

**RISK FACTORS AND THE AVAILABILITY OF SOCIAL  
RESOURCES AS VARIABLES INFLUENCING SUICIDAL  
IDEATION AMONG SOUTH AFRICAN AND BRITISH  
ADOLESCENTS**

by

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## DECLARATION

I, ANTON KRÜGER declare that the thesis hereby submitted by me for the PhD Child Psychology degree at the University of the Free State is my own independent work and has not been previously submitted by me to another university/ faculty. I furthermore cede copyright of the article in favour of the University of the Free State.

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## **ABSTRACT**

Adolescence is considered as a period filled with significant physical, emotional, cognitive and social changes and challenges. Some adolescents might become so overwhelmed by the extensive internal and external transitions that they resort to self damaging behaviour such as suicidal behaviour. A significant increase in adolescent suicidal behaviour has been noted globally in both developed and developing countries. Suicidal behaviour is a multidimensional phenomenon, comprising of personal and contextual factors, developmental challenges and transitions as well as coping responses that constantly interact and as such, influence the risk for suicidal behaviour. The Integrated Stress and Coping Model of Moos and Schaefer (1993) was used as theoretical framework of this study. The aim of this study was to investigate a group of English (United Kingdom as a developed country) and South African (a developing country) adolescents with regard to the influence of personal and contextual stressors and resources, as well as coping strategies on their level of suicidal ideation. A non-experimental, cross sectional design including a correlational and criterium group design was used in this study. A stratified sample of 678 (297 English and 381 Northern Cape) 14 to 16 year old learners were gathered from schools in Surrey, England and the Northern Cape Province in South Africa. A biographical questionnaire, The Suicidal Ideation Questionnaire for Adolescents, the Rosenberg Self Esteem Scale, the Life Stressors and Social Resources Inventory Scale (LISRES), the Hope Scale as well as the Coping Orientations to Problems Experienced Scale (COPE) were used to gather information from the participants. Intercorrelations between the variables were determined with Pearson-product moment correlation coefficients. A step-wise regression analysis was computed in which suicidal ideation was the criterion variable and the various subscales of the Self Esteem, Hope, COPE and LISRES scales were the predictor variables. The 1 % level of statistical significance was used as guideline of significance. Results from the study suggested that the incidence of suicidal ideation was significantly higher for the English adolescent group than for their Northern Cape counterparts. The English group reported school, relationship with siblings and physical health as major stressors while the Northern Cape group viewed socio-economic problems and negative life experiences as significant stressors. Both groups reported family and friends as significant resources. With regard to coping strategies utilized it appears that the Northern Cape participants made use of a wider range of coping strategies such as Problem-focussed, Emotion-focussed and Dysfunctional coping responses. The only coping strategy that the English adolescents utilized more

frequently than the Northern Cape participants was alcohol and drug disengagement. Furthermore English girls showed a stronger preference in utilizing this dysfunctional coping strategy than the English boys. In the step-wise regression analysis the predictor variables together explained a much higher percentage of the variance in the suicidal ideation of the English group than for their Northern Cape counterparts. Ten of the 33 variables made a significant contribution (93.5%) to the variance of the suicidal ideation of the English group. The 10 variables in order of their introduction to the step-wise regression equation was Alcohol-drug Disengagement (67.7%), Physical Health (8.24%), Hope Agency (9.72%), Resource: Family (3.10%), Resource: Friends (1.10%), Self-Esteem (1.10%) Siblings as stressor (0.82%), Family as stressor (0.34%), Mental Disengagement (0.71%) and Acceptance (0.50%). Only two variables, namely Self-esteem (10.94%) and Denial (1.92%) made a statistically significant contribution to the variance in suicidal ideation (explaining 12.4% of the variance of the Northern Cape participants). Limitations of this study were the use of non British and South African measuring instruments and the age difference between the two groups with the English group being 18 months younger than the Northern Cape group. The results of this study emphasise the value of cross national studies. Longitudinal studies comparing cohorts from different countries are recommended.

**Key Words:** Adolescence; English adolescents; South African adolescents; suicidal behaviour, suicidal ideation, personal stressors and resources, contextual stressors and resources; dysfunctional coping; emotion focussed coping; problem focussed coping; alcohol and drug disengagement.

## OPSOMMING

Adolesensie word beskou as 'n periode gekenmerk deur beduidende fisiese, emosionele, kognitiewe en sosiale veranderinge en uitdagings. Sommige adolessente ervaar hierdie tydperk van interne en eksterne veranderinge as so oorweldigend dat hulle hul wend tot selfvernietigende strategieë soos selfmoordgedrag. 'n Beduidende toename in adolessente selfmoordgedrag word wêreldwyd gerapporteer in beide ontwikkelde en ontwikkelende lande. Selfmoordgedrag is 'n multidimensionele fenomeen, bestaande uit persoonlike en kontekstuele faktore, ontwikkelingsuitdagings en oorgangsfases, asook copingstrategieë wat voortdurend met mekaar in interaksie tree en sodoende die risiko vir selfmoordgedrag beïnvloed. Die geïntegreerde Stres en Coping model van Moos en Schaefer (1993) is gebruik as teoretiese raamwerk vir hierdie ondersoek. Die doel van hierdie studie was om ondersoek in te stel na die impak van persoonlike en kontekstuele stressors en hulpbronne asook copingvaardighede op die selfmoordidee van onderskeidelik 'n groep Engelse (Verenigde Koninkryk as 'n ontwikkelde land) en Suid-Afrikaanse ('n ontwikkelende land) adolessente. 'n Nie-eksperimentele, dwarsnitontwerp insluitende 'n korrelasionele en kriteriumgroeptontwerp is gebruik. 'n Steekproef van 678 (297 Engelse en 381 Suid-Afrika) 14- tot 16-jarige skoliere van skole in Surrey, Engeland en die Noord-Kaap provinsie is gebruik. 'n Biografiese vraelys, die Selfmoordidee Vraelys vir Adolessente, Selfesteemvraelys, die Hoopskaal, die Sosiale Stressors en Hulpbronne Vraelys en die COPE Vraelys is gebruik om data in te samel. Interkorrelasies tussen die veranderlikes is bereken met behulp van Pearson-produk moment korrelasie koëffisiënte. 'n Stapsgewyse regressie-ontleding is uitgevoer met selfmoordidee as die kriteriumveranderlike en die subskale van Selfesteem, Hoop, Copingstrategieë en die Sosiale Stressors en Hulpbronsubskale as voorspeller veranderlikes. Die 1%-vlak van statistiese beduidenheid het gedien as beduidendheidsmaatstaf. Die resultate van die studie toon aan dat die voorkoms van selfmoordidee aansienlik hoër was met die Engelse groep in vergelyking met die Noord-Kaapse adolessente. Die Engelse respondente het die skoolomgewing, verhoudings met broers/susters en fisieke gesondheid as vernaamste stressore aangedui, terwyl die Noord-Kaapse groep sosio-ekonomiese probleme en negatiewe lewenservaringe as beduidende stressore gerapporteer het. Beide groepe het die rol van familie en vriende as belangrike hulpbronne geïdentifiseer. Met betrekking tot copingstrategieë wil dit voorkom dat die Noord-Kaapse groep 'n wyer verskeidenheid van Probleem, Emosioneel gefokusde en disfunksionele strategieë in hul hantering van stresvolle situasies gebruik het. Die enigste

copingstrategie wat aansienlik meer deur die Engelse groep gerapporteer is, is die disfunksionele strategie van Alkohol- en dwelmmiddelgebruik. Verder wil dit voorkom asof Engelse meisies 'n sterker voorkeur getoon het vir hierdie betrokke hanteringstrategie. In die stapsgewyse regressie-ontleding het die gesamentlike voorspeller veranderlikes 'n hoër persentasie van die variansie in selfmoordideeasie van die Engelse as Noord-Kaapse groep verklaar. Tien van die 33 veranderlikes het 'n beduidende bydrae (93.5%) tot die variansie van die Engelse groep gelewer. Die tien veranderlikes in volgorde van insluiting tot die stapsgewyse regressie was Alkohol-dwelmmiddelgebruik (67.7%), Fisiese gesondheid (8.24%), Hoop Agentskap (9.72%), Hulpbron: Familie (3.10%), Hulpbron: Vriende (0.34%), Selfgating (10.94%), Broer/suster verhouding as stressor (0.82%), Familie as stressor (0.34%), Kognitiewe onbetrokkenheid (0.71%), en Aanvaarding (0.50%). Slegs twee veranderlikes, naamlik Selfgating (10.94%) en Ontkenning (1.92%) het 'n statistiese betekenisvolle bydrae tot die variansie in selfmoordideeasie (12.4%) van die Noordkaapse groep gelewer. Beperkinge van hierdie studie was die gebruik van nie-Britse en Suid-Afrikaanse meetinstrumente en ook die ouderdomsverskil van 18 maande tussen die Engelse en Noord-Kaap groep. Die resultate van die studie beklemtoon die waarde van kruisnasionale studies. Longitudinale studies wat risiko en beskermende faktore van 'n' kohort naspur, word aanbeveel.

**Kernwoorde:** Adolessensie; Engelse adolessente; Suid-Afrikaanse adolessente; selfmoordgedrag; selfmoordideeasie, persoonlike stressors en hulpbronne, kontekstuele stressors en hulpbronne, alkohol- en dwelmmiddelgebruik; disfunksionele coping, emosie-gefokusde coping; probleem-gefokusde coping.

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# Chapter 1

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## ORIENTATION AND PROBLEM STATEMENT

### 1. INTRODUCTION

This research report is presented in the form of three articles (in accordance with the academic requirements of the PhD Child Psychology degree). The current chapter provides the reader with an overview of the study.

### 2. PROBLEM STATEMENT AND ORIENTATION

Suicide remains a complex, multi-dimensional phenomenon (McLean, Maxwell, Platt, Harris & Jepson, 2008; Schlebusch, 2005). According to the World Health Organisation (2008) over one million people die each year as a result of suicide. In the past 45 years, global suicide rates have increased by 60% (WHO, 2008). What is alarming is the increase in suicidal behaviour rates especially in the 15-24 year old group (Bertolote, 2001; Sadock & Sadock, 2003). In the United States of America (USA) more than 32,000 people, of whom a significant percentage are adolescents, lose their lives to suicide annually. In the United Kingdom (UK), another first-world industrialised country, the rates of suicide are 6.8 per 100,000 persons (WHO, 2008) with Brock and Griffiths reporting an increase among adolescents (Brock & Griffiths, 2003). In South Africa, a developing third-world country, the suicide statistics portray a gloomier scenario. The National Injury Mortality Surveillance System (NIMSS, 2004) cited an overall age rate of 25.3 per 100,000 for men; and 5.6 per 100,000 for women, which is above the world average of 16.0 per 100,000 persons (WHO, 2008). It is, however, important to be cautious in interpreting the cross-national, cross-cultural and even cross-regional data because variations in the reliability and validity of data can occur, especially in the absence of a coordinated epidemiological information systems in South Africa (Schlebusch, 2005). Although both the United Kingdom and South Africa share a similar prevalence in an increase in suicide rates, they are, however, vastly different in terms of economic prosperity, political stability and access to resources. This

disparity has stimulated the discussion on what risk and protective factors impact on suicidal behaviour amongst adolescents in both societies.

The Northern Cape Province in South Africa has shown a marked increase in adolescent suicide since 2002. An average of 15 cases of suicide per week and 40 suicides per month have been reported, most of which are in the 14-19 year old group (George, 2005; Monare, 2003; Van den Berg, 2006). There has been an increase in adolescent suicides in the UK too; and the government, health professionals and academic researchers all realise the important need to deal with this trend which has caused severe human suffering and places a financial burden on medical health care.

Theorists from various disciplines have attempted to explain the different causes of suicide. For example, sociologists focus on the impact of societal pressure and influences as important contributors to the suicidal behaviour of the individual (Durkheim, 1951; Loots, 2008). Psychological perspectives have included the psychoanalytical (suggesting a death or life instinct), behavioural (certain destructive behavioural patterns that are learned or acquired to deal with a stressor) or cognitive (dysfunctional thought patterns or views of self, other people or the future). From a biological perspective, hereditary factors and neuro-physiological changes in the brain are seen as pivotal processes that could pre-empt suicidal behaviour (Cantopher, 2003). A complex range of psycho-social, individual and environmental factors have been implicated as potential contributors to adolescent suicidal behaviour (Beautrais, 2000). Some of these factors could increase an adolescent's degree of vulnerability towards suicidal behaviour and can be identified as risk factors. Some factors, however, enhance the adolescent's ability to deal with stressors in the face of adversity and can be grouped together as protective factors or resources.

In reviewing the different perspectives and their attempts to explain the complexities of adolescent suicidal behaviour, an integrated perspective was used to examine the risk and protective factors which influence suicidal behaviour. Moos and Schaefer's Integrated Stress and Coping Model (1993) which is embedded in the systemic perspective, was used as the theoretical framework for the current study. The basic assumption of this model is that personal (dispositional) and contextual (environmental) risk and protective factors interact with one another and with life-crises and developmental transitions. The combined impact of these three elements determines the coping strategies utilised by the individual and ultimately results in

either a negative (e.g. suicidal behaviour) or positive (e.g. personal well-being) health outcome. An advantage of this model is that there are flexible bi-directional pathways between stressors, resources and coping processes which influence one another (Moos & Schaefer, 1993).

The influence of stressors (internal and external) have been associate with a significant increase in risk for suicide behaviour (O'Connor & Sheehy, 2000; Schlebusch, 2005). Personal (dispositional) factors such as low self-esteem, hopelessness and depression have been identified as factors increasing the level of vulnerability of the individual to suicidal behaviour (Beck, 1967; Goldston et al., 2001; O'Connor & Sheehy, 2000; Pillay & Wassenaar, 1997; Schlebusch, 2005; Sebate, 1999; Wild, Flisher & Lombard, 2004). The inverse of these factors are high levels of self-esteem and hope which reduce the risk to suicidal behaviour and enhance levels of resilience to the challenges the individual might face (Evans, Hawton & Rodham, 2004; Mashego, Peltzer, Williamson & Setwaba, 2003). A number of other dispositional factors such as personality traits and intellectual capacity are identified in literature but were not included in this study.

Demographic factors, for instance gender, age and ethnic affiliation, have also been identified as potential contributors to adolescent well-being and suicidal behaviour. In this study, the role of gender as a demographic factor is included to explore its relationship with adolescent suicidal behaviour. The importance of age and ethnic affiliation is identified but not discussed (George, 2009; Hawton & James, 2005; Madu & Matla, 2003; Schlebusch, 2005).

The environment is of vital importance in the promotion of adolescent well-being. One of the most influential and significant variables in the adolescent's life and environment are family relationships. The stability and functioning of the family unit act as either a risk or a resource for the developing adolescent. Family problems such as parents' divorce, interpersonal conflict between parents and siblings, psychiatric family conditions and suicidal behaviour in the family context can lead to an increased sense of insecurity and a risk for suicidal behaviour (Aspalan, 2003; Cassimjee & Pillay, 2000; Engelbrecht & Van Vuuren, 2000; Evans et al., 2004; Ittel, Kretchmer & Pike, 2010). The inverse of these identified risk factors can be viewed as resources or protective factors where close family units, with effective parenting styles and good communication and support within the family environment, can serve as a buffer to suicidal behaviour (Blum, Harmen, Harris, Bergeisen & Resnick, 1992; Hunter, Hessler & Katz, 2007; Kidd et al., 2006; O'Donnell, O'Donnell, Wardlaw & Stueve, 2004).

Conflict and challenges in relationships outside the family (for instance with peers, romantic partners and teachers) also contribute to increased tendencies towards suicidal behaviour in adolescents (Aspalan, 2003; Frydenberg, 2008; George, 2009; Newman & Newman, 2003; Sebaste, 1999). Another element to peer relationships described by Evans et al. (2004) and Schlebusch (2005) is the “contagious” effect on vulnerable adolescents who engage in suicidal behaviour. Some adolescents face an increased risk due to a romanticised or sensationalist view of suicidal behaviour which has been inflated through the media. Schlebusch (2005) warns that if suicidal behaviour received inappropriate attention or publicity, it would lead to “copy-cat” suicides amongst vulnerable adolescents. Other environmental (contextual) factors that could increase levels of distress and increase the risk of suicidal behaviour is that of socio-economic stressors (poverty, unemployment), poor physical health (especially HIV/AIDS), inadequate health facilities and political instability (Collishaw, Maughan, Goodman & Pickels, 2004; Cooper, Appleby & Amos, 2002; Govender & Killian, 2001; Noor Mohamed, Selmer & Bosch, 2004; Peltzer & Cherian, 1998; Rehkopf & Buka, 2006; Richter, 2000; Schlebusch & Bosch, 2000).

Adolescence as a developmental phase, is characterised by a multitude of complex features. It is a period of transition from childhood to adulthood paved with challenges that some adolescents might experience as problematic and overwhelming. Significant transformations on a physical, emotional, social, cognitive and moral level shape the adolescent’s abilities to manage an array of challenges (Louw & Louw, 2007; Newman & Newman, 2003; Smith, Perrin, Yule & Clarke, 2009). A number of adolescents succumb to the adversity they face after personal trauma while others show high levels of tenacity and resilience (Wilmhurst, 2008).

Coping is a process involving cognitive and behavioural efforts to manage specific internal or external demands that are appraised as threatening or harmful (Frydenberg, 2008). A number of studies in the United Kingdom and South Africa have found that impaired problem-solving coping strategies underpin the evolving adolescent’s impaired levels of social and interpersonal problem-solving abilities (Fiske, 2008; Hoff, Hallisey & Hoff, 2009; Meehan, Peirson & Fridjhon, 2007; O’Connor & Sheehy, 2001; Williams & Pollock, 2001). The inability to develop effective coping skills of some adolescents who have reached levels of significant personal distress and who display health compromising choices ultimately increases their risk of negative life outcomes such as psychiatric disorders, harmful substance abuse and a greater propensity for



suicidal behaviour (Chapman, Specht & Cellucci, 2005; Elliott & Frude, 2001; Lewis & Frydenberg, 2005).

In order to comprehend the complex nature of suicidal behaviour, constant analysis of a wide range of risk and protective factors (resources) is required (Schlebusch, 2005). For this reason, this study aims to explore both risk and protective factors in an integrated manner to determine their role in adolescent suicidal behaviour.

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

The overarching aim of this study is to investigate the risk and protective factors (resources) influencing adolescent suicidal behaviour amongst a group of adolescents from England and Northern Cape Province, South Africa, respectively.

Specific goals of this study are:

- to determine the incidence of suicidal behaviour amongst English and Northern Cape adolescents;
- to investigate the influence of dispositional, demographic, contextual and developmental variables on suicidal ideation and suicidal behaviour amongst English and Northern Cape adolescents;
- to explore the nature of stressors experienced by both groups of participants;
- to explore the influence of psycho-social resources on the suicidal ideation reported by both groups; and
- to determine the utilisation and influence of coping strategies on the suicidal ideation of the English and Northern Cape participants.

## **4. METHODOLOGY**

### **4.1 Research design**

A non-experimental, cross-sectional design, including a correlational and criterion group design was used in the current study.

#### **Participants and data gathering**

The researcher has resided in the Surrey County of England for the last 12 years, holding the post of Consultant Clinical Psychologist in the National Health Service (NHS) and has

maintained close links with local schools and Adolescent Health and Social Services. Schools in the Surrey County, England and in the Northern Cape Province, South Africa, were selected by means of a stratified sampling technique in order to achieve demographic representation of the population of both the Surrey County and that of the Northern Cape Province. Permission was obtained from the relevant educational departments and school principals before the data was gathered. Informed consent with regard to aspects of voluntary participation, confidentiality and anonymity was gathered from parents and participants. The questionnaires utilised were administered in English for both the group in England and the Northern Cape group. Throughout the testing period a qualified psychologist was present to deal with any issues such as language comprehension or the emotional impact of the questions during or after the testing period. The duration of testing was approximately two hours with a break of thirty minutes half-way through the testing period.

#### **4.2 Measuring instruments**

The following questionnaires were used to gather data on the variables involved in this study:

- **Criterion variables**

The Suicidal Ideation Questionnaire (Youth Form) (Reynolds, 1988) measures the frequency and intensity of suicidal thoughts.

- **Predictor variables**

A self-compiled biographical questionnaire covering questions regarding age, gender, race, grade, language preference, geographical location, parents marital status, parental employment status and previous exposure to suicidal behaviour was administered.

- The Rosenberg Self-Esteem Scale (Rosenberg, 1989)

This instrument provides an indication of the participant's sense of self-worth.

- The Life-Stressors and Social Resources Inventory (LISRES) (Youth Form) (Moos & Schaefer, 1993)

This questionnaire measures a wide range of stressors and social resources to which participants have access to.

- The Hope Scale (Snyder et al., 1991)

This questionnaire measures the participants' sense of hopefulness.

- The Coping Orientations to the Problems Experiences Questionnaire (COPE) (Carver, Scheier & Weintraub, 1989)

This questionnaire reflects the participant's choice of different coping strategies.

### 4.3 Ethical considerations

The research committee of the Faculty of Humanities of the University of the Free State, South Africa, granted ethical approval for the research proposal submitted. Although the research report is presented in the form of three articles, the investigation was planned and implemented as one integrated study.

## 5. CONCEPT CLARIFICATION

In promoting a clear comprehension of this study in its totality, certain core terms and concepts featuring throughout the text will be clarified:

**Protective factors** are circumstances that increase the chances of achieving favourable results. They can be identified as societal, psycho-social conditions and/or individual behaviours that lessen the likelihood that an individual will engage in suicidal behaviour (McLean et al., 2008; Schoon, 2006).

**Resilience** is the capability of individuals and systems (families, groups and communities) to cope successfully in the face of significant adversity (Smith, Perrin, Yule, & Clarke, 2009).

**Resources** refer to the necessary means to ensure the attainment of a goal (George, 2009; Hobfoll, 1988).

**Risk factors** are factors that increase the likelihood of a negative outcome (Schoon, 2006).

**A stressor** refers to either a threat to the loss of resources, the total loss of resources or the lack of resource gain following the individual's investment of resources (Hobfoll, 1988).

**Suicidal behaviour** can be interpreted as a broader concept which incorporates a range of self-harming or self-destructive acts precipitated by emotional discomfort and distress (McLean et al., 2008; Rutter & Smith, 1995; Schlebusch, 2005). It can be subdivided into non-fatal and fatal suicidal behaviour. Non-fatal suicidal behaviour for the purpose of this study includes the following:

- Attempted suicide is viewed as an unsuccessful effort to terminate one's life (Schlebusch, 2005).

- Para-suicide is the process whereby an individual engages in self-destructive acts without the deliberate intent to terminate his/her life but rather to attract attention from other people (George, 2009).
- Suicidal ideation comprises images, thoughts or ruminations about committing suicide or experiencing a desire to terminate one's life without the suicidal act itself (McLean et al., 2008).
- Fatal suicide is often also referred to as completed suicide when the individual's intent was to bring an end to his/her own life and ultimately succeeding (Schlebusch, 2005).

**Suicidal risk factors** are individual, psycho-social or societal conditions that increase the likelihood that an individual will engage in self destructive acts (McLean et al., 2008).

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

This study is presented with an introductory chapter followed by three main chapters, comprising three independent articles, leading to a concluding chapter. The five chapters include the following:

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

This chapter introduces the reader to the relevant background which leads to the problem statement of the study. It provides a backdrop to the need for research in this area within the context of two societies such as England and South Africa. It also proceeds to outline the intended methodology of this research project.

### **Chapter 2: Research article I**

**Risk and protective factors in adolescent suicidal behaviour: A literature review of British and South African contexts.** The first article covers a review of the literature on risk and protective factors associated with adolescent suicidal behaviour in a British and South African scenario. The researcher focuses on dispositional and contextual factors, developmental aspects and coping strategies utilised and how they impact on suicidal behaviour amongst a British and South African adolescent population.

### **Chapter 3: Research article II**

#### **The role of coping in suicidal ideation: a comparison of English and South African adolescents**

This article focuses on the role of coping in suicidal ideation as manifested in an English group of adolescents and another from the Northern Cape. Literature and empirical findings in the utilisation of coping strategies and the relationships between suicidal ideation and coping choices are provided.

### **Chapter 4: Research article III**

#### **The influence of psycho-social factors on the suicidal ideation of a group of English and South African adolescents**

The third article provides an overview of risk and protective factors associated with suicidal ideation. A step-wise regression analysis that investigates the influence of personal and contextual stressors and resources as well as coping strategies used in suicidal ideation amongst and English and Northern Cape adolescent groups are discussed.

### **Chapter 5: Conclusion**

The final chapter presents an integrated summary of the findings and results of all three articles with relevant recommendations for future research and practice as well as limitations encountered.

## **7. RESEARCHER'S COMMENTS**

- The researcher intends to publish the articles in accredited journals such as the South African Journal of Psychology, the British Journal of Psychology and the Journal of Child and Adolescent Development.
- The American Psychiatric Association reference format (APA, 2007 version) will be followed throughout this study and report.
- The tables will be included in the text to enable the reader to form an integrated view. However, upon publication they will be attached as an appendix.
- The reference lists of the introductory and conclusion chapters will be presented at the end of the conclusion chapter.

# **Chapter 2**

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## **ARTICLE I**

**RISK AND PROTECTIVE FACTORS IN ADOLESCENT SUICIDAL  
BEHAVIOUR: A LITERATURE REVIEW OF BRITISH AND SOUTH  
AFRICAN CONTEXTS**

## ***ABSTRACT***

A significant increase in adolescent suicidal behaviour has been noted in both the United Kingdom (a developed, industrialised country) and South Africa (a developing country). The focus of this article is to review literature on the similarities and differences in terms of the risk factors that influence suicidal behaviour within a British and South African context. It is clear from the aetiology of suicidal behaviour that it is a complex and multi-dimensional phenomenon, comprising personal and contextual factors, developmental challenges, transitions and coping behaviour that constantly interact to determine whether the outcome will affect one's health positively or negatively. With the aid of the Integrated Stress and Coping Model of Moos and Schaefer (1993) to structure this discussion, it is hoped to establish greater comprehension of adolescent suicidal behaviour. Personal (dispositional) and contextual (environmental) factors, developmental transitions and crises, coping strategies and suicidal behaviour as a negative health outcome were explored. Similarities in personal (poor self-esteem and hopelessness) and some contextual (family discord, peer pressure and socio-economic challenges) factors as well as developmental challenges and poor problem-focussed coping strategies were identified as risk factors for suicidal behaviour for both the British and the South African adolescents. The most noticeable differences were in the contextual (environmental) domain (with socio-economic difficulties, poor physical health such as HIV/AIDS, mental health, access to health services) and political uncertainties which hamper the provision of adequate resources for the South African adolescent.

**Key Words:** Adolescents, British, South African coping, resources, stressors, Integrated stress and coping model, risk factors, suicidal behaviour.

## **INTRODUCTION**

The suicide of a loved one is one of the most traumatic events that anybody could experience. Both the threat of suicide and attempted suicide are disturbing and leave loved ones with a feeling of helplessness when they contemplate the possible premature loss of a young, potentially fulfilled life. Accordingly, the global increase in suicidal behaviour (suicidal ideation and attempts) amongst young people is particularly disturbing (Bertolote, 2001) with these increases having been reported in both developed and developing countries. The focus of this article is to review the literature on the risk and protective factors in adolescent suicidal behaviour as manifested in British and South African contexts depicting a developed and developing country.

According to the World Health Organization (2008), over one million people die because of suicide each year with, on average, one person committing suicide somewhere in the world every forty seconds. Global suicide rates have increased by 60% in the past 45 years (World Health Organisation, 2008). Of even more concern is the increase in attempted suicide as well as the rates of completed suicide in the age group 15-24 years (Sadock & Sadock, 2003). In the United States of America (USA) more than 32,000 people, of whom a significant percentage are adolescents, lose their lives to suicide annually. The latest statistics from the World Health Organization report over 4,000 deaths in the age group 15-24 years (World Health Organization, 2008). In the United Kingdom (UK) the rates of suicide increased steadily during the 1980's and 1990's. More recently, the numbers of suicide cases have stabilised, reaching a 30 year low in 2003 (McClure, 2000; O'Connor & Sheehy, 2001; Suicide and Mental Health Association International, 2008). Brock and Griffiths acknowledge that although a general downward trend in national suicide figures has been reported, adolescent suicide numbers show a strong upward trend (Brock & Griffiths, 2003).

As the USA and UK are viewed as major first-world and industrialised countries where increases in suicidal behaviour amongst adolescents are recorded, the question beckons as to what the equivalent picture might be for third-world industrialised, developing countries. As such a country, South Africa's suicide statistics reveal a bleaker picture than that of the aforementioned industrialised developed countries (Schlebusch, 2005). According to the National Injury Mortality Surveillance System (NIMSS, 2004) an overall age standardised rate of 25.3 suicides per 100,000 for men and 5.6 per 100,000 for women was found, which is above



the world average of 16.0 per 100,000. In a developed country such as the United Kingdom an overall suicide rate of 6.8 per 100,000 was reported in 2008 (World Health Organisation, 2008). However, researchers caution that reported data must be interpreted with care when making cross-national, cross-cultural, cross-ethnic and even cross-regional comparisons because of variations in the reliability of international and regional data (especially due to a lack of a coordinated epidemiological information system in South Africa).

The Northern Cape Province in South Africa has recently experienced an upsurge in adolescent suicide. On average, 15 cases of suicide per week and 390 suicide attempts were reported between April 2002 and January 2003 in the region, which adds up to approximately 40 suicide attempts per month. Most of these incidents were in the 14-19 years age group (George, 2005).

As can be deduced from these global trends in suicidal behaviour, it is understandable that governments, health professionals and academics have realised the great importance of addressing this phenomenon as it causes great human suffering, the loss of a life and the financial burden of medical care. The UK government's health-care target was the establishment of a national suicide prevention strategy nationwide (Department of Health, 2002). This led to the formation of the Centre for Suicide Research at the University of Oxford in 2004. This unit has employed prominent health professionals and leading academics to research and implement preventative interventions to combat these alarming trends in suicidal behaviour (Palmer, 2008). Unfortunately no equivalent national centre for suicide research and prevention exists in South Africa.

The growing concern about increased suicide rates in the Northern Cape Province in South Africa prompted the Department of Education in the Province to approach the Department of Psychology at the University of the Free State to investigate the factors contributing to increased levels of suicidal behaviour (George, 2005). Because both the UK and South Africa have similar trends in adolescent suicidal behaviour, it was deemed worthwhile to do a comparative study of how risk factors, resources and suicidal ideation affect adolescents in these two countries. Another unique characteristic of such a study is the comparison of two very different countries – one nation a prominent first-world economic power and the other a third-world developing nation, with each country having vastly different resources.

Based on the differences between the two countries, the inevitable question arises: is the incidence of suicidal ideation and behaviour lower in the UK than in South Africa due to the greater availability of resources to deal with challenging stressful circumstances and less exposure to stressors such as poverty, political instability and violent crime?

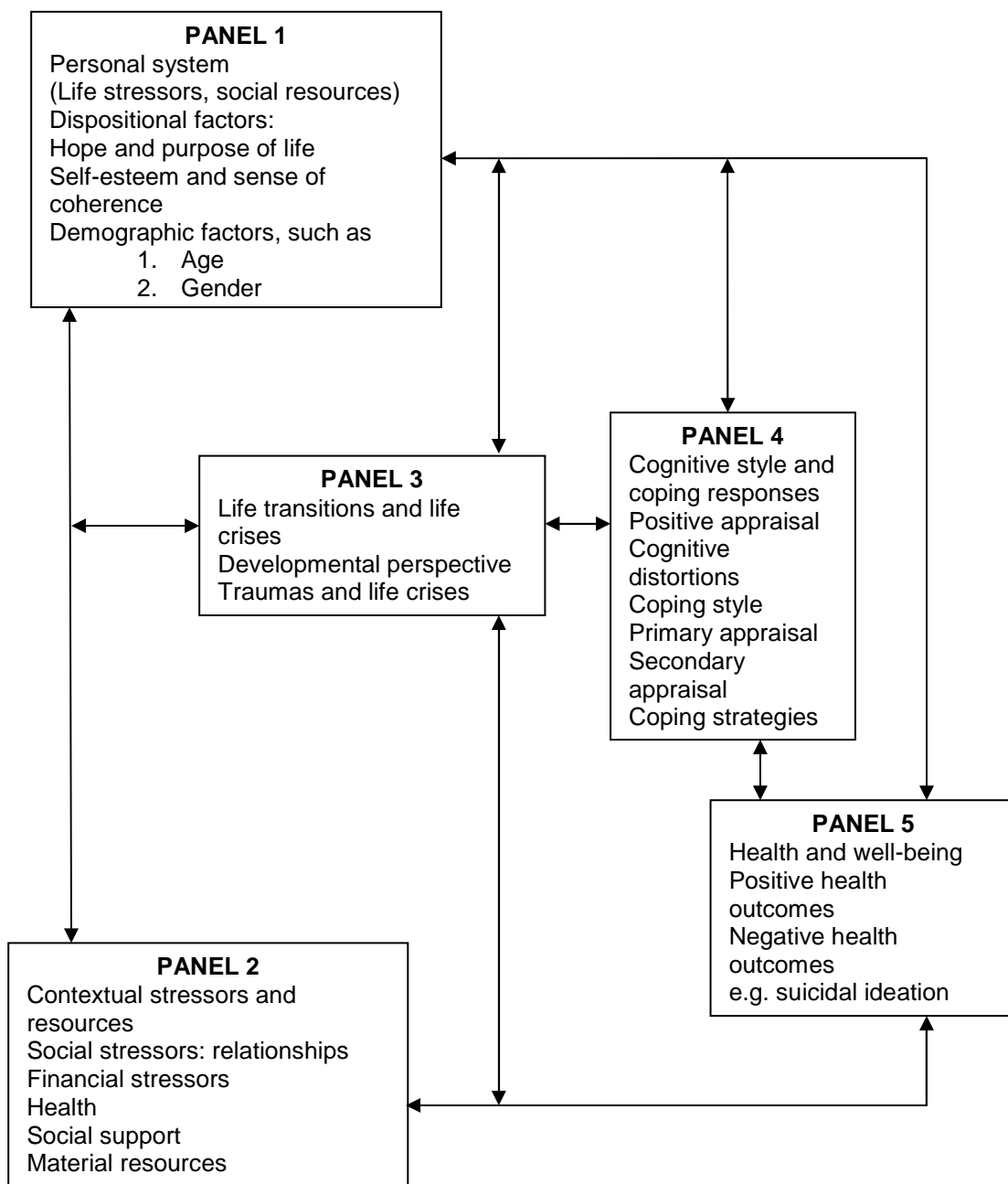
## **SUICIDAL BEHAVIOUR**

The term suicidal behaviour refers to complex, multi-dimensional and multi-factorial events with different behavioural characteristics (McLean, Maxwell, Platt, Harris & Jepson, 2008; Schlebusch, 2005). Suicidal behaviour occurs in different forms that involve a degree of severity that can range from a person wishing him/herself dead to actually killing him/herself. It implies a wide range of self-destructive or self-damaging acts in which people engage, owing to varying levels of distress, psychopathology and expectation of the disastrous consequences or outcomes of the behaviour (Freeman & Jackson, 2002). Furthermore, suicidal behaviour can be considered in two ways: fatal and non-fatal suicidal behaviour. Fatal suicidal behaviour refers to self-committed, completed suicidal behaviour that reflects the person's intent or aim to die and where that person manages to achieve that pre-determined goal. As opposed to this, non-fatal suicidal behaviour refers to self-inflicted suicidal behaviour that does not end the person's life and that embodies several manifestations such as those seen in attempted suicide (Palmer, 2008). Suicidal ideation (often described as a person's thoughts about killing him/herself) forms part of suicidal behaviour and is likewise a discrete and complex phenomenon. Suicidal ideation is not just restricted to thinking or visualising committed suicide, it can also include a person writing or talking about and/or planning her/his suicidal behaviour (Freeman & Jackson, 2002; McLean et al., 2008; Rutter, 1999; Schlebusch, 2005)

A large number of studies have identified a variety of personal (internal) and contextual (external) factors as reasons for an increase in the risk of suicide (Maris, Berman, Silverman & Bongar, 2000). As personal and contextual factors play such a prominent and significant role in suicidal ideation and behaviour, it was felt that the Integrated Stress and Coping model of Moos and Schaefer (1993) can be utilised in understanding and explaining adolescent suicide. A prominent feature of this model is the developmental perspective incorporating life-transitions, such as critical developmental changes, as experienced during adolescence. Another benefit of the model is the inclusion of the coping process as a potential mediator between stressors/resources and either negative or positive health outcome.

## **AN INTEGRATED STRESS AND COPING MODEL**

The basic assumption of this model proposes that personal and contextual (environmental) stressors (risk factors) and resources as well as developmental transitions the individual experiences combine to mould the individual's cognitive appraisal and coping skills that eventually determine his/her health and well-being. See the visual presentation of Moos and Schaefer's model presented in figure 1 (Moos & Schaefer, 1993).



**Figure 1: The Integrated Stress and Coping Process Model (Moos & Schaefer, 1993, p. 237)**

An advantage and feature of this model (which is embedded in the systems theory) lies in its flexible pathways between processes which can influence each other. For example, an adolescent's personal system (Panel 1) can be constructively or destructively influenced by his/her environmental (contextual) system (Panel 2) and vice versa (Moos & Schaefer, 1993). The impact of these systems or factors can thus influence the individual's ability to adjust effectively to personal and environmental demands.

The personal system (Panel 1) comprises of relatively stable dispositions and attributes that influence the individual's cognitive appraisals and choice of coping processes which influence the person's emotional and behavioural outcomes (Moos & Schaefer, 1993). Examples of such personal traits include self-esteem, a sense of hope, personality traits and demographic characteristics of the individual.

Self-esteem can be defined as someone's view and attitude towards the self along a positive to negative continuum (Baron & Byrne, 2000). Guindon (2009) as well as Beck (1967) postulate that a low self-esteem can lead to an over-generalisation of the implications of failure and rejection and a high level of self-esteem is perceived as a strength or resource factor that protects the individual against stress. Evans, Hawton & Rodham (2004) reviewed studies of western populations, mainly involving participants from the UK and USA, and found that adolescents with a realistic and optimistic view of themselves (self-esteem) managed to be more resilient to the challenges they might face. A South African study conducted by Mashego, Peltzer, Williamson and Setwaba (2003) echoed the importance of self-esteem as a buffer in reducing the risk of suicidal behaviour amongst secondary school learners.

Hope is viewed as the individual's evaluation of his or her future, involving the formulation of personal goals that enhance feelings of hope (Snyder et al., 1991). Hopelessness, the inverse of hope, can be seen as a personal stressor or risk factor associated with suicidal ideation. In British studies, hopelessness was identified as mediating the relationship between depression and suicidal behaviour (O'Connor & Sheehy, 2000; O'Connor & Sheehy, 2001; Snyder et al., 2000). South African studies (Schlebusch, 2005; Sebate, 1999) report similar trends as the British findings. Hopelessness correlates strongly with suicide attempts and appears to have an even greater predictor value if the person has a past history of suicide attempts (Goldston et al., 2001). Consistent with globally identified personal risk factors (personal stressors) depression

was found to be associated with suicidal behaviour, especially suicidal ideation (Abela & Hankin, 2008; Micucci, 2009). Some South African studies involving adolescents identified the incidence of hopelessness as a significant precursor of depression (Pillay & Wassenaar, 1997; Wild, Flisher & Lombard, 2004). Many other dispositional risk factors, for instance personality traits and intellectual capacity, are identified in literature but were not involved in the current study.

A number of demographic variables have also been identified as risk factors in suicidal behaviour. Gender as a personal disposition seems to present with different trends in suicidal behaviour. Hawton and van Heeringen (2000) did an elaborate study in the UK to identify gender differences in suicidal behaviour. He found that attempted suicide is higher in females than in males but that males are more inclined to have stronger suicidal intentions. Males also tend to use more violent methods of self-harm and actual suicide. A reason could be that males are less concerned about physical disfigurement, that they are more aggressive and that they have better access to violent means of causing harm. A South African study (Madu & Matla, 2003) reports similar trends as the UK findings regarding a higher percentage of suicidal attempts that were medically less serious amongst females unlike those of their male counterparts who engaged in more destructive and lethal methods.

Another personal risk factor is the cultural or ethnic divide in suicidal behaviour. Bhugra (2002) found that 18-24 year-old South Asian women in the UK are three times more likely to attempt suicide than their white counterparts. By contrast South Asian men were less likely to harm themselves than white males. Amongst South Asian adolescents, a lower incidence of suicidal behaviour was found among people with a more traditional cultural identity. Schlebusch (2005) emphasised that statistics from hospitals revealed a sharp increase in suicidal behaviour amongst black youths. The lack of an organised epidemiological system in South Africa makes it difficult to compare the statistics of different racial groups.

The environment is of vital importance in the promotion of adolescent's well-being. The focus now moves to the impact of contextual (external) or environmental risk factors and resources (Panel 2), such as social, financial and health stressors and resources.

One of the most influential and significant variables in the adolescent's life and environment is the function and impact of the family. The stability and functioning of a family unit acts as either

a risk or as a resource for the developing adolescent. A number of studies in the UK highlight that family discord is a significant risk factor in suicidal behaviour and ideation. Family problems like parental divorce, interpersonal conflicts between parents and siblings, psychiatric family conditions and suicidal behaviour within the family unit led to an increase in the adolescent's sense of insecurity and risk to suicidal ideation (Evans et al., 2004; Hawton, Rodham, Evans & Weatgerall, 2002; Houston, Hawton & Shepperd, 2001; Ittel, Kretchmer & Pike, 2010). South African studies (Aspalan, 2003; Engelbrecht & Van Vuuren, 2000) report similar trends as those in the UK regarding the influence of family disorganisation and disruption as precipitants to suicidal ideation. Cassimjee and Pillay (2000) specifically identify marital problems, interpersonal problems and psychiatric family psychopathology (especially depression) as reasons for suicidal behaviour. It seems that the adolescent experiences difficulties dealing with feelings of loss of support that accompany family change caused by parental separation, divorce and remarriage and adverse parent-child interactions. The inverse of these identified risk factors can be described as resources or protective factors where close family units with good communication and support within the family can act as buffers to suicidal behaviour (Blum, Harmen, Harris, Bergeisen & Resnick, 1992; Evans et al., 2004; Flouri & Buchanan, 2002). Exposure to a supportive family enhances the adolescent's development of strengths such as a healthy self-esteem, feelings of security and hope and the provision of a psychologically and emotionally safe environment (Hunter, Hessler & Katz, 2008; Kidd et al., 2006; O'Donnell, O'Donnell, Wardlaw & Stueve, 2004).

Relationships outside the family unit, especially romantic relationships have been linked to suicidal behaviour and ideation. Houston, Hawton and Shepperd (2001) found in a British study that disruptions in or the termination of romantic relationships are common events preceding suicidal behaviour. In a South African study by Engelbrecht and Van Vuuren (2000), it was found that 17% of the subjects indicated that conflict in romantic relationships acted as a trigger for suicidal behaviour. Interestingly, Aspalan (2003) found parental disapproval of their children's romantic partners as a further risk for suicidal behaviour.

Conflict in peer relationships has also been associated with suicidal behaviour. Evans et al., (2004) found that poor peer relations acted as damaging agents in the British adolescent's view of him/herself and created a bleak perception of his or her future. Sebate (1999), in South Africa, purported that peer pressure could have an adverse effect on adolescent's well-being as it hampers their self-esteem and interferes with a healthy development of identity formation.

The school environment is another domain that requires peer interaction. Many adolescent learners will view the scholastic experience as pleasant with healthy relationships with other peers or teachers enhancing a sense of security, belongingness and the refinement of their social and problem-solving skills. For some individuals their perception and experience of the school milieu is a definite stressor. It is characterised by poor peer interaction, possible negative teacher relations, excessive parental pressure to excel academically, coupled with non-performance in sports or other school-related activities that may enhance feelings of isolation, frustration and depression increasing the risk to suicidal behaviour (Frydenberg, 2008; George, 2009; Newman & Newman, 2003). Pillay and Wassenaar (1997) found that peer problems were seen to be second only to parent-adolescent conflict as a factor contributing to suicidal behaviour. Yet another element that Evans et al. (2004) described concerning peer relationships is the “contagious” effect on vulnerable adolescents of peers who engage in suicidal behaviour. Adolescents face an increased risk due to a romanticised view of suicidal behaviour and this view affects their attitude towards suicide. The case of the small village of Bridgend in Wales that has suffered 22 adolescent suicidal deaths since January 2008, further illustrates this phenomenon. A possible reason could be the “contagious” effect through the media (Hawton & Williams, 2001; Stack, 2003). In the South African context Schlebusch (2005) warned that if suicidal behaviour receives inappropriate attention or publicity, it could lead to “copy cat” suicides amongst vulnerable adolescents.

Other environmental (contextual) factors included in Panel 2 are socio-economic conditions (financial stressors). The effect of poverty and unemployment appears to make a definite contribution to suicidal behaviour. In the studies in both the UK and South Africa it was found that adverse socio-economic factors significantly increased the stress experienced by family members. Unemployment of the parents, especially the father, showed a significant impact on the children which may manifest in feelings of depression and suicidal ideation (Collishaw, Maughan, Goodman & Pickels, 2004; Cooper, Appleby & Amos, 2002; Diekstra & Garnefski, 1995; Foster, Gillespie, McClelland & Patterson, 1999; Govender & Killian, 2001; Peltzer & Cherian, 1998; Platt & Hawton, 2000; Rehkoph & Buka, 2006; Roberts, Chen & Roberts, 1997).

A further contextual risk factor is that of physical health. A number of studies in the UK identified that poor physical health was associated with suicidal ideation (Evans et al., 2004; O’Cavanagh, Owens & Johnstone, 1999). In a South African context, the emergence of HIV/AIDS as a risk factor to physical health and mental well-being has reached pandemic



proportions (Schlebusch, 2005). It has been estimated that 30% of the world's HIV-positive individuals can be found in southern Africa (including South Africa) despite the fact that less than 2% of the world's population live in this region. In 1995 the highest rate of infections seemed to have occurred in the age group 20-24 years (Lindegger & Wood, 1995). By 2002, some researchers had reported a 36 times higher risk of suicidal behaviour in HIV/AIDS-infected people than for the general population (Marzuk et al., 1988; Van Dyk, 2001). The indirect effects of the disease could have a full impact on children when their parents contract HIV/AIDS which causes major social and economic challenges. Adolescents infected/affected by HIV/AIDS face social stigma, fear, depression and anger and these could contribute to suicidal behaviour (Noor Mohamed, Selmer & Bosch, 2004; Peltzer & Cherian, 1998).

Another contextual factor that influences community stability and may affect suicidal behaviour is political uncertainty. Evans et al. (2004) found in a British review that political oppression reduced personal satisfaction and caused social instability which could be linked to suicidal behaviour. It is evident that South Africa's profound legacy of apartheid has not only severely traumatised its citizens, (because of atrocious human-rights violations (Pillay & Schlebusch, 1997) but it has also left a heritage of other stress-related psychological problems with the potential of suicidal implications (Schlebusch & Bosch, 2000). Additional political factors that could cause suicidal behaviour include a high incidence of violence and trauma, socio-economic difficulties, high expectations that are not always realised following political change and the inadequate provision of education and healthcare (Govender & Killian, 2001; Pillay & Schlebusch, 1997; Schlebusch & Bosch, 2000).

The access to services as an environmental risk factor related to the availability of resources showed that, before a fatal suicidal attempt, adolescents in the UK may already have come to the attention of Mental Health Services or Social Services. In the majority of cases, it is because a health-related condition (mental health) is usually present at the time of death in adolescents who die because of suicide (Hawton & James, 2005). However, secrecy and denial are common in suicidal behaviour and a proportion of suicidal adolescents may, therefore, not receive professional help. In the UK there has been a deliberate initiative over the last seven years to implement an after-hour service (assertive-outreach services under the auspices of the National Health Service) to vulnerable adolescents. This service has proven to be successful in the prevention of suicidal behaviour (Chesley & Loring-McNulty, 2003; Fernando & Keating, 2008; National Institute for Clinical Excellence, 2004b). In order to

address shortcomings in adolescent services and in particular to facilitate access to these services, preferences for health-service developmental were canvassed in South Africa (Richter, 2000). Adolescents rated psychiatric services for the prevention of suicide as a major need. In addition, a number of other services were identified as inadequate, including family planning and the treatment of sexually transmitted diseases (Mhlongo & Peltzer, 1999). A number of adolescents also requested greater access to health services including extended opening hours (Richter, 2000). It is thus evident that personal (Panel 1) and environmental (Panel 2) risk factors can inevitably impact on the adolescent's well-being.

As a developmental phase, adolescence appears to have a multitude of complex features and dynamics which form an integral part of the process as depicted in Moos and Schaefer's model (1993) (Panel 3). Louw and Louw (2007) define adolescence as the period of transition between childhood and adulthood which serves the purpose of equipping the individual with the necessary psychosocial skills to master life-tasks of early adulthood. Since the boundaries of adolescence vary globally in terms of age, it is common practice to demarcate the adolescent development stage on the basis of specific physical and psychological developmental characteristics and socio-cultural norms. Adolescence begins at puberty when the body reaches sexual maturation and ends when the individual meets the societal norms and expectations of being an adult (Jackson & Goossens, 2006; Sroufe, Egeland, Carlson & Collins, 2009). A range of developmental transitions shape the individual's path from adolescence to adulthood. Adolescence is characterised by rapid and elaborate physical growth and sexual maturation. An early demand on adolescents is to accept their changing body and deal with their sexuality in a developmentally constructive manner. Some adolescents find it difficult to adjust to these physical changes and may respond with high-risk sexual behaviour or other self-harming acts (Arnett, Kloep, Hendry & Tanner, 2010; Louw & Louw, 2007; Newman & Newman, 2003). Another profound development involves cognitive changes and increased intellectual challenges. Cognitive development in adolescence functions as an organisational core that affects all areas of thinking. For this reason, it affects a wide range of other aspects of development, from family relations and peer friendships to school performance and adverse risky behaviour, for instance, increasing argumentativeness, social awareness, self-consciousness and self-centredness, more complex planning and decision making capacity which could, if undeveloped, lead to maladjustment and vulnerability to suicidal ideation (Louw & Louw, 2007).

In his psycho-social theory Erikson postulated that the central critical task in the adolescent's development is identity formation (Newman & Newman, 2003). Identity formation involves the challenging task for the adolescent to define who he/she is, what is important to him/her and what direction he/she wants to follow in life (Plug, Meyer, Louw & Gouws, 1997). The unsuccessful resolution of this task creates unhealthy adjustments and behavioural problems (Sigelman & Rider, 2003). Adolescent social development is characterised by themes such as maintaining bonds of attachment between parent and adolescent as the adolescent enters into a wider complex social network as well as greater involvement with a peer group. In the domain of moral development, the adolescent's successful adjustment requires a sound personal value system that is internalised and moral reasoning and judgement that is refined. This area of development is of paramount importance as it acts as a guide for appropriate behaviour and supports the adolescent in the avoidance of socially and morally irresponsible behaviour (Coleman & Hagell, 2007). As can be deduced, it is imperative that the individual successfully completes these developmental tasks to ensure appropriate health adjustments (Wilmhurst, 2008).

There are, however, some traumas and crises that take place during adolescence, especially those pre-empted by the physical and sexual maturation process. Evans et al. (2004) identified physical abuse as a significant risk factor with suicidal ideation in adolescents in the UK. Physical acts of aggression as manifested in physical violence could be linked to suicidal behaviour which, according to Schlebusch (2005), is common in South Africa. Sexual abuse showed a similar link with suicidal ideation and behaviour in both the UK and South Africa (Evans et al., 2004; Richter & Higson-Smith, 2004). Although an adolescent's reaction to trauma is unique, adolescents often show reactions similar to those of adults who suffer from post-traumatic stress disorder, e.g. flashbacks, nightmares and emotional numbing. Also common are withdrawal, isolation, rebellious behaviour, anger, shame, guilt, depression and suicidal thoughts (Louw & Louw, 2007; Smith, Perrin, Yule & Clark, 2009). As can be expected not all adolescents will develop adversely in the light of personal trauma and some may show unexpected high levels of tenacity and resilience in coping.

The development of a sound and reliable way of coping (Panel 4) is thus imperative. Coping refers to a process of consistently changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or depleting the resources of the person (Frydenberg, 2008). Coping is thus an interaction between the situation and the person

and it depends on the person's perceived ability to manage the stressor (Lazarus & Folkman, 1984). An individual may choose to utilise either problem-focused or emotion-focused coping strategies as postulated by Lazarus and Folkman (1984). If the adolescent attempts to alter the reasons for the presentation of the problem through active coping or planning activities, the preferred coping initiative is called problem-focussed coping. In contrast, emotion-focussed coping involves the attempt to reduce or modify their emotional response to the problem either by seeking emotional support, accepting the stressor, the venting of emotions or by turning to religion (Everall, Altrows & Paulson, 2006; Hobfoll, 1988; Lazarus & Folkman, 1984; Rothmann & Van Rensburg, 2002; Selekman, 2008). A third coping strategy, identified by Carver, Scheier and Weintraub (1989) is a dysfunctional coping strategy such as denial, avoidance or alcohol and drug disengagement. Adolescents who reflect a poorly developed coping strategy appear to show a vulnerability to challenges that could eventually lead to higher levels of suicidal behaviour (Fiske, 2008; Hoff, Hallisey & Hoff, 2009; Israelashvili, Gilud-Osovitzki & Asherov, 2006; Meehan, Peirson & Fridjhon, 2007). Another dimension to coping involves the differences in coping strategies between adolescent boys and girls. Frydenberg (1997) found that boys (more than girls) use distraction as an effective coping mechanism. Boys tend to get involved in alternative activities, for example sport, to reduce their stress and in this way they suppress or ignore the problem more than girls do. Girls are more inclined to use social support, rely on others for approval and appraise events as more complex and negative so that they are more affected by stressful situations than boys (Frydenberg, 1997; Frydenberg, 2008; Kiselica, Englar-Carlson & Horne, 2008; Seiffge-Krenke, 1995). In spite of this, girls more frequently use functional coping strategies while boys are more inclined to aggression and denial.

In an extensive British review study, O'Connor and Sheehy (2001) found that impaired problem-solving strategies were an important risk factor for suicidal ideation and behaviour. They also found that adolescents with impaired social and interpersonal problem-solving abilities are at a greater risk for suicidal ideation and behaviour. Pollock and Williams (2004) proposed that suicidal adolescents tended to have problems conceptualising, identifying and formulating solutions to challenges. Williams and Pollock (2001) argued that adolescents with suicidal tendencies took longer to recall positive memories. A vulnerability to these defective cognitive processes, combined with environmental stress and faulty learned responses to stress may lead to suicidal behaviour (Williams & Pollock, 2001). Findings by South African studies (Meehan et al., 2007) support the notion that adolescents exhibiting inappropriate methods of communication and problem solving tend to be prone to suicidal behaviour. Many authors

suggest that suicidal behaviour is a destructive attempt to express distress when adolescents felt they had failed to express it in a conventional manner. It is as if they use suicidal behaviour as an inappropriate problem-solving strategy, which reflects a lack of life-experience and limited, dysfunctional coping mechanisms (Meehan, et al., 2007; Schlebusch, 2005). Coping and using cognitive strategies are thus paramount to equip the adolescent for later adulthood (Chapman, Specht & Cellucci, 2005; Elliot & Frude, 2001). The inability of some adolescents to develop effective coping skills increased their risk for negative life outcomes.

According to Moos and Schaefer's model, panel 5 represents the outcome that results from the interaction of personal dispositional factors, environmental influences, developmental transitions and ways of coping for the adolescent. These outcomes can either be positive or negative. A positive life outcome could mould an adolescent as an individual with adequate levels of self-esteem, hopefulness, support of family relations, significant peer and other relationships and the essential skills to master developmental tasks in the physical, psychological, social and moral life domains. The inverse of this is the adolescent who has, unfortunately, reached the level of significant personal distress; one that exhibits health compromising choices (Moos & Schaefer, 1993).

Another significant adverse effect on people's health is psychiatric disorders (depression and other conditions). In the UK Houston et al. (2001), Stallard (2008) and Fleischmann, Bertolote, Gelfer and Beautrais (2005) conducted extensive reviews of studies and found that psychiatric disorders were found in 70.4% of cases of patients who exhibited suicidal behaviour. These were most commonly depressive disorders which in many cases had not been treated in adolescence. Evans et al. (2004) used Mann's (1999) stress-diathesis model to group some risk factors that had been identified as being associated with suicidal ideation and found depression and mental health problems to be significant risk factors (negative outcomes) in the UK in the age group 16-25 years. Consistent with globally identified personal risk factors (or negative outcomes), depression was found to be associated with suicidal behaviours, especially suicidal ideation (Gotlib & Hammen, 2008; Kendall & Comer, 2009; Nolen-Hoeksema & Hilt, 2009; Verduyn, Rogers & Wood, 2009).

Another negative outcome (or risk factor) for suicidal behaviour is the increase in the use and abuse of substances. In 2001, the British government decided to re-classify certain harmful substances (e.g. marijuana) and also to extend hours for people to buy and use alcohol. A

general flexibility and access to alcohol and other harmful substances by younger people followed (Kaminer & Bukstein, 2008; Wilcox, Connor & Caine, 2004). In the age group 16-24 years, it seems that they are put at risk of self-harm due to the access and exposure to harmful substances. Neeleman (2001) found that, in the UK, the availability of substances (e.g. alcohol, recreational drugs etc.) increased the risk of suicidal behaviour amongst young people. In South Africa a National Youth Risk Survey found that alcohol played a role in suicidal behaviour of many of the learners in the 15-19 years age group (Reddy et al., 2002).

The above mentioned negative outcomes (or risk factors), coupled with levels of low self-esteem, hopelessness, adverse environmental factors, incomplete developmental milestones and crises and poor coping mechanisms could lead to a significant negative outcome in the form of suicidal behaviour.

## **CONCLUSION**

In reviewing the literature, it seems that a significant increase in adolescent suicidal behaviour has been noted globally especially in developed and even developing countries. Both the United Kingdom, which is a developed country and South Africa, a developing country, have experienced significant increases in adolescent suicidal behaviour. In scrutinising the body of British and South African studies it is clear that the aetiology of suicidal behaviour is complex and multi-dimensional including personal and contextual factors, developmental challenges and coping behaviour. On a personal level (comprising of relatively stable dispositions and attributes) it appears that self-esteem and a sense of hope are prominent characteristics of the individual that can pose as either a risk or protective factor. Low levels of self-esteem and hope (hopelessness) were identified as risk factors that can enhance the adolescent's level of vulnerability and contribute to eventual suicidal behaviour in both British and South African studies. Obviously the inverse to this with high levels of self-esteem and hope acted as protective factors to lessen the degrees of vulnerability to suicidal behaviour (Evans et al., 2004; Snyder et al., 2000; Wild et al., 2004). Gender and ethnic differences have also been implicated as important influences in suicidal behaviour in both the British and the South African adolescent populations (Hawton et al., 2002; Kelly & Bunting, 1998; Schlebusch, 2005). Research findings have shown that males are more likely to commit suicide than females in both the British and South African populations. Suicide statistics show a higher number of suicides amongst white youths in the UK and South Africa. In South Africa black youths are showing a significant increase in suicidal behaviour (Schlebusch, 2005).

As far as contextual (environmental) variables are concerned, the family unit plays a pivotal role in the adolescent's life; and once again similarities were found between the UK and South Africa. A number of British and South African studies highlighted that family discord was a significant risk factor in suicidal behaviour (O'Brien & Scott, 2007; Pillay & Wassenaar, 1997). Dysfunctional familial problems such as parental divorce, interpersonal conflicts between parents and siblings and family psychiatric conditions appear to have strong links with suicidal behaviour (Aspalan, 2003; Engelbrecht & Van Vuuren, 2000; Houston et al., 2001; Hunter et al., 2007). Relationships outside the family unit, such as romantic relationships and peer relationships, also showed similar trends in both the UK and South Africa in that if turmoil and conflict were experienced in those relationships, they had an adverse effect on adolescent's sense of security and stability which could pose as a further risk for suicidal behaviour (Evans et al., 2004; Sebate, 1999). Socioeconomic stresses appeared to be risk factors for suicidal behaviour in both the UK and South African populations especially poverty and unemployment, more prominently so in the current recession period as well. It appeared that in the South African society the effects and extent of poverty seemed to be more prominent in their effect on the vulnerable adolescent than in the British society (Govender & Killian, 2001; Peltzer & Cherian, 1998). Poor physical health is another contextual risk factor described in the British and South African literature as a contribution to suicidal behaviour (O'Cavanagh et al., 1999; Schlebusch, 2005). However, it appears that the pandemic manifestation of HIV/AIDS is more problematic for the South African adolescent than for its British adolescent counterpart. It has been estimated that 30% of the World's HIV positive individuals are found in southern Africa (including South Africa) which undoubtedly will have an impact on the developing South African adolescent as they face social stigma, fear, depression, anger and a degree of general insecurity regarding their future. All these factors pose a risk for suicidal behaviour (Noor Mohamed et al., 2004; Peltzer & Cherian, 1998). A further difference between the British and South African adolescent population pertains to the access to health services. Access to health services for the British adolescent does not compare favourably with the situation of South African adolescents who have to cope with inadequate medical service provision, especially mental health interventions (Richter, 2000). Political uncertainty as an environmental factor features in both the British and South African studies. Political instability can cause social disruption and threaten the feelings of security and future goals for the developing adolescent. It must be noted, however, that South African's profound legacy of apartheid has traumatised a major part of its citizens and left a heritage of stress-related psychological problems with the

potential of suicidal behaviour. Additional political factors, especially in the South African context, that could cause suicidal behaviour are the high incidence of violence, crime and trauma, which are still evident in South Africa as a society in transition since the first democratic elections in 1994 (Evans et al., 2004; Govendor & Killian, 2001; Pillay & Schlebusch, 1997).

Adolescence is characterised by significant physical, cognitive, social and moral changes. Stress related to physical and sexual maturation processes can increase the risk for mood disorders and the associated suicidal behaviour (Evans et al., 2004; Richter & Higson-Smith, 2004). In the light of these challenges it is imperative for the developing adolescent to apply effective coping strategies to manage life challenges. Strategies utilised by the adolescent can either be functional (effective) or dysfunctional (ineffective). A variety of British and South African studies have found that impaired problem-solving strategies were an important risk factor for suicidal ideation and behaviour as manifested in both adolescent populations (Meehan et al., 2007; O'Connor & Sheehy, 2001).

The interaction of personal and environmental factors combined with developmental transitions and coping responses, determines whether the outcome will be positive or negative for the adolescent. A positive life outcome could mould the adolescent into an individual with adequate levels of self-esteem, hopefulness, supportive family relationships with significant other relationships and the skills to master developmental tasks. Unfortunately some adolescents will experience significant levels of personal distress that could elicit health-compromising choices such as suicidal behaviour. In both the UK and South Africa, adverse health outcomes such as psychiatric disorders (depression) and other mental disorders, such as the use of harmful substances, could further affect the developing adolescent adversely (Evans et al., 2004; Kaminer & Bukstein, 2008; Nolen-Hoeksemer & Hilt, 2009; Pillay & Wassenaar, 1997; Wild et al., 2004).

The most noticeable differences between British and South African adolescents were found in the contextual domain such as socio-economic differences, the influence of HIV/AIDS, access to health services and political uncertainties. No evidence was found of studies undertaken to investigate the differences between personal factors and coping strategies between British and South African adolescents. This highlights the necessity for further studies.



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# **Chapter 3**

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## **ARTICLE 2**

**THE ROLE OF COPING IN SUICIDAL IDEATION: A COMPARISON OF  
ENGLISH AND SOUTH AFRICAN ADOLESCENTS**

## ***ABSTRACT***

Adolescence spans the period between childhood and adulthood and is characterised by significant physical and psychological changes. It is a road paved with challenges. Some people find this transition so problematic that they make ill health-compromising choices and use ineffective ways of coping. The question that arises is how adolescents from vastly different backgrounds and societies deal with this volatile developmental transition. The aim of this article is to investigate the relationship between coping strategies utilised and the level of suicidal ideation of adolescents from two different countries. A non-experimental criterion group design was used. A convenience sample of learners was gathered from schools in the Surrey County, England and from schools in the Northern Cape Province, South Africa. The Suicidal Ideation Questionnaire for Adolescents (Reynolds, 1988) and the COPE Questionnaire (Carver, Scheier & Weintraub, 1989) were used to measure suicidal ideation and coping strategies. The English group reported a higher degree of suicidal ideation than the Northern Cape group. The findings showed that the Northern Cape group used a wider range of coping strategies especially in the Problem-focused and Emotion-focused coping strategy subscales. A positive correlation was found between suicidal ideation and Seeking Social Support for instrumental reasons, Seeking Social Support for emotional reasons, Venting of Emotions, Denial and Alcohol/ Drug Disengagement for the English group. Only two coping strategies (Denial and Behavioural Disengagement) correlated positively with suicidal ideation for the Northern Cape group. The English group of participants used the dysfunctional coping strategy of Alcohol/ Drug Disengagement more frequently than their Northern Cape counterparts. The English girls scored substantially higher than the English boys in the Alcohol/ Drug Disengagement strategy. Further studies need to be undertaken to explore the underlying reasons for this concerning finding. Limitations of this study were the use of non-British and South African measuring instruments. The age span was also too narrow, with the English group being eighteen months younger than the Northern Cape group.

**Keywords:** Coping, Problem-focused coping, Emotion-focused coping, Dysfunctional coping, suicidal ideation, English adolescents, South African adolescents

## **INTRODUCTION**

Adolescence is the period between childhood and adulthood characterised by significant changes of both a physical and psychological nature. These changes herald a new phase in the person's life and prepare him/ her for adulthood. This road through adolescence is often paved with adjustment challenges that can be perceived as daunting and overwhelming. The most important developmental changes during adolescence involve the process of identity formation and a progression towards a sense of independence. Many adolescents experience a smooth transition into adulthood with satisfactory levels of competence and resilience to manage these challenging obstacles; whereas some individuals could develop psychological difficulties and maladaptive ways of coping that could ultimately increase their risk of negative health outcomes, i.e. increased levels of anxiety, stress, depression and even suicidal behaviour (Beautrais, 2000; Isrealashvili, Gilut, Osovitzki & Ashevor, 2006; Jackson & Goosens, 2006; Louw & Louw 2007; Meehan, Peirson & Fridjhon, 2007; Sigelman & Rider 2006; Snyder & Lopez, 2007). A global increase in suicidal behaviour amongst young people is particularly worrying (Bertolote, 2001), with these increases having been reported in both developed and developing countries. The United Kingdom and South Africa are two countries that have both experienced a significant increase in suicide rates over the last decade. They differ significantly in socio-economic status, political stability and the availability of resources; and the contrast between them is also apparent in that the UK is a First World developed country and South Africa a developing Third World country (Koplewicz, Gurian & Williams, 2009). The overall suicide rate reported for the UK in 2008 was 6.8 per 100,000 (WHO, 2008); whereas the South African suicide rate showed a rate of 25.3 per 100,000 for men and 5.6 per 100,000 for women (National Injury Mortality Surveillance System, 2008). As both countries have experienced an alarming increase in suicidal behaviour, the question arises as to what extent coping strategies influence the suicidal behaviour of both adolescent populations.

## **COPING**

Coping involves behavioural and cognitive efforts employed by the individual to manage the stressful demands of the relationship of a person with his/ her environment. The choice of coping response is influenced by the nature of the stressor and availability of resources. Transactions with the environment are appraised as threatening, harmful or challenging and this appraisal prompts the application of strategies to reduce the distress or manage the problem (Frydenberg, 2008; Palmer, 2008; Rothman & van Rensburg, 2002).

Problem-focused coping aims to alter the stressor through cognitive reasoning and purposeful action. Coping responses aimed at reducing tension in order to regulate the unpleasant emotions during stressful circumstances are called Emotion-focused coping responses (Carver, Scheier & Weintraub, 1989; Rothman & Van Rensburg, 2002; Wong, Reker & Peacock, 1993). According to The Transactional Theory of Coping (Lazarus & Folkman, 1984), the appraisal of the stressor and resources determines the choice of coping responses. According to *The Conservation of Resources Theory* of Hobfoll (1988), coping resources are the most important factors in the coping process. Hobfoll (1988) posits that the availability of resources not only influences the individual's appraisal of the situation but also determines the choice of coping strategy. Insufficient resources lead to a more defensive or even destructive coping style whereas adequate resources promote the use of action-orientated problem-focused coping (Hobfoll, 1988; Hutchinson, Stuart & Pretorius, 2007; Santrock, 2004). Coping resources include internal or personal resources such as self esteem, hope and personality traits, whereas external resources consist of social support networks, for instance family, peer and community support and environmental factors such as health services, financial and political stability (Hutchinson et al., 2007).

Apart from the problem-focused and emotion-focused modes of coping, the literature also identifies approach versus avoidance coping style and relational coping (Frydenberg, 2008; Livneh, Livneh, Maron & Kaplin, 1996). Coping behaviour can either be situational, varying across time and context depending on the stressor influencing the individual's preference for a specific coping style. It seems that problem-focused and approach coping strategies are more frequently used if the individual believes that the stressful situation can be altered constructively by his/ her own volition; whereas emotion-focused and avoidance coping appear to be used more often in a situation that is perceived as uncontrollable and unchangeable (Carver et al., 1989; Wong et al., 1993).

Coping strategies are not inherently functional or dysfunctional but the efficacy of any strategy is determined by the ability of the strategy to eliminate or control the stressor. Yet some coping strategies can have a destructive or stress enhancing impact. Strategies such as denying the reality of the situation (denial, ignoring or avoiding the severity of situations either behaviourally or mentally or escaping through alcohol and/or drug consumption) are associated with negative outcomes (Carver et al., 1989; Hobfoll, 1998; Frydenberg, 2008; Meehan et al., 2007; Santrock, 2004; Seiffge-Krenke & Schulman, 1990; Spirito, Francis, Overholser & Frank, 1996).



## **COPING AND SUICIDAL BEHAVIOUR**

Suicidal behaviour is viewed as an umbrella concept depicting a variety of behaviours such as thoughts and perceptions about suicide, suicidal ideation, attempts to cause self harm (suicide attempts) and ending one's life (completed suicide) (McLean, Maxwell, Platt, Harris & Jepson, 2008; Schlebusch, 2005). The use of ineffective coping strategies increases the vulnerability of adolescents to negative health outcomes such as feelings of distress, hopelessness, depression, violence, substance addiction and ultimately suicidal behaviour (Israelashvili et al., 2006; Meehan et al., 2007; Santrock, 2004; Spirito et al., 1996). Inversely, effective strategies can act as a buffer against suicidal ideation and behaviour as various researchers have reported that the effective use of problem-focused coping strategies amongst adolescents has been linked to increased levels of self esteem and resilience (Chapman, Specht & Cellucci, 2005; Elliott & Frude, 2001; Everall, Altrows & Paulson, 2006; McLean et al., 2008; Meehan et al., 2007; Rothman & van Rensburg, 2002).

In reviewing the body of British and South African literature about the relationship between coping strategies and suicidal behaviour amongst adolescents, a number of studies have emphasised that problem-focused coping strategies (such as active coping, planning and seeking information or advice) are protective of suicidal ideation and behaviour (Chapman et al., 2005; Elliott et al., 2001; Everall et al., 2006; Meehan et al., 2007; Rothman & Van Rensburg, 2002).

Certain emotion-focused coping strategies such as seeking support and turning to religion are associated with the successful management of situations and higher levels of optimism and resilience (Frydenberg, 2008). Aspalan (2003) and Brown (2009) maintain that turning to religion not only acts as a protective barrier to stressful challenges but also helps to decrease the impact of suicidal ideation. In some UK studies the absence of religious activities and the lack of spiritual support have been of concern (O'Brien & Scott, 2007). Seeking social support as an emotion-focused coping strategy especially among female adolescents, was reported to reduce feelings of hopelessness and helplessness, created a feeling of belonging and acted as a protector against suicidal ideation and behaviour for both U.K. and S.A. adolescents (Everall et al, 2006; Meehan et al, 2007; Wissing, Claassens & Du Toit, 1998). Venting of emotions, on the other hand, can increase feelings of alienation, insecurity and poor self esteem which are associated with high levels of suicidal ideation (George, 2009). Coping strategies such as self

blame and acceptance may lead to elevated levels of anxiety and depression, which are a further risk to suicidal behaviour (Frydenberg, 2008). Emotion-focused and dysfunctional coping strategies, especially turning to religion and emotional support, denial, avoidance or mental disengagement might be effective in the initial stages of coping with stressful events as they decrease feelings of anxiety, panic and low mood. The beneficial effects of these strategies are usually short lived with levels of renewed anxiety and stress returning, as stressful circumstances persist (Reinecke, 2006).

The use of a dysfunctional coping strategy such as alcohol and drug disengagement strongly correlates with an increased risk of suicidal behaviour (Cantopher, 2009; Neeleman, 2001; Sher, 2005; Windfuhr et al., 2008). Willcox, Connor and Caine (2004) and McLean et al. (2008) further report that the association between alcohol abuse and suicidal risk is stronger among U.K. women than men as initially postulated by Harris and Baraclough's (1997) review. In a South African study, Meehan et al. (2007) confirm that denial and/ or turning to alcohol and drug abuse to cope are associated with higher levels of suicidal ideation.

Demographic factors such as gender, age and ethnic affiliation inevitably influence the way adolescents cope with stress (Fields & Prinz, 1997). The results of studies on racial differences purports that a large percentage of these differences could be attributed to socio-economic circumstances such as poverty, the lack of adequate resources and inequality. These contextual environmental factors could attribute to adolescents' resorting to emotion-focussed or dysfunctional coping strategies in dealing with stressors (Schlebusch, 2005). The demographic factor of racial affiliation was excluded from this study.

In reviewing the literature, one becomes aware that a number of authors depict the differences in the coping behaviour of males and females. A traditional perspective has been to associate males with problem-focussed coping strategies, emotion-focussed coping strategies (such as aggression) and dysfunctional strategies like denial, alcohol and drug disengagement. In contrast, females are perceived as engaging in emotion-focussed coping strategies, such as seeking social support for emotional reasons and venting of emotions (Byrne & Mazanov, 2002; Carver et al., 1989; Frydenberg & Lewis, 1991; Frydenberg & Lewis, 1999; Frydenberg & Lewis, 2000; Hampel & Petermann, 2006; Wissing et al., 1998). These findings are challenged by a South African study by Meehan et al. (2007) who caution against stereotypical perceptions of adolescent boys as being action and problem orientated and girls as passive and emotional.

Meehan et al. (2007) found that both genders of South African adolescents utilise similar problem-focussed coping strategies. Although both genders demonstrate that they use functional coping strategies, there are some inter-gender differences which show that adolescent girls tend to use social support and approval (relational coping) more frequently. The gap between the coping behaviour of male and female adolescents appears to increase with age, with a greater shift in coping occurring between the ages of 14 and 16 years. Older adolescents are more likely to blame themselves for their stressors and resort to tension reducing (dysfunctional) strategies such as the use of alcohol and drugs (Frydenberg, 2008; Meehan et al., 2007).

The preceding discussion highlights similarities and differences between the English and South African adolescents with regard to coping and suicidal behaviour. The aim of this article is to compare a group of English (British) and Northern Cape (South African) adolescents with regard to their coping behaviour and suicidal ideation.

## **METHODOLOGY**

The following procedure was followed in order to attain the objectives of this study.

## **RESEARCH OBJECTIVES OF STUDY**

The research objectives were to determine the significance of differences between the English and Northern Cape groups in terms of levels of suicidal ideation and coping strategies as well as investigating gender differences between the two groups.

## **RESEARCH DESIGN**

A criterion group design has been used to determine significance of differences between the English and Northern Cape group with regard to their suicidal ideation and coping strategies. This non-experimental study attempted to explore the differences between the two groups but due to the limitations of the non-experimental design, no inferences can be made regarding the reasons why the results of the two groups differ from one another (Gravetter & Forzano, 2009).

## **DATA GATHERING**

The researcher held the position of Consultant (Specialist) Clinical Psychologist for the Surrey Borders National Health Service (NHS) Trust Surrey, England. The researcher also maintained close cooperation with researchers of the University of the Free State in South

Africa, who were involved with the gathering of data on suicidal behaviour and well-being of adolescents of the Northern Cape Province of South Africa.

A team of researchers from the Education Support Services (Northern Cape Department of Education) assisted with the process in the Northern Cape Province. Ethical approval for the study was granted by the research committee of the Faculty of Humanities of The University of the Free State. In accordance with the ethical guidelines, permission was obtained from the relevant education departments and school principals before the data were gathered from schools in the Surrey County, England and the Northern Cape Province, South Africa. Informed consent was obtained from all participants and parents, with the assurance of the anonymity and confidentiality of all data. After completion of the data gathering in the U.K. and Northern Cape, the data were coded and analysed at the Department of Psychology at the University of the Free State, South Africa. The questionnaires utilised were administered in English for both the English and the Northern Cape groups. Throughout the testing period of both groups a qualified psychologist was present to deal with any issues such as language comprehension or the emotional impact of the questions during the testing period and relevant referrals were made to health services in the local areas. The duration of testing was approximately two hours with an interval of 30 minutes.

From a demographical and economical perspective the County of Surrey in England is in the heart of southern England with a population of 1.6 million. It is a very affluent area, with the gross domestic product in Surrey being above that of the national U.K. growth rate. The main economic sector is that of professional services, industrial and technological services and consultancies. A high percentage people with tertiary qualifications reside in Surrey and the unemployment rate is 0.9% ([www.surreycc.gov.uk](http://www.surreycc.gov.uk)).

On the other hand, the Northern Cape Province has a population of 0.9 million and agriculture is the main economic activity. Coloureds are the most numerous (51.35%), followed by Blacks (38.99%), Whites (18.70%) and other race groups. The Northern Cape is one of the least densely populated provinces in South Africa and only a small percentage of the population have tertiary qualifications. There is a high rate of unemployment: Black people 43%, Coloured people 38% and White people 7%. The rate of unemployment in the Northern Cape is 37% which compares poorly to the South African level of unemployment of 26% ([www.agrinc.gov.co.za](http://www.agrinc.gov.co.za)).

## **PARTICIPANTS**

An availability sample of 678 English (United Kingdom) and Northern Cape (South Africa) learners were used, consisting of 297 (43.8%) participants from schools in the Surrey County, England and 381 (56.2%) participants from Northern Cape Province (South Africa). The mean age of the English group was 14.6 with a standard deviation of 0.5 while the mean age for the Northern Cape group was 16.3 with a standard deviation of 0.8. The gender distribution for the English group consisted of 162 (54.5%) male and 135 (45.5%) female participants; while the Northern Cape group consisted of 158 (41.5%) male and 223 (58.5%) female participants. The home language of the majority of the Northern Cape participants was Afrikaans.

The majority of the subjects were White. There were 227 English and 118 Northern Cape white participants (76% of English and 30% of Northern Cape group). Only 107 Black participants (English = 30; 10.1%; Northern Cape = 77; 20.2%) were included in the sample. While 185 Coloured subjects, all from the Northern Cape, and 41 Indian/ Asian subjects (40 English and 1 Northern Cape participants, 13.1% and 0.15% of the respective groups) were included in this sample. The majority of the participants (88% of the total sample) came from an urban background, only 81 (12% of the total sample) came from a rural background, all of whom were from the Northern Cape.

## **MEASURING INSTRUMENTS**

The measuring instruments used to gather data consisted of a biographical questionnaire, the Suicidal Ideation Questionnaire (Reynolds, 1988) and The Coping Orientation to the Problems Experienced Questionnaire (COPE) (Carver et al., 1989).

The biographical questionnaire compiled by the research team included questions regarding age, gender, race, language preference, grade, geographical location, parents' marital status, parents' employment status and previous exposure to suicidal behaviour.

The Suicidal Ideation Questionnaire (Youth form) (Reynolds, 1988) is a one-dimensional scale that measures the frequency of suicidal thoughts experienced by the participants. The 30 items of the questionnaire are answered on a seven-point frequency rating scale and the total suicidal ideation score is determined by calculating the sum of the 30 items. Reynolds (1988) reported a mean score of 17.76 and a standard deviation of 20 points. The cut-off score of 30 and

above is indicative of frequent suicidal thoughts and can be used to identify individuals for further assessment of suicidal risk. Alpha coefficients of between 0.93 and 0.97 are reported by Reynolds (1988) for a group of 890 American adolescents. In a South African study on the suicidal ideation on a group of adolescents (George, 2005), an alpha coefficient of 0.90 was reported, indicating good internal consistency. Some of George's participants were included in the sample of the current study. Apart from George's study no other South African study could be found that used the Suicidal Ideation Questionnaire with an adolescent sample.

The Coping Orientations to the Problems Experienced Questionnaire (COPE) (Carver et al., 1989) was developed to evaluate ways in which stressful situations are managed. The scale consists of 53 individual items which are divided into 14 subscales. Items are completed on a four-point frequency rating scale ranging from 1: "I usually do not do this at all" to 4: "I usually do this quite a lot." The subscales are grouped together in three broad categories namely Problem-focused subscales; Emotion-focused subscales and Dysfunctional subscales.

Problem-focused subscales includes subscales such as Active coping (taking action, to remove or circumvent the stressor), Planning (thinking about how to confront the stressor), Suppression of competing activities (suppressing one's attention to other activities in which one might engage in order to concentrate more completely on dealing with the stressor), Restraint coping (coping passively by holding back one's coping attempts until they can be of use) and Seeking social support for instrumental reasons (seeking assistance, information or advice).

Emotion-focused strategy subscales consist of subscales such as Seeking social support for emotional reasons (getting sympathy or emotional support from someone), Positive re-interpretation and growth (making the best of the situation by growing from it or viewing it in a more favourable light), Acceptance (accepting the fact that the stressful event has occurred and is real), Turning to religion (increased engagement in religious activities) and Focus on and venting of emotions (an increased awareness of one's emotional distress and a tendency to ventilate or discharge those feelings).

Dysfunctional subscales include the subscales of Denial (an attempt to reject the reality of a stressful event), Behavioural disengagement (giving up or withdrawing effort from the attempt to attain the goal), Mental disengagement (psychological disengagement from the goal with which

the stressor is interfering) and Alcohol-Drug disengagement (turning to the use of alcohol or other drugs as a way of disengaging from the stressor) (Carver et al., 1989; Wong et al., 1993).

The scores on the individual subscales are calculated by adding the scores of the four items per subscales. Higher scores indicate that the individual frequently uses the proposed strategy, whereas low scores indicate a less frequent use of the coping strategy. Carver et al., (1989), obtained Cronbach's alpha coefficients of between 0.45 - 0.90 for the internal consistency of subscales. In a South African study of an adult sample, Storm and Rothman (2003) found alpha coefficients varying between 0.24 – 0.65 for this questionnaire. The relatively low alpha coefficients might be influenced by the small number of items per subscale. The internal consistency of the measuring instrument used for the current study was investigated by computing Cronbach's alpha coefficients for all the scales and subscales (See Table 1).

According to Nunnally and Bernstein (1994) coefficients of 0.70 and above are considered acceptable for non-cognitive constructs. The alpha coefficients of 0.97 for The Suicidal Ideation Questionnaire indicate good internally consistent measures for the current group of participants. The lower alpha coefficients of 0.43 (English) and 0.15 (Northern Cape) of the Suppression of competing activities subscale as well as 0.43 (English) and 0.39 (Northern Cape) for Positive re-interpretation and growth was considered unacceptable and therefore both subscales were excluded from further analysis. A number of COPE subscales with coefficients between 0.50 – 0.69 were included in subsequent analyses even though they were marginally lower than the guideline of 0.70 because the small number of items might have influenced the alpha coefficients (see Table 1).

## **STATISTICAL PROCEDURE**

The statistical analysis was carried out using the SAS programme (2003). Descriptive statistics such as means and standard deviations were calculated for all the variables. Intercorrelations between the variables were determined with Pearson-product moment correlation coefficients. It was decided to give preference to a series of factorial ANOVAs because:

- multi-variant techniques such as ANOVAs require relatively large sample sizes; and
- there were a large number of dependent variable (as measured by the various scales and subscales).

In this way, the focus could be kept on the influence of the independent variables on the dependent variables, not on the interactions between the various dependent variables.

Moreover, at the same time, the interactions of the independent variables amongst each other as they related to the dependant variables could also be examined. Because of the large number of cells (20) created by the combinations of the various levels of the independent variables (2 for gender, 4 for race, 2 for origin) relative to the sample size, certain interactions could not be computed (specifically the three-way interaction between race, origin, gender). For this reason only gender and geographical location was investigated in the current study.

In terms of the statistical significance of the intercorrelations, the 1% level of significance ( $p \leq 0.01$ ) was used. Effect sizes (Steyn, 1999) were used to determine the practical significance of the findings of the intercorrelations. A cut-off point of 0.50 (large effect) was set for the practical significance of correlation coefficients (Cohen, 1988). A significance level of 1% was used to determine the significance of the ANOVAs.

## **RESULTS AND DISCUSSION OF RESULTS**

The descriptive statistics (means and standard deviations and alpha coefficients) of all the variables are presented in Table 1 for the English and Northern Cape groups.



**Table 1: Means, standard deviations and alpha coefficients for the English and Northern Cape groups**

Variables	UK Group					Total group	NC Group					Total group	Total sample			
	Male		Female		α		Male		Female		α		M	SD		
	162		134				158		223							
	M	SD	M	SD	M		SD	M	SD	M	SD					
Suicidal ideation	6.56	8.44	67.67	62.91		44.77	50	34.42	35.97	40.72	33.33		36.60	37.82	39.75	44.86
Active coping	9.97	3.35	9.89	2.56	0.47			11.49	2.23	11.74	2.46	0.79				
Planning	9.80	3.13	8.46	2.44	0.59			12.08	2.50	12.11	2.56	0.88				
Restraint coping	9.93	1.94	9.37	1.89	0.49			11.02	2.36	11.27	2.51	0.60				
Seeking support for instrumental reasons	9.46	1.90	10.16	2.43	0.62			10.89	2.44	11.21	3.05	0.60				
Seeking support for emotional reasons	8.51	3.17	8.75	3.01	0.65			10.13	2.77	11.22	3.09	0.81				
Acceptance	11.32	2.44	9.77	2.42	0.49			11.41	2.53	11.54	2.60	0.68				
Turning to religion	8.56	4.22	5.45	2.09	0.65			12.32	2.59	13.00	2.76	0.93				
Venting of emotions	9.42	1.69	9.53	3.80	0.46			10.15	2.55	10.83	2.60	0.61				
Denial	6.74	2.68	8.56	1.68	0.55			9.39	2.93	9.84	2.64	0.62				
Behavioural disengagement	9.00	3.04	9.48	1.78	0.48			9.11	2.61	9.72	2.55	0.58				
Mental disengagement	9.80	3.26	11.24	2.69	0.44			10.44	2.68	11.05	2.47	0.72				
Alcohol and drug disengagement	1.24	0.53	2.30	1.16				1.60	0.95	1.52	0.94					

The mean score of the English and Northern Cape group for the criterion variable Suicidal Ideation (SI) is 39.75 with a standard deviation of 44.86. The scores obtained by the current sample are significantly higher than the scores obtained by Reynolds's participants (1989) in which a mean score of 17.60 with a standard deviation of 20.76 was reported. The higher scores of both the English and Northern Cape groups indicate that subjects of the current study experienced a higher degree of suicidal ideation than Reynolds's (1988) participants. The current participants scored well above the cut-off score of 30 suggested by Reynolds (1989) as a criterion for referral for the assessment of suicide. In addition, it is important to note that the

English group showed a higher mean ( $\bar{x} = 44.77$ ; SD= 58.00) than the Northern Cape group ( $\bar{x} = 36.60$ ; SD= 37.82). This could be indicative that the English group experienced a higher degree of suicidal ideation than the Northern Cape respondents. There is a large difference between the mean scores of the English boys ( $\bar{x}$ : 6.56) and girls ( $\bar{x}$ : 67.67). The mean score of the boys are similar to the mean reported by Reynolds (1988) while the mean score of the girls is much higher.

The results of the COPE scale (Carver et al., 1989) reflect that, with the exception of the Alcohol and drug engagement subscale, the Northern Cape group scored higher in all other subscales implying that they used a wider variety of coping strategies. They scored significantly higher in all five of the Problem-focused strategies and the five Emotion-focused subscales than their English counterparts. The only coping strategy in which the English group scored higher than the Northern Cape group was the use of Alcohol and drug disengagement as a coping strategy to cope with a stressful situation. It confirms the results found in U.K. studies regarding the frequent use of a dysfunctional coping strategy such as alcohol and drug disengagement (Cantopher, 2009; McLean et al., 2008).

The intercorrelations between all the variables will be discussed for the English and Northern Cape groups separately and are reported in Tables 2 and 3 respectively.

**Table 2: Pearson-product moment correlations for the English group**

UK	SI	Active Cop.	Planning	Support	Rest	Seeking soc Inst	Seekign SocEmo	Accept	Turnign to R	Vent	Denial	Beh.Desen	Ment.Dise n	Alc +Drugs
Suicidal ideationl	1.00													
Active Coping	-0.03	1.00												
Planning	X -0.18	XX 0.68	1.00											
Support	XX -0.27	XX 0.57	XX 0.45	1.00										
Restraint coping	X -0.18	XX 0.62	XX 0.44	XX 0.54	1.00									
Seeking Social support for instrumental reasons	XX 0.31	XX 0.54	XX 0.59	XX 0.55	XX 0.42	1.00								
Seeking Social support for emotional reasons	XX 0.32	-0.10	XX 0.24	0.01	-0.20	XX 0.56	1.00							
Acceptance	-0.09	XX 0.45	XX 0.49	0.11	XX 0.42	0.15	-0.13	1.00						
Turning to Religion	0.06	0.13	XX 0.56	-0.14	0.11	0.16	0.08	XX 0.51	1.00					
Venting of emotions	XX 0.52	0.12	X 0.21	-0.21	-0.16	XX 0.50	XX 0.74	-0.06	0.21	1.00				
Denial	XX 0.36	XX 0.58	XX 0.32	XX 0.39	XX 0.24	XX 0.43	-0.01	0.18	0.04	0.14	1.00			
Behavioural Disengagement	-0.10	XX 0.49	-0.12	XX 0.31	XX 0.56	0.04	XX -0.54	0.08	XX -0.39	XX -0.23	XX 0.24	1.00		
Mental disengagement	-0.15	XX 0.64	XX 0.39	XX 0.50	XX 0.55	0.21	XX 0.49	XX 0.26	-0.01	XX -0.39	XX 0.56	XX 0.47	1.00	
Alcohol and drug disengagement	XX 0.85	-0.01	-0.16	-0.06	XX -0.27	XX 0.36	XX 0.47	XX -0.26	XX -0.22	XX 0.60	XX 0.31	-0.07	-0.18	1.00

XX =  $p < 0.01$  X =  $p < 0.05$

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

**Table 3: Pearson-product moment correlations for the Northern Cape**

NC	SI	Active Cop.	Planning	Support	Rest	Seeking soc Inst	Seekign SocEmo	Pos.re	Accept	Turnign to R	Vent	Denial	Beh.Desen	Ment.Dise n	Alc +Drugs
Suicidal ideationI	1.00														
Active Coping	-0.09	1.00													
Planning	-0.10	XX 0.63	1.00												
Support	0.01	XX 0.47	XX 0.51	1.00											
Restraint coping	0.01	XX 0.40	XX 0.53	XX 0.43	1.00										
Seeking Social support for instrumental reasons	-0.12	XX 0.47	XX 0.45	XX 0.29	XX 0.34	1.00									
Seeking Social support for emotional reasons	-0.04	XX 0.40	XX 0.27	XX 0.25	XX 0.23	XX 0.57	1.00								
Acceptance	-0.13	XX 0.33	XX 0.39	XX 0.32	XX 0.39	XX 0.35	XX 0.25	XX 0.44	1.00						
Turning to Religion	-0.03	XX 0.37	XX 0.36	XX 0.28	XX 0.31	XX 0.35	XX 0.28	XX 0.33	XX 0.21	1.00					
Venting of emotions	0.12	XX 0.32	XX 0.31	XX 0.30	XX 0.25	XX 0.39	XX 0.50	XX 0.31	XX 0.31	0.16	1.00				
Denial	X 0.17	X 0.18	0.09	0.15	XX 0.21	0.14	XX 0.22	0.09	0.09	0.08	XX 0.23	1.00			
Behavioural .Disengagement.	X 0.17	X 0.18	0.10	X 0.17	XX 0.25	0.09	0.20	0.06	X 0.17	0.05	XX 0.37	XX 0.41	1.00		
Ment.al disengagement	0.06	XX 0.25	XX 0.22	0.15	XX 0.30	XX 0.25	XX 0.30	XX 0.26	0.20	0.16	XX 0.30	XX 0.32	XX 0.22	1.00	
Alc ohol and drug disengagement	-0.03	-0.07	-0.09	0.03	-0.07	-0.06	-0.09	-0.09	0.05	XX 0.33	0.12	0.04	0.11	0.00	1.00

XX =  $p < 0.01$  X =  $p < 0.05$

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

It is important to note that these correlations only reflect correlations that exist between these variables and that no conclusion can be made about the causality between the variables. In the English group the following seven coping strategies correlated statistically significantly on a 1% level of significance with suicidal ideation: Planning, Restraint coping, Seeking social support for instrumental reasons, Seeking social support for emotional reasons, Venting of emotions, Denial and Alcohol-drug disengagement.

Five of these seven coping strategies, namely Seeking social support for instrumental reasons, Seeking social support for emotional reasons, Venting of emotions, Denial and Alcohol-drug disengagement correlated positively with suicidal ideation - thus indicating that the most frequent use of these coping strategies can be associated with higher levels of suicidal ideation (Everall et al., 2006; McLean et al., 2008; Wilcox et al., 2004).

Planning and Restraint coping correlated negatively with suicidal ideation and this indicated that the increased use of these coping strategies are associated with lower levels of suicidal ideation. The following coping strategies showed a statistically significant correlation of large effect size with suicidal ideation for the English participants: Venting of emotions and Alcohol-drug disengagement. This finding indicates that a more frequent use of venting of emotions and especially alcohol-drug disengagement as coping strategies are associated with higher levels of suicidal ideation (as confirmed in UK literature: Cantopher, 2009; McLean et al., 2008). This finding is of great practical significance. The following three coping strategies showed a statistically significant correlation of medium effect size with suicidal ideation: Seeking social support for instrumental reasons, Seeking social support for emotional reasons and Denial. These positive correlations (of moderate practical significance) reflect that frequent use of support seeking behaviour and denial are associated with high levels of suicidal ideation. Although Planning and Restraint coping showed a statistically significant correlation with suicidal ideation, the effect size of these correlations shows that these correlations are of small practical significance.

In the Northern Cape group only the statistics of the following two coping strategies correlated significantly on the 1% level with suicidal ideation: Denial and Behavioural disengagement. Denial and Behavioural disengagement correlated positively with suicidal ideation, indicating that the more frequent use of denial and behavioural disengagement are associated with higher

levels of suicidal ideation. The effect size of these correlations is small and this indicates that these correlations are of small practical significance.

From the above-mentioned correlations, it is clear that there are a number of differences between the English and Northern Cape group with regard to the coping strategies that correlate with suicidal ideation. The correlations are much stronger in the English group than in the Northern Cape group. The intercorrelations between the coping subscales are not discussed due to the large number of subscales.

The results of the ANOVAs depicting the differences between the English and Northern Cape boys and girls are presented in tables 4 to 14.

**Table 4: ANOVA for suicidal ideation**

Source	DF	Mean square	F Value	Pr > F
<b>Model</b>	3	38970.76	56.81	<0.0001
<b>ANOVA results</b>				
<b>Main effects</b>				
<b>Gender</b>	1	157232.34	229.21	<0.0001
<b>Origin</b>	1	2513.79	3.66	0.056
<b>Two-way interactions</b>				
<b>Gender*Origin</b>	1	120372.79	175.48	<0.0001

Significant differences on the 1% level of significance were found with regard to the suicidal ideation of the English and Northern Cape groups (F 56.81; DF 3), with noticeable gender differences within the English (boys =  $\bar{X}$ : 6.56 and girls =  $\bar{X}$ : 67.67) and between the Northern Cape (boys =  $\bar{X}$ : 34.42 and girls =  $\bar{X}$ : 40.72) groups (as deduced from Table 1).

The ANOVA results of the four problem-focused strategies are presented in tables 5-8.

**Table 5: ANOVA for Active Coping**

Source	DF	Mean square	F Value	Pr > F
<b>Model</b>	3	1730.81	15.15	<0.0001
<b>ANOVA results</b>				
<b>Main effects</b>				
<b>Gender</b>	1	17.60	3.24	0.072
<b>Origin</b>	1	484.46	89.10	<0.0001
<b>Two-way interactions</b>				
<b>Gender*Origin</b>	1	0.000	0.000	1.000

Significant differences on the 1% level of significance were found with regard to the Problem-Focused strategy of Active Coping of the English and Northern Cape groups (F 15.15; DF 3), with considerable differences between the English (boys =  $\bar{x}$ : 9.97 and girls =  $\bar{x}$ : 9.89) and the Northern Cape group (boys =  $\bar{x}$ : 11.49 and girls =  $\bar{x}$ : 11.74).

**Table 6: ANOVA for Planning**

Source	DF	Mean square	F Value	Pr > F
<b>Model</b>	3	1730.81	15.15	<0.0001
<b>ANOVA results</b>				
<b>Main effects</b>				
<b>Gender</b>	1	17.60	3.24	0.072
<b>Origin</b>	1	484.46	89.10	<0.0001
<b>Two-way interactions</b>				
<b>Gender*Origin</b>	1	0.000	0.000	1.000

Significant differences on the 1% level of significance were found with regard to the Problem-focused coping strategy of Planning of the English and Northern Cape groups (F 20.51; DF 3) with significant gender differences between the English (boys =  $\bar{x}$ : 9.80 and girls =  $\bar{x}$ : 8.46) and the Northern Cape (boys =  $\bar{x}$ : 12.09 and girls =  $\bar{x}$ : 12.11) groups.

**Table 7: ANOVA for Restraint coping**

Source	DF	Mean square	F Value	Pr > F
Model	3	40.24	9.07	<0.0001
<b>ANOVA results</b>				
<b>Main effects</b>				
Gender	1	1.41	0.32	0.573
Origin	1	369.30	83.29	<0.0001
<b>Two-way interactions</b>				
Gender*Origin	1	27.50	6.2	0.013

Significant differences were found on the 1% level of significance with regard to Restraint coping as a Problem-focused coping strategy of the English and Northern Cape groups (F 9.07; DF 3), with significant differences between the English (boys =  $\bar{x}$ : 9.93 and girls =  $\bar{x}$ : 9.37) and the Northern Cape (boys =  $\bar{x}$ : 11.2 and girls =  $\bar{x}$ : 11.7) groups.

**Table 8: ANOVA for Seeking social support for instrumental reasons**

Source	DF	Mean square	F Value	Pr > F
Model	3	32.06	5.23	<0.0001
<b>ANOVA results</b>				
<b>Main effects</b>				
Gender	1	71.87	11.72	<0.0001
Origin	1	279.99	45.67	<0.0001
<b>Two-way interactions</b>				
Gender*Origin	1	0.000	0.000	1.000

On the 1% level of significance, significant differences were found with regard to Seeking social support for instrumental reasons as a Problem-focused coping strategy of the English and Northern Cape groups (F 2.3; DF 3). There were definite gender differences within the English



group (boys =  $\bar{x}$ : 9.46; and girls =  $\bar{x}$ : 10.16) and between the Northern Cape (boys =  $\bar{x}$ : 10.89; and girls =  $\bar{x}$ : 11.21) groups.

In all four Problem-focused subscales significant differences were found between the English and Northern Cape groups. With regard to the Northern Cape group's higher scores in terms of Problem-focused coping strategies, an explanation could be that their frequent use of problem-focused coping strategies are utilised because they are slightly older than their English counterparts. Another explanation could be the fact that, in the Northern Cape, the adolescents experience more adverse socio-economic and political circumstances than the English participants and could have developed more effective coping strategies. This would explain their use of a wider range of Problem-focused coping strategies than the English group (Meehan, et al., 2007).

The ANOVA results of the four Emotion-focused coping strategies will be presented in tables 9-12.

**Table 9: ANOVA for Seeking social support for emotional reasons**

Source	DF	Mean square	F Value	Pr > F
<b>Model</b>	3	75.33	9.04	<0.0001
<b>ANOVA results</b>				
<b>Main effects</b>				
<b>Gender</b>	1	164.57	19.75	<0.0001
<b>Origin</b>	1	768.17	92.19	<0.0001
<b>Two-way interactions</b>				
<b>Gender*Origin</b>	1	0.000	0.000	1.000

Significant differences on the 1% level of significance were found with regard to the Emotion-focused coping strategy of Seeking social support for emotional reasons of the English and Northern Cape groups (F 9.04; DF 3). Gender differences within the English group (boys =  $\bar{x}$ : 8.51 and girls =  $\bar{x}$ : 8.75) and considerable differences between the English and the Northern Cape (boys =  $\bar{x}$ :10.13 and girls =  $\bar{x}$ : 10.22) groups were found.

**Table 10: ANOVA for Acceptance**

Source	DF	Mean square	F Value	Pr > F
Model	3	58.64	11.61	<0.0001
<b>ANOVA results</b>				
<b>Main effects</b>				
Gender	1	40.33	7.99	0.005
Origin	1	126.07	24.97	<0.0001
<b>Two-way interactions</b>				
Gender*Origin	1	137.99	27.33	<0.0001

Significant differences on the 1% level of significance were found with regard to the Emotion-focused coping strategy of Acceptance of the English and Northern Cape groups (F 11.61; DF 3) with gender differences within the English (boys =  $\bar{x}$ : 11.32 and girls =  $\bar{x}$ : 9.77) and between the Northern Cape ( boys =  $\bar{x}$ : 11.41 and girls =  $\bar{x}$ : 11.54) groups respectively.

**Table 11: ANOVA for Turning to religion**

Source	DF	Mean square	F Value	Pr > F
Model	3	330.57	41.88	<0.0001
<b>ANOVA results</b>				
<b>Main effects</b>				
Gender	1	10.34	1.31	0.25
Origin	1	5162.87	654.1	<0.0001
<b>Two-way interactions</b>				
Gender*Origin	1	744.58	94.33	<0.0001

Significant differences on the 1% level of significance were found with regard to the Emotion-focused coping strategy of Turning to religion in the English and Northern Cape groups (F 41.88; DF 3). There are significant gender differences within the English (boys =  $\bar{x}$ : 8.56 and girls =  $\bar{x}$ : 5.45) and between the Northern Cape (boys =  $\bar{x}$ : 12.32 and girls =  $\bar{x}$ : 13.00) groups. This was confirmed in South African studies on the positive role religion plays as a protective

factor (Aspalan, 2003; Brown, 2009). It is significant to note the lack of religious and spiritual activities in the UK (O'Brien & Scott, 2007).

**Table 12: ANOVA for Venting of emotions**

Source	DF	Mean square	F Value	Pr > F
Model	3	61.32	10.42	<0.0001
<b>ANOVA results</b>				
<b>Main effects</b>				
Gender	1	53.54	9.10	0.003
Origin	1	194.87	33.13	<0.0001
<b>Two-way interactions</b>				
Gender*Origin	1	0.000	0.000	1.000

The significant differences on the 1% level of significance were found with regard to the Emotion-focused coping strategy of Venting of emotions of the English and Northern Cape groups (F 10.42; DF 3). Gender differences were: the English group (boys =  $\bar{x}$ : 9.42 and girls =  $\bar{x}$ : 9.53); and the Northern Cape group (boys =  $\bar{x}$ : 10.15 and girls =  $\bar{x}$ : 10.83). Both genders in the Northern Cape showed a tendency to vent emotions more than the English group.

Significant differences were also found in all four of the Emotion-focused coping strategies subscales between the Northern Cape and English groups. The Northern Cape group showed noticeably higher scores in all four of the Emotion-focused coping strategies subscales (as was the case with the previously mentioned Problem-focused coping strategies).

The wider utilisation of emotion-focused coping strategies for the Northern Cape group could be the result of the fact that there are limited resources at school or within the community. This could force adolescents in the Northern Cape to seek access in other areas for emotional and social support such as seeking support for emotional reasons, acceptance or turning to religion (Aspalan, 2003; Madlu & Matla, 2003; Meehan, et al., 2007).

The ANOVA results of the four Dysfunctional coping strategy subscales will be presented in tables 13-16.

**Table 13: ANOVA for the Denial**

Source	DF	Mean square	F Value	Pr > F
Model	3	87.26	15.95	<0.0001
<b>ANOVA results</b>				
<b>Main effects</b>				
Gender	1	290.32	53.05	<0.0001
Origin	1	725.37	132.56	<0.0001
<b>Two-way interactions</b>				
Gender*Origin	1	0.000	0.000	1.000

Significant differences on the 1% level of significance were found with regard to the Dysfunctional coping strategy of Denial of the English and Northern Cape groups (F 15.95; DF 3) with significant gender differences within the English (boys =  $\bar{x}$ : 6.74 and girls =  $\bar{x}$ : 8.56) and between the Northern Cape (boys =  $\bar{x}$ : 9.39 and girls =  $\bar{x}$ : 9.84) groups respectively.

**Table 14: ANOVA for Mental disengagement**

Source	DF	Mean square	F Value	Pr > F
Model	3	90.81	17.19	<0.0001
<b>ANOVA results</b>				
<b>Main effects</b>				
Gender	1	171.33	32.44	<0.0001
Origin	1	19.85	3.76	0.053
<b>Two-way interactions</b>				
Gender*Origin	1	15.19	2.88	0.09

On the 1% level of significance, no noticeable differences were found with regard to Mental disengagement as a Dysfunctional coping strategy for the English and Northern Cape groups (F 17.19; DF 3). Gender differences between the English (boys =  $\bar{x}$ : 9.80 and girls =  $\bar{x}$ : 11.24) and the Northern Cape (boys =  $\bar{x}$ : 10.44 and girls =  $\bar{x}$ : 11.05) groups were found.

**Table 15: ANOVA for Behavioural disengagement**

Source	DF	Mean square	F Value	Pr > F
Model	3	20.03	3.23	<0.0001
<b>ANOVA results</b>				
<b>Main effects</b>				
Gender	1	56.21	9.07	0.003
Origin	1	10.49	1.69	0.194
<b>Two-way interactions</b>				
Gender*Origin	1	0.000	0.000	1.000

On the 1% level of significance, no significant differences were found with regard to Behavioural disengagement as a Dysfunctional coping strategy for the English and Northern Cape groups (F 3.23; DF 3.00). The results were: the English group (boys =  $\bar{x}$ : 9.00 and girls =  $\bar{x}$ : 9.48) and the Northern Cape group (boys =  $\bar{x}$ : 9.10 and girls =  $\bar{x}$ : 9.00)

**Table 16: ANOVA for Alcohol and drug disengagement**

Source	DF	Mean square	F Value	Pr > F
Model	3	11.30	17.92	<0.0001
<b>ANOVA results</b>				
<b>Main effects</b>				
Gender	1	26.14	41.44	<0.0001
Origin	1	4.58	7.26	0.007
<b>Two-way interactions</b>				
Gender*Origin	1	56.53	89.62	<0.0001

Significant differences on the 1% level of significance were found with regard to Alcohol and Drug disengagement as a Dysfunctional coping strategy for the English and Northern Cape groups (F 17.92; DF 3). Significant gender differences within the English group (boys =  $\bar{x}$ : 1.24

and girls =  $\bar{x}$ : 2.30) and between the sexes in the Northern Cape group (boys =  $\bar{x}$ : 1.60 and girls =  $\bar{x}$ : 1.52). With regard to Alcohol and Drug disengagement as a dysfunctional coping strategy, it appears that the English girls made more frequent use of alcohol and drug disengagement than the English boys and both genders from the Northern Cape. This is supported by the studies of Cantopher, (2009), Neeleman, (2001) and Willcox et al., (2004).

## **RECAPITULATION AND DISCUSSION**

The objective of the study was to investigate differences in the manifestation of coping strategies and suicidal ideation of a group of English and South African adolescents.

The COPE scale yielded much lower alpha coefficients especially for the English group. The subscales of the COPE consist of only four items per subscale and this might have affected the internal consistency of the measurement. The alpha coefficients of the English participants were considerably lower on most subscales. Two of the subscales (Suppression of competing activities and Positive reinterpretation and growth) were excluded because the alpha coefficients were below 0.45 for both groups of participants. The results of the current study are very similar to the alpha coefficients reported by Storm and Rothman (2003) for a South African sample.

The respective mean scores of the English girls ( $\bar{x}$ : = 67.67; SD = 62.91) and the Northern Cape boys ( $\bar{x}$ : = 34.42; SD = 35.97) and girls ( $\bar{x}$ : = 40.72; SD = 33.33) on suicidal ideation were markedly higher than the scores reported in the study by Reynolds (1988) ( $\bar{x}$ : = 17.6 and SD = 20.76). This reflects higher frequency of ideas, images and thoughts of suicide for the English girls and Northern Cape boys and girls. Possible explanations for this finding could be the differences in life circumstances that influence the participants of the current study. The time lapse over the last decade could also have contributed to increased stresses and suicidal ideation than was the case when Reynolds (1988) did his research on an American group of adolescents. Based on the similarities in contextual circumstances between the current English sample and Reynolds's American sample, one would expect greater similarities in the level of suicidal ideation (Koplewicz et al., 2009). It is important to note that in the current sample the English boys reported a much lower level of suicidal ideation ( $\bar{x}$ : = 6.56 and SD = 8.44).

The English and Northern Cape participants differed significantly (on the 1% level of significance) with regard to the use of Problem-focused coping strategies. The Northern Cape group consistently reported a more frequent use of Active coping, Planning, Restraint coping and Seeking social support for instrumental reasons, indicating that they favoured active efforts to eliminate the stressor and to seek advice and guidance when faced with stressful situations. This finding corresponds with results of Meehan et al. (2007) in that Problem-focused (active coping) was the most frequently used coping strategy of both genders in South Africa. The two genders from the Northern Cape group differed regarding Seeking social support for instrumental reasons with the Northern Cape girls utilising this strategy more favourably. The results indicated that South African boys and girls as well as English girls rely strongly on the support of family and friends for advice and other forms of tangible support. This finding supports the findings of Frydenberg (2008) that indicates that girls tend to rely on relational coping as an effective means of dealing with a stressful situation. Northern Cape boys and girls as well as English boys reported a more frequent use of planning as a coping strategy than the English girls did. With regard to Emotion-focussed coping strategies such as seeking support for emotional reasons, Northern Cape boys and girls reported significantly higher scores than their English counterparts. The scores of the Northern Cape girls were also significantly higher than those of Northern Cape boys. In terms of the English group's lack of finding emotional support, it may be said that a degree of emotional restrictedness could be detected especially for the English group. As a hypothesis, this could also be a cultural factor where the expression of emotion is not always encouraged. In other words, a tendency towards stronger emotional regulation amongst the English group could be indicative of certain cultural values and norms that place a restriction on emotional expression. No finding could be found in British literature to support this statement.

In line with the above observation, the Northern Cape group also reported more frequent use of Venting of emotions as a coping strategy. The average score of the English girls for venting of emotions was also slightly higher than that of the English boys. This is consistent with findings reported in the literature (McLean et al., 2008). The Northern Cape group reported significantly higher scores on Acceptance and Turning to religion as coping strategies. The reason for this could be the lack of adequate resources which could force the South African adolescent to turn to religion as a form of social support and to help them cope with any stressful challenges (Aspalan, 2003). In some South African studies the importance of religion as a sense of value and security has been pointed out (Brown, 2009). In some U.K. studies the absence of turning

to religion and the lack of spiritual support have been found to be concerning (O'Brien & Scott, 2007). The English boys reported a stronger tendency than the English girls to use acceptance and turning to religion. No literature could be identified to support this difference which prompts the notion for further research regarding this finding.

As far as Dysfunctional coping strategies are concerned, significant gender differences were found in the use of Mental, Behavioural disengagement and Denial coping strategies. English and Northern Cape girls supported a stronger preference for both behavioural and mental disengagement as ways of coping. The finding regarding the stronger reliance on behavioural disengagement as reported by the English and Northern Cape girls was not consistent with the literature that emphasises a male preference for behavioural disengagement during stressful circumstances (Byrne & Mazanov, 2002; Frydenberg, 2008; Wissing et al., 1998). Northern Cape boys and girls as well as English girls reported significantly higher usage of denial as a coping strategy than the English boys. The English girls reported a much higher score on alcohol and drug disengagement as a coping strategy than any of the other groups (English boys, Northern Cape boys and girls) which corresponds with the findings of Cantopher (2009), McLean et al. (2008) and Willcox et al., (2004) suggesting that English females are more inclined to use alcohol as a coping strategy.

Overall it appears that the Northern Cape group utilised a wider range of coping strategies than the English group. This could be attributed to an early exposure to difficult life circumstances, intra and inter-personal challenges, limited resources and political instability which might have made them more resilient and creative in applying certain coping strategies (George, 2009; Meehan et al., 2007; Spannenberg & Henderson, 2001).

As the United Kingdom is a welfare state with a variety of social and national health services, the hypothesis can be made that the English adolescents are, in a way, over protected from the effects of adverse circumstances and challenges. There are a variety of government and state initiatives to cater for vulnerable adolescents. It is a cause for some concern that the UK adolescent did not utilise a wider range of coping strategies as it appears that they have more resources which should enable them to cope with certain situations in a constructive and functional way. What is also alarming is that the English girls seem to be at higher risk for suicidal ideation and utilise more ineffective coping behaviour than that of the English boys



(Koplewicz et al., 2009; McLean et al., 2008; Wilcox et al., 2004). This finding could be an incentive for further research to clarify this concerning discovery.

## **RECOMMENDATIONS AND LIMITATIONS**

This exploratory study highlights the value of cross-national studies and investigating differences in the manifestation of health outcomes in diverse societies. Differences between the resources of First and Third World countries may have a significant impact on the development of effective coping behaviour amongst adolescents. The result of the current study highlights the potential beneficial effect of how limited access to external resources can promote the development and fostering of internal coping behaviour. It also indicates that access to adequate resources does not guarantee effective coping behaviour (Koplewicz et al., 2009).

In addition, this study challenges many of the existing ideas about gender differences in coping behaviour, especially in the Northern Cape group where very few gender differences were reported. This supports a South African study by Meehan et al. (2007) which emphasises the similarities in coping behaviour of South African boys and girls and guards against the danger of stereotyping the different genders of their preferred choice of coping strategies.

With regard to recommendations, more cross national studies of similar variables in different countries could further clarify the complex dynamics underlying suicidal behaviour. Longitudinal studies following cohorts during different developmental stages are also recommended, especially with regard to the use of coping strategies and resources. This can provide information to practitioners in designing interventions and psycho-educational programmes to equip adolescents and parents with essential skills to promote resilience.

There are, however, limitations that need to be considered in the interpretation of results. This study used non-British and non-South African measuring instruments to measure variables. This emphasises the need to develop instruments for the relevant populations being investigated, especially with regard to the COPE scale's limited items. Problems can occur as adolescents from different back grounds in societies could interpret items of measuring instruments in a variety of ways which could contaminate the result.

The sample size of the current study was not ideal for further analysis of the number of variables included. A larger sample size is also recommended to enable further analysis of the influence of age, gender and ethnic groups on suicidal ideation and coping behaviour. This leads to the relative diverse Northern Cape sample being treated as a homogeneous group which could have contaminated the results.

Another important limitation was the younger average age of the English group which could have been an important moderator in the coping strategies reported by the group. The English group was 18 months younger than the Northern Cape group which could affect and influence their perception of stressors and resources as well as their choice of coping strategies. It is important to note the English boys reported a much lower level of suicidal ideation than the English girls and Northern Cape boys and girls despite their younger age. With less experience of demanding situations and appropriate coping strategies, the English group compared unfavourably to the older Northern Cape participants. This is contrary to other research that found older adolescents are more likely to blame themselves for their stressors and may resort to dysfunctional strategies such as alcohol and drug use (Frydenberg, 2008; Meehan et al., 2007).

In the light of the shortcomings of this study certain recommendations could be of value for the future in the sense to include a more inclusive comprehensive geographical area in both countries so that participants can be randomly selected from Wales, Scotland and Northern Ireland for the United Kingdom as well as from other provinces in South Africa.

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# **Chapter 4**

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## **ARTICLE 3**

**THE INFLUENCE OF PSYCHO-SOCIAL FACTORS ON THE SUICIDAL  
IDEATION OF A GROUP OF ENGLISH AND SOUTH AFRICAN  
ADOLESCENTS**

## **ABSTRACT**

Adolescence is considered as a period filled with different physical, emotional, cognitive and social changes and crises. Some adolescents might become so overwhelmed by the extensive internal and external transitions that they resort to self-damaging strategies such as suicidal behaviour. It is of concern that an increase in suicidal behaviour has been noted globally in both developed and developing countries. The aim of this study is to investigate a group of English and South African adolescents with regard to personal, contextual stressors and resources, coping strategies and the impact on suicidal ideation. A non-experimental, cross-sectional, correlational design was used in this study. A stratified sample of 678 (297 English and 381 Northern Cape) 14- to 16-year-old learners was gathered from schools in Surrey, England (United Kingdom) and the Northern Cape Province (South Africa). The Suicidal Ideation Questionnaire for Adolescents, a biographical questionnaire, the Rosenberg Self-Esteem Scale, the Life Stressors and Social Resources Inventory Scale (youth form), the Hope Scale as well as the Coping Orientations to the Problems Experienced Questionnaire (COPE) were used to gather information from the participants.

Results from the study suggested that the incidence of suicidal ideation was significantly higher for the English adolescent group than for their Northern Cape, South African counterparts. Further findings indicated that the English adolescent reported school, relationships with siblings and physical health as stressors, whilst the group from the Northern Cape viewed socio-economic factors and negative life experiences as significant stressors. Both groups reported family and friends as significant resources. With regard to coping strategies utilised, it appears that the group from the Northern Cape made use of a wider range of coping strategies such as problem-focused, emotion-focused and dysfunctional coping responses. Only variables with a statistically significant contribution on the 1% level of significance were included in the stepwise regression analysis. Ten of the 33 predictor variables contributed significantly to the variance in suicidal ideation of the English participants.

It is evident that the 10 variables accounted for 93.5% of the variance of suicidal ideation. For the Northern Cape participants, only 2 of the 33 variables were significant, accounting for a modest 12.4% of the variance in suicidal ideation. The factors included in the stepwise regression analysis for the English group were Alcohol and Drug disengagement, Physical Health, Hope Agency, Family as a resource, Friends as a resource, Self-esteem, Siblings as a

stressor, Family as a stressor, Mental disengagement and Acceptance. For the Northern Cape group only 2 of the 33 variables, Self-esteem and Denial, were included in the regression analysis. The only coping strategy that the English group used more frequently than the Northern Cape group was Alcohol/Drug disengagement, which contributed significantly to the suicidal ideation of the participants. The limitations of this study were the diversity of the Northern Cape participants that were considered to be a homogenous group as well as the lower age span of the English participants that could have influenced and contaminated the results. The result of this study supports the value of cross-national studies. Longitudinal studies comparing the adjustment of cohorts from different countries are recommended.

**Key Words:** Suicidal ideation, suicidal behaviour, personal stressors and resources, contextual stressors and resources, adolescents, problem-focused coping, emotion-focused coping, alcohol and drug disengagement, England and South Africa.

## INTRODUCTION

Adolescence is considered by many as a challenging time. It is a period characterised by significant changes on a physical, emotional, cognitive and social level which profoundly influence the well-being of the adolescent. The most important challenge during this developmental stage is the effective resolution of the task to develop an independent identity. For many individuals, adolescence serves as a period of preparation for a well adjusted adulthood (Coleman & Hagel, 2007). Nevertheless, it is inevitable that some adolescents struggle to manage the increasingly complex demands associated with adolescent development, such as the pressure to perform, to make important life decisions and to develop satisfying relationships. Although a number of adolescents find this phase difficult, they gradually develop the skills to master the personal, social and environmental demands of life effectively and establish a stable foundation for their adult lives. Unfortunately, some adolescents are so overwhelmed by the extensive internal and external changes that they resort to life-compromising decisions that can result in long-term negative consequences (Sigelman & Rider, 2003). For example, many troubled adolescents employ self-harming strategies to deal with the challenges of adulthood. These behaviours may result in destructive responses such as suicidal behaviour.

The global picture of suicidal behaviour is a fairly bleak one - an estimated one million people commit suicide annually (World Health Organisation, 2008). In a developed country such as the United Kingdom an overall suicide rate of 6.8 per 100 000 was reported in 2008 (World Health Organisation, 2008). In South Africa, which is a developing country, an overall standardised rate for suicide of 25.3 per 100 000 for men and 5.6 per 100 000 for women respectively was found (National Injury Mortality Surveillance System, 2008). Although the number of suicides for nearly all ages has decreased in the United Kingdom over the last ten years, there has been a steady increase in the suicide rate in the 15-24 year-old group in that country (Brock & Griffiths, 2003). A similar increase has been noted for the 15-24 year-old group in South Africa (George, 2005). Since 2003 media reports have consistently emphasised the increase in adolescent suicidal behaviour in the Northern Cape Province in South Africa (Monare, 2003). The sharp rise in adolescent suicides reported in the United Kingdom and South Africa is reflected in statistics that reveal a global increase in suicidal behaviour in adolescents (Bertolote, 2001). This gives rise to the question: What aspect of modern life has such an intense impact on adolescents that they increasingly resort to self-destructive behaviour to escape from personal crises and hardships? The complex nature of suicidal behaviour leads to

many different perspectives on its potential causes (Schlebusch, 2005; Simos, 2002). From a systemic perspective (which served as the guiding theoretical framework of this study), the constant interaction between individual and environmental constraints and resources determines people's health outcomes such as suicidal behaviour (Tartakovsky, 2008). The environments in developed and developing countries differ extensively with regard to the nature and extent of constraints (stressors) to which people are exposed and resources that are available to them. Concerning the differences between the United Kingdom (as a politically stable and economically well developed country) and South Africa (as a developing country in socio-political transition), a comparative investigation into the factors that contribute to high levels of suicidal behaviour may contribute to a better understanding of this complex phenomenon. The focus of this article is to compare a group of English (United Kingdom) and Northern Cape (South Africa) adolescents with regard to:

- their exposure to stressors;
- their access to resources and the coping strategies that they use; and
- the impact of these factors on their respective levels of suicidal behaviour.

## **SUICIDAL BEHAVIOUR**

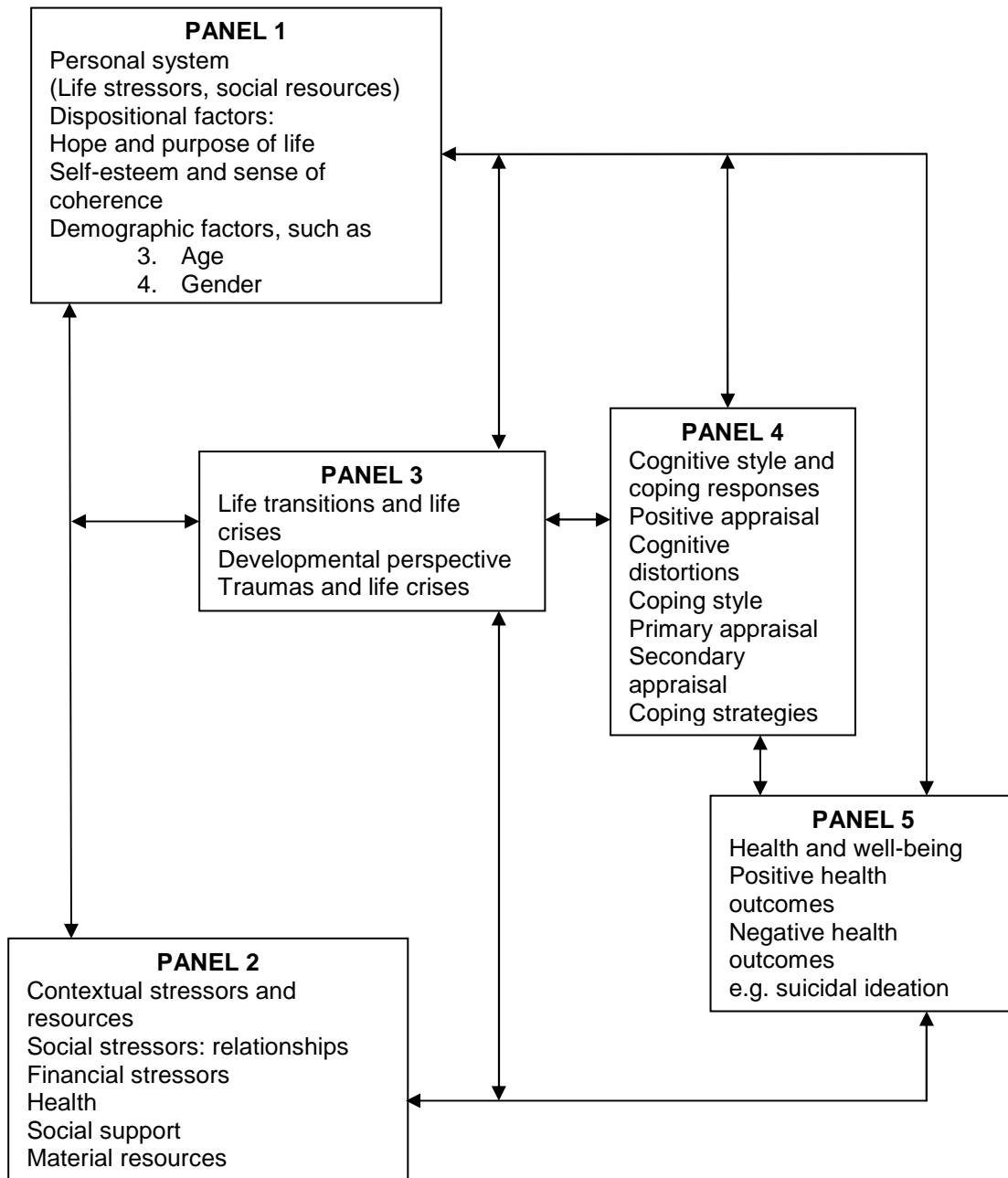
Suicidal behaviour involves thoughts and actions ranging from the wish to be dead to actually carrying out the deed. It is associated with varying levels of distress, motives, psychopathology and the expectation of disastrous consequences (Schlebusch, 2005). Suicidal ideation forms part of the process of suicidal behaviour. Suicidal ideation is not just restricted to thinking about or visualising suicide, it can also include the actions of a person who writes, or talks about or plans his/her suicide (McLean, Maxwell, Platt, Harris & Jepson, 2008; Palmer, 2008; Schlebusch, 2005; Simos, 2002). In the current study suicidal ideation served as an indicator of suicidal behaviour.

Theorists from various disciplines attempt to explain the potential causes of suicide. Sociologists have focussed on the impact of societal pressure and influences as important contributors to suicidal behaviour (Burman & Silverman, 2000; Durkheim, 1951; Loots, 2008). Psychological perspectives include the following:

- psychoanalytical (suggesting a death or life instinct);
- behavioural (certain behavioural patterns that are learned or acquired to deal with the stressor); or
- cognitive (dysfunctional thought patterns or views of the self, other people or the future).

These approaches posit that an individual's characteristics, thoughts and behavioural patterns may increase or decrease his or her vulnerability to suicidal behaviour. From the biological perspective (neuro-psychological and psychiatric), hereditary factors, neuro-physiological changes in the brain as well as dysfunctions in the endocrine and/or limbic system are seen as pivotal factors that pre-empt suicidal behaviour (Cantopher, 2003).

In reviewing the different perspectives and their attempts to explain the complexities of suicidal behaviour, it was felt that an integrated perspective was needed to examine the risk and protective factors which influence such behaviour amongst adolescents. Therefore, Moos and Schaefer's (1993) Integrated Stress and Coping Model, which is embedded in the systemic perspective, was used as a guiding theoretical model for this article. Moos and Schaefer (1993) developed the Integrated Stress and Coping Model with the basic assumption that personal (dispositional) and contextual (environmental) risk and resource factors interact with one another and with life-crises and developmental transitions. The combined impact of these three elements determines the coping strategies utilised by the individual and ultimately results in either a negative (e.g. suicidal behaviour) or positive (e.g. well-being) health outcome. An advantage of this model is that there are flexible bi-directional pathways between stressors, resources and coping processes which influence one another. Another advantage of this model is that it incorporates principles of developmental psychology in its explanation of the stress and coping processes. As can be inferred from Figure 1, the adolescent's personal system (Panel 1) can be constructively or destructively influenced by his/her environmental system (Panel 2). Both these systems are continuously influenced by the developmental changes (physical, emotional, cognitive and social) experienced by the adolescent (see Panel 3). The choice of coping strategies (Panel 4) is determined by personal, contextual and development factors which ultimately lead to either a positive or a negative health outcome, such as suicidal behaviour (panel 5) (Moos & Schaefer, 1993).



**Figure 1: The Integrated Stress and Coping Process Model (Moos & Schaefer, 1993 p.237)**

In reviewing the body of literature on adolescent suicide in Britain and South Africa, it is clear that dispositional risk factors (Panel 1) such as low levels of self-esteem and significant degrees of hopelessness can lead to an over-generalisation of the implications of failure, rejection and despair which appear to be strongly related to suicidal ideation and behaviour. Inversely, an optimistic view (of the self, other people and the world) can function as a resource in dealing with personal or environmental challenges and can also act as a buffer in reducing the risk of suicidal ideation and behaviour. A strong sense of self-value and hope enables the adolescent to be more resilient in the face of adversity (Baron & Byrne, 2000; Evans, Hawton & Rodham, 2004; Fleischman, Bertolote, Belfer & Beautrais, 2005; Mashego, Peltzer, Williamson & Setwaba, 2000 ; O'Connor & Sheehy, 2000; Pillay & Wassenaar, 1997; Schlebusch, 2005; Wild, Flisher & Lombard, 2004).

In the immediate environment of the adolescent (Panel 2), relationships with family and friends is a very important source of stressors and resources (Louw & Louw, 2007). The function and impact of the family plays a very significant role in the adolescent's life. The stability and functionality of the family unit can pose as either a risk or resource for the adolescent. Family discord - as manifested in parental divorce, interpersonal conflicts between parents and siblings, family psychiatric conditions and suicidal behaviour within the family - can lead to an increase in the developing adolescent's sense of disaffiliation and insecurity with an eventual risk of suicidal ideation. Satisfying family relationships serve as a resource where close family units with good communication and support promote the adolescent's sense of security and hope and provide a physically and psychologically safe milieu (Aspalan, 2003; Cassimjee & Pillay, 2000; Engelbrecht & Van Vuuren, 2000; Evans et al., 2004; Flouri & Buchanan, 2002; Houston, Hawton & Shepperd, 2001; Thomlinson, 2002). Conflict in relationships outside the family unit (for instance parental disapproval of romantic or peer relations and strained relationships with teachers) could increase the risk of suicidal behaviour (Aspalan, 2003; Houston et al., 2001; Engelbrecht & Van Vuuren, 2000). Other environmental variables, namely socio-economic stressors (such as poverty, unemployment and the current economic recession, poor physical health and access to healthcare facilities and political uncertainties (Panel 2) appear to make a distinct contribution to suicidal ideation and behaviour (Cooper, Appleby & Amos, 2002; Govender & Killian, 2001; Hawton & James, 2005; McClelland & Patterson, 1999; Peltzer & Cherrian, 1998; Richter, 2000; Schlebusch & Bosch, 2000). On the other hand, access to sufficient resources such as financial prosperity, adequate healthcare services and political stability can promote the development of the individual. Adolescence as a developmental



phase (Panel 3) appears to have complex characteristics and dynamics which the adolescent must experience in his/her transition from childhood to adulthood. This transition is paved with challenging physical, psychological and social developments (Jackson & Goossens, 2006). Some adolescents may find this journey problematic and develop some destructive ways of coping which could lead to a degree of maladjustment in late adolescence and early adulthood (Frydenberg, 2008; Louw & Louw, 2007; Newman & Newman, 2003). Coping (Panel 4) in adolescence reflects thoughts, feelings and behaviour that the adolescent utilises to deal with challenging situations (Frydenberg, 2008). The initial appraisal of a situation determines whether it is threatening or challenging and whether the person feels that he/she has the resources to deal with it (to cope with it). The extent to which the individual applies functional or dysfunctional ways of coping determines his or her health outcome. Coping is generally divided into:

- problem-focussed coping (e.g. planning and active coping);
- emotion-focussed coping (e.g. seeking social support, acceptance, turning to religion and venting of emotions); and
- dysfunctional coping (e.g. denial, alcohol and drug disengagement) (Carver, Scheier & Weintraub, 1989).

A variety of coping strategies can be applied by the adolescent with different consequences for his/her well-being. Functional coping strategies (such as planning, active coping and finding social support) can enable the adolescent to be resilient and serve as a buffer against stress and enhances his/her psychological health. In contrast, dysfunctional coping strategies (such as denial, alcohol and drug disengagement) can lead to vulnerability and distress with a risk of developing suicidal ideation as a negative health outcome (Panel 5) (Brannon & Feist, 2000; Compas, Conner-Smith, Saltzman, Thomsen & Wadsworth, 2001; Frydenberg, 2008; Hobfoll, 1988; Lazarus & Folkman, 1984; O'Brien & Scott, 2007; Snyder & Lopez, 2007).

Thus, risk factors and resources can have an impact on the adolescent's level of vulnerability under stress and can lead to suicidal ideation and behaviour. These risk factors and resources being referred to are:

- dispositional factors - especially low levels of self-esteem and hope;
- problematic relationships (i.e. family, peer and romantic relationships);
- challenging environmental factors (like socioeconomic deprivation, poor physical health or political uncertainty); and
- ineffective coping strategies.

The question that arises is: to what extent do the differences in contextual circumstances (especially with regard to the experience of stressors and resources) influence the suicidal ideation of two groups of adolescents living in a stable well-developed country (England) and a resource-poor developing country (South Africa) respectively?

The objective of the study that formed the base of this article is to investigate the influence of personal factors, contextual factors and coping strategies on the suicidal ideation of the respective English and Northern Cape groups.

## **RESEARCH METHOD**

The procedure that was followed has been described below.

## **RESEARCH QUESTIONS**

The research question was to determine which internal stressors and resources (including self-esteem and hope), external stressors and resources (such as relationships with parents, siblings, peers and teachers, socioeconomic stressors and life-events) as well as coping strategies (divided into problem-focussed, emotion-focussed and dysfunctional strategies) contribute significantly to the level of suicidal ideation of the English and Northern Cape groups respectively.

## **RESEARCH DESIGN**

A cross-sectional research design was used in order to realise the research objectives. More specifically, a correlational design has been used to establish the relationship between suicidal ideation as a criterion variable and personal and contextual factors as well as coping strategies as predictor variables. The correlational design does not attempt to explain the relationship between the criterion and predictor variables and, therefore, no inferences can be made about the causal relationship between the different variables (Gravetter & Forzano, 2009).

## **DATA GATHERING**

The researcher held the position of Consultant (Specialist) Clinical Psychologist for the Surrey Borders National Health Service (NHS) Trust in Surrey, England. The researcher also maintained close cooperation with researchers of the University of the Free State in South Africa, who were involved in the gathering of data on suicidal behaviour and well-being of adolescents in the Northern Cape Province of South Africa. A team of researchers from the

Education Support Services (Northern Cape Department of Education) assisted with the process in the Northern Cape Province. Ethical approval for the study was granted by the Research Committee of the Faculty of Humanities, University of the Free State. In accordance with ethical guidelines, permission was obtained from the relevant educational departments and school principals before the data were gathered in schools in both Surrey County, England and the Northern Cape Province, South Africa. Informed consent was obtained from all participants and their parents, with the assurance of the anonymity and confidentiality of all data. After the completion of the data gathering in England and the Northern Cape, the data was coded and analysed at the Department of Psychology at the University of the Free State, South Africa. The questionnaires utilised were administered to the English and Northern Cape groups in English. Throughout the testing period in England and the Northern Cape a qualified psychologist was present to deal with any issues such as language comprehension or the emotional impact of the questions that might have arisen during the testing period and relevant referrals were made to health services in their local area. The duration of the testing was approximately two hours long with an interval of thirty minutes.

From a demographic and economic perspective, the county of Surrey in England is in the heart of South England with a population of 1.6 million. It is a very affluent area with the gross domestic product in Surrey being greater than the National British Growth Rate. The main economic activities are professional services, industrial and technological services and consultancy. A high percentage of people with tertiary qualifications reside in Surrey and the unemployment rate is 0.9% ([www.surreycc.gov.uk](http://www.surreycc.gov.uk)). On the other hand, the Northern Cape Province has a population of 0.9 million, with agriculture as the main economic sector or industry. Coloureds are the most predominant group (51.35%), followed by Blacks (38.99%), Whites (8.70%) and other race groups. The Northern Cape is one of the least populated provinces in South Africa with a small percentage of people with tertiary qualification. There is a high rate of unemployment, Blacks, 43%; Coloureds, 38%; and Whites 7%. This is in sharp contrast to the South African national level of unemployment which is 26% ([www.agrinc.gov.co.za](http://www.agrinc.gov.co.za)).

## **PARTICIPANTS**

An availability sample of 678 English (United Kingdom) and Northern Cape (South Africa) learners was used. A total of 297 (43.8%) scholars from schools in the Surrey County, England participated whilst 381 (56.2%) participants were from schools in the Northern Cape Province in South Africa. Learners were assessed in groups of twenty to maximise rapport. The mean age of the English group was 14.6 years with a standard deviation of 0.5, while the mean age for the Northern Cape was 16.3 with a standard deviation of 0.8. The gender distribution for the English group consisted of 162 (54.5%) male and 135 (45.5%) female participants; while the group in the Northern Cape consisted of 158 (41.5%) males and 223 (58.5%) females. The majority of subjects were White with 227 English and 118 Northern Cape participants (76% of the English and 30% of the Northern Cape group). Only 107 Black participants (England = 30 which was 10.1% of the total; Northern Cape = 77 or 20.2%) were included in the sample. In the group were 185 Coloureds, all from the Northern Cape and 41 Indian/Asian subjects (40 English and 1 Northern Cape participants, 13.5% and 0.15% of the respective groups). The majority of the participants (88% of the total sample) came from an urban background and only 81 (12% of the total sample) came from a rural background, all of them from the Northern Cape. The English participants were from an affluent area in Surrey, England compared to a socio-economically average to below average area in the Northern Cape province of South Africa.

## **MEASURING INSTRUMENTS**

The measuring instruments used to gather data consisted of:

- a biographical questionnaire;
- the Suicidal Ideation Questionnaire (Reynolds, 1988);
- the Self-Esteem Scale (Rosenberg, 1989);
- the Life Stressors and Social Resources Inventory (Youth Form) (Moos & Schaefer, 1993);
- the Hope Scale (Snyder et al., 1991); and
- the Coping Orientation to the Problems Experienced Questionnaire (COPE) (Carver et al., 1989).

The biographical questionnaire compiled by the research team included questions regarding age, gender, race, grade, language preference, geographical location, parents' marital status, parental employment status and previous exposure to suicidal behaviour.

The Suicidal Ideation Questionnaire (Youth Form) (Reynolds, 1988) is a uni-dimensional scale that measures the frequency of suicidal thoughts experienced by the participants. The 30 items of the questionnaire are answered on a seven-point Likert scale and the total suicidal ideation score is determined by calculating the sum of the 30 items. Reynolds (1988) reported a mean score of 17.76 and a standard deviation of 20.76. A cut-off score of 30 and above is indicative of frequent suicidal thoughts and can be used to identify individuals for further assessment of suicidal risk. Internal consistency coefficients are between 0.93 – 0.97 as reported by Reynolds (1988) for a group of 890 American adolescents. In a South African study on the suicidal ideation of a group of adolescents, George (2005) reported an alpha coefficient of 0.90, which indicates good internal consistency.

The Rosenberg Self-Esteem Scale (Rosenberg, 1989) was administered to give an indication of the participants' feelings of self-worth and self-acceptance. The scale is composed of ten items, five of which are negatively worded. The items are answered according to a four-point Likert scale which ranges from Strongly Agree to Strongly Disagree. A low score is an indication of someone with a low level of self-esteem, where a high score indicates individuals with a high level of self-esteem. Alpha coefficients of between 0.77 – 0.88 were reported for the total score of this measuring instrument (Rosenberg, 1989).

The Life Stressor and Social Resources Inventory (LISRES) (Youth Form) (Moos & Schaefer, 1993) consists of 209 items which are broadly divided into 2 sections, namely life stressors and social resources. This measuring instrument has a total of 16 subscales of which 9 subscales measure life stressors and 7 subscales measure social resources. This instrument is primarily used to provide an indication of what the participants perceive as the stressors and resources in their community. The subscales for life stressors (SS) are as follows: Physical Health (PH), Home and Money (HM), Parents (PAR), Siblings (SIB), Extended Family (FAM), School (SCH), Friends (FR), Boyfriend/Girlfriend (BG) and Negative Life Events (NLE). The subscales for Social Resources (RS) are as follows: Parents (PAR), Siblings (SIB), Extended Family (FAM), School (SCH), Friends (FR), Boyfriend/Girlfriend (BG) and Positive Life Events (PLE). A high score indicates a high level of stress experienced or the presence of adequate resources in a specific domain. This measuring instrument has proved to be reliable and valid. The internal consistency index varies between 0.79 – 0.88 for the stressors subscales and 0.78 – 0.91 for the social resources subscales (Moos & Schaefer, 1993). In the South African study conducted

by Wissing (1996), the Cronbach alpha coefficients ranged between 0.79 – 0.88 for the life stressors scales and between 0.78 – 0.91 for the social resources scales.

The Hope Scale (Snyder et al., 1991) is comprised of 12 items and measures two interrelated aspects of hope, namely Hope Agency (a sense of successful determination in meeting goals in the past, present and future) and Hope Pathways (confidence in their ability to devise plans in order to meet the goals). The scoring of items is achieved by an 8-point rating scale, ranging from definitely false to definitely true. A high score on either of the two subscales points to high levels of hopefulness. Alpha coefficients between 0.74 – 0.88 are reported for the total score of this measuring instrument (Snyder et al., 1991). In a South African study by Potgieter (2004) alpha coefficients of between 0.75 (Hope Pathway) and 0.82 (Hope Agency) were found.

The Coping Orientations to the Problems Experienced Questionnaire (COPE) (Carver et al., 1989) was developed to evaluate ways in which stressful situations are managed. The scale consists of 53 individual items which are divided into 14 subscales. Items are completed on a four-point Likert scale ranging from 1 – “I usually do not do this at all” to 4 – “I usually do this quite a lot”. The subscales are grouped together in three broad categories, namely Problem-focussed subscales, Emotion-focussed subscales and Dysfunctional subscales. Problem-focussed subscales include subscales such as: Active Coping, Planning, the Suppression of Competing Activities, Restraint Coping and Seeking Social support for Instrumental Reasons. The Emotion-focussed strategies consist of subscales Seeking Social Support for Emotional Reasons, Positive Reinterpretation and Growth, Acceptance, Turning to Religion and Focus on and Venting of Emotions. Dysfunctional subscales include the subscales Denial, Behavioural Disengagement, Mental Disengagement and Alcohol-drug Disengagement (Carver et al., 1989; Wong, Reker & Peacock, 1993). The scores on the individual subscales are calculated by adding the scores of the four items per subscale. High scores indicate that the individual frequently uses the proposed strategy, whereas low scores indicate that the coping strategy is used less frequently. Carver et al. (1989) obtained Cronbach alpha coefficients of between 0.45 – 0.90 for the internal consistency of subscales. In a South African study on an adult sample, Storm and Rothman (2003) found alpha coefficients varying between 0.24 – 0.65 for this questionnaire. The relatively low alpha coefficients might be influenced by the small number of items per subscale. The internal consistency of the measuring instruments used for the current study was investigated by computing Cronbach alpha coefficients for all the scales and subscales which are presented in Table 1.

According to Nunnally and Bernstein (1994), coefficients of 0.70 and above are considered acceptable for non-cognitive constructs. The alpha coefficients of 0.97 for the Suicidal Ideation Questionnaire; 0.75 – 0.90 for LISRES (stressor subscales); and 0.77 – 0.97 for LISRES (resource subscales), indicate good internally consistent measures for the current group or participants. The lower alpha coefficient of 0.43 (English) and 0.15 (Northern Cape) of the Suppression of Competing Activities subscale (COPE) as well as 0.43 (English) and 0.39 (Northern Cape) for Positive Reinterpretation and Growth was considered too low and so it was excluded from further analysis. A number of COPE subscales with alpha coefficients between 0.50 – 0.69 were included in subsequent analysis even though they were marginally lower than the guideline of 0.70 because the small number of items might have influenced the alpha coefficients.

## **STATISTICAL PROCEDURE**

The statistical analysis was carried out using the SAS Programme. Descriptive statistics such as means and standard deviations were calculated for all the variables. Inter-correlations between the variables were determined with Pearson-product moment correlation coefficients. A step-wise regression analysis was computed, in which suicidal ideation was the criterion variable and the various subscales of Self-esteem, Hope, Cope and the LISRES were the predictor variables. Although it may be argued that a hierarchical analysis would be more defensible, and whilst it must be conceded that the step-wise analysis may capitalise on chance and not replicate well in other samples, the sheer number of subscales being used meant that in the hierarchical analysis there would be a good chance that the total variance explained could be inflated through the addition of individually non-significant predictors. Thus, in order to determine only the significant predictors from the 33 subscales, the step-wise regression analysis was chosen (Howell, 2007). In terms of the statistical significance of the inter-correlations and step-wise regression analysis, the 1% level of significance ( $p \leq 0.01$ ) was used. Effect sizes (Steyn, 1999) were used to determine the practical significance of the findings of the inter-correlations. A cut-off point of 0.50 (large effect) was set for the practical significance of correlation coefficients (Cohen, 1988).

## RESULTS AND DISCUSSION OF RESULTS

The descriptive statistics (means and standard deviations) with regard to the criterion and predictor variables are presented in Table 1.

**Table 1: Means, Standard Deviations and Alpha Coefficients for the English and Northern Cape Groups**

VARIABLES	UK: N = 297		$\alpha$	NC: N = 381		$\alpha$	Total Sample	
	M	SD		M	SD		M	SD
<b>Criterion variable:</b>								
Suicidal ideation	44.76	57.96	0.95	36.59	33.82	0.99	39.75	44.86
<b>Predictor variables:</b>								
Self-esteem	22.37	3.21	0.64	20.15	4.52	0.57		
Hope – Agency	21.31	4.61	0.59	23.89	4.62	0.51		
Hope – Pathway	21.71	6.87	0.42	23.44	4.75	0.88		
<b>Stressors:</b>								
Stressor: - PH Physical health	3.47	2.19	0.89	2.45	3.72	0.73		
Stressor: - HM Home and money	5.65	5.01	0.90	11.54	7.94	0.72		
Stressor: - SIB Siblings	11.86	4.84	0.84	9.90	5.51	0.86		
Stressor: - FAM Extended family	5.86	5.13	0.85	6.79	4.56	0.84		
Stressor: - SCH School	16.34	6.59	0.81	16.58	8.12	0.87		
Stressor: - FR Friendships	8.36	3.94	0.77	7.48	4.58	0.89		
Stressor: - BG Boyfriend/Girlfriend	4.36	3.57	0.84	5.69	4.60	0.92		
Stressor: - PAR Parents	9.99	4.07	0.85	9.29	4.59	0.84		
Stressor: - NLE Negative life experience	6.07	5.61	0.80	11.94	6.27	0.86		
<b>Resources:</b>								
Resource: - SIB Siblings	10.66	6.18	0.88	11.89	5.54	0.90		
Resource: - FAM Family	14.71	4.17	0.83	17.82	6.40	0.81		
Resource: - SCH School	7.62	4.47	0.81	10.93	4.92	0.90		
Resource: - FR Friends	24.29	5.08	0.80	24.77	7.76	0.74		
Resource: - BG Boyfriend/Girlfriend	10.49	7.34	0.95	13.95	5.67	0.98		
Resource: - PAR Parents	14.04	3.18	0.90	13.10	4.40	0.93		
Resource: - PLE Positive life experience	6.70	3.82	0.70	11.73	4.21	0.71		
<b>Coping strategies:</b>								
Active coping	9.93	3.01	0.47	11.64	2.39	0.79		
Planning	9.21	2.91	0.59	12.08	2.53	0.88		
Restraint coping	9.67	1.93	0.49	11.21	2.44	0.60		
Seeking support for instrumental reasons	9.79	2.18	0.62	11.08	2.806	0.60		
Seeking support for emotional reasons	8.65	3.10	0.65	10.79	2.98	0.81		
Acceptance	10.62	2.55	0.49	11.51	2.56	0.68		
Turning to religion	7.15	3.76	0.65	12.73	2.70	0.93		
Venting of emotions	9.50	2.83	0.46	10.54	2.60	0.61		
Denial	7.59	2.46	0.55	9.67	2.79	0.62		
Behavioural disengagement	9.22	2.55	0.48	9.45	2.62	0.58		
Mental disengagement	10.43	3.08	0.44	10.80	2.59	0.72		
Alcohol and drug disengagement	1.72	1.02	--	1.56	0.95	--		



The mean scores of the English and Northern Cape groups for the criterion variable suicidal ideation (SI) are 39.75 with a standard deviation of 44.86. The scores obtained by the current sample are significantly higher than those obtained by Reynolds (1988) in which a mean of 17.60 with a standard deviation of 20.76 were reported. The higher scores of the groups from both England and the Northern Cape indicate that the subjects of the current study experience a higher degree of suicidal ideation than Reynolds' (1988) participants. The current participants scored well above the cut-off score of 30 suggested by Reynolds (1988) as criterion for a referral for assessment of suicide risk. What is further important to note is that the English group showed a higher mean ( $\bar{x}$  = 44.76; SD = 57.96) than the group from the Northern Cape ( $\bar{x}$  = 36.59; SD = 33.82). This could indicate that the English group experienced a higher degree of suicidal ideation than the subjects from the Northern Cape.

The English participants reported a higher mean score for self-esteem ( $\bar{x}$  = 22.37) than those in the Northern Cape ( $\bar{x}$  = 20.15). This could indicate that the English group experienced a higher level of self-esteem than the group in the Northern Cape. Both groups scored lower than the participants in a study conducted by Grobler (1998) on secondary school learners in the Bloemfontein area in South Africa. Grobler's study reported a mean score of 28.57 which reflects a higher level of self-esteem. For the predictor hope, participants in the English group reported lower mean scores (21.31 for Hope Agency and 21.71 Hope Pathways) than the Northern Cape group (23.89 Hope Agency and 23.44 Hope Pathways) which indicate that the English participants are less hopeful about their ability to realise their goals.

In reporting on the stressors and resources, participants of the English and Northern Cape groups showed marked variations between stressors and resources. The following differences can be noted between the English and Northern Cape participants with regard to their stressors and resources: The English participants showed higher levels of stress related to Siblings ( $\bar{x}$  = 11.86) than those in the Northern Cape ( $\bar{x}$  = 9.90) which corresponds with findings of Evans et al. (2004). The participants from the Northern Cape showed a higher mean score in the stressor subscale Home and Money (NC  $\bar{x}$  = 11.54; England  $\bar{x}$  = 5.65) and Negative Life Events (NC  $\bar{x}$  = 11.94; England  $\bar{x}$  = 6.07) which could be indicative of the Northern Cape's lower socio-economic status (Govender & Killian, 2001). The Northern Cape group appraised the following resources in a more positive light as indicated by the number of resources subscales being markedly higher than the English group, such as Family ( $\bar{x}$  = 17.82 to England  $\bar{x}$  = 14.71);

School ( $\bar{x}$  = 10.93 to England  $\bar{x}$  = 7.62); Boyfriend/Girlfriend ( $\bar{x}$  = 13.95 to England  $\bar{x}$  = 10.49) and Positive Life Experiences ( $\bar{x}$  = 11.73 to England  $\bar{x}$  = 6.70). The English participants' lower score could be indicative of a lower level of reliance on these resources, which may be putting them at risk in dealing with challenges (Coleman & Hagell, 2007).

The results of the COPE scale (Carver et al., 1989) will be presented in the 3 broad categories of Problem-focussed subscales, Emotion-focussed subscales and Dysfunctional subscales. The group from the Northern Cape reported higher mean scores than the English group in all 4 Problem-focussed and all 4 Emotion-focussed subscales which indicate that the Northern Cape group shows a higher utilisation of a variety of coping strategies. With regard to Dysfunctional or ineffective strategies, participants from the Northern Cape reported a more frequent use of denial as a coping strategy than the English participants (Meehan, Peirson & Fridjhon, 2007). The only coping strategy that the English participants utilised more frequently was alcohol-drug disengagement. This finding supports observations by Cantopher (2009); Neeleman (2001) and Wilcox, Connor & Caine (2004) that English adolescents frequently use alcohol/drugs to cope with stressful situations. The inter-correlations between all the variables will be discussed for the English and Northern Cape groups separately and are reported in Tables 2 (English group) and Table 3 (Northern Cape group) respectively.

**Table 2: Pearson-product moment correlations for the English group**

UK	SI	Self-est	Hope-Agency	HopePathway	Stress PH	Stress HM	Stress Par	Stress Fam	Stress Sibl	Stress Friends	Stress B/G	Stress Sch	NLE	Res-Par	Res-Fam	Res-Sibl	Res-Friends	Res-B/G	Res-Sch	PLE	Active Cop.	Planning	Support	Rest	Seeking soc Inst	Seekign SocEmo	Accept	Turnign to R	Vent	Denial	Beh.Desen	Ment.Disen	Alc +Drugs		
SI	1.00																																		
Self-est	XX -0.50	1.00																																	
Hope – Agency	XX -0.63	XX -0.39	1.00																																
Hope – Pathway	XX -0.63	XX -0.31	XX 0.85	1.00																															
Stress PH	XX 0.58	-0.01	-0.13	-0.07	1.00																														
Stress HM	XX 0.13	XX -0.28	-0.08	0.07	0.18	1.00																													
Stress Par	XX 0.32	-0.08	-0.05	-0.01	XX 0.32	0.19	1.00																												
Stress Fam	XX 0.56	XX -0.25	XX -0.27	XX -0.50	XX 0.18	X 0.15	XX 0.57	X 1.00																											
Stress Sibl	-0.02	-0.18	0.06	-0.04	0.00	0.25	0.21	0.14	1.00																										
Stress Friends	0.11	XX -0.41	XX 0.24	0.18	XX 0.47	0.19	0.63	XX 0.42	XX 0.37	1.00																									
Stress B/G	0.26	XX -0.43	XX 0.69	XX 0.54	XX 0.62	X 0.29	XX 0.52	XX 0.75	XX 0.13	XX 0.72	1.00																								
Stress Scho	0.05	0.05	0.09	XX 0.34	XX 0.23	0.15	XX 0.53	0.09	0.09	XX 0.46	0.10	1.00																							
NLE	XX 0.53	-0.04	0.12	0.10	XX 0.72	-0.07	XX 0.42	XX 0.27	-0.15	XX 0.40	XX 0.77	XX 0.30	1.00																						
Res – Par	XX 0.31	X -0.06	XX -0.20	XX -0.52	XX 0.06	XX -0.31	XX -0.31	XX 0.35	XX -0.08	XX -0.14	XX -0.55			1.00																					
Res – Fam	XX 0.47	-0.16	XX -0.37	XX -0.47	0.09	0.07	0.15	XX 0.40	XX 0.31	0.13	-0.14	-0.13	0.06	XX 0.48	1.00																				
Res – Sibl	-0.01	-0.13	X -0.19	XX -0.30	XX -0.25	-0.07	0.16	XX 0.51	-0.45	-0.07	XX -0.13	0.01	XX 0.28	-0.00	1.00																				
Res – Friends	X -0.18	XX 0.46	-0.15	X -0.19	XX -0.57	XX -0.47	XX -0.30	0.00	XX -0.33	XX -0.64	XX -0.41	X -0.21	0.14	-0.14	XX 0.35	1.00																			
Res – B/G	XX 0.32	0.02	X 0.19	XX -0.47	XX -0.69	0.17	XX 0.84	XX 0.71	XX 0.57	XX 0.72	XX 0.45	XX 0.73	XX 0.30	XX 0.39	0.04	XX 0.44	XX -0.50	1.00																	
Res – Scho	XX 0.23	0.14	X -0.18	X 0.21	XX 0.31	0.11	0.13	-0.16	-0.30	-0.07	0.64	XX 0.53	XX 0.26	-0.32	0.03	-0.15	0.01	-0.25	1.00																
PLE	XX 0.47	-0.03	0.11	0.26	XX 0.54	0.11	XX 0.48	XX 0.22	-0.14	0.40	XX -0.80	XX 0.42	XX 0.77	-0.15	-0.00	0.00	-0.23	0.53	0.41	1.00															
Active Cop.	-0.03	0.06	-0.01	-0.22	-0.03	-0.52	0.14	0.35	-0.31	-0.02	0.80	-0.13	0.32	0.42	-0.03	0.47	0.37	0.09	-0.14	-0.04	1.00														
Planning	X -0.18	XX -0.22	XX 0.31	-0.11	-0.16	-0.37	XX 0.14	XX 0.40	0.02	0.25	XX 0.90	XX 0.32	XX 0.46	XX 0.01	XX 0.45	XX 0.13	XX 0.44	-0.55	0.08	0.68	XX 1.00														
Support	XX -0.27	0.08	0.07	-0.19	XX -0.38	-0.41	XX 0.22	X 0.21	0.09	0.05	XX 0.33	0.02	XX 0.31	0.09	0.03	0.31	XX 0.27	XX 0.57	-0.17	XX -0.27	XX 0.57	XX 0.45	1.00												
Restr	X -0.18	-0.11	-0.03	-0.21	X 0.18	X -0.32	XX 0.22	XX 0.23	0.09	0.28	XX 0.56	-0.05	X 0.18	X 0.22	0.10	0.07	-0.01	0.16	-0.27	X -0.21	XX 0.62	XX 0.54	XX 1.00												
Seeking Soc Inst	XX 0.31	XX 0.24	X -0.18	XX -0.65	XX 0.10	X -0.49	X 0.20	XX 0.45	0.00	0.04	XX 0.66	-0.13	X 0.20	XX 0.48	0.19	XX 0.37	XX 0.24	XX 0.54	XX -0.31	XX -0.01	XX 0.54	XX 0.59	XX 0.55	XX 0.42	1.00										
Seeking Soc Emot	XX 0.32	XX 0.26	-0.16	-0.50	XX 0.04	-0.10	-0.19	0.10	0.13	-0.06	X 0.20	-0.07	0.07	XX 0.33	0.17	0.05	0.13	XX 0.40	-0.19	0.06	-0.10	XX 0.24	XX 0.01	XX -0.20	XX 0.56	1.00									
Accept	-0.09	XX -0.59	-0.01	-0.13	XX 0.24	0.07	0.22	XX 0.53	-0.15	XX 0.32	XX 0.72	-0.13	XX 0.36	XX 0.34	0.18	XX 0.54	-0.13	0.07	-0.16	0.14	XX 0.45	XX 0.49	XX 0.11	XX 0.42	XX 0.15	XX -0.13	1.00								
Turning to R	0.06	XX -0.50	XX 0.32	0.03	0.05	0.09	-0.00	XX 0.40	0.10	XX 0.27	XX 0.71	-0.41	XX 0.28	XX 0.49	0.00	XX 0.26	XX -0.25	0.04	-0.48	0.17	0.13	XX 0.56	-0.14	0.11	XX 0.16	XX 0.08	XX 0.51	1.00							
Vent	XX 0.52	XX 0.37	XX -0.30	XX -0.54	XX 0.17	-0.13	-0.28	XX 0.14	-0.12	-0.29	XX 0.06	-0.37	X 0.20	XX 0.54	0.19	0.11	XX 0.23	-0.30	-0.19	0.05	0.12	X 0.21	-0.21	XX 0.50	XX 0.74	XX -0.06	XX 0.21	1.00							
Denial	XX 0.36	XX 0.27	-0.05	-0.11	-0.02	-0.20	-0.34	XX 0.40	XX -0.45	-0.06	XX 0.76	0.18	XX 0.36	XX 0.09	-0.07	XX 0.53	XX 0.32	XX 0.43	0.21	XX 0.31	XX 0.58	XX 0.32	XX 0.39	XX 0.24	XX 0.43	XX -0.01	XX 0.18	XX 0.04	XX 0.14	XX 1.00					
Beh.Disen.	-0.10	XX 0.25	XX -0.32	-0.26	XX 0.16	-0.28	0.08	-0.04	-0.20	X 0.20	XX -0.55	-0.00	X -0.06	-0.00	0.04	0.07	XX 0.32	XX 0.15	XX -0.35	XX 0.49	-0.12	XX 0.31	XX 0.56	XX 0.04	XX -0.54	XX 0.08	XX -0.39	XX -0.23	XX 0.24	XX 1.00					
Ment.Disen	-0.15	-0.04	X 0.21	X 0.20	XX 0.08	XX -0.27	XX 0.57	XX 0.26	-0.12	XX 0.27	XX 0.78	XX 0.26	XX 0.37	XX -0.14	-0.17	XX 0.26	XX 0.10	XX 0.58	XX 0.07	XX 0.21	XX 0.64	XX 0.39	XX 0.50	XX 0.55	XX 0.21	XX 0.49	XX 0.26	-0.01	-0.39	XX 0.56	XX 0.47	1.00			
Alc + Drugs	XX 0.85	XX 0.55	XX -0.52	XX -0.60	X 0.22	X 0.02	0.13	XX 0.34	-0.08	-0.18	-0.16	0.05	0.19	0.16	XX 0.23	XX 0.06	0.17	X 0.21	0.19	XX 0.23	-0.01	-0.16	-0.06	XX -0.27	XX 0.36	XX 0.47	XX -0.26	XX -0.22	XX 0.60	XX 0.31	-0.07	-0.18	1.00		

\*  $p \leq 0.05$  \*\*  $p \leq 0.01$  f (effect size): 0.1 small, 0.3 medium, 0.5 large

Table 3: Pearson-product moment correlations for the Northern Cape group

NC	SI	Self-Est	Hope-Agency	HopePathway	Stress PH	Stress HM	Stress Par	Stress Fam	Stress Sibl	Stress Friends	Stress B/G	Stress Sch	NLE	Res-Par	Res-Fam	Res-Sibl	Res-Friends	Res-B/G	Res-Sch	PLE	Active Cop.	Planning	Support	Rest	Seeking soc Inst	Seekign SocEmo	Pos.re	Accept	Turnign to R	Vent	Denial	Beh.Desen	Ment.Disen	Alc +Drugs		
SI	1.00																																			
Self-est	XX -0.37	1.00																																		
Hope – Agency	-0.07	XX -0.36	1.00																																	
Hope – Pathway	-0.07	XX -0.25	XX 0.50	1.00																																
Stress PH	-0.01	0.05	-0.06	-0.02	1.00																															
Stress HM	0.10	0.13	-0.09	-0.09	-0.03	1.00																														
Stress Par	0.11	0.10	-0.02	-0.04	0.06	1.00																														
Stress Fam	0.02	0.15	-0.02	-0.11	0.05	XX 0.28	XX 0.42	1.00																												
Stress Sibl	-0.03	0.07	0.02	-0.03	0.07	0.03	XX 0.40	XX 0.45	1.00																											
Stress Friends	0.02	0.09	-0.04	0.02	0.08	0.15	XX 0.30	XX 0.43	XX 0.36	1.00																										
Stress B/G	-0.16	-0.02	-0.06	-0.05	-0.02	0.09	XX 0.25	XX 0.33	XX 0.26	XX 0.41	1.00																									
Stress Scho	-0.02	0.06	0.01	0.03	0.11	0.05	XX 0.33	XX 0.41	XX 0.49	XX 0.57	XX 0.38	1.00																								
NLE	0.13	0.06	0.05	0.02	0.14	XX 0.23	XX 0.31	XX 0.26	XX 0.20	XX 0.31	XX 0.30	XX 0.30	1.00																							
Res – Par	-0.10	-0.13	0.07	-0.00	-0.08	XX -0.23	XX -0.28	-0.20	-0.09	-0.08	-0.04	-0.03	-0.18	1.00																						
Res – Fam	-0.03	-0.07	0.01	-0.02	-0.10	XX -0.23	XX -0.02	-0.14	0.09	-0.01	0.04	0.11	-0.10	XX 0.42	1.00																					
Res – Sibl	-0.09	-0.01	-0.01	-0.01	-0.08	-0.14	-0.05	-0.11	-0.14	-0.09	0.04	-0.04	-0.12	XX 0.42	XX 0.46	1.00																				
Res – Friends	-0.15	-0.16	0.06	-0.03	-0.06	XX -0.25	0.05	0.02	0.14	-0.03	0.03	0.16	-0.12	XX 0.37	XX 0.49	XX 0.38	1.00																			
Res – B/G	-0.00	0.00	0.04	-0.05	-0.06	-0.11	0.17	0.08	0.14	0.03	0.02	0.20	-0.03	XX 0.22	XX 0.31	XX 0.45	XX 1.00																			
Res – Scho	0.03	0.02	-0.09	-0.12	-0.10	-0.01	0.08	0.14	0.10	0.07	0.14	0.10	-0.05	XX 0.33	XX 0.29	XX 0.30	XX 0.37	XX 1.00																		
PLE	-0.04	-0.01	0.00	0.04	-0.02	-0.06	0.03	0.08	0.10	0.15	0.16	0.16	XX 0.40	0.12	0.10	0.04	0.04	0.20	0.15	1.00																
Active Cop.	-0.09	XX -0.23	XX 0.35	XX 0.33	-0.05	0.04	0.03	-0.03	0.02	0.02	-0.00	0.04	0.06	-0.04	0.00	-0.02	-0.03	-0.04	-0.15	0.01	1.00															
Planning	-0.10	XX -0.26	XX 0.35	XX 0.28	-0.04	0.02	0.03	-0.01	-0.01	0.01	0.06	0.06	0.03	-0.02	0.03	-0.00	-0.00	-0.01	-0.09	0.05	XX 0.63	1.00														
Support	0.01	-0.10	XX 0.26	XX 0.35	0.05	0.06	0.04	0.03	-0.02	0.03	0.01	0.10	0.00	-0.03	-0.06	-0.03	-0.05	-0.05	-0.05	-0.04	XX 0.47	XX 0.51	XX 1.00													
Restr	0.01	-0.12	0.20	XX 0.23	0.01	0.05	0.03	-0.05	-0.04	0.02	0.05	0.12	0.04	0.03	0.03	0.03	-0.05	0.01	-0.03	0.08	XX 0.40	XX 0.53	XX 0.43	XX 1.00												
Seeking Soc Inst	-0.12	-0.13	0.19	0.19	0.01	0.02	0.01	-0.00	0.01	0.01	0.07	0.03	0.07	-0.00	0.03	-0.02	-0.10	-0.04	-0.02	0.03	XX 0.47	XX 0.45	XX 0.29	XX 0.34	XX 1.00											
Seeking Soc Emot	-0.04	-0.05	0.12	0.12	-0.04	-0.00	-0.02	-0.08	-0.01	-0.10	0.03	-0.07	0.03	0.00	0.03	0.05	-0.05	0.01	-0.01	0.08	XX 0.40	XX 0.27	XX 0.25	XX 0.23	XX 0.57	XX 1.00										
Pos.re	-0.17	XX -0.23	XX 0.36	XX 0.30	-0.05	-0.01	-0.01	-0.08	-0.06	-0.07	0.03	-0.02	0.05	0.02	-0.02	0.01	-0.08	-0.04	-0.08	-0.01	XX 0.54	XX 0.52	XX 0.38	XX 0.46	XX 0.64	XX 0.41	XX 1.00									
Accept	-0.13	XX -0.08	XX 0.20	XX 0.15	-0.09	0.05	-0.05	-0.10	-0.01	-0.03	0.04	-0.03	-0.01	0.05	-0.08	-0.01	-0.02	0.01	-0.06	0.00	XX 0.33	XX 0.39	XX 0.32	XX 0.39	XX 0.35	XX 0.25	XX 0.44	XX 1.00								
Turning to R	-0.03	-0.14	XX 0.25	XX 0.13	0.01	-0.03	0.01	-0.06	-0.10	0.06	0.03	0.07	0.03	0.02	0.01	0.00	-0.00	-0.05	-0.08	0.05	XX 0.37	XX 0.36	XX 0.28	XX 0.31	XX 0.35	XX 0.28	XX 0.33	XX 0.21	XX 1.00							
Vent	0.12	0.03	0.07	0.08	-0.03	0.05	0.06	0.04	0.11	-0.03	0.04	0.05	0.02	-0.05	-0.04	-0.05	-0.05	-0.01	0.01	-0.03	0.32	0.31	0.30	0.25	0.39	0.50	0.31	0.31	0.16	1.00						
Denial	0.17	0.18	-0.14	-0.07	-0.06	0.11	0.05	0.03	-0.01	-0.03	0.01	0.01	0.05	-0.06	-0.00	-0.03	-0.11	-0.06	0.08	0.03	0.18	0.09	0.15	0.21	0.14	0.22	0.09	0.09	0.08	0.08	0.23	XX 1.00				
Beh.Disen.	0.17	XX 0.29	-0.13	-0.11	-0.08	0.19	0.13	0.06	0.03	-0.00	0.04	-0.01	0.08	-0.05	-0.03	0.05	-0.06	-0.02	0.06	-0.02	0.18	0.10	0.17	0.25	0.09	0.20	0.06	0.17	0.05	0.37	XX 0.41	XX 1.00				
Ment.Disen	0.06	0.08	0.02	0.04	-0.03	0.02	0.03	-0.00	-0.02	-0.07	0.06	-0.00	0.07	-0.11	0.05	0.06	-0.00	-0.02	-0.02	0.06	0.25	0.22	0.15	0.30	0.25	0.30	0.26	0.20	0.16	0.30	0.32	XX 1.00				
Alc + Drugs	-0.03	0.08	-0.14	-0.03	-0.02	0.08	0.00	-0.01	0.03	-0.02	-0.05	-0.04	-0.03	-0.00	-0.02	-0.01	-0.00	0.06	-0.03	-0.03	-0.07	-0.09	0.03	-0.07	-0.06	-0.09	-0.09	-0.09	0.05	0.33	0.12	0.04	0.11	0.00	1.00	

\* P ≤ 0.05 \*\* P ≤ 0.01 f (effect size): 0.1 small, 0.3 medium, 0.5 large

A large number of statistically significant inter-correlations were found between suicidal ideation, personal factors (hope and self-esteem), stressor subscales, resource subscales and coping subscales for the English group. Due to the large number of variables involved in this correlation matrix, only correlations between the criterion variable and predictor variable significant within the 1% level of statistical significance; and with a medium-effect size of above 0.30 have been discussed in this section. It is important to note that these correlations only reflect the correlations that exist between these variables but that no conclusion can be drawn about the causality between the variables. Consistent with findings of Wild et al. (2004) the Northern Cape group reported a negative correlation between suicidal ideation and self-esteem (Wild et al., 2004).

In the English group, Self-esteem as well as Hope agency and Hope pathways correlated negatively with suicidal ideation. This finding corresponds with the large body of literature that emphasises the role of self-esteem and hopefulness as protective factors against suicidal ideation (Evans et al., 2004; O'Connor & Sheehy, 2000). The following stressor subscales correlated positively with suicidal ideation of the English participants: Physical Health, Parents, Family and Negative Life Events. It can be inferred from this finding that higher levels of stress related to physical health problems, relationships with their parents and negative life events are strongly associated with high levels of suicidal ideation. This finding corresponds with existing literature (Ittel, Kretchner & Pick, 2010; O'Cavanagh, Owens & Johnstone, 1999). A number of resource subscales correlated significantly with suicidal ideation including Positive Life Events, Parents, Family and Romantic Partners as resources. It is important to note that all four of these resource variables correlated positively with suicidal ideation which is inconsistent with existing literature purporting that resources play a buffering role against suicidal ideation (Coleman & Hagell, 2007; O'Brien & Scott, 2007). Coping strategies such as focussing on and Venting of emotions as well as Alcohol/drug disengagement correlated positively with suicidal ideation. This indicates that respondents with a higher level of suicidal ideation reported more frequent use of venting of emotions and alcohol/drug disengagement as coping strategies which is consistent with existing literature (Cantopher, 2009; Neeleman, 2001; Wilcox et al., 2004).

In the light of the differences found with inter-correlations of the English group and the one from the Northern Cape, the step-wise regression analysis was computed for each group separately. The results of the regression analysis for the English group are presented in Table 4. Only

variables with a statistically significant contribution on the 1% level of significance were included in the step-wise regression analysis.

**Table 4: Step-wise Regression Analysis for the English Group**

Step	Variable Entered	Partial R-Square	Model R-Square	F Value	Pr > F	Direction of relationship to SI
1	Cope—Alcohol	0.6763	0.6763	614.14	<.0001	Positive
2	LISRES—Physical Health	0.0824	0.7587	100.05	<.0001	Positive
3	Hope—Agency	0.0972	0.8559	196.89	<.0001	Negative
4	LISRES—Resources—Family	0.031	0.8869	79.72	<.0001	Positive
5	LISRES—Resources—Friends	0.0102	0.8971	28.74	<.0001	Negative
6	Self- esteem	0.0112	0.9083	35.35	<.0001	Negative
7	LISRES—Stressors—Siblings	0.0082	0.9165	28.41	<.0001	Negative
8	LISRES—Stressors—Family	0.0034	0.92	12.37	0.0005	Positive
9	Cope—Mental	0.0071	0.9271	28.02	<.0001	Negative
10	Cope—Acceptance	0.005	0.9321	21.01	<.0001	Negative

When the analysis was run, 10 of the 33 predictors contributed significantly to the variance in suicidal ideation of the English participants. From Table 4 it is evident that the 10 variables accounted for 93.2% of the variance of suicidal ideation. The coping strategy Alcohol-drug Disengagement contributed 67.7% to the variance of suicidal ideation. The direction of the relationship between suicidal ideation and Alcohol-drug Disengagement is positive, indicating that participants with a high level of suicidal ideation also reported frequent use of alcohol/drugs to cope with stressful situations. The second variable to be included in the regression analysis is the stressor Physical Health with a unique contribution to the variance of 8.24% and the direction of this relationship was also positive. Thus, the participants with higher levels of suicidal ideation also reported higher levels of physical health issues which supports findings by Cantopher (2009) and Evans et al. (2004) that associated health problems with higher suicidal ideation .

Subsequently the variable Hope Agency was introduced to the regression analysis and its unique contribution to the variance in suicidal ideation was 9.72%, with a negative relationship to suicidal ideation indicating that high levels of goal-directed behaviour contribute to lower levels of suicidal ideation (Snyder et al, 1991).

In step 4 the LISRES resource subscale Family was included in the regression analysis with a contribution of 3 % to the variance in suicidal ideation. It is important to note that, contrary to expectations, the relationship of Family as a resource and suicidal ideation was positive. It is difficult to explain this finding but one possible explanation could be that it appears as if adolescents with a very strong bond with their parents could develop a strong reliance on the parents' approval and support. This being so, the impact of the parents' disapproval of the adolescents' choices and behaviour might be experienced by the adolescent as intensely negative which might increase vulnerability. Friends as a resource in step 5, was included in the regression analysis 1.1%. The contribution of Friends as a resource was negative and thus affirms the opinion of the existing literature on the protective role of social support provided by an adequate circle of friends (Coleman & Hagell, 2007).

The next variable to be included in the regression analysis was Self-esteem. The unique contribution of self-esteem was 1.1% and the direction of the relationship to suicidal ideation was negative. This finding supports the protective role of positive self-esteem in combating suicidal ideation (Evans et al., 2004).

In step 7 the stressor subscale Siblings was introduced into the regression analysis and it contributed 0.82% to the variance in suicidal ideation. The direction of this relationship to suicidal ideation was negative, indicating that participants with a higher level of suicidal ideation experienced less stress related to their interaction with their siblings. This finding is not consistent with literature that emphasised the role of conflict between family members as potential risk factor for suicidal behaviour.(Hawton, Rodham, Evans & Weatgerall, 2002) A possible explanation for this finding is that a low level of stress within the relationship does not necessarily mean that siblings have a closer supportive relationship with one another. It might be that they experience low levels of conflict due to non-involvement and limited interaction (O'Brien & Scott, 2007).

In the next step the stressor subscale Family was introduced to the regression analysis with a unique positive contribution of 0.34% to the variance of suicidal ideation, indicating that participants with high levels of suicidal ideation also experienced higher levels of stress in relationships with family members. This finding corresponds with literature (Houston et al., 2001).

In steps 9 and 10 the two coping subscales: Mental Disengagement and Acceptance were introduced into the regression analysis contributing 0.71% and 0.50% respectively to the variance in suicidal ideation. In both these variables the direction of the relationship to suicidal ideation was negative, implicating that a higher level of suicidal ideation is associated with less frequent use of Mental Disengagement and Acceptance as coping strategies. These coping strategies probably contribute to the regulation of intensely unpleasant emotions enabling the adolescent to deal more effectively with challenging situations (Frydenberg, 2008).

The step-wise regression analysis result for the Northern Cape is presented in Table 5. Once again only variables that contributed significantly on the 1% level of statistical significance were introduced in the step-wise regression analysis. For the Northern Cape sample only 2 of the 33 variables were significant, accounting for a modest 12.4% of the variance in suicidal ideation. Self-esteem was the first variable to be included in the regression analysis and it contributed 10.49% to the variance in suicidal ideation. Similar to the finding of the English sample the direction of the relationship of Self-esteem to suicidal ideation was negative. For the second step the coping strategy Denial was included in the regression analysis and its unique contribution to the variance of suicidal ideation was 1.92% (positive direction). Thus, a higher level of suicidal ideation was associated with more frequent use of Denial as a coping strategy (Meehan et al., 2007).

**Table 5: Step-wise Regression Analysis for the Northern Cape Group**

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F	Direction of relationship to SI
Intercept	-25.91	9.0138	8677.8	8.26	0.0043	
Self-esteem	2.3284	0.3737	40779	38.82	<.0001	Negative
Cope—Denial	1.7476	0.607	8706.8	8.29	0.0042	Positive



## RECAPITALISATION AND DISCUSSION

The results from this study indicate that the measuring instruments provided good internally consistent measures for both groups with the exception of the two coping subscales Suppression of Competing Activities and Positive reinterpretation and growth. Both subscales' alpha-coefficients were too low compared to the 0.70 cut-off value as proposed by Nunnally and Bernstein (1994) and were excluded from subsequent analysis for the English and Northern Cape groups. However, the small number of items making up the COPE subscales (4 items per subscale) could have had a negative impact on the internal consistency. The alpha coefficients for the English group were very similar to those of the Northern Cape group except for the Hope (Pathway) subscale and most of the coping subscales. The alpha coefficients for the coping subscales ranged from 0.43 – 0.65 which is lower than the proposed value. Nevertheless, when one considers the small number of items, it compares well with the alpha coefficients that were reported by Pienaar and Rothman (2005) in a South African population. For this reason all these subscales were retained in the analysis of the data. The language (American English) used in the COPE scale could have influenced the internal consistency of the responses of the English group.

According to the results, the incidence of suicidal ideation of English (United Kingdom) adolescents was higher than those of the adolescents with whom they were being compared in the Northern Cape (South Africa). Both these groups scored significantly higher (double the mean score) than Reynolds's (1988) American adolescent sample. Because no studies could be found where Reynolds's (1988) measure was used to assess suicidal ideation in English and/or South African adolescents, it becomes difficult to explain whether these higher mean scores are indicative of a general trend in English or South African adolescents or whether these high levels of suicidal ideation are unique to the current sample. With regard to the different stressors experienced by the English and Northern Cape adolescents, both groups purported that the school environment is an important source of their stress. The English group presented with higher levels of stress in their relationships with their siblings. For the Northern Cape group, the most prominent stressors were those of Home and Money and Negative Life Experiences. This could be reflective of the Northern Cape's lower levels of socio-economic prosperity and adverse environmental and political circumstances as well as a higher frequency

of life-crises which, according to the literature, is often the case with people from lower socio-economic groups (Cooper et al., 2002; Govender & Killian, 2001).

With regard to resources, the English and Northern Cape groups reported that their families and friends are important resources. These findings are consistent with literature (Flouri & Buchanan, 2002; Louw & Louw, 2007) that emphasises that the family unit and friends can be viewed as pivotal support systems that promote the establishment of a safe and psychologically supportive environment for the adolescent. The Northern Cape group also reported high levels of resources such as school and romantic relationships as sources of support as well as more positive life experiences (Engelbrecht & Van Vuuren, 2000). The difference between the two groups with regard to school as a resource might be accounted for by the fact that the group in the Northern Cape has access to fewer resources in their home environment due to socio-economic challenges and therefore experience their school environments as more stimulating and resourceful than what the English children experience in their school environment. The age difference between the English and Northern Cape groups might also influence their experiences of romantic relationships as a resource. The slightly older Northern Cape participants might rely more on their romantic partners for support, than the younger English counterparts due to the developmental differences associated with their respective age groups (Louw & Louw, 2007). With regard to personal resources, the English group experienced a lower level of hope (Agency and Pathways) than the Northern Cape group. This finding might be explained by the age difference between the two groups, where the younger English group might experience more turbulence in intra-personal adjustment (Frydenberg, 2008).

In terms of the coping strategies utilised, the results of this study show that the group in the Northern Cape makes more frequent use of all the problem-focussed and emotion-focussed coping strategies and also uses denial as a dysfunctional coping strategy. The only coping strategy that the English group utilised more frequently was alcohol-drug disengagement. One explanation for the greater repertoire of coping strategies used by Northern Cape's participants might be their slightly higher age. According to the literature on the subject, as adolescents mature cognitively and emotionally, they become more competent in their application of a wider range of coping strategies (Frydenberg, 2008). The two groups were very similar with regard to mental and behavioural disengagement while the Northern Cape group reported a more frequent use of denial as a coping strategy. English participants, in comparison, scored significantly higher in the utilisation of alcohol-drug disengagement as a coping strategy. Given

the lower mean age of the English group, this is a cause for concern. The finding regarding the stronger inclination of the English adolescents to use alcohol or drugs to cope with stressful situations is supported by Cantopher (2009), Neeleman (2001) and Willcox et al., (2004) who express concern about the level of substance abuse among the English youth. The English group scored significantly lower on the turning to religion subscale confirming the findings of O'Brien and Scott (2007) who argue that one of the reasons why English adolescents experience a higher incidence of psycho-social problems can be attributed to the reduced attachment to religious institutions. In the case of the English group, many more variables showed a significant statistical and practical correlation (large effect) with suicidal ideation. These include hope (agency and pathways) and self-esteem, which correlated negatively with suicidal ideation, while physical health and negative life-events as stressors as well as venting of emotions as a coping strategy, correlated positively with suicidal ideation. The findings pertaining to hope concur with the literature in that a sense of hopelessness increases vulnerability to suicidal ideation (O'Connor & Sheehy, 2000). Health concerns, negative life events and venting of emotions have all been associated with higher levels of suicidal ideation (O' Cavanagh et al., 1999; Frydenberg, 2008).

As can be expected from the results of the inter-correlations, the 33 variables included in the step-wise regression analysis of suicidal ideation of the English group explained a much higher percentage of the variance than was the case for the Northern Cape group. Only 10 of the 33 variables made a statistically significant (on the 1% level of significance) contribution to the variance (explaining 93.50% as well to the variance). The 10 variables include (presented in the order of introduction to the step-wise regression equation): Alcohol-drug Disengagement (67.70%), Physical Health (8.24%), Hope Agency (9.72%), Resource: Family (3.10%), Resource Friends (1.10%), Self-Esteem (1.10%) Siblings as stressor (0.82%, stressor Family (0.34%), Mental Disengagement (0.71%) and Acceptance (0.50%). The direction of these significant relationships was negative in the case of Hope Agency, Self-esteem, resource Friends, stressor Siblings and the two coping variables. Apart from the finding pertaining to siblings as a stressor and family as a resource with a positive relation to suicidal ideation, all these findings are consistent with literature regarding factors that contribute to suicidal ideation (Evans et al., 2004; Engelbrecht & Van Vuuren, 2000; O'Brien & Scott, 2007). The important role of alcohol-drug disengagement as a risk factor in suicidal ideation is underlined by the strong contribution of this factor to the variance in suicidal ideation of this group while social

support from family and friends seems to play a protective role which corresponds with existing literature (Blum, Harmen, Harris, Bergeisen & Resnick 1992; Cassimjee & Pillay, 2000).

Only two variables, namely Self-esteem (10.94%, negative direction) and Denial (1.92%, positive direction) made a statistically significant contribution to the variance in suicidal ideation in the Northern Cape group. Together these variables explained 12.4% of the variance. These findings are consistent with literature with regard to the significant contribution of self-esteem and the use of ineffective coping strategies (Meehan et al., 2007). Contrary to expectations, many of the stressors, resources and coping variables did not make a statistically significant contribution to suicidal ideation, indicating that many other variables not included in this study such as personality factors, intellectual abilities, other socio-economic, cultural and religious factors play an important role in suicidal ideation. Another possible explanation is that the Northern Cape sample was so diverse that consistent trends regarding the influence of selected variables did not emerge sufficiently in the regression analysis.

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

The focus of this study was a comparison of an English and a South African group of adolescents with regard to their personal and contextual stressors, dispositional and social resources, coping strategies and its impact on suicidal ideation. The study was based on the components of Moos and Schaefer's (1993) Integrated Stress and Coping Model. This theory postulates that the interaction between personal and environmental stressors and resources, combined with developmental changes such as the transition faced by adolescents, influences coping behaviour which ultimately determines whether the individual adjusts effectively and experiences positive health outcomes; or fails to adjust, resulting in negative health outcomes such as suicidal ideation and behaviour. This guiding theoretical model can stimulate behavioural scientists from various disciplines to gain a clearer understanding of the underlying physical, psychological and social dynamics of suicidal behaviour. Accordingly, it is recommended that multi-disciplinary teams conduct comprehensive research studies assessing the influence of biological, psychological, social and cultural factors on suicidal behaviour in different societies to develop a more holistic understanding of adolescent suicidal behaviour.

An important contribution of the current study was the comparison of groups from England and the Northern Cape. This comparison emphasised that - in spite of limited socio-economic resources - personal and social factors (such as a sense of hope and self-worth as well as

strong family relations and reliance on religion) might serve to protect individuals from the negative impact of complex life challenges that people face in resource-poor, developing countries. The role of coping strategies and personal coping resources such as hope and self-esteem are highlighted by the findings of this study as influential factors in suicidal ideation and behaviour. More cross-national studies of similar variables in different countries could help to elucidate the complex dynamics underlying suicidal behaviour further. Longitudinal studies following cohorts during different developmental stages are also recommended, especially those examining the use of coping strategies and resources by individuals from different age groups might provide valuable information to practitioners for capacity-building interventions that could equip adolescents with the life skills they need to adjust effectively.

However, there are limitations that need to be considered in the interpretation of the results of this study. The use of non-British and South African measuring instruments to measure variables has emphasised the need to develop specific instruments for the relevant population being investigated. Problems could occur when adolescents from different backgrounds and societies interpret items of the measuring instruments in a variety of ways which might contaminate the final results. More research is needed to develop specific measuring instruments for specific populations to enhance levels of reliability and validity.

The sample size of the current study was not optimal for auxiliary analysis of the number of variables included. A larger sample size is also recommended to enable additional analysis of a prediction of variance in different age, race, gender and ethnic groups. It would appear that the relatively diverse sample from the Northern Cape being treated as a homogenous group, could have contaminated the results. The demographic variables such as age, gender and race should be further researched to identify any other contributions that could be made regarding suicidal ideation in adolescents from different groups in different countries. Another important limitation was the narrow age span of the English group. This could have been an important moderator of the differences in coping strategies that were found in this study. The English group was eighteen months younger than the group from the Northern Cape which could have affected and influenced their perception of stressors and resources as well as their choice of coping strategies. Younger English adolescents, with less experience related to demanding situations and appropriate coping strategies, compared unfavourably to the older participants from the Northern Cape.

In the light of the shortcomings of this study, certain recommendations could be of value for the future: a more inclusive and comprehensive geographical area in both countries should be included so that participants can be randomly selected from Wales, Scotland and Northern Ireland and England; and from the other provinces in South Africa. It is hoped that findings from this study can stimulate further research and practice to develop intervention programmes and psycho-educational initiatives for parents and schools.

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# Chapter 5

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## CONCLUSION

This chapter serves as an integrated summary of the findings of the study. Significant conclusions based on the findings presented in the three articles are summarised and the limitations of this study are highlighted. Recommendations are made for future research and practice.

### 5.1 Summary of literature

A review of the literature was presented in Article 1 of this study together with a more detailed theoretical exploration of suicidal behaviour amongst adolescents. The researcher identified theoretical nuances and trends in global research on adolescent suicide. Conventional perspectives on risk factors, which seem to have dominated earlier research, motivated the researcher to explore a wider range of risk and protective factors. A more integrated approach to the complexities of suicidal behaviour was deemed necessary rather than a passing glance at the risk factors. The researcher used The Integrated Stress and Coping Model of Moos and Schaefer (1993) to structure this study. According to the premises of this model, personal (dispositional) and contextual (environmental) factors, developmental transitions and crises as well as coping strategies utilised, all interact to determine a negative health outcome as manifested in suicidal behaviour (Moos & Schaefer, 1993).

An important question that flows from existing literature is: “How do developed and developing countries compare with regard to the factors that contribute to the increase in suicidal behaviour noted in these societies?” Two very diverse developed and developing societies were involved in the current study: the United Kingdom and South Africa. Similarities in personal (poor self-

esteem and hopelessness) and some contextual (family discord, peer pressure and socio-economic challenges) factors as well as developmental challenges and poor problem-focussed coping strategies were identified as risk factors for suicidal behaviour for both British and South African adolescents.

Noticeable differences were mostly in the contextual (environmental) domain with socio-economic difficulties, especially poverty and unemployment, the challenge of the HIV/AIDS epidemic, access to health services and political uncertainty affecting the resources available to the South African adolescent (Aspalan, 2003; Baron & Byrne, 2000; Cassimjee & Pillay, 2000, Engelbrecht & Van Vuuren, 2000; Evans et al., 2004; Goldston et al., 2001; Govender & Killian, 2001; Houston, Hawton & Shepperd, 2001; Ittel et al., 2010; Louw & Louw, 2007; Rehkopf & Buka, 2006; Wild et al., 2004).

## **5.2 Summary of empirical findings**

The key aim of this study was to investigate the risk and protective factors in adolescent suicidal behaviour, amongst a group of English (United Kingdom) and Northern Cape Province (South Africa) adolescents.

### **5.2.1 Suicidal ideation**

The scores obtained by the current sample were significantly higher than those obtained by Reynolds (1988) in which a mean of 17.60 and a standard deviation of 20.76 were reported. The higher scores of the groups from both England and the Northern Cape indicated that the participants in this study experienced a higher degree of suicidal ideation. The English group showed a higher mean score ( $\bar{x} = 44.77$ ) and standard deviation ( $SD = 58.00$ ) than the Northern Cape group ( $\bar{x} = 36.60$ ;  $SD = 37.82$ ). The very high scores of both the groups fall in the range of scores that warrant clinical assessment and intervention.

### **5.2.2 Self-esteem and hope**

The English participants reported a higher mean score for self-esteem ( $\bar{x} = 22.36$ ) than their Northern Cape counterparts ( $\bar{x} = 20.15$ ). This could be indicative that the English adolescent group experiences a higher level of self-esteem than the Northern Cape group (Evans et al., 2004). Both groups scored lower than the participants in the study conducted by Grobler (1998) of secondary school learners in the Bloemfontein area in South Africa. For the predictor Hope, participants in the English group reported lower scores ( $\bar{x} = 21.34$ ;  $\bar{x} = 21.70$ ) than the Northern

Cape group ( $\bar{x}$  = 23.89;  $\bar{x}$  = 23.43). This indicated that the English participants were less hopeful about their ability to realise their goals (O'Connor & Sheehy, 2000).

### 5.2.3 Coping

The English and Northern Cape participants differed significantly (1% level of significance) with regard to their use of Problem-focussed, Emotion-focussed and Dysfunctional coping strategies. The Northern Cape group scored higher in all the subscales of the Problem- and Emotion-focussed subscales: this reflected a preference for and a wider utilisation of coping strategies when faced with challenging situations. The Northern Cape group consistently reported a more frequent use of Active coping, Planning, Restraint coping and Seeking Social Support for Instrumental Reasons, indicating that they prefer active efforts to eliminate the stressor and seek advice and guidance when faced with a stressful situation. This finding corresponds with results of a South African study by Meehan et al. (2007) in that the Problem-focussed (Active coping) coping strategy was the most frequently used amongst both South African genders.

As for Emotion-focussed coping strategies and how they manifest themselves amongst boys and girls, both genders of the Northern Cape group scored higher in Seeking Support for Emotional Reasons than the English groups respectively. This finding could imply that the degree of emotional regulation amongst the English group may be a cultural factor, where cultural values and norms restrict emotional expression in certain geographical parts of England, especially in the south. No findings could be established in British literature to support this statement and further exploration of this finding is needed. The Northern Cape group reported significantly higher scores on Acceptance and Turning to Religion than the English group. The reason could be the lack of resources which may force the South African adolescent to turn to religion and acceptance of circumstances, as these coping strategies could provide social support and another way of dealing with adverse challenges outside their control. Some South African studies have pointed out the importance of religion as a sense of value and security (Brown, 2009). A number of UK studies highlight the absence of turning to religion and the lack of spiritual support as a concerning trend (O'Brien & Scott, 2007). Within the English group the boys showed a stronger tendency towards the use of Acceptance and Turning to Religion than the English girls. No literature could be identified to explain this difference, which prompts the notion for further research regarding this finding.



Both genders of the Northern Cape and English girls reported significantly higher usage of Denial as a coping strategy than the English boys. The English group scored significantly higher than the Northern Cape in the use of the dysfunctional coping strategy of Alcohol and Drug Disengagement, favouring the use of alcohol and drugs disengagement as a way of managing challenging and stressful situations (Cantopher, 2009; Neeleman, 2001; Wilcox, Connor & Caine, 2004). What is of further importance is that English girls showed a much higher score on this coping strategy which corresponds with findings of McLean et al. (2008), suggesting that English females are more inclined to use alcohol and drugs as a coping strategy when faced with adversity.

#### **5.2.4 Discussion of the step-wise regression analysis of suicidal ideation**

The aim of this investigation was to determine the variables, including (personal and environmental stressors and resources, developmental crises and coping strategies), that contribute to the explanation of the variance in suicidal ideation. The results indicated that 10 of the 33 predictor variables contributed significantly to the variance in suicidal ideation of the English participants. These variables collectively accounted for 93.5% of the variance of suicidal ideation on the 1% level of significance. The Dysfunctional coping strategy of Alcohol and Drug Disengagement made the largest contribution of 67.7% to the variance of suicidal ideation. The direction of the relationship between suicidal ideation and alcohol/drug disengagement was positive, indicating that participants with a high level of suicidal ideation also reported frequent alcohol and drug usage to cope with challenging situations which corresponds with British literature in that the usage of alcohol and drugs enhances the levels of vulnerability to suicidal behaviour (Cantopher, 2009; Neeleman, 2001; Wilcox et al., 2004).

Other variables such as Physical Health and Family as stressors also showed a positive direction in the relationship to suicidal ideation, suggesting that concerns regarding health-related aspects and conflict in the family can increase the vulnerability to suicidal ideation (Evans et al., 2004; Ittel et al., 2010; McLean et al., 2008; O’Cavanagh, Owens & Johnstone, 1999). The variable that contributed significantly to suicidal ideation with a negative relationship was Hope agency, indicating that high levels of goal-directed behaviour contribute to lower levels of suicidal ideation (Snyder et al., 1991). Mental disengagement and Acceptance also reflected negative directions in the relationship to suicidal ideation. This indicates that a high level of suicidal ideation is associated with less frequent use of Mental disengagement, Acceptance and Positive re-interpretation and growth as coping strategies. These coping

strategies probably play a role in the regulation of intensely unpleasant emotions which will enable the adolescent to deal more effectively with life challenges (Frydenberg, 2008). Findings that contradicted existing literature and were difficult to explain were the resource Family, with a positive relationship to suicidal ideation. It is difficult to explain this finding but one possible explanation could be that it appears as if adolescents with a very strong bond with their parents could develop a strong reliance on the parents' approval and support. If the parents then showed disapproval of the adolescent's choices and behaviour, it could have a magnified impact on the adolescent who could experience this as intensely negative increasing a degree of vulnerability. Another contradictory finding is Siblings as a stressor, with a negative relationship to suicidal ideation. A possible explanation is that a low level of stress within the sibling relationship does not necessarily mean that siblings have a closer supportive relationship with one another. It might be that they encounter low levels of conflict due to non-involvement and limited interaction ( O'Brien & Scott, 2007 ). The need for further research is indicated to clarify these discrepancies.

Only 2 of the 33 variables were significant predictors of the suicidal ideation of the Northern Cape group and accounted for a modest 12.4% of the variance in suicidal ideation. Self-esteem was the largest variable and contributed 10.49%. Similar to the finding of the English sample, the direction of the relationship to suicidal ideation was negative, indicating that the higher levels of self-esteem and self-worth acted as a buffer and reduced the onset of suicidal ideation (Mashego et al., 2003). Denial as a coping strategy reflected a positive direction in the relationship with suicidal ideation, implying that a higher level of suicidal ideation was associated with the more frequent use of denial as a coping strategy George (2009) and Meehan et al. (2007) also found a positive correlation between the use of denial and suicidal ideation .

### **5.3 Conclusions of the study**

The unique contribution of this study is that it is the first formal investigation to explore and compare a wide range of factors in suicidal behaviour as manifested in two adolescent groups from England and South Africa. It is of particular interest to have identified the similarities and differences in the risk and protective factors as manifested in two diverse societies with England being viewed as a developed first-world country and South Africa as a developing third-world country. Not many studies in South Africa or in the United Kingdom have attempted to follow an integrated approach in examining adolescent suicidal behaviour. The holistic view to suicidal

behaviour, as influenced by personal and environmental risk and protective factors, developmental aspects and life transitions as well as coping strategies utilised have proven valuable in explaining the multi-faceted nature of this complex phenomenon. The systemic approach as followed by this study is different from other previous attempts in literature that traditionally would focus on one or two dimensions for example, assessing risk or demographic factors in suicidal ideation. A further finding was that first-world access to resources did not automatically aid in dealing with stressful challenges and that a lack of resources, as experienced in third-world societies, created resilience in dealing with stressful challenges.

#### **5.4 Limitations**

The use of non-British and South African measuring instruments to measure variables has emphasised the need to develop specific instruments for the relevant populations being investigated. Problems could occur when adolescents from different backgrounds and societies interpret items of the measuring instruments in different ways that may influence final results. The COPE questionnaires subscales, for example, showed a low and limited item-to-subscale ratio, which could be the reason for the low alpha coefficients found. The limited number of items per subscale could have influenced the quality and detail of information gained from the sample.

The sample size of the current study was not optimal for more advanced multivariate analyses such as structural equations modelling. The relatively diverse sample from the Northern Cape was also treated as a homogenous group and this could have contaminated the results, as some participants of the Northern Cape were more similar to the English group regarding variables such as race, socio-economic status and parental levels of employment. Another important limitation was the narrow age-span of the English group. This could have been an important moderator of the difference found in the coping strategies utilised by the respective groups. The English group was eighteen months younger than the Northern Cape group and this may have influenced their ability to deal with stressors, resources and choice of coping strategies.

#### **5.5 Recommendations**

It is recommended that future research continues to utilise a similar integrated approach to explore the complexities of suicidal behaviour. More cross-national studies (especially between developed and developing countries) of similar variables could further help in the elucidation of

the complex dynamics underlying suicidal behaviour, especially if a similar integrated approach can be adopted. A more inclusive and comprehensive geographical area in both countries should be included so that participants can be randomly selected from Wales, Scotland and Northern Ireland and from the other provinces in South Africa. Longitudinal studies following cohorts during different developmental stages are also recommended, especially those examining the use of coping strategies and resources amongst individuals from different age groups. This might provide valuable information to practitioners for capacity building interventions to equip adolescents with the life-skills they need to adjust effectively. It is hoped that the findings from this study can stimulate further research and practice to develop intervention programmes and psycho-educational initiatives for parents and schools.

## **5.6 Personal narrative**

The researcher found the implementation and completion of the study very helpful as it elevated his level of awareness and insight into the complexities of suicidal behaviour. The researcher has been in the fortunate position to reside in both South Africa and England over the last twelve years. This study has been an additional aid in identifying and confirming certain worrying factors that have been perceived in both societies. As the researcher resides in Surrey, England, which is characterised by affluence in a variety of areas, the results of the English group has been of particular concern. The researcher's personal contact with Adolescent Health and Social Services has enabled him to form certain clinical impressions regarding the well-being of adolescents in the Surrey County. On reflection, it has been the researcher's experience that aspects such as inadequate emotional expression with a definite degree of emotional restrictiveness, ineffective coping strategies, especially the use of alcohol and drugs as coping mechanisms, are extant in the Surrey County. On the other hand, the lack of adequate resources restricting many South African adolescents' development has been of equal concern. As a consequence of this first study the researcher would like to refine certain methodological procedures and continue to carry out further research into some concerning findings that have emanated from this study.

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