in the way that they influence suicidal ideation. However, further studies need to be undertaken to explore the underlying reasons for the high levels of dysfunctional coping still prevalent among some groups in particular.*

**Keywords:** *Coping, coping strategies suicidal ideation, problem-focused coping, emotion-focused coping, dysfunctional coping, racial differences*

## **INTRODUCTION AND LITERATURE REVIEW**

The recent socio-political transformation that has taken place in South Africa, along with the many diverse cultural beliefs and languages, has exposed adolescents to an environment of increasing challenges and social demands. Fitting into the newly transformed social arena requires additional adjustment on the part of adolescents and this may increase their risk of developing negative health outcomes such as increased levels of stress, depression, helplessness and suicidal ideation (Meehan, Peirson & Fridjhon, 2007). In dealing with these personal and contextual challenges, adolescents may employ inappropriate coping mechanisms that are associated with negative outcomes such as violence and drug addiction (Santrock, 2003), because their coping abilities are limited when it comes to managing such challenging situations (Israelashvili, Gilud-Osovitzki & Asherov, 2006).

Researchers agree that one of the big differences between well-being and maladjustment is related to limited coping resources (Hutchinson, Stuart & Pretorius, 2007; Hobfoll, 1988, 1998; Santrock, 2003). Hobfoll (1988) considers resources to include objects, personality traits, circumstances and energies that the individual views as useful in achieving a desired goal. As resource availability increases, an individual's ability to make successful adjustments within the environment simultaneously increases. Having adequate resources thus increases an individual's ability to use more effective coping strategies which in turn enhances the individual's ability to make appropriate decisions (Hutchinson et al., 2007). Effective coping strategies have been found to act as a buffer against suicidal ideation, while improving an individual's general well-being (Frydenberg & Lewis, 2004; Meehan et al., 2007).

Suicidal ideation shows some correlation with racial differences, as various cultural groups reflect differing suicidal patterns (Statistical Notes, 2000). Researchers attribute these differences to the nature of the different group experiences and the way that these

experiences influence coping (Burrows & Laflame, 2006; Meehan et al., 2007; Snyder & Lopez, 2007). According to Plaaitjie (2006) it is not only the group experiences of a cultural nature, but the unequal distribution of resources that may account for coping differences. Very few studies have been conducted on the interactive relationship between coping, racial differences and suicidal ideation, while even fewer studies have specifically focused on examining the coping experiences within different racial groups and their relation to suicidal ideation in South Africa (Meehan et al., 2007). It is therefore important to explore the role that coping plays in the different racial groups and how this influences the levels of suicidal ideation in adolescents. Being relatively inexperienced to the unveiling world of social experiences, adolescents former protective environment has now slowly been replaced with a world of increasing stressors and challenges to which they have had little experience. Considering this inexperience and limited coping skills, the importance of coping cannot be further emphasised as a need (Louw & Louw, 2007; Scales, 1999).

### **Definition of coping**

Coping is defined as the efforts that people make to manage situations that have been assessed as potentially harmful or stressful (Caltabiano, Byrne, Martin & Sarafino, 2002). Latack and Havlovic (1992), emphasise that coping does not necessarily imply that all outcomes will reach a positive conclusion. Coping can be conceptualised from many different perspectives. According to the dispositional approach, individuals show a strong preference for specific coping behaviour and the choice of coping behaviour is significantly influenced by stable personal traits (Haan, 1993). Another view, namely the contextual approach, describes coping as a unique process in response to a specific stressor, which entails using active and cognitive appraisal as mediating mechanisms in responding to stressful situations (Suls, David & Harvey, 1996). Using both the aforementioned approaches in explaining coping has paved the way for an integrative approach, of which the Integrated Stress and Coping Model of Moos and Schaefer (1993) is a good example (Holahan, Moos & Shaefer, 1996). This model suggests that stressors and resources emanating from the personal level (dispositional characteristics) and the contextual level

(family and social environment), as well as life crises and transitions, influence how individuals appraise and cope with challenges and how these coping strategies affect health and well-being (Moos & Schaefer, 1993). All components of the model act in a bidirectional manner to influence each other.

### **Modes of coping**

A distinction can be made between problem-focused coping and emotion-focused coping (Crompton, 2005; Lazarus & Folkman, 1984; Caltabiano et al., 2002). Problem-focused coping includes the use of strategies aimed at directly altering or changing the stressor and the way one thinks and reasons about a stressful situation (Compton, 2005). Within the broader category of problem-focused coping a number of different coping strategies are identifiable, such as active coping (direct action), planning, prioritising by suppressing other competing activities, restraining oneself till the right moment to act, as well as seeking advice and information from others (Carver et al., 1989; Rothmann & Van Rensburg, 2002). Emotion-focused coping is viewed as the regulation of one's own emotional responses to manage stressful situations (Compton, 2005) and constitutes a number of different coping strategies, such as seeking emotional support from others, reinterpreting situations in a positive manner, fully accepting the reality of a situation or finding strength in religion as a source of support (Carver et al., 1989; Rothmann & Van Rensburg, 2002).

### **Efficacy of coping**

The two basic modes of coping (emotion-focused coping and problem-focused coping) have been described as more complementary than exclusive. However, problem-focused strategies appear to be more useful where people believe that the situation can be changed constructively by their efforts, while emotion-focused coping strategies appear to be more functional when dealing with situations which are perceived as unchangeable (Carver et al., 1989; Lewis & Freydenberg, 2002). Less common coping strategies termed

dysfunctional/maladaptive coping strategies have been identified by Carver et al. (1989). Dysfunctional coping includes strategies such as denying the reality of stressful situations and ignoring or avoiding stressful situations both behaviourally and mentally, as well as indulging in alcohol and drug consumption associated with negative health outcomes (Carver et al., 1989; Hobfoll, 1988; Meehan et al. 2007; Tomberg, Toomela, Pulver & Tik, 2005; Spirito, Francis, Overholser & Frank, 1996).

### **Coping and Suicidal behaviour**

Researchers have found a significant relationship between the use of coping skills and suicidal behaviour. Using effective or adaptive coping skills has been shown to lead to a decrease in the reported levels of suicide ideation and the frequency of suicide attempts and re-attempts among an adolescent population (Goldston et al., 2001). Higher levels of suicide ideation and behaviour have in turn been reported for those with less exposure to positive coping skills (Israelashvili et al., 2006). One of the reasons for the increased incidence of feelings of helplessness and hopelessness among adolescents can be related to a lack of sufficient coping skills at their disposal (Israelashvili et al., 2006).

The use of problem-focused coping strategies among a group of students has been reported to increase expectation of a positive outcome (hopeful) and similarly improve levels of motivation and satisfaction with peer relationships (Elliot & Marmarosh, 2001; Lewis & Frydenberg, 2002; Rothmann & Van Rensburg, 2002). Strategies such as undertaking active planning and using opportunities appropriately to reach success (restraint coping) have been associated with high levels of self-esteem (Folkman, Lazarus, Dunkel-Schetler, DeLongis & Gruen, 1986; Kleinke, 1998) and consequently act as a buffer against suicide ideation (George, 2005). Regarding the use of emotion-focused coping strategies such as turning to religion and seeking emotional support, researchers have concluded that adolescents are able to manage stressful experiences more successfully through such strategies and that they are able to increase their level of optimism about dealing with future challenges (Bryant-Davis, 2005; Rutter & Estrada, 2006). According to

Aspalan (2003) and Madu and Matla (2003), turning to religion not only helps to mediate between stressful experiences, but has been found to decrease the effects of suicidal ideation. Excessive venting of emotions, however, may be associated with the creation of negative environmental circumstances which can increase a person's risk of developing feelings of insecurity and a low self-image and self-esteem (Barnow, Lucht & Freyberger, 2005; Wilson et al., 1995). Some coping strategies such as self-blame or acceptance of stressful situations may be considered less adaptive and may contribute towards symptoms of anxiety and depression (Garnefski, Kraaij & Spinhoven, 2001). Alternatively some situations where you cannot actively do something to decrease the stressful situation (problem-focused coping), emotion-focused coping strategies appear more useful such as acceptance where an individual can still positively regulate their emotions towards growth and an eventual positive outcome amidst the presence of a stressor (Carver, Scheier & Weintraub, 1989; Myers, 2007). During the initial stages of a traumatic event, coping strategies such as denial or avoidance have been found to decrease levels of anxiety, thereby assisting the coping process. However, these strategies are limited to the duration, nature and type of stressor experienced and is only effective in the initial stages (Anderson, Marwit, Van den Berg & Chinball, 2005; McCrae & Costa, 1986). In a review of literature, James and Gilliland (2001) noted that suicidal patients typically displayed a passive, avoidant and fatalistic outlook towards their circumstances. Adolescents are increasingly using alcohol and drugs as a means of coping with their problems, which inadvertently puts them on a pathway to risk and destruction (Mpiana, Marincowitz, Ragavan & Malete, 2004). In a study reviewing the relationship between alcohol, coping and suicidal behaviour, Sher (2005) found alcohol consumption decreased an individual's ability to generate effective coping strategies, while it increased the usage of maladaptive coping behaviours and the risk for suicidal behaviour.

Other variables that are considered to influence coping and suicidal behaviour are culture and racial background (Gutierrez, Meuhlenkamp, Konnick & Osman, 2005). According to Schlebusch (2005), an increasing degree of identification with more Western lifestyles has significantly altered the picture of suicidal behaviour among all South Africans. A study

comparing cultural influences found that whereas most Western cultural groups appeared to be more problem-focused, collectivistic cultures seemed to be more emotion-focused (Snyder & Lopez, 2007; Magaya, Asner-Self & Schreiber, 2005). Cultural factors such as the encouragement of emotionally dependent relationships in unmarried children, an emphasis on respect for elders as decision-makers, the encouragement of non-confrontational behaviour and the use of avoidance strategies such as wishful thinking, social distancing and self-blame, could potentially play a role in this respect (Du Toit, 1999; Magaya et al., 2005). In a cross-racial study (Gutierrez et al., 2005), black American participants appeared to have a more positive outlook on life than white participants who reported higher levels of suicide ideation. Some South African (SA) studies have revealed statistics indicating a similar trend among local white participants when comparing the suicide mortality rates of different groups (Statistical Notes, 2000; Burrows & Laflame, 2006). The high suicide rate amongst white groups within the SA context could be attributed to socio-political changes and the accompanying disillusionment as to the loss of a privileged position in society (Burrows & Laflame, 2006; Flisher, Liang, Laubscher & Lombard, 2004).

Sheu and Sedlacek (2004) investigated coping differences between Asian, white and black American students and found that Asian students were more pessimistic and showed a greater tendency to use avoidance coping strategies than did white and black Americans. As a previously disadvantaged group, black South Africans appear to use similar avoidance coping strategies such as behavioural and mental disengagement, as well as alcohol and drug disengagement (Du Toit, 1999). Possible explanations for these differences may be related to collectivistic cultural influences which encourage harmony, non-confrontation and interdependency in social relations (Sheu & Sedlacek, 2004). The unequal distribution and access to resources have also been found to contribute to the differences (Du Toit, 1999). While investigating the utilisation of coping strategies among a multiracial American school population (grades 7 to 12), Chapman and Mullis (2000) found that African-American adolescents made greater use of self-reliance, religion, diversion, close friends, relaxation and social support, whereas Caucasian Americans tended to use venting

of emotions and avoidance coping strategies more frequently. In explaining the coping differences, the authors suggested that minority groups felt outnumbered and consequently developed a sense of disempowerment which increased their feelings of anxiety. Anxious groups were more likely to use emotion-focused strategies such as the venting of emotions (Chapman & Mullis, 2000). South African studies in this regard yielded mixed results as Du Toit (1999) found that white participants appeared to make greater use of reasoning and planning, turning to religion and venting of emotions than did participants from other racial groupings. However, Plaaitjie (2006) concluded in his study that black participants primarily turned to religion, Coloured participants to alcohol and substance disengagement and white participants to acceptance. Plaaitjie (2006) furthermore suggested that the socio-political past of South Africa (SA) may have created circumstances that bore an influence on coping behaviours within different racial groups. Aspects of cultural and racial differences must be interpreted against the background of differences with regard to environmental constraints and access to resources as experienced by different racial groups in SA. Although social and environmental changes were brought about by the socio-political changes in SA, socio-economic disparity between groups is still a significant reality.

Another factor that appeared to have a strong influence on coping and suicide amongst adolescents was the advent of colonisation and its aftermath effects. According to MacNeil (2008) and Settee (2009) the effects of colonisation were found to have a significant effect on the high suicide rates among populations where colonisation occurred. Having been exposed to colonisation South African and especially black South African's youth did not appear to show similar suicidal behaviour as countries such as Canada and Australia. Possible reasons for this deviation, could be attributed to the history and socio-political background of the South African black population who have always been the majority group, that never accepted or adopted an attitude of political disempowerment, and remained a strong political opposition till a democratic process was negotiated for all South Africans.

The steady increase in adolescent suicide rates within South Africa (Statistics South Africa, 2005), particularly in the Northern Cape Province (Van den Berg, Personal communication, 28 September, 2006), has become a cause for concern among researchers. If we take cognisance of the important role that coping skills play in an adolescent's ability to manage environmental challenges effectively, it is imperative that further research explore current coping skills and find ways to complement and strengthen existing coping behaviour to the benefit of all adolescents (Cunningham, Brandon & Frydenberg, 2002; Hutchinson, Stuart & Pretorius, 2007; Meehan, Peirson & Fridjhon, 2007).

The objective of this study is firstly to explore the differences in the use of coping strategies as reported by adolescents of different racial groups and secondly, to determine the influence of coping strategies on their level of suicidal ideation.

## **METHODOLOGY**

### **Research design**

In order to realise the objectives of this study, a non-experimental, cross-sectional research design was used. For the purposes of investigating the differences between racial groups with regard to their use of coping strategies, a criterion group design was employed while a correlational design was used to determine the influence of coping strategies on the level of suicidal ideation in respect of the different racial groups.

### **Participants**

A total of 590 participants (grades 10 to 12) were selected from ten schools representative of all six regions in the Northern Cape Province (NCP) by means of a stratified sampling technique. Some defining characteristics of participants were as follows:

- The mean age of the participants was 17.3 with a standard deviation of 1.66.

- Females constituted 267 of the research sample, while males constituted 323 of the participants.
- The participants were from the following ethnic backgrounds: Coloured (280), black (172), white (133) and Asian (5). Owing to the small number of Asian participants, only the remaining three groups were used in further analyses.

### **Data gathering**

The researcher was involved in the collection of the needed data in collaboration with psychologists and psychometrists from the Department of Education (NCP). Permission was obtained from the Department of Education and school principals to conduct the study at the relevant schools. Informed consent was given by parents and participants. Participants were informed about the rationale behind the study, the voluntary nature of their participation and right to withdraw from the study at any time as well as confidentiality and anonymity of all responses. Those who decided to participate were asked to complete a consent form which constituted the first page of all questionnaire booklets. In order to comply with ethical standards of social research, professional staff was available to assist participants with any questions, as well as to assist where emotional support and referral information were needed. Learners were requested to complete a number of questionnaires as part of the data collection process. Learners were assessed in groups of about 20 to maximise rapport. Testing took place over a period of three hours with a break of 30 minutes during which refreshments were served.

### **Measuring instruments**

The following instruments were used to gather information on variables:

- *The Suicidal ideation Questionnaire for Adolescents* (Reynolds, 1988) was employed to measure the frequency and intensity of suicidal thoughts. Internal consistency coefficients of between 0.93 and 0.97 with regard to an American sample were reported for this measuring instrument (Reynolds, 1988). The total suicidal ideation score was used as a measure of the level of suicide ideation. The higher the score

obtained by participants, the higher the level of suicidal ideation. No evidence could be found of South African studies using this instrument on adolescent groups.

- *The Cope Questionnaire* (Carver, Schreier & Weintraub, 1989) measured the participants' frequency of use of different coping strategies. Alpha coefficients of between 0.45 and 0.92 were reported for this instrument as a whole (Carver et al., 1989). South African findings by Wissing (1996) reported alpha coefficients of between 0.39 and 0.90 for a university student population. The small number of items per subscale may have influenced the alpha coefficients negatively (Anastasi & Urbina, 1997). The different coping subscales were also combined by calculating the total scores for problem-focused, emotion-focused and dysfunctional coping subscales.
- *A self-compiled biographical questionnaire* with questions about the age and gender of learners, socio-economic status of parents, ethnicity and exposure to suicide, was used to gain demographic information from participants.

### **Statistical procedure**

Descriptive statistics (means, standard deviations) and alpha coefficients were calculated for all variables. A one-way MANOVA was performed to investigate the differences between coping strategies among different racial groups. The 1% level of significance was used as the criterion for the results. The Scheffe test was used to indicate which groups differed significantly with regard to the coping variables involved.

In order to investigate the extent to which the variance in suicide ideation among adolescents could be attributed to predictor variables (coping strategies and race), a hierarchical regression analysis for the three respective racial groups was performed. Race was measured on a nominal scale for the purposes of the hierarchical regression analysis with the following codes ascribed to different groups: 1 for Coloured, 2 for black and 3 for white participants. For the purposes of this study, the 1% level of statistical significance was considered. The effect size of all statistically significant variables was calculated to determine the practical significance of the findings (SPSS Incorporated, 2003).

## RESULTS

Before discussing the results of the research objectives, it is necessary to consider the calculation of the descriptive statistics (means, standard deviations, skewness and kurtosis) and the reliability of the variables concerned. This information was independently calculated for the respective participating groups as contained within Table 1. The coefficients for suicidal ideation and the modes of coping (problem-, emotion-focused coping and dysfunctional coping) were of acceptable consistency with the coefficients ranging from 0.954 (highest) to 0.65 (lowest). According to Nunnally and Bernstein (1994), coefficients above 0.70 are considered acceptable for non-cognitive constructs. It is important to note that when the different subscales were combined as one scale, the alpha coefficients increased considerably. The alpha coefficients of the coping subscales were relatively low, however this might be related to the small number of items per subscale. As can be inferred from the alpha coefficients presented in Table 1, the internal consistency of the Suicidal Ideation Questionnaire was very good for all three groups of participants (0.93 and higher). The alpha coefficients for the individual coping scales were considerably lower ranging from 0.25 to 0.80 with the majority of the alphas hovering between 0.4 and 0.6. Five alpha coefficients registered below 0.4 included Suppression of competing activities for the Coloured group and Acceptance, Venting of emotions, Mental disengagement and Behavioural disengagement for the black group. This might be related to language differences between the different groups. The small number of items per subscale (four items) might also have influenced the alpha coefficients (Anastasi & Urbina, 1997; Nunnally & Bernstein, 1994). Due to the very low alpha coefficients of the five subscales any significant results pertaining to these subscales for specific group mentioned, should be interpreted with caution.

**Table 1:** Descriptive statistics for all variables

Variable	Group	$\bar{X}$	s	Reliability (KR <sub>20</sub> )	Skewness	Kurtosis
Suicide ideation	Coloured	42,54	38,27	0,960	1,25	0,84
	Black	45,13	36,80	0,938	1,12	0,86
	White	26,06	26,06	0,954	1,82	3,29
Active coping	Coloured	11,48	2,49	0,473	-0,35	-0,13
	Black	11,87	2,45	0,481	-0,37	-0,47
	White	11,60	2,09	0,464	-0,26	0,49
Planning	Coloured	11,83	2,50	0,551	-0,39	-0,12
	Black	12,01	2,69	0,593	-0,42	-0,30
	White	12,26	2,33	0,684	-0,55	0,39
Suppression of competing Activities	Coloured	10,82	2,29	0,377	-0,06	-0,30
	Black	11,42	2,45	0,444	-0,18	-0,36
	White	10,91	2,18	0,500	0,01	-0,12
Restraint coping	Coloured	11,28	2,32	0,438	-0,21	-0,51
	Black	11,34	2,46	0,411	-0,12	-0,57
	White	10,84	2,55	0,638	-0,09	0,03
Seeking social support – Instrumental	Coloured	10,99	2,82	0,624	-0,40	-0,42
	Black	11,38	2,77	0,548	-0,51	0,01
	White	11,02	2,89	0,720	-0,49	-0,22
Seeking social support – Emotional	Coloured	10,69	2,86	0,588	-0,18	-0,55
	Black	11,70	2,71	0,551	-0,47	-0,09
	White	10,85	3,35	0,797	-0,26	-0,95
Positive reinterpretation and Growth	Coloured	12,15	2,52	0,557	-0,41	-0,29
	Black	12,33	2,27	0,407	-0,36	-0,16
	White	11,96	2,37	0,612	-0,27	-0,26
Acceptance	Coloured	11,38	2,44	0,446	-0,29	-0,31
	Black	11,86	2,32	0,351	-0,11	-0,66
	White	11,45	2,78	0,681	-0,37	0,01
Turning to religion	Coloured	12,76	2,65	0,616	-0,87	0,36
	Black	12,42	2,58	0,562	-0,67	0,26
	White	12,78	2,92	0,801	-1,14	0,80
Focusing on and venting of Emotions	Coloured	10,57	2,61	0,461	0,04	-0,53
	Black	10,67	2,40	0,254	-0,22	0,17
	White	10,47	2,85	0,675	-0,21	-0,24
Denial	Coloured	10,09	2,57	0,467	-0,13	-0,40
	Black	10,36	2,63	0,442	-0,08	-0,38
	White	8,74	2,83	0,712	0,29	-0,08
Behavioural disengagement	Coloured	9,67	2,57	0,438	-0,02	-0,49
	Black	10,02	2,54	0,373	0,05	-0,43
	White	8,75	2,59	0,650	0,18	-0,32
Mental disengagement	Coloured	10,83	2,57	0,404	-0,21	-0,43
	Black	11,01	2,53	0,397	-0,12	-0,37
	White	10,90	2,62	0,578	-0,07	-0,13
Alcohol and drug Disengagement	Coloured	1,63	1,02	-	1,37	0,42
	Black	1,53	0,96	-	1,64	1,27
	White	1,52	0,88	-	1,71	1,96
Problem-focused coping	Coloured	56,38	9,21	0,811	-0,27	0,54
	Black	57,99	9,10	0,792	0,02	-0,53
	White	56,59	9,28	0,867	-0,43	1,11
Emotional-focused coping	Coloured	57,52	8,59	0,763	-0,17	0,04
	Black	59,16	7,94	0,710	-0,24	-0,24
	White	57,44	9,88	0,853	-0,35	0,73
Dysfunctional coping	Coloured	32,11	5,48	0,565	-0,01	-0,34
	Black	32,87	5,52	0,557	0,08	-0,45
	White	29,64	6,69	0,801	0,42	0,91

Alcohol and drug disengagement only has one item

An investigation was undertaken to explore the significance of the differences between the suicidal ideation and coping strategies of the respective racial groups (Coloured, black and white). These results are presented in Table 2. The findings indicate that the three racial groups show a significant difference in the group mean scores on the 1% level of significance with regard to suicidal ideation, social support for emotional reasons, denial, behavioural engagement and dysfunctional coping. The corresponding effect size of social support for emotional reasons showed a small to moderate practical significance, while a medium effect size was indicated for suicidal ideation, denial, behavioural disengagement and dysfunctional coping. Specific group differences were investigated by using the Scheffe test and will be discussed as presented in Table 2. The mean scores for suicide ideation in the white group were statistically significantly lower than the mean scores for the Coloured and black groups. From these results it appears that the white participants in the research showed a generally lower level of suicide ideation when compared to Coloured and black groups. The practical significance of this finding was found to be of small to moderate significance. The finding does not concur with the conclusions made by Gutierrez et al. (2005) using an American sample where white participants were found to have a higher level of suicidal ideation. Moreover, South African studies on suicide rates have not reported similar results (Burrows & Laflame, 2006; Statistical Notes, 2000). No comparative data could be found that specifically review suicide ideation between races in South Africa (The following databases were searched: EBSCO and associated databases, Google Scholar and NiPAD, 20 November, 2009).

With regard to the coping strategy social support for emotional reasons, the black groups' mean score is statistically significantly higher than that of the other two groups. The results show that black participants were more likely to seek emotional support from others than were Coloured or white participants. These recorded differences relating to social support for emotional reasons were found to be of small practical significance. According to Magaya et al. (2005), cultural values are a significant influencing factor in the choice of coping strategies adopted by black adolescents.

**Table 2:** Means, standard deviations and *f*-values of the one-way ANOVA

Variable	Coloured N = 280		Black N = 172		White N = 133		F	P	f	Scheffé Test
	$\bar{X}$	s	$\bar{X}$	s	$\bar{X}$	s				
Suicide ideation	42,54	38,27	45,13	36,80	26,06	26,06	8,19*	0,0003	0,21	1 from 2 & 3
Active coping	11,48	2,49	11,87	2,45	11,60	2,09	3,10	0,0463		
Planning	11,83	2,50	12,01	2,69	12,26	2,33	2,29	0,1024		
Suppression of competing activities	10,82	2,29	11,42	2,45	10,91	2,18	3,44	0,0332		
Restraint	11,28	2,32	11,34	2,46	10,84	2,55	2,46	0,0868		
Social support for instrumental reasons	10,99	2,82	11,38	2,77	11,02	2,89	0,61	0,5454		
Social support for emotional reasons	10,69	2,86	11,70	2,71	10,85	3,35	6,54*	0,0016	0,18	2 higher 1&3
Positive reinterpretation and growth	12,15	2,52	12,33	2,27	11,96	2,37	1,28	0,2784		
Acceptance	11,38	2,44	11,86	2,32	11,45	2,78	1,40	0,2484		
Turning to religion	12,76	2,65	12,42	2,58	12,78	2,92	0,34	0,7116		
Venting of emotions	10,57	2,61	10,67	2,40	10,47	2,85	0,01	0,9997		
Denial	10,09	2,57	10,36	2,63	8,74	2,83	12,32*	0,0001	0,25	2&3 higher 1
Behavioural disengagement	9,67	2,57	10,02	2,54	8,75	2,59	10,99*	0,0001	0,24	2 higher 3 & 1
Mental disengagement	10,83	2,57	11,01	2,53	10,90	2,62	0,51	0,5983		
Alcohol and drug Disengagement	1,63	1,02	1,53	0,96	1,52	0,88	2,76	0,0646		
Problem-focused coping	56,38	9,21	57,99	9,10	56,59	9,28	2,71	0,0678		
Emotion-focused coping	57,52	8,59	59,16	7,94	57,44	9,88	1,97	0,1406		
Dysfunctional coping	32,11	5,48	32,87	5,52	29,64	6,69	11,67*	0,0001	0,25	2 & 3 higher 1

\*  $p < 0,01$ • Effect Sizes:  $\pm 0.1$  (small);  $\pm 0.3$  (medium);  $\pm 0.5$  (large)

1: White; 2: Black; 3: Coloured

The need to respect your elders, avoid confrontation and maintain group harmony is a strong driver towards using emotionally supportive ways of coping, such as relying on others. The mean scores for denial among the Coloured and black groups were significantly higher than the scores for the white group, which indicates that the white participants made less frequent use of the denial as a coping strategy. This difference was found to be of moderate practical significance. Researchers such as Chapman and Mullis (2000), as

well as Plaaitjie (2006), suggest that a past socio-political environment with limited resources and segregation policies may have contributed towards the choice, use and maintenance of more socially disengaging coping strategies within previously disadvantaged groups.

The mean scores for behavioural disengagement in the case of white participants were significantly lower than the scores of the black and Coloured participants. This indicates that black and Coloured groups showed a stronger tendency to make use of behavioural actions in order to avoid stressful circumstances. The *f*-value for behavioural disengagement was of moderate practical significance. This finding is consistent with the studies carried out by Du Toit (2000) and Magaya et al. (2005) who found that black participants showed a greater preference for the usage of avoidance coping strategies.

The means scores for dysfunctional coping indicated that white participants had a significantly lower means score than did the Coloured and black participants. The results were found to be of moderate practical significance and consistent with the research of Du Toit (1999), suggesting that black persons showed a greater inclination towards using dysfunctional coping strategies such as behavioural and mental disengagement, as well as alcohol and drug disengagement. These findings correspond with those of an American study which looked at the differences in coping between Asian, white and black participants (Sheu & Sedlacek, 2004). This study found that Asian participants (also a disadvantaged group) used similar dysfunctional coping strategies to those employed by previously disadvantaged black and Coloured participants in our current study.

**Table 3:** Intercorrelations between predictors and suicide ideation among Coloured adolescents

<b>Variables</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>
1 Suicide ideation	-0,12	-0,12	-0,02	0,003	-0,11	-0,05	-0,18*	-0,12	-0,03	0,18*	0,15	0,07	-0,03	0,04
2 Active coping	-	0,56*	0,46*	0,39*	0,48*	0,42*	0,53*	0,30*	0,36*	0,36*	0,21*	0,16*	0,27*	-0,13
3 Planning		-	0,39*	0,50*	0,47*	0,32*	0,47*	0,38*	0,41*	0,30*	0,11	0,11	0,22*	-0,11
4 Suppression of competing activities			-	0,31*	0,28*	0,19*	0,34*	0,31*	0,18*	0,34*	0,19*	0,14	0,08	0,02
5 Restraint coping				-	0,40*	0,27*	0,46*	0,31*	0,37*	0,28*	0,27*	0,20*	0,26*	-0,09
6 Social support ó instrumental					-	0,63*	0,43*	0,25*	0,39*	0,36*	0,21*	0,10	0,25*	-0,11
7 Social support ó emotional						-	0,34*	0,15	0,35*	0,42*	0,23*	0,13	0,26*	-0,15
8 Positive reinterpretation and growth							-	0,39*	0,38*	0,26*	0,18*	0,06	0,29*	-0,19*
9 Acceptance								-	0,21*	0,25*	0,14	0,19*	0,19*	-0,04
10 Turning to Religion									-	0,22*	0,27*	0,13	0,27*	-0,14
11 Venting of emotions										-	0,30*	0,35*	0,24*	0,16*
12 Denial											-	0,33*	0,30*	0,03
13 Behavioural disengagement												-	0,10	0,08
14 Mental disengagement													-	-0,13
15 Alcohol and drug														-

\*  $p \leq 0,01$

$f$  (Effect size): 0.1 small; 0.3 medium; 0.5 large

**Table 4:** Intercorrelations between predictors and suicide ideation among black adolescents

Variables	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 Suicide ideation	-0,05	-0,02	0,08	-0,10	0,02	0,05	-0,11	-0,06	0,02	0,02	0,21	0,11	0,09	0,07
2 Active coping	-	0,60*	0,34*	0,34*	0,42*	0,36*	0,45*	0,34*	0,37*	0,22*	0,23*	0,23*	0,24*	-0,16
3 Planning		-	0,47*	0,39*	0,46*	0,30*	0,53*	0,40*	0,46*	0,18	0,20	0,15	0,15	-0,18
4 Suppression of competing activities			-	0,41*	0,34*	0,21*	0,38*	0,35*	0,29*	0,22*	0,03	0,12	0,23*	0,03
5 Restraint coping				-	0,20	0,14	0,23*	0,36*	0,32*	0,13	0,17	0,23*	0,18	-0,09
6 Social support ó instrumental					-	0,53*	0,36*	0,37*	0,47*	0,30*	0,21*	0,01	0,22*	-0,10
7 Social support ó emotional						-	0,24*	0,28*	0,41*	0,21*	0,09	0,01	0,34*	-0,27*
8 Positive reinterpretation and growth							-	0,35*	0,40*	0,23*	-0,02	0,11	0,07	-0,09
9 Acceptance								-	0,31*	0,21*	0,16	0,26*	0,23*	0,02
10 Turning to religion									-	0,10	0,07	0,16	0,37*	-0,26*
11 Venting of emotions										-	0,20	0,24*	0,22*	0,04
12 Denial											-	0,33*	0,22*	0,05
13 Behavioural disengagement												-	0,19	0,01
14 Mental disengagement													-	-0,10
15 Alcohol and drug disengagement														-

\*  $p \leq 0,01$

$f$  (Effect size): 0.1 small; 0.3 medium; 0.5 large

**Table 5:** Intercorrelations between predictors and suicide ideation among white adolescents

<b>Variables</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>
1 Suicide ideation	- 0,001	-0,04	-0,06	-0,10	-0,05	0,01	-0,10	-	-0,15	0,12	0,11	0,17	0,23	0,003
2 Active coping	-	0,75*	0,56*	0,48*	0,42*	0,23*	0,54*	0,44*	0,29*	0,29*	0,06	0,22	0,23*	0,07
3 Planning		-	0,60*	0,59*	0,44*	0,28*	0,55*	0,39*	0,37*	0,34*	0,11	0,14	0,20	0,03
4 Suppression of competing activities			-	0,58*	0,28*	0,27*	0,41*	0,36*	0,34*	0,25*	0,12	0,25*	0,15	0,05
5 Restraint coping				-	0,42*	0,24*	0,51*	0,47*	0,29*	0,25*	0,19	0,31*	0,35*	0,09
6 Social support ó instrumental					-	0,57*	0,45*	0,46*	0,25*	0,49*	0,11	0,12	0,24*	0,11
7 Social support ó emotional						-	0,26*	0,33*	0,23*	0,68*	0,29*	0,20	0,30*	0,11
8 Positive reinterpretation and growth							-	0,52*	0,31*	0,21	-0,01	0,06	0,22	0,17
9 Acceptance								-	0,27*	0,28*	0,03	0,15	0,19	0,20
10 Turning to religion									-	0,09	-0,13	-0,08	-0,06	-0,11
11 Venting of emotions										-	0,19	0,33*	0,34*	0,16
12 Denial											-	0,53*	0,45*	0,16
13 Behavioural disengagement												-	0,47*	0,34*
14 Mental disengagement													-	0,27*
15 Alcohol and drug disengagement														-

\*  $p \leq 0,01$

$f$  (Effect size): 0.1 small; 0.3 medium; 0.5 large

## **Results of the intercorrelations**

Intercorrelations between different coping subscales for the three racial groups under study are presented in Tables 3 to 5. Very few significant correlations were found between suicide ideation and the coping strategies for the three groups, with the exception of a significant relationship (negative correlation,  $p \leq 0.01$ ,  $f = \text{moderate}$ ) between acceptance and suicidal ideation in the case of the white group, as well as a significant relationship (negative correlation,  $p \leq 0.01$ ,  $f = \text{small}$ ) between suicide ideation and venting of emotions (positive correlation,  $p \leq 0.01$ ,  $f = \text{small}$ ) with regard to the Coloured participants. From these results it can be deduced that a higher level of acceptance among white participants is associated with lower levels of suicidal ideation. Similarly, higher levels of positive reinterpretation and growth correspond with lower levels of suicidal ideation, while higher levels of venting of emotions are associated with higher levels of suicidal ideation for the Coloured group. A strong tendency for active coping and planning was found to correlate with most of the problem- and emotion-focused coping subscales with a moderate effect size. Social support for instrumental reasons was similarly found to have a strong correlation with most of the problem- and emotion-focused coping subscales. In the instance of the white group, a highly significant correlation was found (with a large effect size) between positive reinterpretation and growth and acceptance, as well as between denial and behavioural disengagement and between social support for emotional reasons and venting of emotions. Dysfunctional coping strategies did not show any significant intercorrelations with most of the problem- and emotion-focused coping subscales for any of the three groups.

## **Results of the hierarchical regression analysis**

The hierarchical regression analysis was performed in order to investigate the contribution of coping subscales to the variance in suicidal ideation among the different racial groups. The influence of coping strategies on suicide ideation will be discussed separately for the three racial groups concerned. Information pertaining to the Coloured, black and white participants will be presented in Tables 6, 7 and 8 respectively. From

Table 6 it appears that the 14 coping subscales explain 17.01% ( $R^2 = 0.1701$ ) of the variance in suicide ideation in the case of the Coloured adolescents. This calculated  $R^2$ -value was found to be significant on the 1% level of significance [ $F_{14,188} = 2.75$ ;  $p = 0.001$ ]. The subscales for emotion-focused coping contributed significantly on the 1% level to the variance in suicide ideation of the Coloured participants, contributing 10.71% towards the total variance in suicidal ideation of Coloured participants [ $F_{5,187} = 5.95$ ;  $p \leq 0.01$ ]. This relationship between suicidal ideation and emotion-focused coping is supported by Carver et al. (1989) who found the use of emotion-focused coping alone to be less effective and in need of complementing with active coping strategies so as to achieve adequate management of stressful situations.

**Table 6:** Contribution of different coping variables to the variance in suicidal ideation ( $R^2$ ) for Coloured participants

Variable for analysis	$R^2$	Contribution to $R^2$ :	$F$	$f^2$
1. [pfc]+[efc]+[dfc]	0,1701	166=0,0233	1,62	
2. [pfc]+[efc]+denial	0,1617	266=0,0149	4,14*	0,02
3. [pfc]+[efc]+behavioural disengagement	0,1492	3-6=0,0024	0,67	
4. [pfc]+[efc]+mental disengagement	0,1494	4-6=0,0026	0,72	
5. [pfc]+[efc]+alcohol	0,1484	5-6=0,0016	0,44	
6. [pfc]+[efc]	0,1468			
7. [pfc]+[dfc]+[efc]	0,1701	7-13=0,1071	5,95**	0,13
8. [pfc]+[dfc]+emotional support	0,0756	8-13=0,0126	3,50	
9. [pfc]+[dfc]+positive reinterpretation	0,0851	9-13=0,0221	6,14*	0,02
10. [pfc]+[dfc]+acceptance	0,0771	10-13=0,0141	3,62	
11. [pfc]+[dfc]+religion	0,0681	11-13=0,0051	1,31	
12. [pfc]+[dfc]+venting emotions	0,1307	12-13=0,0677	18,81**	0,08
13. [pfc]+[dfc]	0,0630			
14. [efc]+[dfc]+[pfc]	0,1701	14-20=0,0411	2,28*	0,04
15. [efc]+[dfc]+active coping	0,1470	15-20=0,0180	5,00*	0,02
16. [efc]+[dfc]+planning	0,1464	16-20=0,0174	4,83*	0,02
17. [efc]+[dfc]+suppression of competing activities	0,1314	17-20=0,0024	0,67	
18. [efc]+[dfc]+restraint	0,1344	18-20=0,0054	1,50	
19. [efc]+[dfc]+instrumental support	0,1350	19-20=0,0060	1,67	
20. [efc]+[dfc]	0,1290			

Key: [pfc]=problem-focused coping; [efc]=emotional-focused coping; [dfc]=dysfunctional-focused coping]

\*\*  $p \leq 0,01$  \*  $p \leq 0,05$

Lewis and Frydenberg (2002) additionally found the frequent use of emotion-focused coping strategies compromised young people's coping abilities if used exclusively, while it increased their risk to develop stress, depression and suicidal tendencies. As a coping strategy venting of emotions positively contributed 6.77% [ $F_{1,190} = 18.81$ ;  $p \leq 0.01$ ] to the explanation of the variance in suicide ideation of Coloured participants and was significant on the 1% level of significance. Venting of emotions is associated with higher levels of suicide ideation as continuous venting enhances the creation of a negative environment in which feelings of low self-worth, insecurity and tendencies for suicide are fostered (Barnow et al., 2005; Wilson et al., 1995). All statistically significant relationships had a small effect size and were of small practical significance.

As can be inferred from Table 7, the 14 coping subscales for black participants together explained 17.32% ( $R^2 = 0.1732$ ) of the variance in suicide ideation of black adolescents. The contribution of the coping subscale for dysfunctional-focused coping was found to be significant on the 1% level of significance in explaining the variance of suicide ideation among black participants. The contribution showed a small effect size and was of small practical significance. Dysfunctional coping strategies are associated with less effective or immature coping abilities (Anderson et al., 2005) and increase the individual's risk of developing depression and committing suicidal acts (Meehan et al., 2007; Spirito et al., 1996).

Table 7: Contribution of different coping variables to the variance in suicide ideation ( $R^2$ ) of black participants

Variables to be analysed	$R^2$	Contribution to R	$F$	$f^2$
1. [pfc]+[efc]+[dfc]	0,1732	166=0,0859	3,90**	0,10
2. [pfc]+[efc]+denial	0,1583	266=0,0710	12,91**	0,08
3. [pfc]+[efc]+behavioural disengagement	0,1064	3-6=0,0191	3,47	
4. [pfc]+[efc]+mental disengagement	0,0897	4-6=0,0024	0,44	
5. [pfc]+[efc]+alcohol	0,0874	5-6=0,0001	0,02	
6. [pfc]+[efc]	0,0873			
7. [pfc]+[dfc]+[efc]	0,1732	7-13=0,0549	2,00	
8. [pfc]+[dfc]+emotional support	0,1225	8-13=0,0042	0,76	
9. [pfc]+[dfc]+positive reinterpretation	0,1185	9-13=0,0002	0,04	
10. [pfc]+[dfc]+acceptance	0,1189	10-13=0,0006	0,11	
11. [pfc]+[dfc]+religion	0,1565	11-13=0,0382	6,95**	0,05
12. [pfc]+[dfc]+venting of emotions	0,1417	12-13=0,0234	4,25*	0,03
13. [pfc]+[dfc]	0,1183			
14. [efc]+[dfc]+[pfc]	0,1732	14-20=0,0812	2,95*	0,10
15. [efc]+[dfc]+active coping	0,0958	15-20=0,0038	0,69	
16. [efc]+[dfc]+planning	0,0931	16-20=0,0011	0,20	
17. [efc]+[dfc]+suppression of competing activities	0,0922	17-20=0,0002	0,04	
18. [efc]+[dfc]+restraint	0,1440	18-20=0,0520	9,45**	0,06
19. [efc]+[dfc]+instrumental support	0,1037	19-20=0,0117	2,13	
20. [efc]+[dfc]	0,0920			

Key: [pfc]=problem-focused coping; [efc]=emotional-focused coping; [dfc]=dysfunctional-focused coping]

\*\*  $p \leq 0,01$  ; \*  $p \leq 0,05$

Individual coping subscales such as denial and turning to religion showed a significantly positive contribution namely 7.10% ( $F_{1;81} = 12.91$ ;  $p \leq 0.01$ ), 3.82% ( $F_{1;81} = 6.95$ ;  $p \leq 0.01$ ) while restraint coping was negatively associated in its contribution to the variance of suicidal ideation on the 1% level of significance, 5,20% ( $F_{1;81} = 9.45$ ;  $p \leq 0.01$ ). The effect sizes were small and of relatively little practical significance. The current findings related to turning to religion and suicidal behaviour were not consistent with those of Aspalan (2003) and Rutter and Estrada (2006), as well as the findings of Madu and Matla (2003). The coping strategy of denial appears to be effective at the initial stages of a stressful situation; however, it's efficacy decline as the stressor is prolonged, simultaneously increasing the individual's suicide risk (McCrae & Costa, 1986; Meehan et al., 2007).

Conversely, the use of active coping strategies, such as active coping, planning and selecting appropriate opportunities to act, was found to increase the chance of attaining positive health outcomes (Folkman et al., 1986, Kleinke, 1998).

From Table 8, it can be seen that all 14 coping subscales contributed 22.44% ( $R^2 = 0.2244$ ) to the variance in suicidal ideation of white participants. The subscale emotion-focused coping explained 12% of the variance for suicidal ideation and was significant on the 1% level of significance.

Table 8: Contribution of different coping variables to the variance in suicide ideation ( $R^2$ ) of white participants

Analysis of Variables	$R^2$	Contribution to $R^2$ :	$F$	$f^2$
1. [pfc]+[efc]+[dfc]	0,2244	166=0,0374	1,40	
2. [pfc]+[efc]+denial	0,1997	266=0,0127	1,89	
3. [pfc]+[efc]+behavioural disengagement	0,1878	3-6=0,0008	0,12	
4. [pfc]+[efc]+mental disengagement	0,2236	4-6=0,0366	5,46*	0,05
5. [pfc]+[efc]+alcohol	0,1885	5-6=0,0015	0,22	
6. [pfc]+[efc]	0,1870			
7. [pfc]+[dfc]+[efc]	0,2244	7-13=0,1200	3,58**	0,16
8. [pfc]+[dfc]+emotional support	0,1096	8-13=0,0052	0,78	
9. [pfc]+[dfc]+positive reinterpretation	0,1044	9-13=0,0000	0,00	
10. [pfc]+[dfc]+acceptance	0,1896	10-13=0,0852	12,72**	0,11
11. [pfc]+[dfc]+religion	0,1117	11-13=0,0073	1,09	
12. [pfc]+[dfc]+venting emotions	0,1085	12-13=0,0041	0,61	
13. [pfc]+[dfc]	0,1044			
14. [efc]+[dfc]+[pfc]	0,2244	14-20=0,0068	0,20	
15. [efc]+[dfc]+active coping	0,2183	15-20=0,0007	0,10	
16. [efc]+[dfc]+planning	0,2239	16-20=0,0063	0,94	
17. [efc]+[dfc]+suppression of competing activities	0,2241	17-20=0,0065	0,97	
18. [efc]+[dfc]+restraint	0,2193	18-20=0,0017	0,25	
19. [efc]+[dfc]+instrumental support	0,2214	19-20=0,0038	0,57	
20. [efc]+[dfc]	0,2176			

Key: [pfc]=problem-focused coping; [efc]=emotional-focused coping; [dfc]=dysfunctional-focused coping]

\*\*  $p \leq 0,01$ , \*  $p \leq 0,05$

These results concur with the findings of Du Toit (1999) who concluded that white participants made greater use of emotion-focused coping strategies such as turning to religion than did the black participants. The frequent use of emotion-focused strategies, according to Lewis and Frydenberg (2002), is associated with a low self-image and self-esteem, traits that appear to correlate strongly with suicidal ideation. The subscale acceptance was negatively associated and contributed 8.52% ( $F_{1,81} = 12,72; p \leq 0,01$ ) to the explanation to the variance in suicidal ideation of the white adolescent group. This result was significant on the 1% level of significance. The comparative effect sizes of statistically significant correlations were small and of little practical significance. The current result concurs with the findings of Carver et al. (1989) and Myers (2007) who found strategy acceptance was useful as an emotional approach to decreasing the experience of stressors which may contribute in decreasing suicide risk.

## **RECAPITULATION AND DISCUSSION**

The objective of this article was to explore group differences with regard to the use of coping strategies as well as to determine the influence of these coping strategies on suicidal ideation among different groups. The results indicated that the measuring instruments provided acceptable alpha coefficients in terms of suicidal ideation and problem-focused, emotion-focused and dysfunctional coping, since all were above the 0.70 cut-off. However some alpha coefficients for the individual coping strategy subscales were below 0.40 and should not be considered in further interpretations (Nunnally & Bernstein, 1994).

The incidence of suicide ideation among the different racial groups in this study suggests that black participants had the highest level of suicide ideation, followed closely by Coloured participants. White participants reflected a significantly lower rate of suicide ideation than did the two other groups involved. Given the account of South Africa's political past and the resultant potential for higher levels of stress, this could explain the higher levels of suicidal ideation reflected for black and Coloured participants. It would

moreover appear that black and Coloured participants are struggling to adjust to stressful circumstances on an emotional and behavioural level. According to some recent studies, elevated suicidal ideation could be explained by rapid socio-political changes and an inability to cope with these changing demands (Hutchinson et al., 2007; Meehan et al., 2007, Frydenberg & Lewis, 2004). Current studies, however, do not support the findings of Burrows and Laflame (2006) that suicide rates are the highest among white people in South Africa. Notwithstanding significant social changes in the social environment since 1994, past socio-political circumstances may still have an influence in the choice of coping strategies utilised by the different groups (Chapman & Mullis, 2000; Goldston et al., 2001; Plaaitjie, 2006). Limited or no access to needed resources according to Hobfoll (1998) could lead to increased levels of stress and a disadvantaged position. Israelashvili et al., (2006) state that those participants who lack effective coping skills are less able to overcome a lack of resources and are more likely to use poor coping skills which predispose them to the risk of suicide.

Black and Coloured participants appeared to differ significantly from white participants with regard to denial of stressors experienced, while black participants show a significant difference from the Coloured and white groups with regard to seeking social support for emotional reasons. These differences may be the result of collectivistic cultures which upholds values that have a very commanding influence on black participants' lifestyles and which create an environment that allows for young black participants to be more dependent on older and other members of their community (Du Toit, 1999; Magaya et al., 2005). Lack of cultural and other resources appears to encourage avoidance coping behaviour as a means of promoting cultural well-being and harmonious relationships (Magaya et al., 2005). The dawn of a new socio-political era in South Africa has unfortunately brought disillusionment for some people, as many inhabitants of the previously disadvantaged groups have become dissatisfied with the progress made in communities. When a situation is appraised as unchangeable, or when there are inadequate resources available, avoidance behaviour patterns such as denial tend to be employed as a means of managing stress. Chapman and Mullis (2000) translate denial as a

symptom of people's feelings of helplessness in circumstances where goal attainment is being frustrated. Due to the low alpha coefficients, especially in the Coloured and blacks groups no meaningful interpretation was possible. A possible reason for these low values may be linked to language preference and strength of participants in the NCP.

A further investigation into how the modes of coping and dysfunctional coping differ between races has shown that problem-focused and emotion-focused coping do not significantly differ across the racial spectrum. These findings do not support the research done by Magaya et al. (2005) who concluded that cultural influences do contribute towards shaping an emotion-focused coping approach in collectivistic cultures, whereas in Western cultures (Snyder & Lopez, 2007) the coping approaches are more individualistic and problem-focused. Schlebusch (2005) alludes to the fact that South Africans may have been affected by the process of acculturation and may show a greater identification with a more Western lifestyle. This would place South Africans in a unique situation where the culture of the majority of the population is predominantly collectivistic. However, factors such as mass-scale urbanisation, erosion of traditional value systems, increasing identification with individualistic values and lifestyles and globalisation of economies, may have contributed to an increasing Westernised coping lifestyle as well. Dysfunctional coping appears to be used more frequently as a coping approach by black and Coloured participants. The reason for this may be related to the way that the political past shaped environments of unequal access to resources, leading to an increased use of certain coping mechanisms such as avoidance, alcohol and drug disengagement and denial (Chapman & Mullis, 2000, Du Toit, 1999, Hobfoll, 1998, Plaaitjie, 2006).

The hierarchical regression analysis of coping with regard to the variance found in suicide ideation among all three racial groups indicates that in the case of the white participants coping subscales constituted the largest contribution to suicide ideation (22.44%), compared to the 17.32% of the black participants and the 17.01% of the Coloured participants. Venting of emotions contributed 6.77% (significant on the 1% level) towards

the explanation of suicide ideation among Coloured participants. The venting of emotions was associated with creating an environment of insecurity, low self-image and esteem and increased an individual's risk for suicide (Barnow et al., 2005; Wilson et al., 1995). The continued use of emotion-focused strategies such as the venting of emotions is associated with ineffective coping and consequently a risk for suicide (Lewis & Frydenberg, 2002).

The coping strategies denial, turning to religion and restraint coping together significantly (1% level) contributed 7.10% to the variance in suicide ideation as reported by black participants. Turning to religion showed a positive correlation to suicidal ideation and did not concur with conventional literature (Aspalan, 2003; Madu & Matla, 2003; Rutter & Estrada, 2006), making it difficult to explain. Researchers McCrae and Costa (1986) and Anderson et al. (2005) are of the opinion that the prolonged use of denial may be associated with less effective coping strategies. The continued use of denial will not resolve the stressor, but will instead aggravate the stressful circumstances and this could increase the risk of suicide (Meehan et al., 2007). Restraint coping was also found to have a significantly negative correlation with suicidal ideation. According to Folkman et al. (1986), as well as Kleinke (1998), using opportunities appropriately to achieve success is associated with psychological well-being and acts as a buffer against suicide ideation.

The results for white participants indicated that the variable acceptance showed a significant negative correlation with suicide ideation. As an emotion-focused strategy acceptance is viewed as a useful alternative in situations where participants cannot change the physical nature of the situation but rather adopt an altered emotional approach to confronting stressors (Carver et al., 1989; Myers, 2007).

In comparing the influence of modes of coping on suicide ideation among different race groups, emotion-focused coping (Coloured group) and dysfunctional coping (black group) were significantly correlated to suicide ideation. Carver et al. (1989) found emotion-focused coping to be used more frequently when situations were perceived as

unchangeable and fatalistic. James and Gilliland (2001) suggest that symptoms such as adopting an approach of acceptance or avoidance are indicative of persons at risk of committing suicide. Dysfunctional coping strategies are considered to be less effective coping mechanisms (Carver et al., 1989) which limit the individual's ability to obtain necessary resources, thereby aggravating the experience of the stressful circumstances (Israelashvili et al., 2006). Continued failure at coping effectively can lead to depression and suicide-related behaviour (Meehan et al., 2007).

### **RECOMMENDATIONS AND LIMITATIONS OF THE STUDY**

It is hoped that this article will contribute towards a better understanding of racial differences with regard to coping and suicide ideation among adolescent learners. Although a few studies in South Africa have investigated certain coping and racial aspects, few have made a distinction between Coloured, black and Asian participants who are usually grouped under the umbrella term black. Such a distinction is necessary as researchers cannot assume that different races grouped together under black will all display similar coping mechanisms.

Human behaviour is sometimes best understood when observed in the form of longitudinal studies, since these allow researchers to observe the impact of developmental changes on variables of choice. It is recommended that studies on the interaction between suicide ideation and coping strategies among participants from different racial backgrounds be undertaken in a manner whereby participants can be observed over a number of years. Additional variables that should be considered as part of longitudinal studies are the nature and extent of the stressor, and how participants utilise resources and how these influence coping behaviour and suicidal ideation. Researchers and practitioners need to develop and implement programs aimed at developing effective coping skills that will assist adolescents in feeling more positive about themselves and their ability to effectively deal with demands in their environment.

Coping explains a small albeit significant percentage of the variance in suicide ideation. Exploring factors such as poverty, culture and other dispositional factors may offer further useful understanding regarding the relationship between suicide ideation and coping. Another consideration could be the exploration of gender, race, and socio-economic status on coping and suicidal ideation.

It is important that the results of this study be interpreted in the light of certain limitations. The coping scale used in this study consisted of 14 subscales measured by 53 items. Each subscale was measured by four item questions, except in the case of alcohol and drug usage which were measured by only one item question. The limited number of items may have compromised the depth and quality of information retrieved from the participants. Unfortunately no additional coping scale could be introduced as the time factor would not allow for this. The coping instrument used was standardised on the basis of an American population, which may have influenced the results obtained on a diverse South African sample.

If researchers are to make any progress in empowering and equipping adolescents to deal with the inevitable presence of stressors, it is imperative that we invest in further and more focused studies on adolescent coping.

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## **CHAPTER 6**

### **ARTICLE 5**

# **THE INFLUENCE OF PSYCHOSOCIAL VARIABLES ON ADOLESCENT SUICIDAL IDEATION**

# **THE INFLUENCE OF PSYCHOSOCIAL VARIABLES ON ADOLESCENT SUICIDAL IDEATION**

## **Abstract**

The incidence of adolescent suicide has become a source of grave concern within our societies as suicide rates have nearly trebled in some industrialised countries, with South Africa showing a similar increase. At the current rate South Africa is losing approximately one person to suicide every hour, with adolescent suicide accounting for 9.5% of all deaths registered by teenagers. The aim of this study is to investigate the influence of risk and protective factors (psychosocial and individual factors) on suicidal ideation.

A correlational design was used in this non-experimental, cross-sectional study. A stratified sample of 381 learners from grades 10 to 12 was gathered from ten schools in the Northern Cape Province. The Suicidal Ideation Questionnaire for Adolescents (Reynolds, 1988), a biographical questionnaire, the Rosenberg Self-esteem Scale (Rosenberg, 1989), the Life Stressors and Social Resources Inventory, Youth Form (Moos & Moos, 1994), the Cope Questionnaire (Carver, Scheier & Weintraub, 1989) as well as the Hope Scale (Snyder et al., 1991) were used to gather information from the participants. Results from the study suggested that the incidence of suicidal ideation was significantly higher than for the original American adolescent sample. Further findings indicated that self-esteem, coping through denial, acceptance, emotional ventilation, seeking social support for instrumental reasons as well as the stress of negative life events and strained romantic relationships contributed significantly to the suicidal ideation of the participants. In conclusion it appears that coping strategies such as denial, venting of emotions and restraint coping contribute to higher levels of suicidal ideation while acceptance and seeking support for instrumental reasons contributed to lower levels of suicidal ideation. Further studies are recommended to explore variables such as self-efficacy, locus of control and sense of coherence that may offer significant explanations for suicidal ideation as it is a multi-faceted phenomenon and needs sufficient exploration in order to develop effective preventive programs.

**Keywords:** *Suicide, suicide attempt, suicidal ideation, self-esteem, hope, personal stressors and resources, environmental stressors and resources, adolescence, parental support, emotion-focused coping, problem-focused coping, denial*

## **INTRODUCTION AND LITERATURE REVIEW**

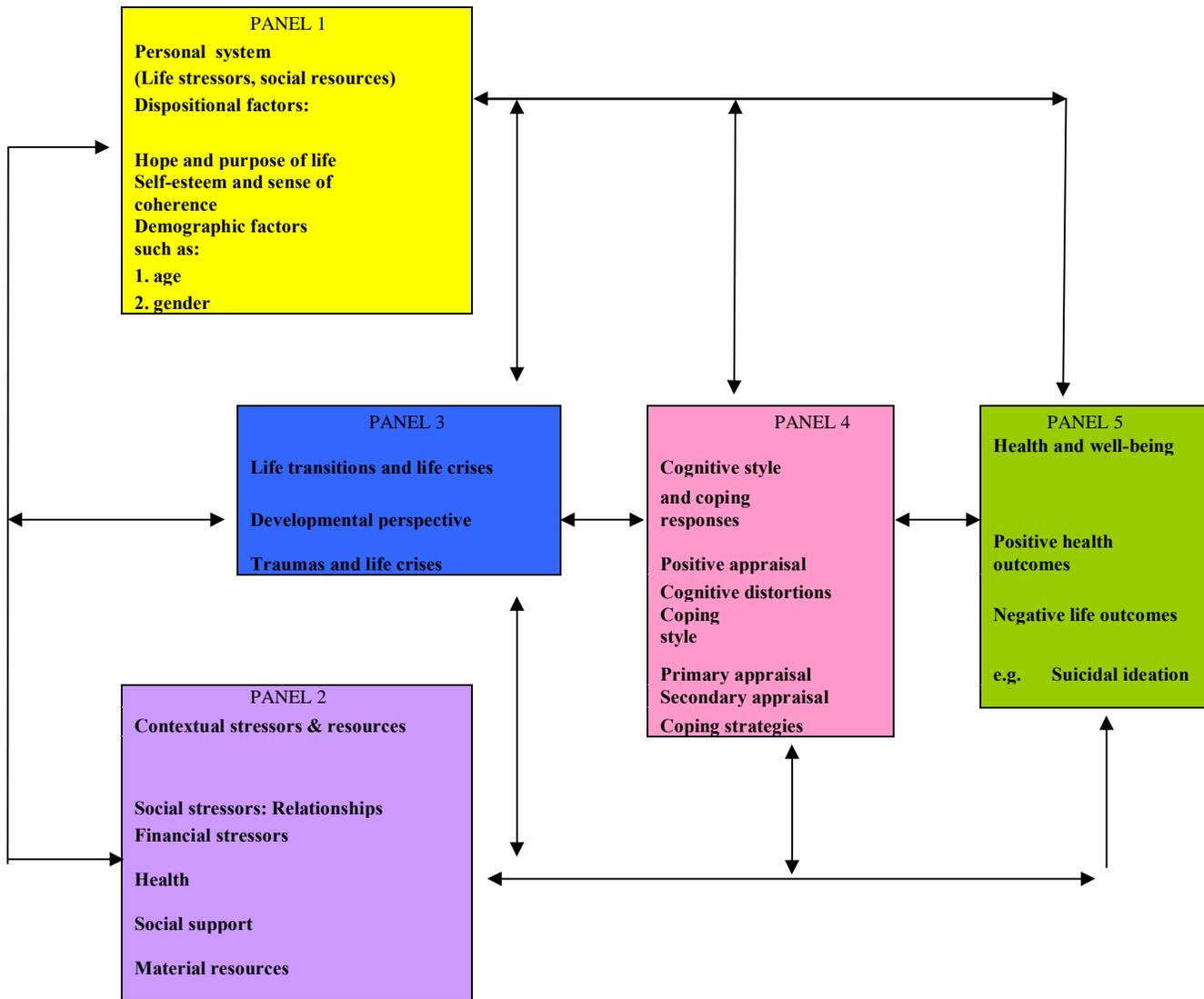
The incidence of suicide has nearly trebled in the United States since the 1950s and has become the third leading cause of death amongst the age group from 15 to 24 years with suicide as reported cause of death in 12% of all adolescent deaths (National Institute for Mental Health [NIMH], 2004; Sadock & Sadock, 2003). A suicide attempt is regarded as an unsuccessful act of trying to bring about death (Schlebusch, 2005). There are an estimated 8 to 25 attempts for each completed suicide in the United States NIMH (2004). WHO (2006) predicted that a rate of one suicide every 40 seconds and one suicide attempt every three seconds is likely to be reached by the end of 2020. In South Africa (SA) suicide statistics indicate a suicide rate of 17 000 persons /100 000, which is 1200 /100 000 persons higher than the global average (Statistical Notes, 2000). Statistics from the South African Depression and Anxiety Group (SADAG) (2008) indicated 22 suicides and 220 suicide attempts daily with 9.5% of adolescent deaths by suicide.

The Northern Cape Province, a mostly rural region with a low per capita income, was publicised for its high rate of adolescent suicide attempts in 2003. As no prior statistics were available, media reports (Monare, 2003) indicated that approximately 15 completed suicides and 390 attempted suicide cases (April 2002 and January 2003) were dealt with at the main public sector hospital (Kimberley Hospital Complex) each month. Van der Berg (Personal communication, September 28, 2006) reported a continued rise in suicide attempts between 2004 and 2006 in the age group from 10 to 20 years.

Suicide is viewed as an act in which the victim's intent or aim was to die and this intended goal is achieved, while suicidal ideation is described as thoughts that people have about ending their own lives (Schlebusch, 2005). This significant increase in adolescent suicidal behaviour stresses the need to explore the underlying reasons. Historically, the causes of suicide were linked to dispositional factors (personality traits, self-esteem, etc.) and later social factors were considered as a potential causes for suicidal behaviour (Durkheim,

1951; Lester 1988). Given the multi-dimensional nature of suicide, a more recent model, the Integrated Stress and Coping Model of Moos and Schaefer (1993), takes both personal and social factors into account. In addition it also considers the development and coping strategies as important contributors to negative health outcomes such as suicidal behaviour.

In order to conceptualise psychosocial factors that influence suicidal ideation this model served as guiding theoretical model for the current study. The basic assumption of this model posits that personal and environmental stressors and resources, as well as the life crises and transitions experienced by the individual, combine to shape cognitive appraisal and coping strategies that ultimately determine the health and well-being of the individual. The bidirectional pathways between all these factors indicate that the processes are reciprocal and able to influence each other. For example, the reciprocal interaction between stressors and resources that constitute the adolescent's personal system can exert a positive or negative influence on the environmental system, and vice versa. An adolescent's health and well-being are therefore substantially influenced by his/her exposure to stressors, as well as the availability and utilisation of personal and environmental coping resources. An illustration of the model is presented in figure 1.



**Figure 1.** The Integrated Stress and Coping Process Model (Moos & Schaefer, 1993)

Adolescence is defined as a developmental transition between childhood and adulthood, which begins at about the age of 12 or 13 years and extends to the late teens or early twenties (Myers, 2008). During this developmental stage (Panel-3) adolescents are faced with a number of developmental tasks involving physical, emotional and psychological maturation that need adequate negotiation as this process eventually influences health outcomes for adolescents (Louw & Louw, 2007; Moos & Schaefer, 1993; Swimmer, 1996). Challenges such as having to manage your physically maturing body, dealing with the acceptance of your changing body image, developing a positive image and esteem, dealing with peer pressure and rejection as well as facing the challenges of romantic relationships,

can all lead to the experience of stress and negative health outcomes (Engelbrecht & van Vuuren, 2000; George, 2005; Louw & Louw, 2007). Adolescents show a greater propensity for adopting negative behaviours as coping mechanisms when their support structures appear inadequate (Israelashvili, Gilad-Osovitzki & Asherov, 2006). In conditions of limited support, personal crises such as destabilised families, family violence and abuse, as well as personal losses through death, create negative feelings within adolescents that predispose them to social isolation and depression (Larson, Wilson & Mortimer, 2002; Sigelman & Rider, 2003). Negative experiences such as academic pressure to perform and the associated stressor of grade-12 learners of having to find employment after school, were linked to increased alcohol abuse and a higher incidence of risk behaviour amongst learners (Cooker & Borders, 2001; Flisher, Liang, Laubscher & Lombard, 2004; Kwon Hoo, 2002).

In accordance with the integrated stress and coping model, the personal system composed of internal stressors and resources (panel 1) is a relatively stable disposition that affects the selection of appraisal and coping processes, which influence the cumulative behavioural outcome (Moos & Schaefer, 1993). Examples of such personal resources and stressors are self-esteem and hope. Self-esteem is defined as an evaluation by individuals of their personal characteristics as either positive or negative (Louw & Louw, 2007). A poor self-esteem may lead to persons holding distorted and negative perceptions about themselves and their environment thereby predisposing them towards feelings of hopelessness, developing depressive symptoms and self-destructive behaviours (Moore, 2000; Wilson et al., 1995). A positive sense of self-esteem is positively associated with academic success and self-confidence and is associated with having a buffering effect on adolescent suicidal behaviour (Mashego, Peltzer, Williamson & Setwaba, 2003; Wilburn & Smith, 2005). Another personal factor, namely hope, is defined as a positive motivational state that is based on an interactively derived sense of success (Snyder et al., 1991). Cheavens, Feldman, Woodward and Snyder (2006) identified hope as having three components, namely goals (anything that an individual desires to get), pathways (person's perceived capacity to produce cognitive routes to desired goals) and agency thinking

(active engagement of planning, construing or strategizing in the achievement of such goals). Goldston, et al., (2001) found a strong association between hopelessness, depression and a higher risk of suicidal behaviour. An investigation reporting on the reason for living concluded that participants who are hopeful showed a reduced level of suicidal ideation and behaviour (Malone, Oquendo, Haas, Ellis, Li & Mann, 2000; Sebaste, 1999).

In addition to hope and self-esteem, individual factors such as sense of coherence, locus of control, self-efficacy and personality factors were found to influence suicidal behaviour (Beautrais, 2000, Khunou, 2000; McDevitt & Ormrod, 2004). These factors will, however, not be covered in this study.

Other personal factors such as gender distribution and physical health appear to be related to suicide risk (Chang, 1998; Sadock & Sadock, 2003). Gender distribution and suicidal behaviour appear to be demarcated when comparing suicide attempts with completed suicides. Statistics indicate that females outnumber male suicide attempts by a ratio of four to one whereas males engage in much more lethal suicide methods, leading to a higher male-completed suicide rate (Sadock & Sadock, 2003; Skegg, 2005). The South African statistics (Statistics South Africa, 2005) reflected findings similar to the global trends while Madu and Matla (2003) found that males outnumbered females in both their level of suicidal ideation and attempted suicide. For the purposes of this study, gender will not be further explored as no significant gender differences were found in a previous study using the same data as the current study. One of the current major health risks among the younger population group is HIV/AIDS. Although the direct impact of the effects of HIV/AIDS on adolescents is smaller than for adults the indirect effects such as dealing with the social stigma, decreased economic and social resources, new found family responsibilities as well as the physical implications of the condition can lead to increased levels of stress, depression and suicide risk (Peltzer, 2008; Whiteside & Sunter, 2001). Direct health influences on the adolescent, such as the loss of mobility or poor physical

condition, have been reported to contribute to the incidence of suicidal behaviour (Sadock & Sadock, 2003).

The health outcomes of adolescents are affected by more than just their internal or personal experiences. Environmental stressors and resources (panel 2) such as social support from family and friends and financial factors are significant determinants of health and well-being for adolescents (Beautrais, 2000). The basic functions of a family are multifaceted to include aspects such as having to ensure socio-emotional competence. Growing up in a supportive family allows for the healthy development of aspects such as self-esteem, motivation, as well as providing an emotionally safe and supportive environment for its members (Thomlison, 2002). Members from destabilised family structures, either as a result of marital separation, family violence or disrupted family routines, are at greater risk of suicidal behaviour (Skegg, 2005; Stack, 2004). Earlier findings by Pillay and Wassenaar (1997) reported that conflicting adolescent-parental relationships increased adolescents' stress levels as well as their likelihood of participating in self-destructive behaviours. This is not necessarily the outcome for all disrupted families as separation in some family situations enables more effective functioning of the remaining family members (Garden, 2002; Jansen van Rensburg, 2004).

Relationships outside the family, namely peer and educator-learner relationships, can have an influence on suicidal behaviour. Peer pressure, a concept that results from conflict between socially desired outcomes and one's developing values, is significantly influenced by the need for acceptance as it influences identity formation (Erwin, 2002). The exposure to positive peer relationships provides greater opportunities for social interaction and the simultaneous experience of greater personal satisfaction (Horstmanshof, Punch & Creed, 2008), while poor peer connectedness predisposes them to an environment of social isolation, academic indifference as well as the possibility of developing a range of emotional and social problems (McGraw, Moore, Fuller & Bates, 2008; Louw & Louw, 2007). Some adolescents view school as a significant stressor, but the support from

educators can make a positive contribution and be instrumental in fostering good interpersonal and problem-solving skills (Berk, 2002). Romantic relationships can be an emotionally and socially satisfying experience while romantic problems have been reported as stressful and may lead to suicidal behaviour in adolescents (Engelbrecht & Van Vuuren, 2000; Louw & Louw, 2007).

Another environmental factor, namely poverty, appears to contribute to suicidal behaviour. The World Health Organisation (WHO) (2000) reported that unemployment heralded social aspects such as poverty, social deprivation and domestic difficulties that could eventually lead to feelings of hopelessness. Adolescents who experience poverty are more likely to engage in drug and alcohol abuse and other high-risk behaviour thereby predisposing them to the development of emotional problems such as depression and stress (Skegg, 2005). The unemployment of parents, especially fathers, appears to contribute to the occurrence of depression and suicidal reactions in their children (Diekstra & Garnefski, 1995).

Panel 4 of the model includes coping and cognitive style. Coping is defined as efforts made by individuals in managing situations that are appraised as potentially harmful or stressful (Kleinke, 1998). The choice of coping strategies was found to influence behavioural outcomes, as adolescents who model adaptive coping skills reported a lower prevalence for suicidal ideation (Hobfoll, 1988; Israelashvili et al., 2006; Moore, 2000; Smith, 1993). A study comparing adolescent suicide attempters with their distressed and non-distressed peers, reported that suicide attempters primarily used avoidance (denial) and social withdrawal as coping strategies in dealing with stressful situations (Sadowski & Kelley, 1993; Spirito, Francis, Overholser & Frank, 1996). Although useful in the initial stages of a stressful event, prolonged usage of denial decreases its efficacy as a coping strategy while enhancing the risk of suicidal behaviour (McCrae & Costa, 1986). Individuals are motivated to decrease negative emotional states by actively changing their emotional thinking patterns. If, however, individuals have difficulty in altering their emotional

regulating patterns, they inadvertently increase the presence of more undesirable emotional states (creating more negative emotions), instead of more pleasant emotional states (Nixon & Heath, 2009). The venting of emotions was found to be associated with higher levels of suicidal ideation as those who relate to their environment in an over-reactive manner are at greater risk of developing low self-worth, feelings of insecurity and other negative outcomes like suicidal behaviour (Barnow, Lucht & Freyberger, 2005; Wilson et al., 1995). South African studies investigating the effects of different coping strategies found that turning to religion was having a reducing effect on stressful circumstances while simultaneously reducing the effects of suicidal behaviour (Du Toit, 1999; Plaaitjie, 2006).

Cognitive coping strategies typically employed by individuals during stressful situations are self-blame, acceptance, rumination, refocusing on planning, positive reappraisal, putting things into perspective, catastrophising as well as blaming of others (Garnefski, Kraaij & Spinhoven, 2001). Some of these coping strategies may be considered 'less adaptive', such as self-blame or passive acceptance of stressful situations, rumination and catastrophising of events. These 'less adaptive' coping strategies were found to contribute towards symptoms of anxiety and depression, while 'adaptive' coping strategies such as positive refocusing and putting events into perspective are considered to have a buffering effect against stress-related conditions and depression (Garnefski et al. 2001). Earlier findings by McCrae and Costa (1986) pre-empted the findings of Garnefski et al. (2001) when they found self-blame and the passive acceptance of stressful circumstances to be less effective coping mechanisms. According to James and Gilliland (2001) such a passive and fatalistic (accepting) attitude was associated with suicidal symptomatology. Conversely the adoption of emotion-focused strategies such as acceptance can contribute to decrease the perception and experience of stressors in situations where the stressor cannot be actively altered (Carver et al., 1989; Myers, 2007). Effective coping strategies such as seeking social support networks was found to be more useful as persons who were able to access social support faced a smaller risk of becoming isolated from needed

resources that can contribute towards decreasing the risk of negative health outcomes (Kleinke, 1998, Lazarus & Folkman, 1984).

How adolescents are able to manage stressful situations is influenced by their individual coping processes as well. Their flawed reasoning has been implicated as contributing towards self-harming behaviours (Moos & Schaefer, 1993). Sadowski and Kelley (1993) concluded that adolescent suicide attempters showed deficient abilities in utilising their problem-solving skills effectively. Comparing the relationship between problem-solving and health-risk outcomes, a positive approach to problem-solving was associated with hopefulness while a pessimistic problem-solving approach was found to increase the risk of suicidal behaviour in adolescents (Chang, 1998; Lewis & Frydenberg, 2002; Levenson & Neuringer, 1971; Sadowski & Kelly, 1993).

The application of the main components of the stress and coping model on suicidal behaviour were presented in this literature overview. Suicidal ideation is considered the health outcome and forms the criterion variable (panel 5) of this study. The personal system (panel 1) includes hope, self-esteem, and demographic factors as individual factors contributing towards to suicidal ideation. The contextual influences (panel 2) such as financial stress, home environment and relationships within the adolescent's domain were considered as environmental stressors and resources. The phase of human development (panel 3) focuses on adolescents in their senior phase of high school. The cognitive component (panel 4) is focused on coping strategies employed by adolescents in managing their challenging situations. The researcher aims to gain a better understanding of how these internal and external factors contribute towards suicidal ideation. The following specific objectives will be investigated in this study:

- To determining the incidence of suicidal ideation amongst a group of adolescents.
- Investigating the relationship between suicidal ideation and all the predictor variables.
- To explore the influence of the predictor variables including personal stressors such as self-esteem, hope and contextual stressors and resources (relationships

with family and friends) as well as coping strategies on suicidal ideation of an adolescent group.

## **METHODOLOGY**

In order to realise the objectives of this study the procedure used is as follows:

### **Research design**

A non-experimental, cross-sectional and correlational design was used.

### **Participants**

Ten schools representative of the general population of the Northern Cape Province (NCP) were selected by means of a purposive, stratified sampling technique. Sixty participants from each school (twenty per grade) were selected from grades 10 to 12 to constitute a sample of 590 learners from the NCP. The sample size was reduced to include 381 participants by excluding all participants older than 18 years of age. This decision was based on the fact that participants older than 18 years may differ significantly from younger participants with regard to their development tasks and may have acquired different coping strategies at an older age. Exclusion of older participants contributed towards creating a more homogenous sample.

Defining characteristics of the sample were:

The mean age of participants was 16.3 years with a standard deviation of 0.5.

The sample constituted 223 females and 158 males.

The participants were ethnically divided as follows: Coloured (185), black (77) and white (118).

The majority of participants were from a urban background (88%) while 12% came from rural background.

## **Data gathering**

The researcher, in collaboration with psychologists and psychometrists from the Department of Education (NCP), was involved in the data collection process, which took place during school hours. Permission from the Department of Education and school principals was obtained to gather data at the relevant schools. Informed consent was received from the parents and participants. This was achieved by informing the learners about the rationale of the study and by explaining that their participation was voluntary and that participants could withdraw from the study at any time during the process. The participants were furthermore informed that all information obtained in this study would be handled in the strictest confidentiality and anonymity. The participants who agreed to take part signed a consent form as part of their test booklet. Testing took place over a 3-hour period with a break of 30 minutes during which refreshments were served. All measuring instruments were administered to the participants in English. In order to comply with the ethical standards of social research, the professional staff was available to answer questions or initiating debriefing opportunities as some of the questions could have elicited emotional reactions from the participants.

## **Measuring instruments**

The following measuring instruments were used:

### ***Criterion variable***

*The Suicidal Ideation Questionnaire for Adolescents* (Reynolds, 1988) measures the frequency and intensity of suicidal thoughts. Internal consistency coefficients of between 0.93 and 0.97 have been reported for an American sample (Reynolds, 1988). Suicidal ideation was calculated by using the total SIQ score. A high total score was indicative of high levels of suicidal ideation while a low total score indicated low levels of suicidal ideation. No South African studies could be found that reported its use (The following databases were searched: EBSCO and associate databases, Google Scholar and NiPAD, 20 November, 2009).

### ***Predictor variables***

A researcher-compiled biographical questionnaire with questions about the age and gender of learners, socioeconomic status of parents, religious affiliation, ethnicity and exposure to suicide, was used to gain biographical information.

*The Rosenberg Self-esteem Scale* (Rosenberg, 1989) consists of 10 items. This measure gives an indication of the participants' global sense of self-worth. Alpha coefficients of between 0.77 and 0.88 (Rosenberg, 1989) are reported for the total score of this measuring instrument. The RSES has been purported to be the standard against which new self-esteem measures are evaluated (Robinson, Shaver & Wrightsman, 1991). A South African study conducted by Henn (2005) reported an alpha coefficient of 0.60 when used on a adolescent group.

*The Life Stressors and Social Resources Inventory, Youth Form* (LISRES) (Moos & Moos, 1994) measures a wide range of stressors, as well as the social resources to which learners have access. The internal consistency indexes vary from 0.79 to 0.88 for the stressor subscales and from 0.78 to 0.91 for social resources subscales. A South African study conducted by Wissing (1996) reported coefficients ranging from 0.78 to 0.91 for all subscales.

*The Hope Scale* (Snyder *et al.*, 1991) measures the participants' sense of hopefulness. Alpha coefficients of between 0.74 and 0.88 are reported for the total score of this measuring instrument. Potgieter (2004) reported coefficients of 0.81 for hope agency and 0.75 for hope pathways for a sample of young adults.

*The Cope Questionnaire* (Carver, Scheier & Weintraub, 1989) measures the participants' coping strategies. Alpha coefficients of between 0.45 and 0.92 were reported for this instrument as a whole (Carver *et al.*, 1989). In a South African study Wissing (1996) reported coefficients of between 0.39 and 0.90 in a study of university students.

Alpha coefficients were calculated for all scales and subscales of the current sample.

## Statistical analysis

The SAS Software (SAS Institute, 2003) was used to analyse the data and intercorrelations. Descriptive statistics were calculated for all scales and subscales. In order to investigate which predictors are most successful in determining suicidal ideation a stepwise regression analysis (with the assistance of a forward selection procedure) was performed. In a forward selection of the predictor variables the predictor variable that correlates the highest with the criterion variable will be the first to be placed into the equation. This only takes place if the corresponding *F*-value has been found to be significant on either the 1% or 5% levels of significance. Sequentially, the predictor with the second highest partial correlation is added to the equation. This process is repeated until none of the remaining predictor variables reflect a significant contribution to the prediction model.

The number of predictors that can constructively be used in the model is determined by investigating the increase in variance from having entered the first predictor to adding the last predictor variable to the model. The investigation is done by using the *F*-test (Howell, 2007). If a significant increase (on the 5%-level) in variance is found, the following equation (as defined by step 2) is compared with the last step of the regression model. This procedure is sequentially repeated until the specific regression model is found where the variance differs significantly from the last equation. A stepwise regression analysis was computed in which suicidal ideation was the criterion variable and the various subscales of self-esteem, hope, coping and the stressors and resources of the LISRES (Moos & Moos, 1994) were the predictor variables. It may be argued that the hierarchical analysis would be more defensible, and while it must be conceded that the stepwise analysis may capitalise on chance and not replicate well in other samples, the sheer number of subscales being used meant that in a hierarchical analysis the chances would be very good that the total variance explained could be inflated through the addition of individually non-significant predictors. Thus a stepwise regression was chosen to determine only the significant predictors from the 33 subscales.

## **RESULTS AND DISCUSSION OF RESULTS**

Before reporting the results of the stepwise regression analysis, the descriptive statistics (means and standard deviations) related to the criterion and predictor variables, is presented in Table 1. Alpha coefficients for the hope scale and all coping subscales ranged from 0.419 to 0.65 which is considered low if one compares these to the guiding criteria of 0.7 as proposed by Nunally and Bernstein (1994) for non-cognitive measures. The small number of items might have influenced the alpha coefficients (Anastasi & Urbina, 1997). The participants obtained a mean of 38.12 and a standard deviation of 34.54 for the criterion variable suicidal ideation. The scores obtained in this study appear significantly higher than the mean suicidal ideation scores reported by Reynolds (1988) with a mean of 17.76 and a standard deviation of 20.76. This indicates that the participants in this study reported a higher degree of suicidal ideation.

Table1: Means and standard deviations for the research group as a whole (N=381)

Variables	M	S	Coefficients
Criterion variable:			
Suicidal ideation	38.108	34.541	0.960
Predictor variables:			
Self-esteem	20.249	4.498	0.680
Hope ó agency	23.912	4.588	0.551
Hope ó pathway	23.441	4.707	0.419
Cope scales			
Emotion-focused coping	57.286	9.113	0.778
Problem-focused coping	56.753	9.281	0.819
Dysfunctional coping	31.362	5.907	0.649
Alcohol and drug disengagement	1.555	0.947	
Positive reinterpretation and growth	11.885	2.386	0.531
Mental disengagement	10.798	2.592	0.441
Seeking support for instrumental reasons	11.075	2.806	0.623
Seeking support for emotional reasons	10.788	2.983	0.650
Denial	9.671	2.789	0.549
Venting of emotions	10.539	2.603	0.463
Planning	12.079	2.529	0.592
Active coping	11.637	2.385	0.473
Turning to religion	12.72	2.696	0.650
Behavioural disengagement	9.446	2.621	0.488
Restraint coping	11.211	2.441	0.488
Acceptance	11.508	2.562	0.487
Suppression of competing activities	10.959	2.290	0.429
LISRES			
Stressor: - PH Physical health	2.396	3.596	0.888
Stressor: - HM Home and money	11.543	7.940	0.850
Stressor: - SIB Siblings	9.821	5.526	0.785
Stressor: - FAM Extended family	6.793	4.555	0.777
Stressor: - SCH School	16.601	8.116	0.811
Stressor: - FR Friendships	7.475	4.579	0.723
Stressor: - BG Boyfriend/girlfriend	5.567	4.536	0.793
Stressor: - PAR Parents	9.325	4.646	0.830
Stressor: - NLE Neg life experience	11.939	6.268	0.745
Resource: - SIB Siblings	11.811	5.566	0.861
Resource: - FAM Family	17.803	6.406	0.836
Resource: - SCH School	10.911	4.918	0.820
Resource: - FR Friends	24.772	7.755	0.783
Resource: - BG Boyfriend/girlfriend	13.934	5.685	0.889
Resource: - PAR Parents	13.099	4.389	0.883
Resource: - PLE Pos life experience	11.732	4.214	0.719

For self-esteem, a mean score of 20.25 and a standard deviation of 4.49 were obtained. Findings from a South African adolescent study (Grobler, 1998) reported a mean score of 28.57, which indicated that participants in the Northern Cape sample reported lower levels of self-esteem. With regard to the predictor variable hope, the participants' mean scores on the

two different subscales were 23.91 for hope (agency) and 23.44 for hope (pathways). The scores obtained in this research study appear to be consistent with the results (24.73 for agency and 23.86 for pathways) obtained by Potgieter (2004) in a multicultural investigation into wellness in young South African adults.

In the report on the stressors and resources the participants' scores showed considerable variation between individual scores. The stressors and resources scores were slightly higher than corresponding results yielded by Moos and Moos (1994) and Du Toit (1999). In addition it was noted that negative life experience (NLE) scores reflected by the current research group were significantly higher than the scores measured in the American study of Moos and Moos (1994), but fairly similar to the South African study by Du Toit (1999). This finding could be linked to the fact that socioeconomic disparities, high crime and violence rates appear more marked in South Africa as a developing country than in developed countries such as the United States.

### **Intercorrelations**

In discussing Table 2 the correlations significant for suicidal ideation, with a 1% level of significance and a medium to large effect size as well as other correlations with a large effect size, are discussed.

a) It is clear from the intercorrelations that self-esteem was the only variable that correlated significantly with suicidal ideation. The correlation between suicidal ideation and self-esteem was found to be negative, which implies that participants who experience a low level of self-esteem show a greater probability of having a higher level of suicidal ideation. This finding was confirmed by earlier results (Wilburn & Smith, 2005) who concluded that high levels of self-esteem decreased the level of suicidal ideation in adolescents.

b) A positive correlation was found between emotion-focused coping and dysfunctional coping. Participants who are more inclined towards the use of emotion-focused coping strategies also use more dysfunctional coping strategies. According to Carver et al. (1989) emotion-focused and problem-focused coping strategies are complementary and in certain situations context specific. Excessive and inappropriate use of emotion-focused coping can therefore lead to ineffective coping behaviour which may increase the likelihood of using other more dysfunctional coping strategies.

c) A strong positive correlation was found between friends as a stressor (Str Friends), school as a stressor (Str School) and family as a stressor (Str Family). Furthermore, a positive relationship was found between friendships as resources (Res Friends) and that of family (Res Family) and romantic relationships (Res Boy/girl) as resources. It appears that individuals who have negative experiences in one relationship are likely to experience other relationships in a similar way. Participants who had positive experiences within their peer relationships are more likely to experience positive family and romantic relationships as well (Horstmanshof et al., 2008).

**Table 2:** Intercorrelations between the different variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1. Suicidal ideation	1	-0.32*	-0.10	-0.06	-0.05	-0.08	0.18*	-0.01	0.12	-0.04	0.03	-0.01	0.03	0.11	0.13	0.12	-0.09	-0.05	0.05	-0.11	0.03	-0.11	-0.03
2. Self-esteem		1	-0.35*	-0.26*	-0.12	-0.19*	0.23*	0.02	0.14	0.09	0.16*	0.07	0.10	-0.03	0.09	0.05	-0.04	-0.09	0.02	-0.10	0.02	-0.13	-0.02
3. Hope agency			1	0.47*	0.24*	0.30*	-0.13	-0.06	-0.09	0.03	-0.01	0.01	-0.04	0.01	-0.01	0.06	0.01	0.01	-0.09	0.06	0.04	0.06	0.01
4. Hope pathway				1	0.21*	0.31*	-0.06	-0.03	-0.08	-0.02	-0.12	0.03	0.02	-0.03	-0.04	0.02	0.01	-0.03	-0.12	-0.03	-0.07	-0.01	0.04
5. Emotion-focused coping					1	0.62*	0.23*	-0.05	0.02	-0.02	-0.10	-0.02	-0.09	-0.03	-0.04	0.04	0.01	-0.04	-0.04	-0.08	-0.06	0.06	0.04
6. Problem-focused coping						1	0.20*	0.01	0.01	0.02	-0.03	0.12	0.01	0.03	0.03	0.06	0.02	0.02	-0.08	-0.03	-0.06	0.01	0.05
7. Dysfunctional coping							1	-0.07	0.17*	-0.01	0.05	-0.02	-0.03	-0.01	0.06	0.06	0.02	-0.02	0.06	-0.10	-0.09	-0.08	0.02
8. Physical health								1	-0.03	0.09	0.06	0.10	0.09	0.04	0.03	0.15*	-0.08	-0.09	-0.09	-0.06	-0.08	-0.09	-0.01
9. Home money									1	0.04	0.28*	0.05	0.16*	0.08	0.16*	0.23*	-0.15*	-0.24*	-0.01	-0.26*	-0.13	-0.22*	-0.06
10. STR Siblings										1	0.44*	0.51*	0.40*	0.30*	0.40*	0.21*	-0.13	0.07	0.07	0.13	0.15*	-0.08	0.09
11. STR Family											1	0.42*	0.44*	0.31*	0.39*	0.26*	-0.13	-0.15	0.14	0.02	0.06	-0.18*	0.08
12. STR School												1	0.57*	0.37*	0.29*	0.29*	-0.04	0.11	0.10	0.16*	0.19*	-0.02	0.16*
13. STR Friends													1	0.41*	0.28*	0.31*	-0.10	-0.02	0.07	-0.03	0.02	-0.08	0.15
14. STR Boy/Girl														1	0.21*	0.30*	-0.01	0.01	0.13	0.05	0.03	-0.04	0.14
15. STR Parents															1	0.29*	-0.05	-0.02	0.11	0.07	0.17*	-0.25*	0.01*
16. NLE																1	-0.13	-0.10	-0.05	-0.12	-0.02	-0.20*	0.40*
17. RES Siblings																	1	0.45*	0.28*	0.37*	0.19*	0.43*	0.03
18. RES Family																		1	0.34*	0.50*	0.34*	0.43*	0.11
19. RES School																			1	0.37*	0.29*	0.29*	0.15*
20. RES Friends																				1	0.50*	0.37*	0.14*
21. RES Boy/Girl																					1	0.23*	0.21*
22. RESParents																						1	0.10899
23. PLE																							1

\*P < 0.01      *f* (Effect size): 0.1 small; 0.3 medium; 0.5 large  
 STR ó Stressor      RES ó Resource      NLE ó Negative life events; PLE ó Positive life events

## Results of the Stepwise regression analysis

The results of the stepwise regression analysis are presented in Table 3. These results indicate that all the predictor variables explain a combined 19.27% ( $R^2 = 0.1927$ ) of the variance of suicidal ideation. The calculated  $R^2$ -value has been found to be significant on the 1% level of significance [ $F=12.72$ ].

In step 1 of the stepwise regression analysis, self-esteem was found to be significant on the 1% level of significance and explained 10.49% of the variance of suicidal ideation [ $F = 44.43, p \leq 0.01$ ]. The direction of the relationship between self-esteem and suicidal ideation was found to be negative. Therefore the participants who experienced higher levels of self-esteem were more likely to report lower levels of suicidal ideation. This finding is in accordance with earlier research findings of Mashego et al. (2003) as well as Wilburn and Smith (2005), who concluded a positive sense of self-esteem acted as a buffer against suicidal ideation.

**Table 3:** Stepwise Regression Analysis

Step	Variable entered N = 381	Partial R <sup>2</sup>	Model R <sup>2</sup>	F-Value	Direction of relationships with suicidal ideation	Pr > F
1	Self-esteem	0.1049	0.1049	44.43	Negative	<0.0001**
2	Cope-denial	0.0192	0.1241	8.29	Positive	0.0042**
3	Stressor : Romantic relationships between boyfriend and girlfriend	0.0183	0.1927	8.45	Positive	0.0039**
4	Cope ó Ventilation of emotions	0.0179	0.1534	7.96	Positive	0.0050**
5	Cope - Acceptance	0.0113	0.1354	4.93	Negative	0.0271*
6	Cope ó Seeking support for instrumental reasons	0.0107	0.1641	4.81	Negative	0.0289*
7	Negative life experience	0.0103	0.1744	4.66	Positive	0.0315*

\*\* p <= 0.01; \* p <= 0.05

Step 2 of the regression model found coping through denial contributed 1.92% to the variance of suicidal ideation on the 1% level of statistical significance [ $F = 8.29, p \leq 0.01$ ]. Suicidal ideation was positively associated with denial, which implies that participants who frequently made use of denial as a coping strategy were also at a greater risk of experiencing high suicidal ideation. These findings concur with earlier findings of

Sadowski and Kelley (1993) as well as Spirito et al. (1996), who found denial to be more prevalent in adolescents who were suicidal than in their non-suicidal counterparts.

In step 3 of the stepwise regression model, the stressor romantic relationships between girlfriend and boyfriend was found statistically significant on the 1% level of significance. This stressor boyfriend/girlfriend contributed 1.83% [ $F = 8.45, p \leq 0.01$ ] to the variance of suicidal ideation. A positive relationship between the two variables indicated an increased risk of suicidal ideation where romantic partners experienced their relationships as stressful and troublesome. These findings concur with those of Engelbrecht and Van Vuuren (2000) and Louw and Louw (2007), who concluded that unsatisfying romantic relationships could act as a precipitant for self-destructive behaviour in adolescents.

In step 4 of the stepwise regression analysis, coping through the venting of emotions was statistically significant on the 1% level of significance [ $F = 7.96, p \leq 0.01$ ], while explaining 1.79% of the variance of suicidal ideation. The directional relationship between the variables is positive, indicating that participants who use the venting of emotions more frequently are also likely to display higher levels of suicidal ideation. Current findings appear to be in concurrence with findings of Barnow et al. (2005) and Wilson et al. (1995), in which it was found that the venting of emotions was associated with higher levels of suicidal ideation. A recent study by Nixon and Heath (2009) found that poor emotional regulation could lead to an increase in the experience of negative emotions, which may act as a predisposing factor for the development of self-destructive behaviours.

Step 5 of the stepwise regression analysis found coping by accepting one's circumstances and stressors to be statistically significant on the 5% level of significance, contributing 1.13% to the variance of suicidal ideation [ $F = 4.93, p \leq 0.05$ ]. A negative relationship was found between cope acceptance and suicidal ideation which implies that higher levels of acceptance are associated with lower levels of suicidal ideation. These results do not

concur with earlier findings that indicate acceptance can act to decrease stressful situations when stressors appear unchangeable (Carver et al., 1989; Myers, 2007).

In step 6 of the stepwise regression analysis, coping by seeking support for instrumental reasons was found to be significant on the 5% level of significance and contributed 1.07% to the variance of suicidal ideation [ $F = 4.81, p \leq 0.05$ ]. A negative relationship between seeking support for instrumental reasons and suicidal ideation implies that the participants' level of suicidal ideation is likely to decrease as they increasingly seek support from others. These findings are in line with the earlier findings of Lazarus and Folkman (1984) and Kleinke (1998) who found supporting evidence that those who actively seek social support from others are more optimistic about their future and show a lower risk of developing depression and associated symptoms.

In step 7 of the regression model, negative life experiences were found to be significant on the 5% level of significance. Negative life experiences contributed 1.03% [ $F = 4.66, p \leq 0.05$ ] to the variance of suicidal ideation. The direction of the relationship between the variables was positive, which implies that the participants who experience stressful circumstances or difficulties in life were at a greater risk of developing suicidal ideation. Negative life experiences such as destabilized families, family violence and abuse, personal losses and substance usage were found to predispose adolescents to developing negative feelings, increasing their indulgence in high-risk behaviours as well as developing depression (Flisher et al., 2004; Larson et al., 2002).

## **RECAPITULATION AND DISCUSSION**

The aim of this study was to explore to what extent variables representative of the components of the stress and coping model (personal system, contextual stressors and resources, life crises and coping and strategies) explain the variance in suicidal ideation.

The results indicate a higher incidence of suicidal ideation in the current sample than that for an American adolescent sample (Reynolds, 1988), while self-esteem levels were lower than those of a South African adolescent group from the Free State Province (Henn, 2005). The current sample also reported a higher incidence of negative life events compared to another SA group (Du Toit, 1999).

The results of the stepwise regression analysis indicated that seven of the 33 variables, namely self-esteem, coping by denial, stressful romantic relationships, ventilation of emotions, coping through acceptance, seeking support for instrumental reasons and negative life experiences, made a significant contribution to suicidal ideation (on at least the 5% level of significance). Collectively these variables explained 19.27% of the variance of suicidal ideation.

The variable self-esteem made the largest contribution to the variance of suicidal ideation (10.49% contribution). According to the findings, the participants who experienced a low sense of self-esteem were more likely to experience suicidal thoughts or contemplate suicide as a means of dealing with their problems. It seems as if participants who have negative perceptions about themselves are unable to view themselves or their environment in a positive manner, thereby contribute to reinforcing negative perceptions and experiences leading to feelings of hopelessness and depression (Moore, 2000). These findings support conclusions by Mashego et al. (2003) as well as Wilburn and Smith (2005) that a high sense of self-esteem contributes to the attainment of academic success, decreasing stress levels as well as acting as a buffer against suicidal ideation.

In terms of the contribution by the coping subscales, denial (1.92%), venting of emotions (1.79%), acceptance (1.13%) and seeking support for instrumental reasons (1.07%) contributed significantly to the variance of suicidal ideation. The direction of the relationship between denial, venting of emotions and suicidal ideation was positive

indicating the frequent use of denial and venting of emotions are associated with higher levels of suicidal ideation. These findings are supported by results from earlier studies that emphasised the use of denial and venting of emotions as aggravating stressful situations (McCrae & Costa, 1986; Sadowski & Kelley 1993; Spirito et al., 1996). The excessive use of the venting of emotions appears to increasingly create more negative environments thereby making the experience of positive emotions more difficult, which leads to a lowered sense of self-worth, feelings of insecurity as well as an increased risk of suicidal behaviour (Barnow et al., 2005; Nixon & Heath, 2009; Wilson et al., 1995). The findings related to acceptance and suicidal ideation concur with Carver et al. (1989) and Myers (2007) who viewed acceptance as an emotionally alternative manner/strategy in dealing with physically unchangeable stressors which may contribute in decreasing suicidal ideation. The finding regarding seeking social support for instrumental reasons was negatively related to suicidal ideation which indicated more frequent use of seeking social support for instrumental reasons was associated with lower levels of suicidal ideation. The ability to reach out to socially supportive structures for the purposes of rectification or consultation within a community enables individuals to remain socially bonded while this support simultaneously acts as a buffer against suicidal behaviour (Kleinke, 1998; Lazarus & Folkman, 1984).

The two stressors (Boy-/girlfriend and negative life events) contributed significantly to the variance of suicidal ideation. As a developmental stage, adolescence is a stressful phase in which adolescents with limited coping skills and supportive structures may struggle to deal with the dynamics of complicated romantic relationships, thereby increasing their levels of stress as well as the risk of suicidal ideation (Engelbrecht & Van Vuuren, 2000; Israelashvili et al., 2006; Louw & Louw, 2007; Wilburn & Smith, 2005). Being exposed to negative life experiences may increase an individual's vulnerability to stress and subsequent self-destructive behaviour (Cooker & Borders, 2001; Kwon Hoo, 2002; Sigelman & Rider, 2003). The difficulty in managing stressful situations contributed to creating negative feelings within participants who were then more likely to adopt negative coping behaviours (Israelashvili et al., 2006; Larson et al., 2002).

Based on the research findings it appears that ineffective coping and a lack of self-esteem are areas that contribute significantly to the vulnerability of adolescents. Conversely, a positive sense of self and effective coping behaviour appears to serve a protective role

## **RECOMMENDATIONS AND LIMITATIONS**

Researchers agree that suicidal behaviour is not a linear but rather a multifaceted phenomenon. Pertaining to adolescents, it is recommended that suicidal ideation be explored with additional variables such as race, gender, personality factors, self-efficacy with a special focus on the combination of risk and protective factors as determinants of suicidal ideation. It is further recommended that longitudinal studies be undertaken to enable researchers to observe the developmental influences that interact with different variables at specific developmental stages. In this way researchers will be able to differentiate between the variables that are more prevalent at different stages, thereby increasing the focus of intervention programmes for different age groups.

The need for South African contextualised measuring instruments such as a suicidal ideation scale cannot be emphasised more as South Africa, with its unique history and cultural dynamics, may present a different worldview and elicit different responses from its inhabitants. This would eventually enable scientists and therapists to better understand coping behaviour and provide more accurate preventative strategies for our youth.

The results support the notion that an interactive number of personal and contextual factors contribute to the variance in suicidal ideation. This emphasises the importance of including a variety of skills in capacity building programs to empower adolescents in managing difficult situations.

Based on the research findings it appears that coping and self-esteem are areas that adolescents may be struggling with. The need for school-based workshops and seminars to equip adolescents with skills such as problem-solving, positive reinterpretations and positive visualisation would contribute to empowering teenagers when they are confronted with difficult challenges. The need to raise awareness about risk factors concerning suicide should be encapsulated within a suicide prevention programme, which could be incorporated into life-orientation subjects in order to not only raise awareness, but simultaneously make these socially taboo issues a topic of discussion within the correct milieu to ensure timely identification of individuals who may be at risk for suicidal behaviour.

The use of non-South African measuring instruments is considered an important limitation in this study as it may have influenced students' understanding and interpretation of certain questions or phrases, which could have influenced the results of the study. Another limitation is that this study focused on learners in general rather than those who had a previous suicide attempt which may have contributed to a better understanding of the dynamics of suicidal ideation. The need for reduction of the sample in order to obtain greater homogeneity was a further limiting factor, as the subsequent sample size made attempts at an initially intended Structural Equations Modelling analysis of data statistically less viable.

It is hoped that the findings from future research will lead to the development and implementation of programmes for parents, adolescents and teachers. These groups can benefit from being skilled as well as empowered in building and developing the necessary skills to strengthen and support each other in managing suicidal behaviour more successfully.

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## **CHAPTER 7:**

## **CONCLUSION**

In this chapter, some of the most significant research findings of this overarching study are presented. The limitations of the research are discussed and recommendations are made regarding future studies.

## 7.1 SUMMARY OF LITERATURE

A review of literature was presented in Article One of this thesis to obtain a clearer theoretical understanding of suicidal behaviour, specifically, in relation to adolescents. This literature review allowed the researcher to establish the direction and trends that global research has taken with regard to suicidal behaviour. Although suicidal behaviour is a well-explored field of study, a review of previous studies highlighted the fact that limited data was available with specific emphasis on suicidal ideation, with even less data available as South African studies. Albeit the fact that suicidal behaviour primarily focused on prevention from a psychopathological perspective, namely the study and prevention of risk factors (Barlow & Durand, 2009; James & Gilliland, 2001), one of the noteworthy findings was the adoption of a more integrative approach towards the outcome of suicidal behaviour as illustrated by the emphasis on the interaction of risk and protective factors as more salient than merely the presence of risk factors (Centre of Parenting and Research, 2007; Hobfoll, 1988; 1998).

Another important directional change is the fact that the etiological explanations of suicide have moved away from the conventional risk factors to include a variety of additional variables/factors such as personal resources, contextual factors, health-related factors, the stage of individual development, demographic factors, as well as how individuals cope with situations, which all interact to determine vulnerability or protection against suicidal behaviour (Beautrais, 2000; George, 2005; James & Gilliland, 2001; Larson, Wilson & Mortimer, 2002). The question whether risk and protective factors exist along the same continuum, or if the concepts are qualitatively different requires further exploration, as some greater clarity is needed regarding this issue (Centre of Parenting and Research, 2007; Luthar & Cicchetti, 2000; Schoon, 2006). Gaining clarity could have significant

implications for both researchers and adolescent communities as it may impact on what resources communities have, what resources they need, and how these resources can be utilized in the deceleration of suicidal behaviour (Hobfoll, 1998).

## **7.2 SUMMARY OF EMPIRICAL FINDINGS**

The overarching aim of this study was to investigate the risk and protective factors underlying adolescent suicidal behaviour in this group of adolescent participants from the Northern Cape Province (NCP), South Africa. The study made use of both quantitative and qualitative methods by which data was collected, processed, and interpreted for each of the individual articles.

### **7.2.1 Suicidal Ideation**

The participants obtained a mean of 39.51 and a standard deviation of 36.14 for suicidal ideation, which was significantly higher than the scores obtained by participants in a study conducted by Reynolds (1988), where a mean of 17.76 and a standard deviation of 20.76 were obtained for an American sample. The fact that the South African scores appear significantly higher than the latter scores indicates that the participants in this study reported a generally higher degree of suicidal ideation. From the total group of 590 participants, 13% reported having attempted suicide previously. In comparing participants who previously attempted suicide to groups of non-attempters with regard to their suicide risk as determined by the Suicidal Ideation Questionnaire (SIQ) (Reynolds, 1988), results indicated a significant difference between suicide attempters and non-attempters with regard to suicide risk. A total of 65% of the participants who had previously attempted suicide were identified as being at higher risk for suicide. The findings were supported by Szabo (1997) who concluded that a prior suicide attempt increased the individual's suicide risk status for subsequent attempts. Group comparisons with regard to the level of suicidal ideation indicated that coloured and black participants showed a significantly higher mean score than the white group. This finding could be

related to the changing socio-economic environment, lower levels of financial security, or higher levels of poverty and deprivation.

## 7.2.2 Stressors

### 7.2.2.1 Quantitative findings

In reporting on the stressors and resources, participants' scores showed considerable variation between individual scores. The scores for the stressor subscales were slightly higher than corresponding results yielded by Moos and Moos (1994) and Wissing (1996). The stressor negative life experience (NLE), as reflected by the current group(s), was significantly higher than comparative scores measured for an American study of Moos and Moos (1994). Factors such as socio-economic disparities, high crime rates, and the violence that continues to mark the growing pains of a democratic South Africa, may have contributed to the current groups' experiences. In comparing the group results to a South African study on university students (Wissing, 1996), the only significant deviation was recorded in the stressor school (SCH) with a mean of 11.65 to 16.08, which was higher for the current research group.

### 7.2.2.2 Qualitative findings

Using the Biopsychosocial-Spiritual model (Winiarski, 1997) as explanatory structure for expression of adolescent stressors, it became apparent that stressors were primarily centred on the psychological and social dimensions. Psychological stressors included adolescents generally feeling stressed and directing negative feelings towards themselves as they struggled with issues of acceptance and identity development. Stressful experiences like these are not uncommon, as certain developmental tasks can impact negatively on adolescents' development, causing negative self-perceptions (Louw & Louw, 2007; McGraw, Moore, Fuller & Bates, 2008; Sun & Hui, 2006). Other stressors reflecting concern for adolescents were their degrading attitudes and poor regulation of emotions, which lead to many unnecessary arguments and conflict. Not having the necessary coping skills in dealing with emotionally competitive environments can lead to adolescents

adopting defensive or poor emotional regulating strategies (Erwin, 2002; Southam-Gerow, 2002). Not being treated with the necessary respect and trust by others was identified as a distressing factor to adolescents. Where adolescents are able to afford each other the necessary respect and opportunities, they appear more equipped to deal with stressful situations (Berk, 2002; Paulson & Everall, 2001).

Stressors experienced along the social dimension were related to adolescents feeling concerned about how they perceive others, and that such negative attributional styles lead to conflicting relationships, especially conflicting peer relationships. According to Barnow, Lucht and Freyberger (2005), adolescents exposed to weakened family structures are more likely to reproduce such behavioural repertoires in other areas of their lives. Adolescents also reported feeling insecure and distressed in their relationships with their parents or with romantic partners, and experienced peer pressure as a stressful and ambivalent experience. As a basic supportive system, poor parent-child relationships can have negative implications for the siblings. However, this also serves as a modelling school from which behavioural repertoires can be transferred into other social areas of the adolescents' life (Finkernauer, Engels & Baumeister, 2005; Simões, Matos & Batista-Forguet, 2008). Peer pressure can be a stressful experience in which adolescents have to choose between conformity or rejection and isolation, which can induce high levels of stress (McGraw, et al, 2008).

A small number of respondents reported financial factors and socio-political factors as a reason for their distress. Given that the NCP is the largest and one of the poorest provinces in South Africa, it is to be expected that economic factors would be a stressor. One possible explanation could be linked to the fact that participants have come to accept the limited resources through a passive or stoical acceptance as coping strategy because they appraise their situations as unchangeable (Felner, 2006).

### **7.2.2.3 Integration of quantitative and qualitative finding pertaining to stressors**

A review of both methodological approaches indicates that negative life experiences, a poor child-parent relationship, as well as poor romantic relationships, appear common in both quantitative and qualitative studies. Other stressors that can relate to negative life experiences are the inner negativity and the experience of feeling stressed as adolescents. Financial factors as a stressor were not overwhelming in their contribution as a stressor; however, concerns were voiced by respondents in the qualitative study. These findings indicate that adolescents in the NCP have a generally more negative and pessimistic view, which could be related to the passive acceptance of their circumstances.

### **7.2.3 Resources**

The participants achieved a mean score of 20.25 and a standard deviation of 4.50 for self-esteem. In a study conducted by Grobler (1998) amongst secondary school learners in the Mangaung area (Bloemfontein) a mean score of 28.57 was obtained. The higher mean scores achieved by the participants in Grobler's study is indicative of a lower sense of self-esteem in participants from the NCP. Self-esteem made an important contribution and was the only resource found to be significant.

### **7.2.4 Coping**

According to the results, participants made frequent use of problem- and emotion-focused coping strategies. From these findings, it could be deduced that adolescents make use of a variety of coping strategies. Some differences were noted when coping strategies were analysed along racial categories. Similarities were noted between Coloured, black, and white groups with regard to their use of problem-focused coping strategies, while only Coloured and white groups reported greater frequency in the use of emotion-focused coping strategies. Black participants were the only group found to make greater use of dysfunctional coping strategies.

The coping subscales contributed 17.01% (Coloured), 17.32% (black), and 22.44% (white), respectively, to the variance of suicidal ideation. For the Coloured participants, venting of emotions showed a significant positive relationship with suicidal ideation, implying that venting of emotions increased levels of suicidal ideation. Literature has indicated that when venting of emotions is used more frequently (complaining and voicing your frustrations all the time), this behaviour can contribute towards creating a negative environment and associated negative self-perceptions that can increase suicidal risk (Barnow et al., 2005; Wilson, Stelzer, Bergman, Inayatullah & Elliott, 1995). For the black participants, denial and turning to religion were positively related, while restraint coping had a negative relationship with suicidal ideation. Higher levels of turning to religion were found to increase suicidal ideation, which was in contradiction to previous literature findings (Aspalan, 2003; Madu & Matla, 2003; Rutter & Estrada, 2006). As a coping strategy the prolonged use of denial was associated with hibernating and not dealing with the problem, which contributed to aggravating the stressor instead of reducing it (Anderson, Narwit, Van den Berg & Chinball, 2005; McCrae & Costa, 1986). The relationship between restraint coping and suicidal ideation emphasised the need to use one's opportunities, skills and abilities appropriately and timeously in order to experience more positive achievements in one's life (Folkman, Lazarus, Dunkel-Schetler, DeLongis & Greun, 1986; Kleinke, 1998). For white participants, acceptance was negatively related to suicidal ideation. In some situations where one cannot actively do something to decrease the stressful situation, emotion-focused coping strategies may be more useful, such as acceptance where an individual can still positively regulate their emotions towards growth and an eventual positive outcome amidst the presence of a stressor (Carver, Scheier & Weintraub, 1989; Myers, 2007).

A comparison of the influence of modes of coping and suicidal ideation indicated that emotion-focused coping (Coloured and white) and dysfunctional coping (black group) were significant. Coloured and white participants may therefore have made frequent use of emotion-focused coping strategies, which, according to Lewis and Frydenberg (2002), leads to ineffective coping and may increase one's risk for suicide. Carver et al. (1989)

have clearly stated that dysfunctional coping strategies are less often used, while Meehan, Peirson and Fridjhon (2007) have termed them maladaptive strategies that can increase suicide risk.

#### **7.2.5 Discussion of stepwise prediction of suicidal ideation**

The overarching investigation exploring the extent to which variables are associated with the stress and coping process model (personal and contextual stressors and resources, life crises, and coping strategies) explained the variance in suicidal ideation. The results indicated seven of the 33 variables, namely self-esteem, coping through acceptance, and seeking support for instrumental reasons were negatively related, while coping by denial, stressful romantic relationships, ventilation of emotions, and negative life experiences were positively related to suicidal ideation. These variables collectively explained 19.27% of the variance of suicidal ideation on the 1% or 5% level of significance. Self-esteem made the largest contribution to the variance of suicidal ideation which indicated that higher levels of self esteem stood in opposition to negative self-perceptions and thus significantly reduced the development of hopelessness and depression, including the onset of suicidal ideation (Mashego, Williamson & Setwaba, 2003; Moore, 2000; Wilburn & Smith, 2005).

Coping subscales such as denial, venting of emotions, and acceptance once again played a significant role in explaining suicidal ideation. Although small, these subscales provide further evidence that choice of coping strategies does play a role in how adolescents experience suicidal ideation (Hobfoll, 1998; Israelashvili, Gilud-Osovitski & Asherov, 2006; Lewis & Frydenberg, 2002; Myers, 2007; Nixon & Heath, 2007; Sadowski & Kelley, 1993).

From the group of stressors and resources, romantic relationships and negative life experiences constantly contributed significantly to suicidal ideation. These positive relationships shared with suicidal ideation are indicative of how influential, problematic romantic relationships and negative life experiences can increase participants' levels of

suicidal ideation (Cooker & Borders, 2001; Engelbrecht & Van Vuuren, 2000; Larson et al., 2002).

### **7.3 CONTRIBUTIONS OF THIS STUDY**

This study is the first of its kind conducted in the Northern Cape Province. It has been invaluable in establishing baseline data on adolescent suicidal behaviour in this province. From this study, further research can be undertaken to explore suicidal behaviour in the NCP with regard to changing suicidal behaviour patterns, as well as to explore other uniquely based variables that may influence suicidal behaviour within the NCP specifically.

Very few studies in South Africa have adopted an integrative approach in exploring suicidal behaviour. This study has emphasised the importance of approaching suicide in a multifaceted manner as both personal and contextual resources, the development stage of the individual and life transitions, as well as the coping strategies utilised, have been found to influence suicidal ideation. It is furthermore important that the interaction between risk and protective factors be considered in the outcome of suicidal behaviour and not merely the risk factors alone. This study underlines the importance of protective factors such as self-esteem, which can be used to develop counter measures in ensuring a decreasing suicide rate among adolescents.

### **7.4 LIMITATIONS**

Information was obtained by means of a self-compiled questionnaire. Some of the variables explored, such as suicide attempts or previous exposure, were measured by a single question. The use of a structured questionnaire that explored more specific questions related to such variables may have yielded a richer sample of information. It must be borne in mind that, in agreement with the NCP department of education's guidelines, questionnaires were administered in English. Evaluations based on the pilot study found no language gaps. In the eventual analysis a substantial majority of the participants were Afrikaans-speaking, which implies that language may have played a role

in how adolescents responded, even though psychometrists and psychologists were at hand to answer questions and clarify concepts. The coping subscales showed a low item-to-subscale ratio, which may be the reason for their generally low alpha coefficients. Furthermore the limited number of items per subscale might have influenced the depth and quality of information retrieved from the sample. In learning about suicidal behaviour, it is sometimes best to explore only those who have had some related experiences with suicide, such as participants who have previously attempted suicide. Unfortunately, those who had previously attempted suicide constituted a small number of the total sample, making generalisation of the sample difficult if only these participants were used.

## **7.5 RECOMMENDATIONS**

It is recommended that future studies adopt a similar integrative approach in the investigation of suicidal behaviour and explore the interaction of additional demographic and psychosocial variables as factors that may influence suicidal behaviour. One way of exploring such variables would be through longitudinal investigations, which have the additional advantage of accounting for developmental changes as well. Using longitudinal investigations, researchers could explore the saliency of variables at particular stages of development as different variables may have different influences on suicidal behaviour at particular development stages, such as early, middle, and late adolescence. With longitudinal investigations, researchers can observe developmental influences that occur with regard to the saliency of different variables at different developmental stages throughout the lives of participants. It is furthermore important for researchers to gain greater clarity concerning how long an individual can be deemed at risk following a traumatic event such as a suicide attempt. Longitudinal studies may prove invaluable in this regard. The use of more than one qualitative method may benefit the data-gathering process, as such methods can complement each other and further enrich the voice of adolescents concerned in dealing with one of their most threatening challenges, namely suicide. It is recommended that future studies use the models and measures of Positive Psychology, as this may contribute to a better understanding of protective factors as well as preventative and remedial interventions that can help increase resilience and reduce self-destructive behaviours in adolescents. As a result of this study, it is recommended that

a program be developed which will include improving adolescents' behavioural and emotional regulation abilities, improving their coping skills in dealing with stressors, improving their social and life skills, as well as expanding its focus to significant others (parents and teachers) in order to raise their awareness with regard to the needs of adolescents.

**REFERENCE LISTS:**

**ORIENTATION AND PROBLEM STATEMENT**

**&**

**CONCLUSION**

## LIST OF REFERENCES: ORIENTATION AND PROBLEM STATEMENT

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