PSYCHOSOCIAL PREDICTORS OF SUICIDAL IDEATION IN ADOLESCENCE

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Thesis submitted for partial fulfilment of the degree

P.hD. in Child Psychology and Related Fields

in the
Faculty of Humanities
Department of Psychology

at the

UNIVERSITY OF THE FREE STATE

BLOEMFONTEIN
MAY 2010

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DECLARATION

I, Hester Maria Tancred, declare that the thesis submitted by me for the P.hD. in Child Psychology in the Faculty of Humanities at the University of the Free State is my own independent work and has not previously been submitted by me at another university/faculty. I furthermore cede copyright of the thesis in favour of the University of the Free State.

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Hester M Tancred *Date*

ACKNOWLEDGEMENTS

My sincere thanks to the following significant influences in my life:

My Heavenly Father, for granting me the opportunity and the ability to persevere.

My promotor, Prof. DA Louw, for his guidance and kind impartation of knowledge.

My co-promotor, Dr HS van den Berg, for her loyal commitment and constructive inputs.

Prof. KGF Esterhuyse for assisting with statistical analysis.

The Department of Education: Western Cape, the principals and learners who participated in the research.

My husband, Hugo, for being there always in so many ways and believing in me.

My children, Jandré, Emma and Pieter, for unconditionally loving me still after so many absent hours.

My father, for your prayers and support.

My mother, for being the mother when I was not able to be there and the sacrifices made.

My familiy, for encouragement and love.

HM Tancred, Bloemfontein, May 2010

"Jy moes eers die berg uitklim om die vlakte te kon sien."

Ouma Susarah Maria Sophia de Kock

Gebore: 19 Januarie 1915

ABSTRACT

South African adolescents - like their peers around the world – struggle to keep their emotional health intact. These problems are revealed by the youths' involvement in risky activities such as suicidal behaviour. The steady increase in suicidal behaviour in South Africa makes it imperative to understand the contextual resources and dispositional factors which can act as potential protectors in adolescent suicide; and also to understand the psychosocial risk factors experienced by South African adolescents at risk of suicide. Suicidal ideation has been proved to be a good predictor of suicide risk and was therefore taken as the criterion variable in the current study. A high level of suicide risk among the participants was determined by cut off scores of above 31; and low levels by cut off scores of below 16 on the Suicidal Ideation Questionnaire. The adolescents in the present study with a high suicide risk (N=214) brings the incidence of suicidal ideation to 36% for the current study.

The primary aim of the present study was to examine the relationship between a contextual resource (social support from family and friends) and suicidal ideation in a community sample of (N=594) grade 8 to 10 learners from an urban area in the Western Cape region, South Africa. Social support from family and friends was measured with The Perceived Social Support from Family and Friends Scale. A hierarchical regression analysis revealed that the support from family and friends explained 21,5% of the variance of suicidal ideation with support from family being more important than support from friends. The unique contribution of the present study was that social support differed for population groups but not for gender and family structure.

Secondly, the present study aimed to determine how adolescents with high risk and those with low risk for suicide differed with regard to the dispositional factors of self-esteem, hope, sense of coherence and cognitive style. The 214 adolescents with a high suicide risk and 267 adolescents with a low suicide risk were compared in terms of

these dispositional factors. The results from the MANOVA and ANOVA analyses indicated that adolescents with a high risk of suicide displayed lower self-esteem, a weaker sense of coherence and made more negative attributions for negative life events.

The third aim of the present study was to explore the psychosocial risk factors experienced by adolescents. The participants with a high risk of suicide (N=214) were asked to give their opinions on adolescent suicide. These qualitative responses were analysed using the method of content analysis. From this analysis it was clear that adolescents experienced numerous risks, which were given in the following order of prominence: individual factors (substance abuse; negative emotional experiences; self-esteem; problem-solving ability and hope for the future); family environments and family relationships; peer group and romantic relationships; stressful life events; and socio-economic factors.

The findings from the present study suggested that a supportive family; a healthy self-esteem; a sense of coherence; and an optimistic explanatory style could be protective mechanisms in lowering the identified risks of substance abuse, feeling stressed, a troubled family environment and poor parent-child relationships found among suicidal adolescents in South Africa.

Keywords: *Adolescence, Suicidal ideation, Suicide risk, Social support, Psychosocial risk factors, Protective factors, Self-esteem, Hope, Sense of coherence, Cognitive style.*

OPSOMMING

Talle adolessente in Suid Afrika, netsoos hulle eweknieë in die res van die wêreld, vind dit moeilik om 'n hoë psigiese welstandspeil te handhaaf. Bewyse vir hierdie stelling word weerspieël deur die jeug se riskante aktiwiteite soos selfmoordgedrag. Die toename in selfmoordgedrag noodsaak nie net 'n begrip van kontekstuele hulpbronne en disposionele faktore wat as potensiële beskermers in adolessente selfmoord kan dien nie, maar ook begrip vir psigososiale risikofaktore wat ervaar word deur Suid-Afrikaanse adolessente wat 'n selfmoordrisiko is. Omdat selfmoordideasie 'n goeie voorspeller van selfmoordrisiko blyk te wees, is dit as kriteriumveranderlike in die huidige studie gebruik. Die hoë en lae selfmoordrisiko van deelnemers is bepaal deur afsnytellings van > 31 en < 16 op die Selfmoordideasie Vraelys. Die adolessente in die huidige studie met 'n hoë risiko (N=214) bring die voorkomssyfer van selfmoordideasie op 36% vir die huidige ondersoekgroep te staan.

Die primêre oogmerk van die huidige studie was om die verband te ondersoek tussen 'n kontekstuele hulpbron (sosiale ondersteuning deur gesin en vriende) en selfmoordideasie soos wat dit in 'n gemeenskapsteekproef (N=594) van graad 8- tot 10-leerders in 'n stedelike area in die Wes Kaap in Suid-Afrika voorkom. Sosiale ondersteuning van gesin en vriende is gemeet met Die Vraelys oor Sosiale Ondersteuning van Gesin en Vriende. 'n Hiërargiese regressie analise het getoon dat ondersteuning van die gesin en vriende 21,5% van die variansie van selfmoordideasie verklaar. Die gesin is as die belangrikste ondersteuningsbron aangedui. 'n Belangrike bevinding van die studie is dat sosiale ondersteuning ten opsigte van bevolkingsgroepe verskil, maar nie ten opsigte van geslag en gesinstrukture nie.

Tweedens het die studie gepoog om te bepaal hoe adolessente met hoë en lae selfmoordrisiko verskil ten opsigte van disposisionele faktore soos selfkonsep, hoop,

koherensiesin en kognitiewe styl. Die 214 adolessente met 'n hoë selfmoordrisiko is met die 267 adolessente met 'n lae selfmoordrisiko vergelyk. Die resultate van die MANOVA- en ANOVA-analises het aangedui dat adolessente met 'n hoë selfmoordrisiko, laer selfagting en 'n swakker koherensiesin toon, asook 'n meer negatiewe kognitiewe styl handhaaf.

Die derde doelwit van die studie was 'n kwalitatiewe ondersoek van psigososiale risikofaktore van Suid-Afrikaanse adolessente. Deelnemers met 'n hoë selfmoordrisiko (N=214) is gevra om verklarings te bied vir die redes vir adolessenteselfmoord. Hierdie kwalitatiewe response is volgens die inhoudsanalise-metode ontleed. Hiervolgens was dit duidelik dat adolessente met talle risikofaktore gekonfronteer word. Die belangrikste, in volgorde van belangrikheid, is: individuele faktore (substansmisbruik, negatiewe emosionele ervarings, selfkonsep, probleemoplossingsvaardighede en hoop vir die toekoms), gesinsomgewing en –verhoudings, portuurgroep- en romantiese verhoudings, stresvolle lewensgebeurtenisse en sosio-ekonomiese faktore.

Die bevindings van die huidige studie dui daarop dat 'n ondersteunende gesin, 'n gesonde selfkonsep, 'n koherensiesin, en 'n optimitiese kognitiewe styl as beskermingsfaktore kan dien om die geïdentifiseerde risiko's van substansmisbruik, 'n belewing van stres, 'n problematiese gesinsomgewing en swak ouer-kindverhoudings onder adolessente met selfmoordneigings in Suid-Afrika te verminder.

***Kernwoorde**: Adolessensie, Selfmoordideasie, Selfmoordrisiko, Sosiale ondersteuning, Psigososiale risiko faktore, Beskermingsfaktore, Selfkonsep, Hoop, Koherensiesin, Kognitiewe styl*

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A QUALITATIVE ANALYSIS OF SOUTH AFRICAN ADOLESCENT SUICIDE RISK

PERCEIVED SOCIAL SUPPORT AS A PREDICTOR OF ADOLESCENT SUICIDAL IDEATION

ABSTRACT

Social support can operate as an important contextual resource in protecting adolescents from emotional problems. The present study was designed to examine the relationship between social support from family and friends, and suicidal ideation in a community sample of (N=594) grade 8 to 10 learners from an urban area in the Western Cape region, South Africa. The Perceived Social Support from Family and Friends Scale and the Suicidal Ideation Questionnaire for Adolescents proved to be reliable measures of these contructs. The results of a hierarchical regression analysis revealed that the support from family and friends explained 21,5% of the variance of suicidal ideation for the current group. The value of family support significantly outweighed that of support from friends. The unique contribution of the present study is the finding that social support differs for population group, but not for gender and family structure. The findings of this study suggest that social support, and specifically family support, can play a important role in protecting adolescents from suicidal behaviour. However, the role of cultural factors should always be kept in mind.

Keywords: *Adolescence, Suicidal ideation, Social support, Family social support, Friend social support, Gender differences, Population group differences, Family structure*

INTRODUCTION

Globally it is estimated that one million people commit suicide per year (Fleishman, 2008). All the same, it is particularly the escalation in youth suicides over the last decade that is of great concern. In an international epidemiological study based on the World Health Organization's mortality database, the mean suicide rate for 15 to 19 year-olds in 90 countries (excluding South Africa) in the latest year reported was 7,4 per 100 000 (Wasserman, Cheng & Jiang, 2005). In South Africa the closest possible comparison that can be made with the report referred to above was in the age group 15 to 24 years where youth suicides accounted for 23,7% of all non-natural deaths in 2007 (Donson et al., 2008). South African statistics should, however, be interpreted with caution due to inconsistent and inadequate reporting of suicidal behaviour in some regions of the country (Schlebusch, 2005), as well as the influence of socio-cultural stigma which precludes people from reporting suicide: this may mask higher rates among certain groups (Ozer, Macdonald & Irwin, 2002).

In the 2007 *Youth Risk Behavior Surveillance Survey* published in the United States, 14,5% of high school students had seriously considered attempting suicide (Centers for Disease Control and Prevention, 2008). The South African situation seems worse, with *The 2nd South African Youth Risk Behaviour Survey* reporting that a fifth of 10270 grade eight to eleven learners had considered attempting suicide (Reddy et al., 2010). Community-based studies in different regions of South Africa have reported on the incidence of suicidal ideation among high school students, ranging from 19% (Flisher, 1999; Meehan, Peirson & Fridjhon, 2007) to as high as 37% (Matla, 2001). Studies done specifically in the Western Cape region reported prevalence rates for suicidal ideation of 17,3% for a representative sample of adolescents (Wild, Flisher & Lombard, 2004) and 32,18% in a small private school sample (Van Renen & Wild, 2008). In South Africa, where half of the population (44,8million) is 19 years and younger (Statistics South Africa, 2001), it is essential for the future development of the country that adolescent well-being and health should be a priority.

Because suicide can be viewed as a key indicator of alienation and disengagement (Call et al., 2002), resources (such as strong family and community connections which can help adolescents develop resilience and coping skills) should be regarded as important (Coleman & Hagel, 2007; Robinson & Garber, 1995). International research has clearly stated that social support within close relationships is an important aetiological factor in adolescent suicide risk (Beautrais, 2000; King et al., 2001; Steinhausen & Winkler-Metzke, 2004). Specific research that focuses on the unique multi-cultural situation of South Africa is scarce (Peltzer, 2008). The aim of this study is to make a contribution to South African research data- and more specifically to investigate whether social support from family and friends can be a predictor of suicidal ideation.

Suicidal ideation, as a phenomenon of suicidal behaviour (Bryan & Rudd, 2006), can be placed hierarchically at the lower end of a continuum with an inherent progression from the least to the most life-threatening events (Hawton & Van Heeringen, 2000; Lewinsohn, Rohde & Seeley, 1996). In some cases completed suicide is the result of a long process starting with passive suicidal ideation, proceeding through stages of active contemplation, planning and preparation, and finally the completion of a suicide attempt (DiClemente, Hansen & Ponton, 1996). In contrast, some individuals describe their suicidal thoughts as fluctuating (Wyder & De Leo, 2007) and ending in an impulsive act during an intense emotional period (DiClemente et al., 1996). Research findings on impulsivity in adolescent suicide attempts are inconclusive. Witte et al. (2008) found that impulsive suicide attempts are not the norm in the adolescent population, while (Horesh, Gothelf, Ofek, Weisman & Apter, 1999) have found impulsivity to be a greater facilitator of suicidal behaviour in boys than in girls. This is in line with the gender difference in completed adolescent suicide which is higher among males (Brent, Baugher, Bridge, Chen & Chiappetta, 1999; Evans, Hawton, Rodham & Deeks, 2005; Groleger, Tomori & Kocmur, 2003), while ideation is significantly more endorsed among females (Kirkcaldy, Eysenck & Siefen, 2004; Peltzer, 2008). To the contrary, it should be considered that the gender paradox in suicide might also be the result of cultural influences (Canetto & Sakinofsky, 1998).

Although impulsiveness cannot be excluded, in a South African study by George (2009) it is reported that 60,5% of adolescents with a previous suicide attempt belong in a "high-risk" group of suicidal ideation. Flisher, Ziervogel, Charlton, Leger & Robertson (1993) came to a similar conclusion. Suicidal ideation can therefore be seen as an important initial indicator of suicide risk and consequently an important research variable regarding suicide preventative strategy.

The conceptual framework of the stress and coping model proposed by Moos and Schaefer (1993) is useful as an organizing system regarding suicidal ideation and social support in adolescence. Within the integrative spirit of this model, the multi-dimensional phenomena relating to adolescent suicidal behaviour and specifically to suicidal ideation, can be conceptualized as the outcome of a transactional process that starts with the interaction between the environmental system and the personal system. This then sets the stage for transitory environments (conditions), such as the adolescent life-phase, to take form. These three factors shape how the adolescent cognitively appraises and copes with challenges and adaptive demands and, in turn, the adolescent's health and well-being will be affected. The environmental system consists of relatively stable ongoing life stressors and social resources (of which the family climate and social support from family and friends are key components). These, together with the temporary context of adolescence, provide opportunities for learning and development or decline (Call et al., 2002; Moos & Holahan, 2003). The personal system acknowledges that the adolescent with a certain demographic composition and personal resources such as cognitive abilities, social competence and self-confidence, are shaped by previously stressful events and coping experiences. At the same time, contextual factors affect psychosocial functioning and maturation within the individual through socialization and modelling (Moos, 2003; Moos & Schaefer, 1993).

Adolescents in the 21st century are not only faced with the normal developmental challenges brought about by bio-psycho-social-cognitive maturation processes (Louw, Louw & Ferns, 2007) but also with more diverse and complex societal demands for versatile interpersonal functioning (Larson, Wilson & Mortimer, 2002). What is

expected from adolescents differs not only from nation to nation, but also between different cultural groups within one nation. In South Africa, adolescents are additionally faced with a rapid transformation of the societal and family structure through socio-political and economic changes, processes of urbanization, modernization and acculturation. This shift in lifestyle and culture can have both beneficial and harmful effects on the adolescent's mental and physical health (Vorster et al., 2000).

Adolescence (as a transitory phase with its accelerated development) is a potentially stressful time (Seiffge-Krenke, 2000). During adolescence the psychological adjustments (Coleman & Hagell, 2007) hold the promise of their long-awaited greater autonomy while at the same time new demands for skills and resources are required. For example, the greater participation in parental decision-making also challenges the adolescent in terms of conflict resolution. Psychological stress is experienced when relationships with the environment are perceived as taxing and exceeding their personal resources (Lazarus & Folkman, 1984:21). The adolescent - who is still developing the necessary resources - is therefore increasingly susceptible to emotional and behavioural problems (e.g., low self-esteem, depressive symptoms) which have been linked to suicidal ideation (Ahrens, Linden, Zaske & Berzewski, 2000; Groleger et al., 2003; Helsen, Vollebergh & Meeus, 2000). On the other hand, many adolescents do overcome the odds and obstacles and increased demands (Coleman & Hagell, 2007; Larson et al., 2002). This corresponds with the opinion of Haan (1997) that with each stressor overcome and when developmental challenges are resolved, new resources are built. This enhance the adolescent's growth and decrease his or her vulnerability.

An adolescent's ability to cope or not is directly related to the possibility of suicidal ideation (Lewis & Frydenberg, 2002). The coping strategies used by adolescents with high suicidal ideation seem to be mainly in the category of denial and mental disengagement (Loots, 2008; Meehan et al., 2007). Lewis and Frydenberg (2002) state that, when the denial-strategy of coping is used, the severity of problems is ignored and the adolescent avoids taking appropriate action to solve the problem. In a

group of adolescents with low levels of suicidal ideation, Loots (2008) found a correlation between planning and acceptance as successful coping strategies. In other words, the main difference between those with high and low suicidal ideation is that the latter group will be inclined to face problems more readily. The relationship that does exist between suicidal ideation and the coping strategy used by the individual should still be understood within a holistic framework (Moos & Schaefer, 1993) of other personal, environmental (e.g. social support) and developmental influences (Meehan et al., 2007). Moreover, Rutter and Behrendt (2004) found that adolescents who report strong social support (low isolation), exhibit higher levels of resilience and lower levels of suicide risk.

Three major processes of maturation influence adolescent appraisal and coping behaviours: cognitive development, identity formation, and autonomy striving. The adolescent's newly found ability to perform hypothetical-deductive reasoning can cause argumentativeness, idealism and criticism due to the lack of life experience that is necessary to make realistic evaluations of sudden higher-order reasoning (Everall, Bostik & Paulson, 2005; Louw et al., 2007). Adolescents are likely to appraise stressful situations as catastrophic because they find it difficult to understand that the effects of stressful situations will abate over time (Portes, Sandhu & Longwell-Grice, 2002) and this lack of insight predisposes adolescents to suicidal ideation (Wilson et al., 1995).

The process of self-discovery can cause a crisis in which the adolescent experiences discomfort, confusion, impulsive and acting-out behaviour, mood swings, reduced ego-strength, and impaired coping (Erikson, 1977). On the other hand, the organizing and meaning-making feature of ego development moves the adolescent away from the more aggressive style of coping through ventilation towards a more interpersonal, reflective, and emotional coping style (Recklitis & Noam, 1999). Bar-Joseph and Tzuriel (1990) found that suicidal youths score significantly lower on most ego identity factors than non-suicidal peers. This is similar to the finding in a South African adolescent sample which indicates that high ego identity achievement is correlated with a high "Attraction to life" (coping, adjustment, secure relationships

and esteem); while a strong "Repulsion by life" (rejection, alienation, problems are perceived as unsolvable) is correlated with low ego identity formation (Ramgoon, Bachoo, Patel & Paruk, 2006).

Inadequate negotiation of autonomy has significant consequences for social and psychological well-being and is related to adolescent suicidal behaviour (Arnett, 2000; Kaplan & Worth, 1993; Lee & Bell, 2003). Psychological control pertains to parental behaviours (criticism, guilt induction) that restrict the adolescent's psychological development and intrude on individuation. Under such circumstances, high levels of psychological control from both parents are significantly related to suicidal ideation (Van Renen & Wild, 2008). On the other hand, autonomy is a function of attachment relationships in as far as the adolescent with secure attachment relationships is encouraged to autonomic exploration of other relationships with the knowledge that they can rely on attachment figures when needed (Meeus, Oosterwegel & Vollebergh, 2002). Ryan and Solky (1996) suggest that for supportive relationships to enhance well-being, they must be characterized by "autonomy support" which starts with the primary caregiver's "teaching" of emotional regulation when they attend to needs and discomfort followed by supporting a person's self-regulation through respect for the true self (feelings, values, and perspectives) of the other, and by allowing and facilitating the healthy expression of these dispositions (Sroufe, Duggal, Weinfield & Carlson, 2000). Adolescents' relationships with their parents enhance autonomy even further by providing a context for socialization of social norms, being a prototype for the formation of future supportive relationships outside the family, building the adolescents' expectations of social support in other social environments like the peer-group and developing skills to negotiate other supportive transactions (Hobfoll & Vaux, 1993; Pierce, Sarason, Sarason, Joseph & Henderson, 1996; Thoits, 1995).

Perceived social support (described as the belief about the quality and availability of supportive relationships (Hobfoll & Vaux, 1993; Procidano & Heller, 1983)) is generally accepted as playing a vital role in well-being (Berkman & Kawachi, 2000; Rutter & Behrendt, 2004) and is associated with a reduced risk of both mental and

physical illness in adolescents (Thoits, 1995), for example of depression (Kaltiala-Heino, Rimpela, Rantanen & Liappala, 2001). The perception that others are supportive (i.e. parental expression of empathy, praise and gratitude) enhances a positive self-perception (Borowsky, Ireland & Resnick, 2001; Connor & Rueter, 2006; Pierce et al., 1996). A positive self-perception includes personal coping resources such as improved esteem-qualities and a resilient self-concept (Ptacek, 1996). These emotional gains are demonstrated when an adolescents with high levels of perceived social support can interpret a stressful situation less negatively and display less severe emotional reactions to the situation (Barrera & Li, 1996; Fergusson, Woodward & Horwood, 2000; Groholt, Ekeberg, Wichstrom & Haldorsen, 2000; Lakey & Cohen, 2000; Peltzer, 2008). In terms of suicidal behaviour specifically, it has been found that the presence of a support system comprises a major difference between someone with suicide ideation and someone who will, in fact, attempt suicide (Flouri & Buchanan, 2002; Smith & Anderson, 2000). This indicates that people who do attempt suicide may not have received the support from others when they needed to cope with a situation; or, because they have not experienced support in the past, they also don't know how to elicit support when needed.

Families remain a central source of support for adolescents (Larson et al., 2002; Lewinsohn, Rohde & Seeley, 1994) and their absence is a possible predictor of emotional problems in adolescence (Helsen et al., 2000). Parents are the providers of emotional support (sympathetic listening which communicates care and acceptance), instrumental support (practical help, aid), and informational support (providing knowledge for solving problems and advice/ guidance about alternatives), and tangible support in resolving problems and enforcing rules of conduct (Wills & Shinar, 2000). In a South African study by Van Renen and Wild (2008), it was found that low family connection and frequent parent-child conflict were related to higher levels of adolescent suicidal ideation, while the family structure and marital status of the parents were of lesser importance. In general, families of suicidal adolescents demonstrate higher levels of conflict than average families (Sroufe et al., 2000).

Support from peers makes a unique contribution to adolescent functioning because it is a prominent source of intimacy and acceptance companionship (sharing of social and leisure activities) (Wills & Shinar, 2000). It should, however, be remembered, that family support paves the way for forming relationships of quality with friends (Helsen et al., 2000; Mullis, Hill & Readdick, 1999). This explains the finding by Prinstein, Boergers, Spirito, Little & Grapentine (2000) that adolescents who are less satisfied with their relationships with their parents also experience difficulties in other areas of interaction (such as disturbed peer relationships). Research has also shown that adolescents with emotional problems tend to rely on peer support rather than support from their families (Helsen et al., 2000). It can be speculated that if this tendency is true for most suicidal youths, the resultant peer-group affiliates are characterized by emotional problems and that this will magnify these adolescents' vulnerability (Prinstein, Boergers & Spirito, 2001). Helsen et al. (2000) have found only modest correlations between parental and peer support that indicate that these relationships are two distinct/ independent sources of social support. Peer support in adolescence should not be painted too negatively because, for many adolescents living in adverse family circumstances, their friends are a substitute support system.

Social support is greatly influenced by the norms and expectations that govern relationships across different cultures and gender. Social support as a transaction for help when the individual is stressed, is a particularly Westernized concept where the focus is primarily on individual coping (Taylor et al., 2004). How social support plays a role in suicidal ideation of adolescents in a multi-cultural background, such as that in South Africa, will be part of the aim of the present study.

METHODOLOGY

The aim of this study was to investigate the influence of social support from family and friends on suicidal ideation as reported by adolescents.

Research design

A correlational design was used to investigate the relationship between suicidal ideation as the criterion variable and social support as predictor variable for the

sample as a whole, as well as considering the above in terms of gender, population group and family (two-parent and single parent) groupings.

Participants and information gathering

By means of a convenient sampling method a total of 594 grades 8 to 10 learners from six public senior secondary schools in an urban town in the Western Cape region, South Africa participated in the present study. The sample included 278 males (46,8%) and 316 females (53,2%) with the population[1] group distribution as follows: 19,4% black; 49,0% Coloured; 31,0% white; and 0,6% not indicated. The ages of the participants ranged from 13 to 19 years, with a mean age of 14,96 (SD = 1,19). The majority (68,4%) of the learners came from two-parent families, while 30,3% indicated that they live in one-parent families. In this study a two-parent family structure implies married parents and their children who are living together as a nuclear unit; while a single-parent family structure includes types of families such as divorced or separated families. The degree of family intactness appears to be protective, lessening symptoms of distress by 16 % compared to adolescents from disrupted families who show more internalizing and externalizing problems (Storksen, Roysamb, Holmen & Tambs, 2006).

In terms of ethical considerations, the concerned committees at the University of the Free State approved the study. The Western Cape Education Department also supported the study and granted permission for the study to be conducted. The necessity for the study and its aims were discussed with the school principals who identified those learners available for participation during free periods. The decision that it was not deemed necessary to obtain parental consent was based on the South African Children's Act No. 38 of 2005 (Republic of South Africa, 2006) which recognises of the rights of children over the age of 12 to consent to their own medical

[1] In this study the term 'population group' and associated references such as 'black', 'Coloured', 'Indian/ Asian' and 'white' are used. The use of these terms in this article does not imply any acceptance of the historical racist assumptions to which these labels might allude. Instead, the use of these terms is intended to differentiate between the conditions within which these 'population groups' still exist in South Africa. Another reason for including 'population group' names is for the purpose of statistical comparison with other research data issued by statistical authorities in South Africa e.g. Statistics SA and National Injury Mortality Surveillance System (NIMSS).

treatment and to make other health-related decisions without parental consent. Informed consent was received from the learners who participated in this study. Participants were ensured of the confidentiality and anonymity of their responses and counselling opportunities were offered post-participation.

A registered psychologist was present during the administration of the measures. The measuring instruments were translated from the original English to Afrikaans and Xhosa using the back translation method. The questionnaires were completed within school hours during a 90-minute session with no breaks because of time constraints. During the testing it was apparent that participants had difficulty reading the Xhosa and it was later admitted by the teachers that the Xhosa-speaking adolescents are sometimes more fluent in reading English than in Xhosa. The problem was addressed as follows: if a learner indicated that he/ she could not read or understand a question, the English version of the question was made available to the participant.

Measuring instruments

Three measuring instruments were utilised in the present study:

A demographic questionnaire, compiled by the researcher was used to obtain data on age, gender, population group, language, family and parental details.

The criterion variable was assessed by means of the *Suicidal Ideation Questionnaire for Adolescents* (SIQ) (Reynolds, 1999). This 30-item questionnaire measures the extent of suicidal thoughts over the previous month on a 7 point scale ranging from 0 ("never had this thought") to 6 ("having this thought almost every day"). The score of each item is summed to yield a total raw score. The criteria stipulated by Pienaar and Rothmann (2005) and used by George (2009) to evaluate suicide risk, are also adopted in this study (low risk = 16; average risk = 17 to 31; and high risk = 32). A comparative South African study done by George (2005) has found the reliability of the scale to be very good with a Cronbach α-coefficient measured at 0,945. This is in line with the original standardization sample with a reported internal consistency of α= 0,94 (Reynolds, 1999).

The predictor variable of social support was measured with the *The Perceived Social Support from Family and Friends Scale* (PSS-Fa and PSS-Fr) (Procidano & Heller, 1983). The two 20-item parallel forms of the scale measure functional support from two sources (family and friends), i.e. the extent to which an individual believes that his/ her needs for support, information, and feedback are fulfilled. A four-response option format was used, with options ranging from "Agree Strongly", to "Disagree Strongly". This was done to increase the discriminative utility of the measure (Comrey, 1988). In developing this instrument the authors reported alpha reliability coefficients of 0,90 for family support and 0,88 for friend support (Procidano & Heller, 1983).

For the family subscale, three factors were identified by Windle and Miller-Tutzauer (1992), namely received family support (12 items); support provided (5 items); and family intimacy (3 items). The scores for these family factors were calculated separately as was a total score for each of perceived support from family and friends.

Cronbach's α-coefficients were calculated for all the scales and subscales used in order to investigate the internal consistency of the measuring instruments for the current sample. This was done for the total group and separately for the three population groups (white, black and Coloured). The results are presented in Table 1.

Table 1: Alpha-coefficients for the different measuring instruments across the total sample and the three population groups

Measuring Instruments	**α-coefficient**			
	Total	**Black**	**Coloured**	**White**
Suicidal Ideation (SIQ)	0,967	0,951	0,965	0,978
PSS – Family (PSS-Fa)				
Received support	0,852	0,654	0,849	0,920
Support provided	0,758	0,660	0,738	0,835
Intimacy	0,576	0,476	0,562	0,604
Total scale	0,867	0,710	0,859	0,925
PSS – Friends (PSS-Fr)	0,845	0,689	0,822	0,922

All the instruments and subscales presented in Table 1 show acceptable internal consistency. The Suicidal Ideation Questionnaire (SIQ) shows particularly good reliability across the three population groups ranging from 0,951 to 0,978, which are higher than the results in the developmental study by Reynolds (1999), and a comparable South African study by George (2005). The mean scores and related suicide risk for the different population groups are:

- black adolescents (M = 38,83; high suicide risk)
- Coloured adolescents (M = 44,46; extremely high suicide risk)
- white adolescents (M = 20,61; average suicide risk)

These findings suggest that the suicidal behaviour of the youth in South Africa resembles that of adults, as reported in the South African Stress and Health Study (SASH) (Joe, Stein, Seedat, Herman & Williams, 2008). One of the prominent similarities is found in the Coloured group that shows the highest level of suicidal behaviour in both adults and now in adolescents.

On the Perceived Social Support from Family scale (PSS-Fa), the intimacy subscale is the only scale with relatively low reliability coefficients. This result concurs with that of Windle and Miller-Tutzauer (1992), who found only borderline acceptability with regard to reliability on the family intimacy subscale. A possible explanation is that this subscale consists of only 3 items. Nevertheless, a decision was made to keep the intimacy subscale in further analysis because this subscale is still part of the composite factor (Perceived Social Support from Family), which is one of the primary variables of this study. The reliability coefficients are generally lower for the black group, which might be caused by a translation problem or by the participant's linguistic abilities. Another consideration is that within the black culture, social support is differently constructed than intended by this measuring instrument (PSS-Fa and PSS-Fr). Social support seeking is culturally determined through divergent relationship orientations found in different cultures (Taylor et al., 2004). The white adolescent group in the current study reported relatively high reliability coefficients on the PSS-Fa and PSS-Fr, most probably indicating that differences in Cronbach's α-coefficients can be explained by an underlying cultural phenomena.

Statistical analysis

Descriptive statistics were calculated for all scales and subscales using raw scores. A hierarchical regression analysis was performed with the perceived social support from family and friends as the predictor variables, and suicidal ideation as the criterion variable for the group as a whole, as well as for gender, population group and family intactness separately. A combination of the 1% level of statistical significance, as well as a moderate effect size was used as criterion of significance of findings. The first step in the analysis was to investigate the total variance of the criterion (suicidal ideation) that is explained by the predictor variables taken together (complete model). Secondly, the contribution of each of the predictors (family and friend support) was considered; and thirdly, the unique contribution of each of the family factors in explaining the variance of suicidal ideation came under scrutiny. A hierarchical *F*-test was used to measure the statistical significance of a particular variable's contribution to the $\mathbf{R^2}$ value. It was also necessary to calculate the effect size of the contribution of a particular variable. The effect size gives an indication of the contribution in terms of the proportion unexplained variance of the full model. Steyn (1999) proposes guideline values for (f^2) in regression-analysis: 0,15= small effect, 0,3= medium effect, and 0,5= large effect. Statistical calculations were performed with the SPSS-computer program (SPSS Incorporated, 2009).

RESULTS AND DISCUSSION OF THE HIERARCHAL REGRESSION ANALYSIS

Social support can be provided by two sources, namely by family and friends. In this study family support was measured with three scales while a single scale represents the aspect of support of friends.

The correlation between the predictor and criterion variables was calculated with Pearson product moment correlation coefficients. The results of the correlations will be discussed first, followed by the results of the regression analysis. The results for the group as a whole are as follows.

1. The group as a whole

Table 2: Correlation between predictors and criterion for the group as a whole

Variables	Group as a whole			
	rs	sp	it	sf
Suicidal ideation	-0,389*	-0,234*	-0,347*	-0,162*
Fam: Received support (rs)	-	0,592*	0,290*	0,230*
Fam: Support provided (sp)		-	0,032	0,249*
Fam: Intimacy (it)			-	0,167*
Support friends (sf)				-

* p = 0,01

Effect size: 0,15= small; 0,3= medium; and 0,5= large

Significant correlations were found between all four the social support resources (complete model) and suicidal ideation (criterion) on the 1% level of significance for the whole group of adolescents. The fact that all the coefficients are negative indicates that the stronger the support resources that are evaluated, the lower the probability for suicidal ideation. This inverse relationship between social support and distress symptoms such as suicidal ideation was also suggested by the authors of the PSS-scale (Procidano & Heller, 1983).

The results of the hierarchical regression-analysis are given and discussed in table 3.

Table 3: Contributions of social support resources towards R^2 with suicidal ideation as criterion for the adolescent group as a whole

Variables in equation	R^2	Contribution towards R^2 : Full minus the reduced model	*F*	f^2
1. [friend]+[family]	0,215	1–5=0,189	48,46*	0,24
2. [friend]+received	0,156	2–5=0,130	92,86*	0,15
3. [friend]+provided	0,066	3-5=0,040	25,00*	0,04
4. [friend]+intimacy	0,132	4-5=0,106	70,67*	0,12
5. [friend]	0,026			
6. [family]+[friend]	0,215	6-7=0,001	0,77	
7. [family]	0,214			

* p = 0,01

Effect size: 0,15= small; 0,3= medium; and 0,5= large

The four predictors collectively explain 21,5% of the variance of suicidal ideation for the adolescent group as a whole. This calculated R^2-value is significant on the 1%-level of significance [$F4;589 = 40,4$; $p < 0.0001$]. This result is important when compared to a similar South African study by George (2005) who found that a combination of eighteen predictor variables explained 14,4% of the variance of suicidal ideation for an adolescent group.

The three family factors (received support, support provided and intimacy) collectively explain 18,9% of the variance of suicidal ideation for this group of adolescents. The corresponding f-value (0,24) is indicative of results with a small to moderate practical value and should therefore be interpreted with caution. The individual factors of received support and intimacy contribute 13% and 10,6% to the explanation of the variance of suicidal ideation. These results show small to moderate effect sizes - and are, therefore, of moderate importance. The contribution of support provided is of little practical value, contributing only 4,0% of the variance of suicidal ideation.

The social support of friends makes an insignificant contribution by explaining only 0,1% of the variance of suicidal ideation. This finding is consistent with results by Sommer (2005) that perceived family support are a more powerful predictor of adolescent suicide than support from friends.

2. Gender

The correlations between the predictors and the criterion for the two genders are shown in table 4.

Table 4: Correlations between predictors and criterion for the two gender groups

Variables	**Male (N=278)**			
	rs	**sp**	**it**	**sf**
Suicidal ideation	-0,353*	-0,176*	-0,331*	-0,258*
Family: Received support (rs)	-	0,577*	0,180*	0,362*
Family: Support provided (sp)		-	-0,133	0,283*
Family: Intimacy (it)			-	0,135
Support friends (sf)				-
Variables	**Female (N=316)**			
	rs	**sp**	**it**	**sf**
Suicidal ideation	-0,415*	-0,299*	-0,373*	-0,138
Family: Received support (rs)	-	0,614*	0,382*	0,150*
Family: Support provided (sp)		-	0,171*	0,204*
Family: Intimacy (it)			-	0,182*
Support friends (sf)				-

* p = 0,01

Effect size: 0,15= small; 0,3= medium; and 0,5= large

For both male and female participants in the current study, all three family support variables have significant negative correlations with suicidal ideation (the criterion). The subscale, received support from family was indicated to have the strongest correlation with suicidal ideation for both the gender groups.

In the current study, high perceived peer support was significantly correlated with lower levels of suicidal ideation (the criterion) for the male group. This result is in contrast with findings in general that perceived peer support is a protective factor in suicidal ideation more for girls than boys (Colarossi & Lynch, 2000; Peltzer, 2008; Sun & Hui, 2007). In a group of inpatient adolescent males, high perceived peer support was found to be associated with higher levels of suicidal ideation which suggested a negative influence with affiliation among emotionally distressed adolescents (Kerr, Preuss & King, 2006). A possible explanation for the results of the current male group is that peers have a positive influence suggestive of a relatively lower level of emotional problems in the male group.

The results of the hierarchical regression-analysis are given and discussed in table 5.

Table 5: Contributions of social support resources towards R^2 with suicidal ideation as criterion for each of the separate gender groups

Variables in equation	R^2	Contribution towards R^2: Full minus the reduced model	*F*	f^2
Male adolescents				
1. [friend]+[family]	0,214	1–5=0,147	17,50*	0,19
2. [friend]+received	0,144	2–5=0,077	25,67*	0,09
3. [friend]+provided	0,078	3-5=0,011	3,33	
4. [friend]+intimacy	0,156	4-5=0,089	29,67*	0,11
5. [friend]	0,067			
6. [family]+[friend]	0,214	6-7=0,013	4,64	
7. [family]	0,201			
Female adolescents				
1. [friend]+[family]	0,233	1–5=0,214	28,53*	0,28
2. [friend]+received	0,178	2–5=0,159	61,15*	0,19
3. [friend]+provided	0,096	3-5=0,077	26,55*	0,09
4. [friend]+intimacy	0,145	4-5=0,126	46,67*	0,15
5. [friend]	0,019			
6. [family]+[friend]	0,233	6-7=0,001	0,40	
7. [family]	0,232			

* p = 0,01

Effect size: 0,15= small; 0,3= medium; and 0,5= large

From table 5 it is clear that the four predictors (complete model) collectively explain the following percentage of variance of suicidal ideation for the male and female groups:

- male adolescents (21,4%; $F_{4;273}$ = 18,55; p = 0,0001);
- female adolescents (23,3%; $F_{4;311}$ = 23,63; p = 0,0001);

The three family factors (received support, support provided, intimacy) together explain 14,7% [$F_{(3;273)}$ = 17,5] and 21,4% [$F_{(3;311)}$ = 28,53] of the variance of suicidal ideation for male and female adolescents respectively. The corresponding *f*-value for females (0,28) is in close range to a moderate effect size of 0,3 and can therefore be considered for its moderate practical value. This finding is consistent with results by Peltzer (2008) and Kerr et al.(2006) who report that for female adolescents, a lack of parental support was associated with high suicide risk. In terms of the individual

family factors, none showed an effect size of considerable practical significance as far as gender is concerned.

The social support from friends is non-significant for both male and female adolescents.

3. Population group

The correlations between the predictors and the criterion for the different population groups are shown in table 6.

Table 6: Correlations between predictors and criterion for the different population groups

Variables	**Black (N=115)**			
	rs	**sp**	**it**	**sf**
Suicidal ideation	-0,232	-0,084	-0,314*	-0,368*
Family: Received support (rs)	-	0,530*	0,048	0,542*
Family: Support provided (sp)		-	-0,207	0,394*
Family: Intimacy (it)			-	0,085
Support friends (sf)				-
Variables	**Coloured (N=291)**			
	rs	**sp**	**it**	**sf**
Suicidal ideation	-0,342*	-0,228*	-0,270*	-0,149
Family: Received support (rs)	-	0,595*	0,216*	0,173*
Family: Support provided (sp)		-	-0,011	0,214*
Family: Intimacy (it)			-	0,145
Support friends (sf)				-
Variables	**White (N=184)**			
	rs	**sp**	**it**	**sf**
Suicidal ideation	-0,539*	-0,383*	-0,452*	-0,033
Family: Received support (rs)	-	0,626*	0,507*	0,182
Family: Support provided (sp)		-	0,332*	0,286*
Family: Intimacy (it)			-	0,187
Support friends (sf)				-

* p = 0,01

Effect size: 0,15= small; 0,3= medium; and 0,5= large

Significant negative correlations were found between all three family support factors and suicidal ideation (criterion) for the Coloured and white adolescents in this sample, while for the current black adolescents only the family factor of intimacy was found to be significant. This result in the black adolescent group should, however, be

evaluated with caution because of low reliability coefficients for the family support factor, intimacy (see Table 1).

In the black adolescent group in this study, the social support from friends shows significant negative correlations with suicidal ideation. This is a prominent result when compared to the relative absence of social support from friends in the other two population groups (white and Coloured).

The results of the hierarchical regression-analysis are given and discussed in table 7.

Table 7: Contributions of social support resources towards R^2 with suicidal ideation as criterion for each of the respective population groups

Variables in equation	R^2	Contribution towards R^2: Full minus the reduced model	*F*	f^2
Black adolescents (N=115)				
1. [friend]+[family]	0,217	1–5=0,082	3,85	
2. [friend]+received	0,137	2–5=0,002	0,26	
3. [friend]+provided	0,140	3-5=0,005	0,65	
4. [friend]+intimacy	0,216	4-5=0,081	11,57*	0,10
5. [friend]	0,135			
6. [family]+[friend]	0,217	6-7=0,070	9,86*	0,09
7. [family]	0,147			
Coloured adolescents (N=291)				
1. [friend]+[family]	0,165	1–5=0,143	16,44*	0,17
2. [fiend]+received	0,126	2–5=0,104	34,67*	0,12
3. [friend]+provided	0,063	3-5=0,041	13,67*	0,04
4. [friend]+intimacy	0,085	4-5=0,063	19,69*	0,07
5. [friend]	0,022			
6. [family]+[friend]	0,165	6-7=0,003	1,00	
7. [family]	0,162			
White adolescents (N=184)				
1. [friend]+[family]	0,348	1–5=0,347	32,13*	0,53
2. [friend]+received	0,295	2–5=0,294	75,38*	0,42
3. [friend]+provided	0,153	3-5=0,152	32,34*	0,18
4. [friend]+intimacy	0,207	4-5=0,206	46,82*	0,26
5. [friend]	0,001			
6. [family]+[friend]	0,348	6-7=0,011	3,06	
7. [family]	0,337			

* p = 0,01

Effect size: 0,15= small; 0,3= medium; and 0,5= large

It is evident from table 7 that the four predictors collectively (complete model) explain the following percentage of the variance of suicidal ideation for the different population groups:

- black adolescents (21,7%; $F_{4;110} = 7{,}63$; $p = 0{,}0001$);
- Coloured adolescents (16,5%; $F_{4;286} = 14{,}17$; $p = 0{,}0001$);
- white adolescents (34,8%; $F_{4;179} = 23{,}86$; $p = 0{,}0001$).

The percentage of variance of suicidal ideation explained by the complete model (all four the predictors collectively) is diverse for the three population groups. In the white adolescent group, the explained variance is double that of the Coloured adolescent group. Taylor et al. (2004) also found cultural differences in using social support.

The composite factor of perceived family support (received support, support provided and intimacy) explains the largest variance (34,7%) of suicidal ideation in the white adolescent group compared to (8,2%) for black, and (14,3%) for Coloured adolescents. The corresponding *f*-value of (0,53) for the white adolescent group is indicative of results with a large practical value and, for this reason, the three family factors make an important contribution in explaining suicidal ideation for white adolescents in the current study.

The white adolescent's high perceived social support from family is supported by the results of Dawes and Finchilescu (2002) that white adolescents are the most ethnocentric of all population groups in South Africa. Related findings by Tom and Coetzee (2004) are that white adolescents are less secure in their identities than their black peers. This is possibly due to the change in the status of whites and a decrease in white role models, probably causes a prolonged process of psychosocial identity formation and a possible stronger association with the family as primary resource of identity.

In both the black and Coloured adolescent groups in this study, the social support from the family is not perceived as a resource in suicidal ideation. This finding is unexpected in terms of the theoretical background that black and Coloured South

Africans are more collectivistic (interdependent) and white South Africans more individualistic (independent) in their cultural orientation (Norris et al., 2008), where family support is part of collectivistic coping (Yeh, Arora & Wu, 2006; Chun, Moos & Cronkite, 2006). The family contributes strongly to the identity construal of a collectivistic person and provides a vital supportive and caring function for its members. This is why an individual from an interdependent background may prefer to seek help from their family members and solve their problems within the family system in respect of family image. A possible explanation of the results could be related to findings such as those by Bailey and Dua (1999) with Asian students who have lived long enough in Western culture tend to use less collectivistic coping styles. This suggests that coping styles are more related to cultural orientation, and perhaps acculturation, than to population group and ethnicity (Yeh et al., 2006). Or, it could simply be that Westernized definitions of social support (as used in this measuring instrument) are different from a collectivistic/ African-definition on social support (Taylor et al., 2004). The results should, therefore, not be misinterpreted as that family support is no longer important to black and Coloured adolescents but is used rather differently in these population groups (Kim, Sherman & Taylor, 2008) than was intended by this measuring instrument. Those from more collectivistic cultures (black and Coloured in this study) use social support in an implicit manner by an awareness of the existence of support and being in their company without discussing problems and feelings openly (Kim et al., 2008).

A study on suicide among Coloured men in the Western Cape in post-apartheid South Africa found that this group are faced with the pressure and expectation to perform as individuals (Laubscher, 2003). Disappointment and shame could no longer be blamed on the "apartheid-regime" but should rather be explained from within. A sense of self-sufficiency and independence steadily replaced the strengths and relationships within the community (Laubscher, 2003) - thus explaining the current results that the adolescents in the Coloured community do not experience high levels of family support, especially in times of stress. Joe et al. (2008) linked the increased levels of suicidal behaviour in the Coloured community to the stressful adjustment they experienced with the rapid political and socio-economic transitions in South Africa

and the simultaneous stagnation or decline in employment and other social opportunities. Accordingly, it can be assumed that Coloured families are characterized by high stress levels and possible dysfunction and that this might have a direct impact on these families' abilities to provide support for its adolescent members.

Each of the three individual family support factors (received support, support provided and intimacy) makes a unique contribution to explaining the variance of suicidal ideation for the white adolescents of this study. The results for the individual family support factors are especially pronounced for the white adolescent group with an explained variance of 29,4% (received support), 15,2% (support provided), and 20,6% (intimacy). The contribution of received support (0,42), is of moderate to high practical value and that of intimacy (0,26), is of small to moderate practical value. In the Coloured adolescent group only received support shows a small effect size, and so the results should be interpreted with caution. It is important to mention that none of the individual family support factors has practical significance in the case of the black adolescent group.

The social support from friends explains a significant variance (7,0%) of suicidal ideation only for the black adolescents in this study. Yet, this result should be interpreted with caution because of a less than small effect size (0,09). Although the effect size is small, the social support from friends is only significant for the black participants of this study and should be noted. This might be a reflection on the predicted shift for blacks in the new post-apartheid South Africa, from traditional cultural identification to more Western lifestyles (process of acculturation) with its focus on individual achievement, education, materialism and success (Schlebusch, Vawda & Bosch, 2003). The reason for their greater identification with the peer group might be to blend the traditional with the modern (Larson et al., 2002).

4. Family structure

The correlations between predictors and the criterion for the two types of family structure (two-parent and single parent) are shown in table 8.

Table 8: Correlations between predictors and criterion for different family structures

Variables	**Two-parent family (N=406)**			
	rs	**sp**	**it**	**sf**
Suicidal ideation	-0,387*	-0,227*	-0,349*	-0,159*
Family: Received support (rs)	-	0,590*	0,310*	0,264*
Family: Support provided (sp)		-	-0,041	0,284*
Family: Intimacy (it)			-	0,171*
Support friends (sf)				-
Variables	**Single parent family (N=180)**			
	rs	**sp**	**it**	**sf**
Suicidal ideation	-0,392*	-0,256*	-0,328*	-0,172
Family: Received support (rs)	-	0,608*	0,245*	0,165
Family: Support provided (sp)		-	0,041*	0,201
Family: Intimacy (it)			-	0,137
Support friends (sf)				-

* p = 0,01

Effect size: 0,15= small; 0,3= medium; and 0,5= large

For adolescents from two-parent as well as single-parent families, the three family support factors (received support, support provided, and intimacy) show significant negative correlation coefficients with suicidal ideation (criterion). This finding is in contrast with findings in another South African study with a group of black adolescents (Mpe, 2001) which revealed that 60% of those with a history of suicide attempts did not reside with both their biological parents. The support from friends is only significant for the adolescents from two-parent families.

The results of the hierarchical regression-analysis are given and discussed in table 9.

Table 9: Contributions of social support resources towards R^2 with suicidal ideation as criterion for the respective family structures

Variables in equation	R^2	Contribution towards R^2: Full minus the reduced model	*F*	f^2
Two-parent family				
1. [friend]+[family]	0,211	1–5=0,186	31,00*	0,24
2. [friend]+received	0,154	2–5=0,129	64,50*	0,15
3. [friend]+provided	0,061	3-5=0,036	15,65*	0,04
4. [friend]+intimacy	0,132	4-5=0,107	50,95*	0,12
5. [friend]	0,025			
6. [family]+[friend]	0,211	6-7=0,001	0,50	
7. [family]	0,210			
Single parent family				
1. [friend]+[family]	0,220	1–5=0,191	14,15*	0,19
2. [friend]+received	0,166	2–5=0,137	29,15*	0,16
3. [friend]+provided	0,080	3-5=0,051	9,81*	0,06
4. [friend]+intimacy	0,124	4-5=0,095	19,39*	0,11
5. [friend]	0,029			
6. [family]+[friend]	0,220	6-7=0,006	1,33	
7. [family]	0,214			

* p = 0,01

Effect size: 0,15= small; 0,3= medium; and 0,5= large

It is evident from table 9 that the four predictors collectively (complete model) explain significant percentages of the variance of suicidal ideation for the different family groups:

- Two-parent families (21,1%; $F_{4;401} = 26,78$; $p = 0,0001$);
- Single-parent families (22,0%; $F_{4;175} = 12,36$; $p = 0,0001$).

The two types of families do not seem to differ much in terms of the percentage of variance of suicidal ideation explained by all four social support resources.

The three family factors (received support, support provided and intimacy) collectively explain 18,6% and 19,1% of the variance of suicidal ideation for adolescents from two-parent and single parent families- neither of them differs much in their experience of perceived social support from family. The corresponding *f*-values of (0,24) (small to moderate effect size) and (0,19) (small to moderate effect

size) are indicative of results with moderate practical value. Similar findings are reported in a South African study by Henn (2005) who found that the marital status of parents was only weakly associated with perceived social support from family. The results of the current study confirm that it no longer makes sense to use the nuclear family as the standard against which the functionality of families is measured. The family processes of caring and committed relationships matter more than family form in the well-being of its members (Walsh, 2003). This has also been suggested in another South African study (Van Renen & Wild, 2008).

Each of the individual family support factors (received support, support provided and intimacy) makes a unique contribution towards explaining the variance of suicidal ideation in both the family groups. The respective contribution of the three family support factors are received support (12,9% for two-parent; 13,7% for single parent), support provided (3,6% for two-parent; 5,1% for single parent), and intimacy (10,7% for two-parent; 9,5% for single parent). The only family support factor of notable practical value is received support with small effect size in both the family groups.

The social support from friends is insignificant for both the two-parent and single parent family groups.

CONCLUSION

This study has proved that the environmental factor of social support does indeed play an important role in the outcome of suicidal ideation. It was found that in the current sample of adolescents, the perceived social support from family and friends makes a significant contribution by explaining 21,5% of the variance of suicidal ideation. The overall negative direction of correlations that were found, suggests that social support from family and friends (as measured by the Perceived Social Support by Family and Friends Scale)(Procidano & Heller, 1983) is a resource that lowers the probability of suicidal ideation in adolescents. The general indication of findings in this study is that social support from family plays a more important role than social support from friends, explaining 18,9% and 0,1% of the variance of suicidal ideation respectively. The support from family is a good predictor of suicidal ideation for both male and female adolescents and is especially pronounced in girls (Kerr et al., 2006). Accordingly, adolescent girls might be particularly at risk for suicidal ideation when they no longer have support from their families.

Another important contribution of this study is the population group comparison of social support and suicidal ideation. In the white adolescent group, the family seems to be very important as a social support resource, explaining 34,7% of the variance in suicidal ideation, the highest for all three population groups. It is especially the family support variable of received support that is of high value. In the black and Coloured adolescent groups, low perceived support from the family is coupled with a high suicide risk. This combination of findings forces us to examine the reciprocal influence of processes at the level of the individual and the family. Just as a lack of family support can impel an increase in a youngster's problem behaviour, a youngster's problem behaviour can result in a decline in family support (Moos 2003; Moos & Holahan, 2003). In a study by Garnefski and Diekstra (1996), it was found that negative perceptions of social support from family were four times more often reported by adolescents with either behavioural or emotional problems than adolescents without such problems.

Adolescents from two-parent and single parent families seem to perceive their families as equally supportive. The conclusion is that social support is not so much a function of family attributes but rather of the quality of relationships amongst its members (Walsh, 2003). The results can also indicate that, over time, the single parent family has adapted to the demands of being a fully functioning family unit.

Interestingly, support from friends has been found to be significant for the black adolescent group only (explaining 7% of the variance in suicidal ideation). Although the result only has a small practical value, it is still of notable importance especially because of the absence of this predictor when it comes to explaining suicidal ideation in the other population groups. This might question family functioning within the black community which has possibly been disrupted by economic (urbanization) circumstances, health (influence of disease) reasons and cultural-value changes (acculturation) within family structures. Adolescents under such conditions might rely more on friends who are more available (closer) to the individual in a physical and ideological sense. The assumption can be made that support from friends (despite being more available) might be less appropriate in the sense that the adolescent would be guided by someone with equal life experience.

Limitations

The following limitations should be borne in mind when interpreting the results of this study:

- The current study was conducted in one region of South Africa and is therefore not representative of the multi-cultural character of the country. The results of the current study can therefore only be generalized to adolescents with a similar background.
- A single measurement strategy is used in the investigation of social support, namely a paper-and-pencil test from only one informant. Other sources of information (e.g. parents) and different modalities (e.g. semi-structured interviews) of data gathering could have provided a more comprehensive understanding.

- Westernized measuring instruments are used to assess the constructs of social support and suicidal ideation in an African context. This study would have benefited from a pilot study to establish potential problems with the measuring instruments, for example with translations, language difficulties and the length of the test.
- A culture by gender analysis of suicidal ideation and social support was not done, but it would have yielded interesting interrelationships especially in the Coloured and Black groups for whom suicide statistics is on the increase (Langhinrichsen-Rohling, Friend & Powell, 2009).

Recommendations

The increasing number of suicides amongst Black South Africans (Schlebusch et al., 2003) might be indicative of an ideological change in thinking about life and therefore the importance of using culture-sensitive measuring instruments to evaluate suicidal ideation. A reliable Xhosa-version of the Perceived Social Support scale (PSS) will need to be developed in a similar fashion as the Setswana-version done by Moroeng (2001).

The rise of suicidal behaviour among Coloured South Africans (Joe et al., 2008) and the increasing numbers of suicide amongst black South Africans (Schlebusch et al., 2003) call for a better understanding of social constructs like social support within these communities. A qualitative investigation on the context-culture-specific definition of social support from family and friends as advocated by Williams, Barclay and Schmied (2004) for black and Coloured adolescents would be a valuable advancement in future research driven by a need for sound preventative interventions for suicidal adolescents in the black and coloured groups. As mentioned earlier, the higher suicide risk amongst these two population groups calls for a better understanding of coping strategies and cognitive appraisal processes used by black and Coloured adolescents.

Although the results of the perceived social support from the families of white adolescents in this study seem very positive, it might also be indicative of an

underlying deficit within these individuals. The influence of personal factors such as self-esteem, hope and future orientation might be questioned, especially in light of other results on identity security in the white population of South Africa (Norris et al., 2008).

As a general comment, the integrated stress and coping model (Moos & Holahan, 2003; Moos & Schaefer, 1993) proposes that social resources such as social support from family affect the selection and use of coping responses in specific stressful situations. For example, emotional support can promote feelings of self-esteem and self-confidence which will ensure a more pro-active approach by the individual. In this study, the black and Coloured adolescents with higher suicide risk seem to lack social support from their families while adolescents from single parent families seem to take advantage of the family support that they can obtain in a smaller family unit. There is an avenue of exploration for future research in these seemingly different coping styles and in the cognitive appraisal processes involved.

REFERENCES

Ahrens, B., Linden, M., Zaske, H., & Berzewski, H. (2000). Suicidal behaviour-symptom or disorder. *Comprehensive Psychiatry*, *41*, 116-121.

Arnett, J.J. (2000). Emerging adulthood: A theory of development from the late teens through the early twenties. *American Psychologist*, *55*, 469-480.

Bailey, F.J., & Dua, J. (1999). Individualism-collectivism, coping styles, and stress in international and Anglo-Australian students: A comparative study. *Australian Psychologist, 45*, 177-182.

Bar-Joseph, H., & Tzuriel, D. (1990). Suicidal tendencies and ego identity in adolescence. *Adolescence, 25*, 215-224.

Barrera, M., & Li, S.A. (1996). The relations of family support to adolescents' psychological distress and behavior problems. In G.R. Pierce, B.R. Sarason, and I.G. Sarason (Eds.), *Handbook of social support and the family* (pp. 313-343). New York: Plenum Press.

Beautrais, A.L. (2000). Risk factors for suicide and attempted suicide among young people. *Australian and New Zealand Journal of Psychiatry, 34*, 420-436.

Berkman, L.F., & Kawachi, I. (2000). *Social epidemiology*. Oxford University Press: Oxford.

Borowsky, I.W., Ireland, M., & Rescnick, M.D. (2001). Adolescent suicide attempts: Risks and protectors. *Paediatrics, 107*(3), 485-493.

Brent, D.A., Baugher, M., Bridge, J., Chen, T., & Chiappetta, L. (1999). Age-and sex-related risk factors for adolescent suicide. *Journal of American Academy of Child and Adolescent Psychiatry, 38,* 1497-1505.

Bryan, C.J., & Rudd, M.D. (2006). Advances in the assessment of suicide risk. *Journal of Clinical Psychology: In Session, 62*(2), 185-200.

Call, K.T., Riedel, A.A., Hein, K., McLoyd, V., Petersen, A., & Kipke, M. (2002). Adolescent health and well-being in the twenty-first century: A global perspective. *Journal of Research on Adolescence, 12*(1), 69-98.

Canetto, S.S., & Sakinofsky, I. (1998). The gender paradox in suicide. *Suicide and Life-Threatening Behavior, 28*(1), 1-23.

Centers for Disease Control and Prevention (2008). Youth risk behavior surveillance-United States, 2007: Surveillance Summaries. *Morbidity and Mortality Weekly Report*, 57(4). Retrieved January, 27, 2010 from http://www.cdc.gov/mmwr/PDF/ss/ss5704.pdf

Chun, C.A., Moos, R.H., & Cronkite, R.C. (2006). Culture: a fundamental context for the stress and coping paradigm. In P.T.P. Wong and L.C.J. Wong (Eds.), *Handbook of multicultural perspectives on stress and coping* (pp. 29-54). New York: Springer.

Colarossi, L.G., & Lynch, S.A. (2000). Tales of social support throughout family development. In R.D. Harold, *Becoming a family: Parents' stories and their implications for practice, policy and research* (pp. 115-154). New Jersey: Lawrence Erlbaum Associates, Inc., Publishers.

Coleman, J., & Hagell, A. (2007). *Adolescence, risk and resilience: Against the odds.* Sussex: John Wiley & Sons.

Comrey, A. (1988). Factor-analytic methods of scale development in personality and clinical psychology. *Journal of Consulting and Clinical Psychology, 56*, 754-761.

Connor, J.J., & Rueter, M.A. (2006). Parent-child relationships as systems of support or risk for adolescent suicidality. *Journal of Family Psychology, 20*, 143-155.

Dawes, A., & Finchilescu, G. (2002). What's changed? The racial orientation of South African adolescents during rapid political change. *Childhood, 9*(2), 147-165.

DiClemente, R.J., Hansen, W.B., & Ponton, L.E. (1996). *Handbook of adolescent health risk behavior*. New York: Plenum Press.

Donson, H., Alley, Y., Breda, M., Krige, A., Laher, H., Lau, U., Lekoba, R., Lourie, L., Mathebula, B., Mtshali, J., Neethling, I., Prinsloo, M., Ross, K., & Swart, L-A. (2008). *A profile of fatal injuries in South Africa 2007: The 9th annual report of the National Injury Mortality Surveillance System (NIMSS)*. Cape Town: Medical Research Council. Retrieved May, 28, 2010 from http://www.mrc.ac.za/crime/nimss07.PDF

Erikson, E.H. (1977). *Childhood and society*. New York: Norton.

Evans, E., Hawton, K., Rodham, K., & Deeks, J. (2005). The prevalence of suicidal phenomena in adolescents: A systematic review of population based studies. *Suicide and Life-Threatening Behavior, 35*, 239-249.

Everall, R.D., Bostik, K.E., & Paulson, B.L. (2005). I'm sick of being me: Developmental themes in a suicidal adolescent. *Adolescence, 40*(160), 693-708.

Fergusson, D.M., Woodward, L.J., & Horwood, L.J. (2000). Risk factors and life processes associated with the onset of suicidal behaviour during adolescence and early adulthood. *Psychological Medicine, 30*, 23-39.

Fleischman, A. (2008). *World health organization statement*: *10 September 2008 on World Suicide Prevention Day 2008.* Retrieved January 19, 2010, from, http://www.who.int/mental_health/prevention/suicide/wspd_2008_statement.pdf

Flisher, A.J. (1999). The management of suicidal behaviour in adolescents. *Specialist Medicine*, *2*, 418-424.

Flisher, A.J., Ziervogel, C.F., Charlton, D.O., Leger, P.H., & Robertson, B.A. (1993). Risk-taking behaviour of Cape Peninsula High School students. *South African Medical Journal, 83(7)*, 474-476.

Flouri, E., & Buchanan, A. (2002). The protective role of parental involvement in adolescent suicide. *Crisis, 23*(1), 17-22.

Garnefski, N., & Diekstra, R.F.W. (1996). Perceived social support from family, school, and peers: Relationship with emotional and behavioral problems among adolescents. *Journal of American Acadamy of Child and Adolecent Psychiatry, 35*(12), 1657-1664.

George, A.A. (2005). *The influence of psychosocial factors and resources on suicidal ideation of adolescents.* Unpublished master's dissertation, University of the Free State, Bloemfontein, South Africa.

George, A.A. (2009). *Risk and resilience in adolescent suicidal ideation*. Unpublished doctoral thesis, University of the Free State, Bloemfontein, South Africa.

Groholt, B., Ekeberg, O., Wichstrom, L., & Haldorsen, T. (2000). Young suicide attempters: a comparison between a clinical and a epidemiological sample. *Journal of the American Academy of Child and Adolescent Psychiatry, 39*(7), 868-875.

Groleger, U., Tomori, M., & Kocmur, M. (2003). Suicidal ideation in adolescence-an indicator of actual risk? *Isralean Journal of Psychiatry and Related Sciences, 40*, 202-208.

Haan, N. (1997). *Coping and Defending.* New York: Academic Press.

Hawton, K., & Van Heeringen, K. (2000). *International handbook of suicide and attempted suicide.* New York: John Wily & Sons, Ltd.

Helsen, M., Vollebergh, W., & Meeus, W. (2000). Social support from parents and friends and emotional problems in adolescence. *Journal of Youth and Adolescence, 29*(3), 319-335.

Henn, C.M. (2005). *The relatioship between certain family variables and the psychological well-being of black adolescents.* Unpublished doctoral thesis, University of the Free State, Bloemfontein, South Africa.

Hobfoll, S.E., & Vaux, A. (1993). Social support: Social resources and social context. In L. Goldberger and S. Breznitz (Eds.), *Handbook of stress: Theoretical and clinical aspects* (2nd ed., pp. 685-705). New York: Free Press.

Horesh, N., Gothelf, D., Ofek, H., Weisman, T., & Apter, A. (1999). Impulsivity as a correlate of suicidal behavior in adolescent psychiatric inpatients. *Crisis, 20*(1), 8-14.

Joe, S., Stein, D.J., Seedat, S., Herman, A., & Williams, D.R. (2008). Non-fatal suicidal behaviour among South Africans: Results from the South African stress and health study. *Social Psychiatry and Psychiatric Epidemiology, 43*, 454-461.

Kaltiala-Heino, R., Rimpela, M., Rantanen, P., & Laippala, P. (2001). Adolescent depression: The role of discontinuities in life course and social support. *Journal of Affective Disorders, 64*, 155-166.

Kaplan, K.J., & Worth, S.A. (1993). Individuation-attachment and suicide trajectory: A developmental guide for the clinician. *Omega, 27*, 207-237.

Kerr, D.C.R., Preuss, L.J., & King, C.A. (2006). Suicidal adolescents' social support from family and peers: Gender-specific associations with psychopathology. *Journal of Abnormal Child Psychology, 34*, 103-114.

Kim, H.S., Sherman, D.K., & Taylor, S.E. (2008). Culture and social support. *American Psychologist, 63*(6), 518-526.

King, R.A., Schwab-Stone, M., Flisher, A.J., Greenwald, S., Kramer, R.A., Goodman, S.H., Lahey, B.B., Shaffer, D., & Gould, M.S. (2001). Psychosocial and risk behavior correlates of youth suicide attempts and suicidal ideation. *Journal of the American Academy of Child and Adolescent Psychiatry, 40*(7), 837-846.

Kirkcaldy, B.D., Eysenck, M.W., & Siefen, G.R. (2004). Psychological and social predictors of suicidal ideation among young adolescents. *School Psychology International, 25*, 301- 316.

Lakey, B., & Cohen, S. (2000). Social support theory and measurement. In S. Cohen, L.G. Underwood and B.H. Gottlieb (Eds.), *Social support measurement and intervention: A guide for health and social scientists* (pp. 29-52). New York: Oxford University Press.

Langhinrichsen-Rohling, J., Friend, J., & Powell, A. (2009). Adolescent suicide, gender, and culture: A rate and risk factor analysis. *Aggression and Violent Behavior, 14*, 402–414.

Larson, R.W., Wilson, S., & Mortimer, J.T. (2002). Conclusions: Adolescents' preparation for the future. *Journal of Research on Adolescence, 12*(1), 159-166.

Laubscher, L.R. (2003). Suicide in a South African town: A cultural psychological investigation. *South African Journal of Psychology, 33*(3), 133-143.

Lazarus, R.S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer.

Lee, J.M., & Bell, N.J. (2003). Individual differences in attachment-autonomy configurations: Linkages with substance use and youth competencies. *Journal of Adolescence, 26,* 347-361.

Lewinsohn, P.M., Rohde, P., & Seeley, J.R. (1994). Psychosocial risk factors for future adolescent suicide attempts. *Journal of the American Academy of Child and Adolescent Psychiatry, 32*, 60-68.

Lewinsohn, P.M., Rohde, P., & Seeley, J.R. (1996). Adolescent suicidal ideation and attempts: Prevalence, risk factors, and clinical implications. *Clinical Psychology Science and Practice, 3*, 25-36.

Lewis, R., & Frydenberg, E. (2002). Concomitants of failure to cope: What we should teach adolescents about coping. *British Journal of Educational Psychology, 72*(3), 419-431.

Loots, S. (2008). *The role of exposure to suicide and coping strategies in the suicidal ideation of adolescents*. Unpublished master's dissertation, University of the Free State, Bloemfontein, South Africa.

Louw, A.E., Louw, D.A., & Ferns, I. (2007). Adolescence. In D.A. Louw and A.E. Louw (Eds.), *Child and adolescent development* (pp. 278-347). Bloemfontein: Psychology Publications.

Matla, M.P. (2001). *The prevalence and risk factors for adolescent suicidal behaviours in the Northern Province.* Unpublished master's dissertation, University of the North, South Africa.

Meehan, S., Peirson, A., & Fridjhon, P. (2007). Suicidal ideation in adolescent South Africans: The role of gender and coping strategies. *South African Journal of Psychology, 37*(3), 552-575.

Meeus, W., Oosterwegel, A., & Vollebergh, W. (2002). Parental and peer attachment and identiy development in adolescence. *Journal of Adolescence, 25*, 93-106.

Moos, R.H., (2003). Social contexts: Transcending their power and their fragility. *American Journal of Community Psychology, 31*(1/2), 1-13.

Moos, R.H., & Holahan, C.J. (2003). Dispositional and contextual perspectives on coping: Toward an integrative framework. *Journal of Clinical Psychology, 59*(12), 1387-1403.

Moos, R.H., & Schaefer, J.A. (1993). Coping resources and processes: Current concepts and measures. In L. Goldberger & S. Breznitz (Eds.), H*andbook of Stress: Theoretical and Clinical aspects* (2nd ed., pp. 234-258). New York: Free Press.

Moroeng, C.M. (2001). *The psychometric properties of scales measuring perceived social support in a Setswana-speaking group*. Unpublished master's dissertation, University of the North West, Potchefstroom, South Africa.

Mpe, N.F. (2001). *The role of personality traits and family processes in attempted suicide among black adolescents*. Unpublished master's dissertation, University of Pretoria, Pretoria, South Africa.

Mullis, R.L., Hill, E.W., & Readdick, C.A. (1999). Attachment and social support among adolescents. *The Journal of Genetic Psychology, 160*(4), 500-502.

Norris, S.A., Roeser, R.W., Richter, L.M., Lewin, N., Ginsburg, C., Fleetwood, S.A., Taole, E., & van der Wolf, K. (2008). South African-ness among adolescents. The emergence of a collective identity within the birth to twenty cohort study. *Journal of Early Adolescence, 289(*1), 51-69.

Ozer, E.M., Macdonald, R., & Irwin, C.E., Jr. (2002). Adolescent health care in the U.S.: Implications and projections for the new millennium. In J.T. Mortimer & R.W. Larson (Eds.), *The changing adolescent experience: Societal trends and the transition to adulthood* (pp. 175-207) New York: Cambridge University Press.

Peltzer, K. (2008). Social support and suicide risk among secondary school students in Cape Town, South Arica. *Psychological Reports, 103*, 653-660.

Pienaar, J., & Rothmann, S. (2005). Suicide ideation in the South African police service. *South African Journal of Psychology, 35*(1), 58-72.

Pierce, G.R., Sarason, B.R., Sarason, I.G., Joseph, H.J., & Henderson, C.A. (1996). Conceptualizing and assessing social support in the context of the family. In G.R. Pierce, B.R. Sarason, and I.G. Sarason (Eds.), *Handbook of social support and the family* (pp. 3-23). New York: Plenum Press.

Portes, P.R., Sandhu, D.S., & Longwell-Grice, R. (2002). Understanding adolescent suicide: A psychosocail interpretation of developmental and contaxtual factors. *Adolescence, 37*, 805-814.

Prinstein, M.J., Boergers, J., & Spirito, A. (2001). Adolescents' and their friends' health-risk behavior: factors that alter or add to peer influence. *Journal of Pediatric Psychology, 26*(5), 287-298.

Prinstein, M.J., Boergers, J., Spirito, A., Little, T.D., & Grapentine, W.L. (2000). Peer functioning, family dysfunction, and psychological symptoms in a risk factor model for adolescent inpatients' suicidal ideation severity. *Journal of clinical child psychology, 29*(3), 392-405.

Procidano, M.E., & Heller K. (1983). Measures of perceived social support from friends and from family: Three validation studies. *American Journal of Community Psychology, 11*, 1-24.

Ptacek, J.T. (1996). The role of attachment in perceived support on the stress and coping process. In G.R. Pierce, B.R. Sarason, and I.G. Sarason (Eds.), *Handbook of social support and the family* (pp. 495-520). New York: Plenum Press.

Ramgoon, S., Bachoo, S., Patel, C., & Paruk, Z. (2006). Could a healthy ego identity serve as a protective factor against suicidal tendencies? A pilot study. *Journal of Child and Adolescent Mental Health, 18*(2), 49-54.

Recklitis, C.J., & Noam, G.G. (1999). Clinical and developmental perspectives on adolescent coping. *Child Psychiatry and Human Development, 30*(2), 87-101.

Reddy, S.P., James, S., Sewpaul, R., Koopman, F., Funani, N.I., Sifunda, S., Josie, J., Masuka, P., Kambaran, N.S., & Omardien, R.G. (2010). *Umthente uhlaba usamila – The 2nd South African national youth risk behaviour survey 2008*. Cape Town: South African Medical Research Council, 2010. Retrieve April 24, 2010, from http://www.timeslive.co.za/multimedia/archive/00609/yrbs_2008_final_rep_609325a.pdf

Republic of South Africa (2006) Act No. 38, 2005: Children's Act, 2005. Government Gazette, 492 (No. 28944). Retrieved March 17, 2010, from http://www.info.gov.za/view/DownloadFileAction?id=67892

Reynolds, W.M. (1999). *Suicidal ideation questionnaire for adolescents*. Odessa, Florida: Psychological Assessment Resource.

Robinson, N.S., & Garber, J. (1995). Social support and psychopathology across the life span. In D. Cicchetti & D.J. Cohen (Eds.), *Developmental psychopathology. Vol. 2: Risk, disorder, and adaptation* (pp. 162-209). New York: Wiley.

Rutter, P.A., & Behrendt, A.E. (2004). Adolescent suicide risk: *Four psychosocial factors. Adolescence, 39*(154), 295-302.

Ryan, R.M., & Solky, J.A. (1996). What is supportive about social support? In G.R. Pierce, B.R. Sarason, and I.G. Sarason (Eds.), *Handbook of social support and the family* (pp. 249-267). New York: Plenum Press.

Schlebusch, L. (2005). *Suicidal behaviour in South Africa.* Scottsville, South Africa: University of KwaZulu-Natal Press.

Schlebusch, L., Vawda, N.B.M., & Bosch, B.A. (2003). Suicidal behaviour in black South Africans. *Crisis, 24*(1), 24-28.

Seiffge-Krenke, I. (2000). Causal links between stressful events, coping style, and adolescent symptomatology. *Journal of Adolescence, 23*, 675-691.

Smith, D., & Anderson, R. (2000). Social support, risk-level and safety actions following acute assessment of suicidal youth. *Journal of Youth and Adolescence, 29(*4), 451-465.

Sommer, M. (2005). *Suicidal behaviour of high school students: Attempts, ideation and risk factors of South African and German adolescents*. Unpublished masters dissertation, University of South Africa, Pretoria, South Africa.

SPSS Incorporated (2009). *SPSS user's guide: Version 17.0*. New York: Author.

Sroufe, A.L., Duggal, S., Weinfeld, N., & Carlson, E. (2000). Relationships, development, and psychopathology. In A.J. Sameroff, M. Lewis, & S.M. Miller (Eds.), *Handbook of developmental psychopathology* (2nd ed., pp.75-92). New York: Kluwer Academic/Plenum Press.

Statistics South Africa (2001). *Statistics South Africa- Census 2001*.

Steinhausen, H.C., & Winkler-Metzke, C.W. (2004). The impact of suicidal ideation in preadolescence, adolescence, and young adulthood on psychosocial functioning and psychopathology in young adulthood. *Acta Psychiatry Scandinavia, 110*, 438-445.

Steyn, H.S. (1999). *Praktiese beduidendheid: die gebruik van effekgroottes*. Potchefstroom: Publikasiebeheerkomitee, PU vir CHO.

Storksen, I., Roysamb, E., Holmen, T.L., & Tambs, K. (2006). Adolescent adjustment and well-being: Effects of parental divorce and distress. *Scandinavian Journal of Psychology, 47*, 75-84.

Sun, R.C.F., & Hui, E.K.P. (2007). Psychosocial factors contributing to adolescent suicidal ideation. *Journal of Youth Adolescence, 36,* 775-786.

Taylor, S.E., Sherman, D.K., Kim, H.S., Jarcho, J., Takagi, K., & Dunagan, M.S. (2004). Culture and social support: Who seeks it and why? *Journal of Personality and Social Psychology, 87*(3), 354-362.

Thoits, P.A. (1995). Stress, coping, and social support processes: Where are we? What next? *Journal of Health and Social Behavior*, (Extra Issue), 53-79.

Tom, D.P., & Coetzee, C.H. (2004). Identity development of South African adolescents in a democratic society. *Society in Transition, 35*, 183-193.

Van Renen, L.J., & Wild, L.G. (2008). Family functioning and suicidal ideation/behaviour in adolescents: A pilot study. *Journal of Child and Adolescent Mental Health, 20*(2), 111-121.

Vorster,H.H., Wissing,M.P., Venter,C.S., Kruger,H.S., Kruger,A., Malan,,N.T., De Ridder, J.H., Veldman,F.J., Steyn,H.S, Margetts,B.M., & MacIntyre,U. (2000). The impact of urbanisation on physical, psychological and mental health of Africans in the North West Province of South Africa: the THUSA study. *South African Journal of Science*, *96*, 505 – 514.

Walsh, F. (2003). Changing families in a changing world: Reconstructing family normality. In F. Walsh (Eds.), *Normal family processes: Growing diversity and complexity* (3rd ed., pp. 3-26). New York: Guilford Press.

Wasserman, D., Cheng, Q., & Jiang, G. (2005). Global suicide rates among young people aged 15-19. *World Psychiatry, 4*(2), 114-120.

Wild, L.G., Flisher, A.J., & Lombard, C. (2004). Suicidal ideation and attempts in adolescents: Association with depression and six domains of self-esteem. *Journal of Adolescence 27*, 611-624.

Williams, P., Barclay, L., & Schmied, V. (2004). Defining social support in context: A necessary step in improving research, intervention, and practice. *Qualitative Health Research, 14*, 942-960.

Wills, T.A., & Shinar, O. (2000). Measuring perceived and received social support. In S. Cohen, L.G. Underwood and B.H. Gottlieb (Eds.), *Social support measurement and intervention: A guide for health and social scientists* (pp. 86-135). New York: Oxford University Press.

Wilson, K.G., Stelzer, J., Bergman, J.N., Kral, M.J., Inayatullah, M., & Elliot, C.A. (1995). Problem solving, stress, and coping in adolescent suicide attempts. *Suicide and Life-Threatening Behaviour, 25(*2), 241-252.

Windle, M., & Miller-Tutzauer, C. (1992). Confirmatory factor analysis and concurrent validity of the perceived social support-family measure among adolescents. *Journal of Marriage and the Family, 54*, 777-787.

Witte, T.K., Merrill, K.A., Stellrecht, N.E., Bernert, R.A., Hollar, D.L., Schatschneider, C., & Joiner Jr, T.E. (2008). "Impulsive" youth suicide attempters are not necessarily all that impulsive. *Journal of Affective Disorders, 107*, 107-116.

Wyder, M., & De Leo, D. (2007). Behind impulsive suicide attempts: Indications from a community study. Journal of Affective Disorders, 104, 167-173.

Yeh, C.J., Arora, A.K., & Wu, K.A. (2006). A new theoretical model of collectivistic coping. . In P.T.P. Wong and L.C.J. Wong (Eds.), *Handbook of multicultural perspectives on stress and coping* (pp.55-72). New York: Springer

SELF-ESTEEM, HOPE, SENSE OF COHERENCE AND COGNITIVE STYLE IN ADOLESCENT SUICIDE IDEATION

ABSTRACT

The movement towards the promotion of mental health, rather than the mere explanation of mental health problems, calls for research on protective factors rather than focussing on risk factors only. The aim of the present study was to determine how adolescents with high risk and those with low risk of suicide differed with regard to the factors of self-esteem, hope, a sense of coherence and cognitive style as potential protective factors. These factors were assessed with the following measuring instruments: The Rosenberg Self-esteem Scale, The Hope Scale, The Orientation to Life Scale and The Adolescent Cognitive Style Questionnaire. A comparison was drawn between 214 adolescents with a high suicide risk and 267 adolescents with a low suicide risk as determined by their scores on the Suicidal Ideation Questionnaire (SIQ) (Reynolds, 1999). The results from the MANOVA and ANOVA analyses indicated that adolescents with a high risk of suicide displayed lower self-esteem, a weaker sense of coherence and made more negative attributions that negative life events were. Contrary to expectations, the factor of hope was high in both the low and high suicide risk groups. Furthermore, gender did not make any independent contribution in explaining the difference in suicidal ideation for any of the predictor variables studied. The limitations of the study are discussed and recommendations made.

Keyword: *Adolescence, Suicidal ideation, Protective factors, Suicide risk, Self-esteem, Hope, Sense of Coherence, Cognitive Style*

INTRODUCTION

The devastating global effects of youth suicide are difficult to ignore when suicide is reported as the second most common cause of mortality in the 15 to 19 year old age group (Patton, 2009; World Health Organization, 2008). This highlights that the phase of adolescence cannot only be seen in terms of the promises it holds for development, but should also be regarded as challenging (Kleinert, 2007). For this reason, research in the field of adolescent suicide needs to focus more on the factors associated with coping with such challenges rather than keeping the accent on finding explanations in psychosocial risk factors which was the approach in the past. This is in agreement with the World Health Organization's plea for youth psychosocial development and for a focus on the factors that can support healthy adolescent functioning (Herrman, Saxena & Moodie, 2005). Insight into these health-promoting factors is especially important for developing countries like South Africa where the youth should rather participate and contribute to their own development and that of society than be hindered by mental health problems such as suicide (Patel, Flisher, Hetrick & McGorry, 2007).

Protective factors can be categorized on the levels of individual, family and community functioning (Coleman & Hagell, 2007). The body of research on psychosocial risk factors associated with adolescent suicide indirectly explains the factors that might be lacking within each of these domains of functioning and that might protect adolescents who present a high suicide risk. Psychosocial risk factors previously identified on the individual level include characteristics such as psychiatric disorders, interpersonal loss, poor problem-solving skills, hopelessness, impulsivity, poor self-esteem, prior suicide attempts, poor parent-child relationships, school and disciplinary problems (Bridge, Goldstein & Brent, 2006; Gould, Greenberg, Velting & Shaffer, 2003; Pelkonen & Marttunen, 2003). Based on this list, the current study will focus on factors of self-esteem, hope, sense of coherence, and cognitive style.

The stress and coping model proposed by Moos and Schaefer (1993) is an integrative conceptual framework, which provides a comprehensive understanding of coping by including both dispositional (the stable, person-based factors used in general adaptation) and contextual (the influence of specific stressful contexts in coping

choices) components in the stress-coping-process. This model combines the complimentary strengths of both the dispositional and contextual perspectives. Dispositional components in this model include both personal and social resources that, in combination, are available to help the individual deal with stress. Personal resources include relatively stable coping styles (e.g. autonomy) and personal characteristics (e.g. a sense of coherence), while social resources refer to ongoing environmental factors (e.g. health and family relationships) which can either be stressors or resources, depending on the direction of influence. The more stable and enduring personal and social resources interact with transitory conditions (e.g. the adolescent developmental phase) and these three factors shape cognitive appraisal (e.g. cognitive style) and coping skills. All this interaction between different components in the stress and coping process affect an individual's health and well-being outcomes (e.g. suicidal ideation), which in turn affect all these components reciprocally (Moos & Holahan, 2003; Moos 2003).

Each of the four predictor variables in the current study (self-esteem, hope, sense of coherence and cognitive style) will be described and conceptualized next in terms of a suicidal outcome, and exploring the development of the construct, with specific reference to gender.

Self-esteem

Self-esteem is an overall sense of worth and well-being (Louw, Louw & Ferns, 2007), with a high sense of self-esteem being strongly associated with healthy functioning in different domains. Self-esteem is important as a guide for future behaviour and choices and assists with goal attainment (Tesser, 2004). According to the self-esteem theory, self-esteem is socially constructed and depends heavily on reflected appraisals, social comparisons, and self-attributions (Rosenberg, Schooler & Schoenbach, 1989). In terms of coping, low self-esteem- as a felt worthlessness (Pfeffer, 2001)- can estrange the adolescent from supportive interpersonal relations which lessen the protective value of such social belongings (Tesser, 2004). Low self-esteem can further inhibit someone's participation in activities that could otherwise help to enhance his or her self-esteem. This may become a self-perpetuating cycle

whereby social withdrawal reduces the person's self-esteem and potential for coping (Overholser, Adams, Lehnert & Brinkman, 1995). In contrast, adolescents with higher scores for self-esteem use more problem-focused coping than adolescents with lower scores for self-esteem (Mullis & Chapman, 2000). This can be understood as part of the confidence in the self that is needed for dealing with difficulties and explains why such an approach style of coping is used.

Self-esteem is proposed as a protective mechanism on an individual level (Blum, 1998; Olssen, Bond, Burns, Vella-Brodrick & Sawyer, 2003). As such, it acts to ameliorate an individual's response to adversity by being part of his or her coping strategies that are used to deal with challenges (Rutter, 2007). It is difficult to determine the direction of a causal relationship between self-esteem and problem behaviour such as suicidal ideation with any certainty (Rosenberg et al., 1989). However, it is important to acknowledge that suicidal ideation has been associated with dysfunctional coping strategies (Loots, 2008; Meehan, Peirson & Fridjhon, 2007). Self-esteem can therefore be part of protection against outcomes such as suicidal ideation.

During adolescence self-esteem has to be modified continuously due to the accelerated nature of maturation and development in aspects of cognitive functioning, physical appearance, sexuality, social relationships, and career choices to name a few (Louw et al., 2007). In this process the adolescent's self-image becomes differentiated into eight domains: scholastic competence, social appearance, athletic competence, physical appearance, job competence, romantic appeal, behavioural conduct and close friendship as proposed by (Harter, 1999). Each of these domains influences global self-esteem to the extent of the importance attached to that domain. A high level of global self-esteem indicates a positive self-image in all domains (Louw et al., 2007). In a meta-analysis of gender and self-esteem, males and females have shown similar levels of self-esteem- but self-esteem may depend on different sources (King, Hyde, Showers & Buswell, 1999). These are important for the understanding of how self-esteem functions when facing threat. For example, girls

seem to be more dependent on support and approval from peers and they tend to respond differently to rejection than boys (Sun & Hui, 2007).

Hope

The guiding assumption of hope theory is that human actions are goal directed. According to this, hope is defined as the enduring disposition an individual has about successful goal-directed determination (agency) and the planning of ways to meet these goals (pathways). In order to achieve certain goals both motivation and planning are necessary, and individually neither motivation nor planning alone is sufficient for hopeful action (Snyder et al., 1991). The correlation found between hope and life-satisfaction proposes that, through perceived progress in the attainment of goals, personal meaning and satisfaction are created which relate to greater psychological adjustment and well-being (Chang, 2003; Snyder, 2002). Hope has been found to make a significant and unique contribution to the prediction of well-being and, together with self-efficacy, reflects a positive orientation toward everyday experience and therefore plays a unique role in coping with challenges (see Magaletta & Oliver, 1999).

In terms of the relationship between hope and suicide, Snyder (1994) explains that suicide in itself can be seen as a goal when it is described as the final act of hope. The process of suicide starts when life goals are obstructed. This elicits a sense of being blocked and frustrated and ultimately causes such unbearable pain that suicide becomes the only remaining achievable goal (Snyder, 1994). Analogous then to this concept of suicide, the individuals with suicidal tendencies show high levels of hope, contrary to the expectation that their hope should be low.

Hope is developed in childhood through the experience of cause and effect of events-together with the encouragement from others to overcome obstacles and the experience of praise when a goal is accomplished (Snyder, 1994; 2000; 2002). This positive emotional set accompanies a high-hope individual in the pursuit of future goals and provides him or her with a motivational focus for effectively planning the task at hand. In contrast, people with low levels of hope are susceptible to stress and

risk and become derailed in the pursuit of their goals when pre-existing apprehension is perpetuated into further negative emotions. This happens when the person perceives that goals are unattainable. Those with a history of adversity during childhood do not develop hope; and their "trait hope" remains low. Such individuals are much more susceptible to stress when they are frustrated in their efforts to attain their goals. Their lack of agency and pathways thinking hinders them from dealing with difficult situations even more (Grewal & Porter, 2007).

Sense of coherence (SOC)

A sense of coherence (SOC) is a way of seeing the world from a dispositional orientation, which facilitates successful coping with the countless, complex stressors confronting adolescents in the course of living (Antonovsky, 1993). A sense of coherence specifies the three broad domains for interpreting stimuli from the environment as: Comprehensible, in which stimuli make cognitive sense and are associated with the fact that information is perceived as predictable, ordered, consistent, structured, and clear; Manageable, that requires that demands be under the control of the individual and others; and Meaningful, in which matters are motivationally relevant in terms of challenges being worth engaging with as part of shaping one's destiny (Antonovsky, 1987; Strümpfer, 2002). An SOC can be conceptualized as the common factor to a repertoire of generalised resistance resources (GRRs), including physical (e.g. health), social (e.g. support), and individual factors (e.g. intelligence). These resources are universally meaningful across all cultures- and this makes an SOC a culture-free construct (Antonovsky, 1990; 1993).

An SOC is a good predictor of an individual's ability to assess and cope with stressful situations (McSherry & Holm, 1994) and consequently of well-being in diverse populations and contexts (e.g. Amirkhan & Greaves, 2003). In a study by McSherry and Holm (1994), it was found that the coping behaviours of people with a low SOC were significantly less approach-oriented and that they were less likely to believe that they possessed the resources to cope with demands. In addition, prior to stressful situations people with a low SOC showed more psychological distress which is

maintained through-out the process of coping, than those with a medium to high SOC. In accordance with this, Kerr-Hutchinson (2005) found the manageability component of an SOC as the most important predictor of whether or not a young person will be able to select effective coping strategies to handle stressors. This is why the strategies/interventions aimed at strengthening a sense of coherence are highly effective in terms of facilitating coping. (Kerr-Hutchinson, 2005).

The development of an SOC starts in childhood and continues to young adulthood, after which it is hypothesized that an SOC will remains relatively stable through-out adulthood (Antonovsky, 1994). The development of a strong SOC is stimulated by three kinds of life experiences transmitted through family and other social institutions influenced by gender, cultural, economic, and genetic characteristics. Firstly, a high sense of comprehensibility is stimulated by the experience of consistency in life. Secondly, high sense of manageability is particularly enhanced by a balanced load of life experiences. Thirdly, participation in socially valued decision-making enables the individual to ascribe meaning to life experience (Antonovsky, 1987). Because an SOC is developed through rather general universal life experiences, it does not seem to develop in gender-specific ways. For example, two South African studies that did not find any gender differences in youth samples confirm this (Kerr-Hutchinson, 2005; Roothman, Kirsten & Wissing, 2003). However, in an American study by Marsh, Clinkinbeard, Thomas and Evans (2007), it was shown that an SOC increases as adolescent females get older; but this phenomenon is unexplained.

Cognitive style

It is indeed true that stressful life experiences predict depression among adolescents (Grant et al., 2004) and one explanation for this interaction is by means of the concept of cognitive style, which pertains to how individuals explain life events. A negative/pessimistic explanatory style increases the vulnerability to the development of hopelessness-depression and suicide (Abramson, Metalsky & Alloy, 1989). Negative cognitive style/ or depressogenic thinking creates a feeling of hopelessness in the individual when it is asserted that negative life events are likely to persist over time (stable) and affect many areas of his or her life (global), will have further

negative consequences and infer negative self characteristics from the event (Abramson et al., 1998; Abramson et al., 2002). In contrast, adolescents with an optimistic explanatory style report having less suicidal ideation, negative and traumatic life events than adolescents with a pessimistic explanatory style (Hirsch, Wolford, LaLonde, Brunk & Parker-Morris, 2009). Those with a more optimistic style of explaining negative events tend to avoid self-blame and can acknowledge a traumatic experience as an isolated event with limited consequences for other areas of their lives.

Given the extensive evidence linking negative cognitive style to depression, it is important to understand the developmental origins of this cognitive vulnerability in adolescents. It has been proposed by Rose and Abramson (1992) that children exposed to repeated and uncontrollable negative life events may develop a more negative cognitive style because over time children internalize a hopelessness-belief that change will not happen in the future. One such domain of negative life events that shows the strongest relationship with the development of cognitive vulnerability in adolescents is negative peer-related events (peer harassment, overt peer aggression and relational peer aggression) (Mezulis, Hyde & Abramson, 2006). Unfortunately, cognitive vulnerability to depression, which crystallizes during the transition to adolescence, developmentally coincides with the adolescent's increased control over their social and interpersonal worlds. And so, in the domain of peer relationships, the potential risk for negative events is therefore high (Cole, Maxwell & Martin, 1997).

Hankin and Abramson (2002) found gender differences for attributional style. Girls exhibited a more depressogenic attributional style than boys, with greater levels of general negative cognitive style, attributional style, and negative inferences for self, (which accounted for girls' elevated levels of depressive symptoms compared to boys). Coyne and Whiffen (1995) argued that people's present social contexts might powerfully influence their cognitive vulnerability to depression. Adolescent girls are more likely than boys to encounter negative life events (Rudolph & Hammen, 1999) because of their greater awareness of situational change. This leads to greater elevations of initial negative affect (Wichstrom, 1999) because gender socialization

and negative affect transactionally contribute to the generation of more predictors of negative life events (contributed by the individual), which restart the causal chain of depression (Hankin & Abramson, 2001).

The following research methodology will be used.

METHODOLOGY

The aim of the study was to determine whether the participants with high levels of suicidal ideation differ significantly from those participants with low levels of suicidal ideation with regard to the dispositional factors of hope, self-esteem, sense of coherence and cognitive style.

Research design

Multivariate analysis of variance (MANOVA) was used to examine the impact of suicidal ideation (high and low levels) and gender across all predictor variables (hope, self-esteem, sense of coherence, cognitive style). In cases where significant effects were obtained, the multivariate analysis was followed by an analysis of variance (ANOVA). Effect sizes are given as an indication of the degree of practical importance of findings.

Participants and information gathering

An overall sample of 594 grade 8 to 10 learners from six public senior secondary schools in an urban town in the Western Cape region, South Africa, was selected by means of a convenient sampling method to participate in a research project. The aims of the current study were only investigated within a sub-sample of 481 learners of this larger participant pool. This sub-sample of participants was composed of those with high and those with low suicidal ideation (SI) scores, identified by cut-off scores on the *Suicidal Ideation Questionnaire* (see discussion on measuring instruments). For the aim of the present study the participants in the average range (n=113) were excluded from analysis. The participants in the present study had the following biographic profile:

- the sample consisted of 481 learners from grades 8 to 10;
- the high suicidal ideation group (high SI) consisted of 214 learners, with a gender distribution of 90 males and 124 females;
- the low suicidal ideation group (low SI) consisted of 267 learners, with a gender distribution of 137 males and 130 females;
- the age range was 13 to 19 years, with a mean age of 15,0 (SD = 1,21).
- the population group[1] distribution for the high suicidal ideation group was: black (23,4%; n=50), Coloured(62,1%; n=133), white(14,5%; n=31); and
- the population group distribution for the low suicidal ideation group was: black (16,7%; n=44), Coloured (39,8%; n=105), white (43,6%; n=115).

Concerning ethical considerations, the concerned committees at the University of the Free State approved the study. The Western Cape Education Department also supported the study and granted permission for the study to be conducted. The necessity and aims of the study were discussed with the school principals who identified the learners available for participation during free periods. The decision that it was not deemed necessary to obtain parental consent was based on the South African Children's Act No. 38 of 2005 (Republic of South Africa, 2006) which acknowledges the rights of children over the age of 12 to consent to their own medical treatment and to make other health-related decisions without parental consent. Informed consent was received from the learners who participated in this study. Participants were ensured of the confidentiality and anonymity of their responses and counselling opportunities were offered post-participation.

During the administration of the measures, a registered psychologist was present. The measuring instruments were translated from the original English to Afrikaans and Xhosa using the back translation method. The questionnaires were completed within

[1] In this study the term 'population group' and associated references such as 'black', 'Coloured', 'Indian/ Asian' and 'white' are used. The use of these terms in this article does not imply any acceptance of the historical racist assumptions to which these labels might allude. Instead, the use of these terms is intended to differentiate between the conditions within which these 'population groups' still exist in South Africa. Another reason for including 'population group' names is for the purpose of statistical comparison with other research data issued by statistical authorities in South Africa e.g. Statistics SA and National Injury Mortality Surveillance System (NIMSS).

school hours during a 90-minute session with no breaks because of time constraints. During the testing it was apparent that participants had difficulty reading the Xhosa and it was later admitted by the teachers that the Xhosa speaking adolescents were sometimes more fluent in English than Xhosa. The problem was addressed as follows: if a learner indicated that he/she could not read or understand a question, the English version of the question was made available to the participant.

Measuring instruments

The following six measuring instruments were utilised:

A demographic questionnaire, compiled by the researcher, was used to obtain data on age, gender, population group, language, family and parental profile.

The Suicidal Ideation Questionnaire for Adolescents (SIQ) (Reynolds, 1999). This questionnaire measured the extent of suicidal thoughts in the preceding month. The criteria stipulated by Pienaar and Rothmann (2005) and used by George (2009) to evaluate suicide risk, were also adopted in this study (cut-off scores: low risk =16, and high risk =32). A comparative South African study done by George (2005) found the reliability of the scale to be very good, with a Cronbach α-coefficient measured at 0,945. This is in line with the original standardization sample with a reported internal consistency of α= 0,94 (Reynolds, 1999).

The Rosenberg Self-esteem Scale (Rosenberg, 1989) measures global, one-dimensional self-esteem based on the individual's overall impression and evaluation of himself or herself after integrating past performances (Harter, 1993). The higher the total score, the higher the self-esteem that is experienced. The author of the instrument reported alpha coefficients of between 0,77 and 0,88 for the total score of this measuring instrument (Rosenberg, 1989). In a South African study done by George (2005) a Cronbach alpha coefficient of 0,643 was reported.

The Hope Scale (Snyder et al., 1991). Hope, as part of a person's perception that goals can be met involves a cognitive set which contains a sense of determination (agency) and the planning of successful goal-directedness (pathways) (Snyder et al., 1991). Cronbach alpha coefficients reported by Snyder et al. (1991) are 0,71 to 0,76 for the agency subscale and 0,63 to 0,80 for the pathways subscale. In a South African adolescent sample George (2005) reported Cronbach alpha coefficients of 0,585 and 0,719 for agency-hope and pathways-hope.

The Orientation to Life Scale (Antonovsky, 1987). A strong sense of coherence (SOC) is a way of seeing the world which facilitates the successful coping with the stressors that confront us in the course of life (Antonovsky, 1993). In a review of studies using this scale, reliability coefficients ranging from 0,82 to 0,95 were reported (Antonovsky, 1993). The scale has been used widely in South African studies. In one such a study by Kerr-Hutchinson (2005) with a multi-cultural group of 17 to 21 year old adolescents, a Cronbach alpha coefficient of 0,876 was reported.

The Adolescent Cognitive Style Questionnaire (ACSQ) (Hankin & Abramson, 2002). The ACSQ indicates the presence of a negative cognitive style to explain that the cause of the negative event is (a) internal, (b) stable, (c) global, (d) that further negative consequences will result from the negative event, and (e) that the occurrence of the event signifies that the person's sense of self is flawed. In the current study these ratings are given the following category names: Internal attribution, Stability, Global, Generalization, and Self-blame. The internal consistency reliability was demonstrated with alpha = 0,95 in the developmental study (Hankin & Abramson, 2002).

In order to investigate the internal consistency of the measuring instruments for the current sample, Cronbach's α-coefficients were calculated for all the scales and subscales used in the present study. The results are presented in Table 1.

Table 1: Alfa-coefficients of the different measuring instruments for the sample as a whole as well as for the separate population groups.

Measuring Instruments	**α-coefficient**
Suicidal Ideation (SIQ)	0,967
Self-esteem	0,708
Hope:	
Agency	0,802
Pathways	0,748
Sense of Coherence (SOC)	
Comprehensibility	0,689
Manageability	0,605
Meaningfulness	0,640
Total scale	0,822
Cognitive style	
Internal attribution	0,864
Stability	0,808
Global	0,799
Generalization	0,823
Self-blame	0,816

Based on the norms proposed by Nunnally and Bernstein (1994), coefficients of 0,7 and above are considered acceptable for non-cognitive constructs. Table 1 shows that acceptable internal consistency measures were obtained for all the scales accept for two of the sense of coherence (SOC) subscales (Manageability and Meaningfulness). A possible explanation for this result on the SOC might be that the item scenarios are outside the context of some of the participants. It was, however, decided to include this scale in further analysis because the reliability coefficient for the complete scale is still good. The *Suicidal Ideation Questionnaire (SIQ)* shows a particular good reliability coefficient of 0,97 which is higher than reported in the development of the scale.

Statistical analysis

Descriptive statistics were calculated for all scales and subscales using raw scores.

The current study investigated significant differences that exist in the mean scores for self-esteem, hope, sense of coherence and cognitive style for a) the suicidal ideation group (composing of both high and low scorers) as well as for b) the interaction of suicidal ideation and gender.

A multivariate analysis of variance (MANOVA) was conducted in the present study because more than one criterion variable and various predictor variables were investigated. In cases where significant results (*F*-values) were obtained with the MANOVA, a follow-up analysis of variance (ANOVA) was done with each of the predictor variables. The Scheffé procedure was employed to determine which of the mean scores for a subgroup on the predictor variable show statistical significance.

In the current study both the 1%-level and the 5%-level of significance of results were used. Effect sizes were calculated as a measurement of the practical value of statistically significant findings of the current study. The effect sizes (*f*) of the compared population mean scores (as done in one-way analysis of variance) were interpreted according to the following guideline values: f = 0,1 (small effect); f = 0,25 (medium effect) and f = 0,4 (large effect) proposed by (Steyn, 1999). Effect sizes were only calculated for statistical significant results on either the 1% or 5%-levels of significance. Statistical calculations were performed with the SPSS-computer program (SPSS Incorporated, 2009).

The results will be discussed further.

RESULTS AND DISCUSSION OF RESULTS

Descriptive statistics

The descriptive statistics (mean and standard deviation) for all the variables in the present study sample are reported in Table 2.

Table 2: Mean scores and standard deviations for the total study sample (both high SI and low SI scorers) (N=481)

Variable	$\overline{X}$	S
Suicidal ideation:	38,77	43,40
Self-esteem:	20,31	4,98
Hope:		
Agency	11,24	3,15
Pathway	11,29	2,95
Sense of Coherence:		
Comprehensibility	45,03	13,61
Manageability	46,61	11,37
Meaningfulness	41,94	9,93
Total scale	133,58	29,27
Cognitive style:		
Internal attribution	5,77	2,50
Stability	4,36	2,17
Global	4,36	2,13
Generalization	4,02	2,14
Self-blame	4,08	2,44

For the criterion variable of suicidal ideation, the current group of adolescents attained a mean of 38,77 and a standard deviation of 43,40. The large standard deviation is explained in terms of the scale's scores, which range from 0 to 180. In another comparable South African study by George (2005), a mean of 39,51 and a standard deviation of 36,14 were reported. The mean obtained in both the present study and the study by George (2005) were higher than the cut-off score of 32 for high suicidal ideation, suggesting that adolescents in both these studies were more inclined to have high suicidal ideation than low suicidal ideation.

The participants in the current study obtained a mean of 20,31 and a standard deviation of 4,98 for self-esteem. These results indicated that, as a whole, the group had acceptable self-esteem values when compared to the scale's theoretical mean of 15. Almost identical results (mean=20,33; s=4,57) were reported by George (2005) for an adolescent group of the Northern Cape region.

On the construct of hope, the participant's mean scores for the subscales of agency and pathways were 11,24 and 11,29. Compared to the maximum and minimum subscale scores of 16 and 4 with a theoretical mean of 10, these scores indicate that agency-hope and pathways-hope for the current participants are in the high-hope range. In another South African study with a community sample of adolescents using the same hope scale, slightly higher mean scores for agency-hope and pathways-hope were reported as 13,19 and 12,36 (Venter, 2004). The comparison with Venter's findings is however done with caution because of low reliability coefficients reported on the hope scale.

The performance of participants on the total sense of coherence scale (mean=133,58; standard deviation=29,27) was within close range of the average score of 137 for the sense of coherence scale in South Africa, as proposed by Strümpfer and Wissing (1998). International data indicates that the average sense of coherence ranges from 117 to 152, with a calculated mean of 134- this is the same as the current study's mean score. Thus one may say that the adolescents in the present study show a comparable overall sense of coherence in the average range.

The mean scores on the cognitive style, subscales range from as high as 5,77 for Internal Attribution to 4,02 for Generalization which is higher than the mean scores found in the construction of the scale (Hankin & Abramson, 2002). This indicate that participants in the current study are more inclined to use negative cognitive styles in explaining events that happen to them. This negative style can cause the individual to believe that he or she does not have the ability to cope with situations.

Multivariate analysis

The MANOVA procedure was employed to investigate the role played by the interaction of suicidal ideation (composing of high + low scorers) **x** gender in self-esteem, hope, sense of coherence and cognitive style. The analysis was done with the assistance of the SPSS-computer program (SPSS Incorporated, 2009).

The results of the MANOVA-analysis are presented in Table 3. Effect sizes of results are expressed with the *partial eta squared* value.

Table 3: Manova F-value to test the degree of suicidal ideation and interaction with gender

Source	**F-value+**	***V***	***P***	***Partial Eta squared***
Composite Suicidal ideation Group (CSIG) (high + low)	19,132**	11; 469	0,000	0,310
Gender x SIG	7,821**	33;1397	0,000	0,156

** p <= 0,01
* p <= 0,05
+ Hotelling's Trace has been used
Effect size: 0,1= small; 0,25= medium; and 0,4= large

From Table 3 it is clear that differences in the means on the predictor variables do exist for the suicidal ideation group (composing of high and low SI) as well as for the interaction with gender on the 1%-level of significance. The corresponding effect sizes for the suicidal ideation group indicate that the results are of medium size and are, therefore, of practical importance. The result that concerns the interaction is of lesser practical value. Both of the results will be explored further in Tables 4 and 5, for both the suicidal ideation groups (high and low) and for the interaction suicidal ideation with gender.

Suicidal ideation groups (SIG)

In order to estimate on which of the predictor variables significant differences on the mean scores of the two groups (high and low scorers) exist, one-way analysis of variance was performed. The results of the predictor variables with the effect sizes (*f*) appear in Table 4.

Table 4: F-values for the one-way analysis of variance to test for differences in mean scores for the two suicidal ideation groups on all the predictor variables.

Scales	*High (N=214)*		*Low (N=267)*		F-value	*P*	*f*
	$\overline{X}$	*S*	$\overline{X}$	*s*			
Self-esteem:	18,26	4,91	21,96	4,40	75,575**	0,000	0,40
Hope:							
Agency	10,92	2,91	11,49	3,31	4,032*	0,045	0,09
Pathway	11,04	2,99	11,49	2,91	2,865	0,091	-
Sense of Coherence:							
Comprehensibility	39,24	12,39	49,67	12,76	81,388**	0,000	0,41
Manageability	40,57	10,43	51,45	9,65	140,686**	0,000	0,54
Meaningfulness	37,25	10,02	45,70	8,11	104,569**	0,000	0,47
Total	117,05	26,09	146,82	24,60	164,80**	0,000	0,26
Cognitive style:							
Internal attribution	42,45	17,37	38,76	17,45	5,317*	0,022	0,11
Stability	35,80	16,16	26,32	12,93	51,090**	0,000	0,33
Global	35,48	14,99	26,49	13,64	47,263**	0,000	0,31
Generalization	34,73	15,65	22,88	12,09	87,914**	0,000	0,43
Self-blame	35,00	18,13	23,37	14,23	62,231**	0,000	0,36

** p <= 0,01
* p <= 0,05
Effect size: 0,1= small; 0,25= medium; and 0,4= large

It is clear from Table 4 that the two groups (high SI and low SI) differ concerning the group mean scores for self-esteem, all the sense of coherence scales and four of the cognitive style subscales (Stability, Global, Generalization and Gelf-blame) on the 1%-level of significance. The hope (agency) and the cognitive style (internal attribution) show significant differences on the 5%-level of significance between the two groups. However, the latter results are of small practical value and are not included in further discussions. All other results have medium to large effect sizes and may consequently be considered important findings of the current study.

The results of the present study indicate that adolescents with high and those with low levels of suicidal ideation differ in important ways. High levels of suicidal ideation can be associated with a lower self-esteem, a less developed sense of coherence and the use of more negative cognitive styles in the current group of adolescents. The negative cognitive styles that adolescents with a suicide risk use to interpret negative events are: attributions of stable/ enduring determinants, likely to affect many other

outcomes and that are likely to have future negative consequences. This canbe interpreted as indicative that the self is fundamentally flawed.

The discussion of these results together with the interaction with gender continues in the next section.

Interaction of- suicidal ideation (SI) and gender

The four groups (high SI males, high SI females, low SI males, low SI females) are compared in terms of their mean scores for the predictor variables to find significant differences. One-way analysis of variance was used to determine which of the predictor variables significant show differences and which of the groups display these differences. The Scheffé procedure was applied in this regard. The results of the predictor variables and the calculated effect sizes (*f*) are presented in Table 5.

Table 5: F-values of the one-way analysis of variance to test the differences in mean scores on the predictor variables for the four groups

Predictor Variables	***High SI males (N=90)***		***High SI females (N=124)***		***Low SI males (N=137)***		***Low SI females (N=130)***		**F value**	***p***	***f***
	$\overline{X}$	***S***	$\overline{X}$	***S***	$\overline{X}$	***s***	$\overline{X}$	***s***			
Self-esteem:	18,83	4,58	17,84	5,12	21,93	4,33	21,98	4,50	26,016**	0,000	0,40
Hope:											
Agency	11,09	2,66	10,79	3,08	11,65	3,20	11,33	3,43	1,727	0,161	-
Pathway	11,02	2,91	11,05	3,05	11,77	2,89	11,21	2,91	1,759	0,154	-
Sense of Coherence:											
Comprehensibility	40,63	10,88	38,23	13,33	49,89	12,40	49,43	13,18	27,793**	0,000	0,42
Manageability	40,48	9,18	40,63	11,29	51,91	8,99	50,98	10,31	46,952**	0,000	0,54
Meaningfulness	36,76	10,11	37,60	9,98	45,16	8,27	46,27	7,93	35,309**	0,000	0,47
Total	117,87	22,21	116,46	28,66	146,96	24,17	146,68	25,13	54,780**	0,000	0,58
Cognitive style:											
Internal attribution	43,02	16,73	42,03	17,88	37,89	15,83	39,68	19,03	2,060	0,105	-
Stability	38,29	15,32	33,99	16,57	27,23	12,98	25,36	12,85	19,084**	0,000	0,35
Global	38,94	13,83	32,96	15,34	27,93	13,31	24,97	13,86	20,204**	0,000	0,36
Generalization	38,89	15,18	31,72	15,35	24,55	13,19	21,12	10,58	36,637**	0,000	0,48
Self-blame	37,43	17,52	33,24	18,42	22,61	12,57	24,16	15,80	22,232**	0,000	0,37

** p <= 0,01
* p <= 0,05
Effect size: 0,1= small; 0,25= medium; and 0,4= large

It is clear from the results in Table 5 that differences in mean scores for the four groups exist for self-esteem, for all the sense of coherence scales (including the complete scale) and for four cognitive styles (Stability, Global, Generalization and Self-blame). These differences are significant on the 1%-level of significance. Besides the hope scales and the cognitive style of: Internal Attribution, all other results indicate medium or large effect sizes and are therefore of significant practical value. The results on the hope variable are, however, a replication of findings in another South African study, where George (2005) found that the relationship between suicidal ideation and hope was not statistically significant.

The Scheffé procedure was followed to identify group differences:

Self-esteem

The high SI group and the low SI group differ significantly on the 1%-level of significance with regard to self-esteem scores. The high SI group (male and female) shows significantly lower self-esteem scores. These findings concur with other South African researchers that global self-esteem is significantly associated with suicidal ideation (Peltzer, Kleintjies, Van Wyk, Thompson & Mashego, 2008; Wild, Flisher, Bhana & Lombard, 2004). However, when inter-correlations between depression and self-esteem were controlled on a multi-dimensional measure of self-esteem, the self-esteem within the family context was independently associated with an increased risk of suicidal ideation in adolescents (Wild, Flisher & Lombard, 2004). This is a warning that results from a one-dimensional scale (such as that of the present study) exclude a more detailed understanding of the sub-dimensions of self-esteem. An additional warning that relates to the interpretation of the current results is posed by Rosenberg, the author of the self-esteem scale used in the current study. Rosenberg et al., (1989) found a bidirectional relationship between self-esteem and depression. This means that they have a significant effect on each other, with depression exerting a somewhat stronger effect on self-esteem than vice versa. Taken the strong correlation between depression and suicidal ideation (Lewinsohn, Rohde, Seeley & Baldwin, 2001; Wild, Flisher & Lombard, 2004), it should be remembered that self-esteem can either be a cause of suicidal ideation or a consequence of the social influence thereof.

No gender differences for self-esteem are reported within either of the SI groups of the current study. The issue as to whether gender differences affect self-esteem or not, has been debated and studied widely without a clear consistent answer (King, Hyde, Showers & Buswell, 1999) and therefore the results of the current study should be seen as unique in their own way. If one had to follow the arguments of some of the popular theories in this regard (such as the socialization hypothesis, the gender role variation, and exposure to negative events), the current findings might suggest that males and females are generally exposed to similar conditions in the South African context.

Hope

The high and low SI groups in the present study did not differ in terms of the hope variable. This finding is consistent to the results found by Davidson, Wingate, Rasmussen and Slish (2009) that neither overall hope nor the subscales of agency or pathways significantly predicted suicidal ideation among college students. On the contrary, other studies have found that hope is inversely correlated with internalizing (e.g. suicidal ideation) and externalizing behaviour (Valle, Huebner & Suldo, 2006), suggesting that hope is a psychological strength in adolescence.

Besides similar mean scores for both the high and low SI groups on both subscales, all the hope scores are in the high hope range. This indicates that hope in both groups is in the same direction (that of high hope), but the underlying goals might be vastly different. The hope theory hypothesis suggests that suicidal individuals have the high hope that suicide will stop the psychological pain caused by a history of frustrated and disappointing life-goal attainments (Snyder, 1994; 2002). It follows that adolescents with high SI have high hope for the goal of suicide, while the low SI adolescents have high hope for life-goals (e.g. academic achievement). This explanation should be seen primarily as theoretical and needs further exploration.

In the current study hope does not seem to differ for gender, which is in accordance with the findings of the original exploratory studies on the concept of hope (Snyder et al., 1991).

Sense of coherence

The high SI group and the low SI group differ significantly with regard to the scores on the complete sense of coherence scale and the three subscales on the 1%-level of significance. The high SI group (male and female) show significantly lower mean scores on the complete scale as well as for comprehensibility, manageability and meaningfulness. Similar findings that a sense of coherence was negatively associated with suicidal manifestations are reported by Edwards and Holden (2001).

In the study no gender differences for sense of coherence are reported within either of the SI groups. This finding confirm previous findings from another South African study involving adolescents (Kerr-Hutchinson, 2005) and means that general psychological well-being (as measured by SOC) is the same for both genders. This is good news to the many efforts being made in empowering adolescents to achieve and cope with modern living because both genders equally benefit from enhancing their development of SOC.

Cognitive style

The two suicidal ideation groups (high and low) differ on the 1%-level of significance on four of the cognitive style subscales (Stability, Global, Generalization and Self-blame). The high SI group achieved higher mean scores on these four cognitive style subscales than the low SI group. This suggests that those with high levels of suicidal ideation use more negative cognitive styles in evaluating negative life events. More specifically, the current high SI group was more inclined to: attribute negative events to stable and global causes, and to infer that more negative consequences will follow and perceive such events as proof of a personal flaw. This finding agrees with previous research which has shown that individuals with such cognitive vulnerabilities are at higher risk for suicidality (Abramson et al., 1998) and that this depressogenic thinking activates suicidal thoughts (Smith, Lauren, Alloy & Abramson, 2006). The hypothesis is that the mechanism of action is that such a general negative cognitive style increases a person's vulnerability to become hopeless, and in turn, allows the development of the symptoms of hopelessness and depression of which suicide is a symptom (Abramson et al., 1989).

Gender differences are identified within the high SI group for the cognitive style subscales: Global attribution and Generalization of consequences. According to the Scheffé results, the mean scores on these subscales are significantly higher for male participants than for female, despite the fact that in the high SI group there were fewer male participants. The elevated levels for global attribution found in male participants indicate that males perceive that negative events are likely to affect many areas of their lives. In contrast, previous studies have found that the cognitive style of global attribution was higher in females (Gladstone, Kaslow, Seeley & Lewinsohn, 1997; Hankin & Abramson, 2002). Individuals with repeated occurrences of negative life events in a wide variety of domains should develop a more stable, global attribution style for negative events and hence increase their cognitive vulnerability for depression (Hankin & Abramson, 2001). However, explanations based on the amount of events experienced can be an oversimplification of the stress process which has been found to differ according to gender in terms of: the kind of events encountered; the events that are experienced as stressful and how attention given to different aspects of the situation can be different for males and females (Matud, 2004).

The finding that the males in the high SI group have a higher tendency to use generalization of consequences as a cognitive style is supported by previous research that this is the only cognitive style not found to be higher in girls (Hankin & Abramson, 2002).

CONCLUSION

The core finding from the current study is that adolescents with a high suicide risk show lower levels of self-esteem, less sense of coherence and more negative cognitive styles of interpretation. Adolescent suicide risk can therefore be assessed on the basis of the level of these seemingly protective factors.

Furthermore, if suicide risk is seen as a marker of deteriorated mental health and well-being (Reddy et al., 2003; 2010) the current findings indicate that self-esteem, a sense of coherence and cognitive style can effectively be included in programmes promoting the general psychological well-being of adolescents. The enhancement of

these three factors may allow adolescents to choose more effective coping strategies than suicide when faced with adverse or negative life events. The fact that gender did not play a role in the majority of the variables included implies that self-esteem, a sense of coherence and cognitive style (optimistic explanatory style) can be promoted with the same degree of importance for both males and females in any intervention strategy.

In the counselling and therapeutic context, the indices for self-esteem, the sense of coherence and cognitive style used in the present study can form part of a screening device for suicidal adolescents.

Hope as a predictor, did not significantly discriminate between adolescents with high SI and those with low SI. The fact that the level of hope in both these groups was above average could indicate that adolescents in this current sample show relatively positive hope that goals will be attained- but that the nature of the goals of the two groups might be different (see Snyder, 2002). In the case of high SI adolescents, the goal is that suicide will alleviate their psychological pain, while the low SI adolescents rather have positive life-goals (e.g. making new friends, academic success, sport achievements). The finding should therefore not change the importance of hope as a factor in achievement and the overcoming of difficulties in adolescence (Seginer, 2008; Snyder, 2002) and it is therefore still important to adolescent well-being. Clinicians dealing with suicidal youth could focus on the reformulation of suicide-goals as one avenue of decreasing suicide risk.

Limitations

The findings of the present study should be read with the necessary recognition of the limitations described below.

- In the present study investigations relied exclusively on participant's self reports on quantitative measures, while the addition of simultaneous qualitative exploration (e.g. focus groups) of constructs could have yielded important information, for example on the sources of self-esteem for the different genders and the nature of goals for high and low SI adolescents.

- The study was conducted in a specific community sample, which limits the generalizability of findings to individuals with a similar biographic background.
- Because self-esteem is measured with a one-dimensional measuring instrument, it only provides information on global self-esteem- whereas a multi-dimensional instrument would have yielded information on all the other domains of self-esteem, which might have differential influences on suicidal ideation.
- The data in the present study are cross-sectional and so the association between suicidal ideation and self-esteem, sense of coherence and cognitive style should not be interpreted as causal relationships.
- The results on the (ACSQ) was not differentiated according to the two broad scenario types of interpersonal and achievement. Such an analysis might provide some insight on gender differences.

Recommendations

Although this study contributed to the knowledge of how mechanisms (such as self-esteem, hope, sense of coherence and cognitive style) can be protective of adolescent's well-being, it should only be seen as a first step. The important phenomenon of suicidal behaviour among South African adolescents and specifically the factors that might enhance adolescent's ability to deal with related circumstances should be investigated on a much wider scale.

As far as the findings from the present study are concerned, the factors of self-esteem, a sense of coherence and cognitive style (optimistic explanatory style) could be tested in longitudinal experimental research designs. Such investigations would yield information on the potential of these factors to lower the risk of suicide among adolescents and on the permanency of such changes. An important extension to the current study would also be to investigate how these protective factors represent the different South African population groups.

Future research in the field of adolescent suicide would benefit from the application of a multi-dimensional measuring instrument for self-esteem such as the Self-Esteem Questionnaire developed by DuBois, Felner, Brand, Phillips and Lease (1996). Such a scale could provide detailed answers regarding the sources that enhance or inhibit self-esteem development in males and females and within different population groups. This can be especially useful in designing culture and gender sensitive suicide prevention programmes for the youth in South Africa.

It is generally accepted that hope is an important factor in well-being (Magaletta & Oliver, 1999; Snyder, 2002) and should consequently receive priority in future research. The positive future expectations in terms of hope (Sagy & Adwan, 2006) might be especially important to those for whom the future holds the risk of suicide. When one keeps in mind that hope finds its roots in past experiences within varying contexts of risk and stability (Nalkur, 2009), the hope of South African adolescents, with a history of multiple societal changes, also puts hope high on the agenda for future research. The investigations into hope should make use of additional qualitative methods of inquiry to allow exploration of hope constructions and underlying goals.

REFERENCES

Abramson, L.Y., Alloy, L.B., Hogan, M.E., Whitehouse, W.G., Cornette, M., Akhavan, S., & Chiara, A. (1998). Suicidality and cognitive vulnerability to depression among college students: A prospective study. *Journal of Adolescence, 21*, 473-487.

Abramson, L.Y., Alloy, L.B., Hogan, M.E., Whitehouse, W.G., Donovan, P., Rose, D.T., Panzarella, C., & Raniere, D. (2002). Cognitive vulnerability to depression: Theory and evidence. In R.L. Leahy and E.T. Dowd (Eds.), *Clinical advances in cognitive psychotherapy: Theory and application* (pp. 75-92). New York: Springer Publishing Company.

Abramson, L.Y., Metalsky, G.I., & Alloy, L.B. (1989). Hopelessness depression: A theory-based subtype of depression. *Psychological Review, 96*(2), 358-372.

Amirkhan J., & Greaves, H. (2003). Sense of coherence and stress: The mechanisms of a healthy disposition. *Psychology and Health, 18*, 31-62.

Antonovsky, A. (1987). *Unravelling the mystery of health: How people mange stress and stay well.* San Fancisco: Jossey-Bass.

Antonovsky, A. (1990). A somewhat personal odyssey in studying the stress process. Stress Medicine, 6,71-80.

Antonovsky, A. (1993). The structure and properties of the sense of coherence scale. *Social Science Medicine, 36*(6), 725-733.

Antonovsky, A. (1994). The sense of coherence: An historical and future perspective. In H.I. McCubbin, E.A. Thompson, A.I. Thompson and J.E. Fromer, (Eds.), *Sense of coherence and resiliency: Stress, coping, and health* (pp.3-20). Madison, WI: The University of Wisconsin-Madison.

Blum, R.W. (1998). Healthy youth development as a model for youth health promotion: A review. *Journal of Adolescent Health, 22*, 368-375.

Bridge, J.A., Goldstein, T.R., & Brent, D.A. (2006). Adolescent suicide and suicidal behaviour. *Journal of Child Psychology and Psychiatry, 47*(3/4), 372-394.

Chang, E. C. (2003). A critical appraisal and extension of hope theory in middle aged men and women: Is it important to distinguish agency and pathways components? *Journal of Social and Clinical Psychology, 22*, 121–143.

Cole, D.A., Maxwell, S.E., & Martin, J.M. (1997). Reflected self-appraisals: Strength and structure of the relation of teacher, peer, and parent ratings to children's self-perceived competencies. *Journal of Educational Psychology, 89,* 55-70.

Coleman, J., & Hagell, A. (2007). *Adolescence, risk and resilience: Against the odds.* Sussex: John Wiley & Sons.

Coyne, J.C., & Whiffen, V.E. (1995). Issues in personality as diathesis for depression: The case of sociotropy-dependency and autonomy-self-criticism. *Psychological Bulletin, 118*, 358-378.

Davidson, C.L., Wingate, L.R., Rasmussen, K.A., & Slish, M.L. (2009). Hope as a predictor of interpersonal suicide risk. *Suicide and Life-Threatening Behavior, 39*(5), 499-507.

DuBois, D.L., Felner, R.D., Brand, S., Phillips, R.S.C., & Lease, A.M. (1996). Early adolescent self-esteem: A developmental-ecological framework and assessment strategy. *Journal of Research on Adolescence, 6*, 543-579.

Edwards, M.J., & Holden, R.R. (2001). Coping, meaning in life, and suicidal manifestations: Examining gender differences. *Journal of Clinical Psychology, 57*(12), 1517-1534.

George, A.A. (2005). *The influence of psychosocial factors and resources on suicidal ideation of adolescents.* Unpublished master's thesis, University of the Free State, Bloemfontein, South Africa.

George, A.A. (2009). *Risk and resilience in adolescent suicidal ideation*. Unpublished doctoral dissertation, University of the Free State, Bloemfontein, South Africa.

Gladstone, T.R., Kaslow, N.J., Seeley, J.R., & Lewinsohn, P.M. (1997). Sex differences, attributional style, and depressive symptoms among adolescents. *Journal of Abnormal Child Psychology, 25*(4), 297-305.

Gould M. S., Greenberg, T., Velting, D.M., & Shaffer, D. (2003). Youth suicide risk and preventive interventions: A review of the past 10 years. *Journal of the American Academy of Child and Adolescent Psychiatry, 42*(4), 386-405.

Grant, K. E., Compas, B. E., Stuhlmacher, A. F., Thurm, A. E., McMahon, S. D., & Halper, J. A. (2004). Stressors and child and adolescent psychopathology: measurement issues and prospective effects. *Journal of Clinical Child and Adolescent Psychology, 33*, 412-425.

Grewal, P.K., & Porter, J.E. (2007). Hope theory: a framework for understanding suicidal action. *Death Studies, 31*, 131-154.

Hankin, B.J., & Abramson, L.Y. (2001). Development of gender differences in depression: an elaborated cognitive vulnerability-transactional stress theory. *Psychological Bulletin, 127*(6), 773-796.

Hankin, B.L., & Abramson, L.Y. (2002). Measuring cognitive vulnerability to depression in adolescence: reliability, validity, and gender differences. *Journal of Clinical Child and Adolescent Psychology, 31*(4), 491-504.

Harter, S. (1993). Causes and consequences of low self-esteem in children and adolescents. In R.F. Baumeister (Ed.), *Self-esteem: The puzzle of low self-regard* (pp. 87-116). New York: Plenum.

Harter, S. (1999). *The construction of the self. A developmental perspective.* New York: Guilford.

Herrman, H., Saxena, S., & Moodie, R. (2005). *Promoting mental health concepts, emerging evidence, practice.* A report from the World Health Organization, Department of Mental Health and Substance Abuse in collaboration with the Victorian Health Promotion Foundation and the University of Melbourne. Geneva: World Health Organization. Retrieved April 25, 2010, from http://www.who.int/mental_health/evidence/MH_Promotion_Book.pdf

Hirsch, J.K., Wolford, K., LaLonde, S.M., Brunk, L., & Parker-Morris, A. (2009). Optimistic explanatory style as a moderator of the association between negative life events and suicide ideation. *Crisis, 30*(1), 48-53.

Kerr-Hutchinson, A. (2005). *Meaning of life and sense of coherence as predictors of coping among young adults*. Unpublished master's thesis, University of Johannesburg, Auckland Park, South Africa.

King, K.C., Hyde, J.S., Showers, C.J., & Buswell, B.N. (1999). Gender differences in self-esteem: A meta-analysis. *Psychological Bulletin, 125*(4), 470-500.

Kleinert, S. (2007). Adolescent health: An opportunity not to be missed. *Lancet, 369*(9569), 1057–58.

Lewinsohn, P.M., Rohde, P., Seeley, J.R., & Baldwin, C.L. (2001). Gender differences in suicide attempts from adolescence to young adulthood. *Journal of the American Academy of Child and Adolescent of Psychiatry, 40*(4), 427-434.

Loots, S. (2008). *The role of exposure to suicide and coping strategies in the suicidal ideation of adolescents.* Unpublished master's thesis, University of the Free State, Bloemfontein, South Africa.

Louw, A.E., Louw, D.A., & Ferns, I. (2007). Adolescence. In D.A. Louw and A.E. Louw (Eds.), *Child and Adolescent Development* (pp. 278-347). Bloemfontein: Psychology Publications.

Magaletta, P.R., & Oliver, J.M. (1999). The hope construct, Will, and Ways: their relations with self-efficacy, optimism, and general well-being. *Journal of Clinical Psychology, 55*(5), 539-551.

Marsh, S.C., Clinkinbeard, S.S, Thomas, R.M., & Evans, W.P. (2007). Risk and protective factors predictive of sense of coherence during adolescence. *Journal of Health Psychology, 12*(2), 281-284.

Matud, M.P. (2004). Gender differences in stress and coping styles. Personality and *Individual Differences, 37*, 1401-1415.

McSherry, W.C., & Holm, J.E. (1994). Sense of coherence: its effects on psychological and physiological processes prior to, during, and after stressful situations. *Journal of Clinical Psychology, 50*(4), 476-487.

Meehan, S., Peirson, A., & Fridjhon, P. (2007). Suicidal ideation in adolescent South Africans: The role of gender and coping strategies. *South African Journal of Psychology, 37*(3), 552-575.

Mezulis, A.H., Hyde, J.S., & Abramson, L.Y. (2006). The developmental origins of cognitive vulnerability to depression: Temperament, parenting, and negative life events in childhood as contributors to negative cognitive style. *Developmental Psychology, 42*(6), 1012-1025.

Moos, R.H. (2003). Social contexts: transcending their power and their fragility. *American Journal of Community Psychology, 31*(1/2), 1-13.

Moos, R.H., & Holahan, C.J. (2003). Dispositional and contextual perspectives on coping: Toward an integrative framework. *Journal of Clinical Psychology, 59*(12), 1387-1403.

Moos, R.H., & Schaefer, J.A. (1993). Coping resources and processes: current concepts and measures. In L. Goldberger and S. Breznitz (Eds.), *Handbook of stress: Theoretical and clinical aspects* (2nd ed., pp. 234-258). New York: Free Press.

Mullis, R.L., & Chapman, P. (2000). Age, gender, and self-esteem differences in adolescent coping styles. *The Journal of Social Psychology, 140*(4), 539-541.

Nalkur, P.G. (2009). Adolescent hopefulness in Tanzania: Street youth, former street youth and school youth. *Journal of Adolescent Research, 24*, 668-690.

Nunnally, J.C., & Bernstein, I.H. (1994). *Psychometric theory* (3rded.). New York: McGraw-Hill.

Olssen, C.A., Bond, L., Burns, J.M., Vella-Brodrick, D.A., & Sawyer, S.M. (2003). Adolescent resilience: A concept analysis. *Journal of Adolescence, 26*, 1-11.

Overholser, J.C., Adams, D.M., Lehnert, K.L., & Brinkman, D.C. (1995). Self-esteem deficits and suicidal tendencies among adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 34*(7), 919-928.

Patel, V., Flisher, A.J., Hetrick, S., & McGorry, P. (2007). Mental health of young people: A global public-health challenge. *Lancet, 369*(9569), 1302-1313.

Patton, G.C., Coffey, C., Sawyer, S.M., Viner, R.M., Haller, D.M., Bose, K., Vos, T., Ferguson, J., & Mathers, C.D. (2009). Global patterns of mortality in young people: A systematic analysis of population health data. *Lancet, 374*(9693), 881-892.

Pelkonen, M., & Marttunen, M. (2003). Child and adolescent suicide: Epidemiology, risk factors, and approaches to prevention. *Paediatric Drugs, 5*(4), 243-265.

Peltzer, K., Kleintjies, S., Van Wyk, B., Thompson, E.A., & Mashego, T.B. (2008). Correlates of suicide risk among secondary school students in Cape Town. *Social Behaviour and Personality, 36*(4), 493-502.

Pfeffer, C.R. (2001). Diagnosis of childhood and adolescent suicidal behaviour: Unmet needs for suicide prevention. *Society of Biological Psychiatry, 49*, 1055-1061.

Pienaar, J., & Rothmann, S. (2005). Suicide ideation in the South African police service. *South African Journal of Psychology, 35*(1), 58-72.

Reddy, S.P., James, S., Sewpaul, R., Koopman, F., Funani, N.I., Sifunda, S., Josie, J., Masuka, P., Kambaran, N.S., & Omardien, R.G. (2010). *Umthente Uhlaba Usamila- The 2nd South African national youth risk behaviour survey 2008*. Cape Town: South African Medical Research Council. Retrieved April 24, 2010, from http://www.timeslive.co.za/multimedia/archive/00609/yrbs_2008_final_rep_609325a.pdf

Reddy, S.P., Panday, S., Swart, D., Jinabhai, C.C., Amosum, S.L., Monyeki, K.D., Stevens, G., Morejele, N., Kambaran, N.S., Omardien, R.G., & Van den Borne, H.W. (2003). *UmthentheUhlaba Usamila- The 1st South African national youth risk behaviour survey 2002*. Cape Town: South African Medical Research Council. Retrieved May 28, 2010, from http://www.info.gov.za/otherdocs/2003/youth/part1.pdf

Republic of South Africa (2006). *Act No. 38, 2005: Children's Act, 2005*. Government Gazette, 492 (No. 28944). Retrieved March, 17, 2010, from http://www.info.gov.za/view/DownloadFileAction?id=67892

Reynolds, W.M. (1999). *Suicidal ideation questionnaire for adolescents.* Odessa, Florica: Psychological Assessment Resources.

Roothman, B., Kirsten, D.K., & Wissing, M.P. (2003). Gender differences in aspects of psychological well-being. *South African Journal of Psychology, 33*(4), 212-218.

Rose, D., & Abramson, L. (1992). Developmental predictors of depressive cognitive style: Research and theory. In D. Cicchetti and S. Toth (Eds.), *Developmental perspectives on depression* (pp. 323-349). Rochester: University of Rochester Press.

Rosenberg, M. (1989). *Society and the Adolescent Self-Image.* Revised edition. Middletown, CT: Wesleyan University Press.

Rosenberg, M., Schooler, C., & Schoenbach, C. (1989). Self-esteem and adolescent problems: Modelling reciprocal effects. *American Sociological Review, 54* (Dec.), 1004-1018.

Rudolph, K.D., & Hammen, C. (1999). Age and gender as determinants of stress exposure, generation, and reactions in youngsters: A transactional perspective. *Child Development, 70*(3), 660-677.

Rutter, M. (2007). Resilience, competence, and coping. *Child Abuse & Neglect, 31*, 205-209.

Sagy, S., & Adwan, S.(2006). Hope in times of threat: The case of Israeli and Palestinian youth. *American Journal of Orthopsychiatry, 76*(1), 128-133.

Seginer, R. (2008). Future orientation in times of threat and challenge: How resilient adolescents construct their future. *International Journal of Behavioral Development, 32*, 272-282.

Snyder, C.R. (1994). *The psychology of hope: You can get there from here*. New York: Free Press.

Snyder, C.R. (2000). Genesis: Birth and growth of hope. In C.R. Snyder (Ed.), *Handbook of hope: Theory, measures, and applications* (pp. 3-21). San Diego, CA: Academic.

Snyder, C.R. (2002). Hope theory; rainbows in the mind. *Psychological Inquiry, 13*(4), 249-275.

Snyder, C.R., Harris, C., Anderson, J.R., Holleran, S.A., Irving, L.M., Sigmon, S.T., Yoshinobu, L., Gibb, J., Langelle, C., & Harney, P. (1991). The will and the ways: Development and validation of an individual-differences measure of hope. *Journal of Personality and Social Psychology, 60*(4), 570-585.

Smith, J.M., Lauren, M.A., Alloy, B., & Abramson, L.Y. (2006). Cognitive vulnerability to depression, rumination, hopelessness, and suicidal ideation: Multiple pathways to self-injurious thinking. *Suicide and Life-Threatening Behavior, 36*(4), 443-454.

Steyn, H.S. (1999). *Praktiese beduidendheid: Die gebruik van effekgroottes*. Potchefstroom: Publikasiebeheerkomitee, PU vir CHO.

Strümpfer, D.J.W. (2002). *Psychofortology: Review of a new paradigm marching on*. (Working paper- under revision). Pretoria: University of Pretoria.

Strümpfer, D.J.W., & Wissing, M.P. (1998). Review of South African data on the sense of coherence scale as a measure of fortigenesis and salutogenesis. Article taken from the PsySSA conference 8-11 September, 1998: Cape Town.

SPSS Incorporated (2009). *SPSS user's guide: Version 17.0*. New York: Author.

Sun, R.C.F., & Hui, E.K.P. (2007). Psychosocial factors contributing to adolescent suicidal ideation. *Journal of Youth Adolescence, 36*, 775-786.

Tesser, A. (2004). Self-esteem. In M.B. Brewer and E.M. Hewstone (Eds.), *Motivation and emotion* (pp. 184-203). Malden, MA: Blackwell.

Valle, M.F., Huebner, E.S., & Suldo, S.M. (2006). An analysis of hope as a psychological strength. *Journal of School Psychology, 44*, 393-406.

Venter, A. (2004). *Die rol van kognitiewe funksionering in hoop by adolescente.* Unpublished doctoral dissertation, University of the Free State, Bloemfontein, South Africa.

Wichstrom, L. (1999). The emergence of gender difference in depressed mood during adolescence: The role of intensified gender socialization. *Developmental Psychology, 35*(1), 232-245.

Wild, L.G., Flisher, A.J., Bhana, A., & Lombard, C. (2004). Substance abuse, suicidality, and self-esteem in South African adolescents. *Journal of Drug Education, 34*(1), 1-17.

Wild, L.G., Flisher, A.J., & Lombard, C. (2004). Suicidal ideation and attempts in adolescents: Associations with depression and six domains of self-esteem. *Journal of Adolescence, 27*, 611-624.

World Health Organization (WHO) (2008). *The global burden of disease: 2004 update*. Geneva: World Health Organization. http://www.who.int/healthinfo/global_burden_disease/2004_report_update/en/index.html

A QUALITATIVE ANALYSIS OF SOUTH AFRICAN ADOLESCENT SUICIDE RISK

ABSTRACT

The South African adolescent population shows significant mental health problems as indicated by their suicide rate which is not only relatively high but is also on the increase. A need therefore exists to explore the psychosocial factors experienced by South African adolescents at risk of suicide. A study on adolescent suicidal ideation was conducted on a community sample of 13 to 19 year olds from an urban town in the Western Cape region of South Africa. A subgroup of adolescents (N=214) with a high suicide risk was selected from this original sample on the basis of their scores on the Suicidal Ideation Questionnaire, using a cut-off score of >31. A qualitative content analysis was performed with the responses provided by this high-risk group to an open question on the reasons for adolescent suicide. From the analysis, it was clear that adolescents experience numerous individual risk factors relating to substance abuse, negative emotional experiences, self-esteem, problem-solving ability and hope for the future; their family environment and family relationships; peer group and romantic relationships; stressful life events; and socio-economic factors. Guided by the conservation of resources theory (COR) suggestions were made for adolescent resource development on three levels of functioning.

Keywords: *Adolescence, Suicidal ideation, Psychosocial risk factors, Individual risk factors, Family risk factors, Peer relationship risks, Stressful life events, Socio-economic factors, Conservation of resources theory*

INTRODUCTION

It is accepted worldwide that adolescents' life experiences influence their adult lives. The international concern about the mental health of adolescents is equally pertinent to South Africa (Herrman, Saxena & Moodie, 2005; Patel, Flisher, Nikapota & Malhotra, 2008; Wasserman, Cheng & Jiang, 2005) as is highlighted by the results reported in *The 2nd South African National Youth Risk Behaviour Survey 2008* (YRBS) (Reddy et al., 2010) on adolescent suicidal behaviour. This is emphasized once again by the fact that in the six years since the first South African survey was done in 2002 (Reddy et al., 2003), an increase in adolescent suicide statistics has been noticed. Furthermore, when the South African trends are compared with those of a similar 2007 American survey (Centers for Disease Control and Prevention, 2008), it appears that the prevalence of South African adolescents' suicidal thoughts, suicide plans and suicide attempts exceed those of their American counterparts. Accordingly, one could easily support the viewpoint of Reddy and colleagues (2010) who maintain that adolescents in South Africa are faced with serious emotional health problems. The factors contributing to this dilemma and all its facets therefore need to be addressed urgently. One important aspect that require research attention is adolescent suicide.

The international consensus on suicidal behaviour amongst the youth states that a convergence of multi-level predisposing and concurrent risk factors combine to encourage the development of suicidal behaviour (Fergusson, Woodward & Horwood, 2000; Waldvogel, Rueter & Oberg, 2008). For example, poverty increases the risk of depression and other mental disorders in parents. This results in less effective parenting styles and thus contributes to the cumulative risk for the adolescent family member. These risk factors can be organized into various categories such as individual, familial, demographic, socio-environmental and adverse life events (Beautrais, 2000; Gould, Greenberg, Velting & Shaffer, 2003); or as independent (outside the control of the individual e.g. death of a parent) and non-independent (related to an individual's own behaviour, e.g. relationship difficulties) risk factors (Coleman & Hagell, 2007).

In order to understand the risk factors for suicide fully, one may not ignore the adolescent's environment (which shapes the person as much as the person influences his/her environment). Our investigations should take note of the fact that young people are moral actors in the drama of their lives, and not just passive objects of suffering and healing. Thus, although their lives are not determined by household structures, family processes and economic circumstances, these environmental forces do affect young people's behaviour and achievement (Scott, Treas & Richards, 2004). This reciprocal or bidirectional relationship plays a vital role in the developmental steps taken daily by either enhancing or hindering well-being and risk (Call et al., 2002). It follows that the goal of identifying risk factors for suicide among the youth is not about locating pathology within the individual but in this study it is to recognize that the experience of South African adolescents is shaped by distinct cultural, social and economic circumstances (Larson, Wilson & Mortimer, 2002). These circumstances challenge the adolescent's ability to take advantage of opportunities in the midst of major societal transitions.

If one bears in mind that the factors involved in the rising number of youth suicides in South Africa is still speculative (Flisher, Liang, Laubscher & Lombard, 2004), insight into risk factors are critical for the purpose of developing relevant and contextualised intervention programmes and services to combat the rising incidence of youth suicide among South African adolescents (Schlebusch, 2005). However, risk factors cannot be the sole answer to the complex problem of suicide because adolescents with similar risk profiles do not necessarily have the same degree of suicide risk. The difference is made by protective factors which reflect resources (comprising emotional, educational, social and economic influences) that help adolescents to resist adversity and protect them from outcomes of dysfunction such as suicide (Bynner, 2001). Recent discussions suggest that risk and protective factors are interrelated (connect in a dynamic process) because protective factors may only become detectable in the presence of a risk factor (Coleman & Hagell, 2007; Herrman, et al., 2005). The dynamic interplay between risk and protective factors becomes apparent when protective factors are too high and then become a risk when they hinder

individual development. For example, when family cohesion is too high it can hinder the adolescents' identity formation. Protective factors, on the other hand, can be seen as indicators of what is meant by positive mental health (Knopf, Park & Paul-Mulye, 2008). It is clear that in the South African situation a cause for concern is that the executive support systems (such as the Mental Health Care Act No. 17 of 2002 (Republic of South Africa, 2002) which deals with problems such as youth suicide) do not integrate risks and resources but are still dominated by an illness-narrative. This is demonstrated by the absence of a definition of or any reference to what constitutes "mental health" in the Mental Health Care Act No. 17 of 2002 (Republic of South Africa, 2002). This indicates that health services in South Africa are still involved in curing and preventing rather than in promoting and enhancing. The aim of this study is to explore the risk factors for adolescent suicide in order to help inform policy makers on the needs of adolescents in South Africa.

Hobfoll's integrated stress theory (Hobfoll, 1988; 1989; 1998; 2002) which is known as the Conservation of Resources (COR) theory, provides a theoretical framework to interpret how the risk factors (identified in the current study) and resources interconnect in the developmental course of a psychological problem such as suicidal behaviour. Resources can be classified as: object resources (material possessions, e.g. house, clothes); condition resources (those that lay a foundation for access to other resources such as group and family membership); personal resources (skill-based e.g. self-esteem); and energy resources (to facilitate acquisition of other resources, e.g. developmental maturity, educational status) (Hobfoll, 1989; 1998).

Because resources are of primary importance in assisting the individual to achieve his or her goals, they are highly valued by the individual whose central goal is to be successful. This positions the acquisition and facilitation of resources as a central motivational construct (Hobfoll, 2002). The principle proposition of COR is that the loss of a resource is disproportionately more salient than the gain of a resource - and so loss will have a much greater impact as the principal ingredient of the stress process than a gain (Hobfoll, 1998; 2002).

COR posits that people who work to obtain resources they do not have, retain the resources they possess, protect these resources when threatened, and foster resources by positioning themselves so that their resources can be put to best use. Major life stressors are likely to have a significant impact on resource acquisition and protection; but even minor hassles may collectively act to diminish people's capacity to cultivate and guard their resources. The basic principle of COR is that stress occurs when resources are threatened with loss, when resources are actually lost, or when there is a failure to adequately gain resources following significant resource investment (Hobfoll, 1998).

Stressful circumstances often threaten or deplete the individual's resources. The losses are felt in terms of both their instrumental and the symbolic value (i.e. part of a person's definition of who he or she is) of the resources for the individual. This links the loss of a resource to emotional distress such as suicidal behaviour. The use of resources to meet life challenges often results in the deterioration of resources (Hobfoll, 2002), leaving the individual more vulnerable to ongoing stress. COR theory posits that those with greater resources are less vulnerable to lose resources and more capable of planning how to regain the resources. Conversely, people with fewer resources or a lack thereof are more vulnerable to the loss of resources and are less capable of gaining resources whereby initial loss results in future loss in ongoing loss cycles (Hobfoll, 1998; 2001). However, COR also suggests that addressing challenging circumstances results in increased resources. Cycles during which resources are gained are most likely to emerge as people seek to identify and mobilize resources during highly stressful times. In a ten-year study by Holahan, Moos, Holahan and Cronkite (1999), it was found that a long-term gain in resources has a great impact on reversing psychological distress.

People who lack resources are likely to adopt a defensive posture to conserve their resources. It is suggested that those who are less capable psychologically use seemingly counterproductive forms of extreme denial because they lack resources. It may be that resource reserves are too depleted to act otherwise. Risk factors influence

resource protection and acquisition through an individual's diminished capacity to cope when burdened by risks (Hobfoll, 1998).

The (COR) theory (Hobfoll, 1988; 1989; 1998) has been offered as an integrative stress theory that considers both environmental and internal processes by proposing the "individual-nested in family-nested in tribe" principle. This means that the self and the behavioural alternatives available to the person, including thought, are reflections of cultural processes and are delineated by cultural scripts and formulations (Hobfoll, 2001).

Previous research on suicide among the South African youth shows methodological limitations, with most investigations using closed-ended enquiry and hypothesis-confirming strategies that incorporate Westernized, non-South African measuring instruments. There is an urgent need to move beyond merely describing the problem towards the goal of management and/ or prevention of youth suicide (Schlebusch, 2005). Information is needed on context-relevant risk factors experienced by young people currently in South Africa. The knowledge gained can aid in the generation of uniquely South African solutions and reduce suicide potential in this group.

METHODOLOGY

The aim of the presents study is to explore the psychosocial risk factors experienced by a group of adolescents with a high risk for suicide.

Research design

A qualitative research design was used to explore the risk factors experienced by a group of South African adolescents with a high suicide risk. Although the qualitative approach is exploratory in nature, it can be advantageous in giving a description of phenomena through the lived experiences of South African adolescents. The qualitative data were analysed by means of the content analysis approach. This approach was chosen because the majority of participant responses were single words, which makes the inference of theoretical relationships between concepts difficult.

Nevertheless, it is still important to illuminate themes and factors that were central to these youths' perceptions of the risks in their lives.

Participants and information gathering

The initial study sample consisted of 594 learners in grades 8, 9 and 10 from public senior secondary schools in an urban town in the Western Cape region of South Africa. A subgroup of 214 learners was selected on the basis of their high suicidal risk as indicated by a score of >31 on the *Suicidal Ideation Questionnaire* (Reynolds, 1999). The participants were between the ages of 13 and 19 years (with a mean age of 15,1 years). The gender composition for this subgroup was 121 female and 92 male adolescents. The population group[1] distribution of the high suicide risk group in the present study is as follows, 17,7% (n= 38) were black, 68,2% (n=146) were Coloured, while the white group totalled 14% (n=30). About a quarter of the this group (23,8%; n=51), (29 females and 22 males) had attempted suicide previously.

With regard to ethical considerations, the concerned committees at the University of the Free State approved the study. The Western Cape Education Department also supported the study and granted permission for the study to be conducted. The need for the study and its aims were discussed with the school principals, who identified the learners available for participation during free periods. The decision that it was not deemed necessary to obtain parental consent was based on the South African Children's Act No. 38 of 2005 (Republic of South Africa, 2006) which recognises of the rights of children over the age of 12 to consent to their own medical treatment and to make other health-related decisions without parental consent. However, informed consent was obtained from the learners who participated in this study. Participants were assured of the confidentiality and anonymity of their responses and counselling opportunities were offered to assist learners after they had completed the study. A

[1] In this study the term 'population group' and associated references such as 'black', 'Coloured', 'Indian/ Asian' and 'white' are used. The use of these terms in this article does not imply any acceptance of the historical racist assumptions to which these labels might allude. Instead, the use of these terms is intended to differentiate between the conditions within which these 'population groups' still exist in South Africa. Another reason for including 'population group' names is for the purpose of statistical comparison with other research data issued by statistical authorities in South Africa e.g. Statistics SA and National Injury Mortality Surveillance System (NIMSS).

registered psychologist was present during the response session of 90 minutes to ensure an environment conducive to the issues of fairness, ethical behaviour and confidentiality. The psychologist assisted the participants, for example by providing them with other language versions of a question when unclear.

Data collection

As part of the demographic questionnaire used in the first part of the current study (see article 1), participants were asked to complete the following open-ended question in writing: "What do you think are the three most common reasons for adolescent suicide?" The question was asked in each of three languages: Afrikaans (an indigenous Germanic language, predominantly spoken by white and Coloured adolescents), English, or Xhosa (an indigenous black language spoken in the Western Cape region of South Africa). Participants could answer the question in their preferred language. Two independent, registered translators translated the Xhosa responses into English using the back translation method. The answers in Afrikaans were kept in that language in order not to miss any of the fine nuances of description. In the next step all the responses to the open-ended question (in either Afrikaans or English) were written onto one text document.

Data analysis

The analytic process followed three main steps:

- first, open coding, a process of immersion, highlighting key thoughts, examining, writing down first impressions, labelling, comparing, conceptualizing and sorting into categories;
- second, theoretical coding, conceptual organization of categories, creating a hierarchical structure based on relationships discovered in the data, and defining categories; and
- third, reporting the emerged central themes linking it to relevant theory or other research findings (Berg, 2007; Hsieh & Shannon, 2005).

External validity

Steps were taken to support the validity of the analysis.

- Effort was made to locate and understand discrepant information that was different or challenged the conclusions made.
- The research supervisor gave an independent opinion on the merging of categories and the conceptual organization.
- The researcher's inferences are reduced when the extracted categories are given a text reference (own words of the participant's (Part.) with a unique *part*.Number).
- The analysis was supplemented with descriptive statistics on frequency of categories (indicating the magnitude of a theme), and characteristics of the participants.

RESULTS AND DISCUSSION OF RESULTS

Suicide risk

The subsample of 214 participants with a suicidal risk represents 36% of the original sample. This incidence of suicidal ideation is noticeably higher than the 20,7% found in the South African YRBS (Reddy et al., 2010) and the 31,6% found in a similar regional study by (Peltzer, Kleintjies, Van Wyk, Thompson & Mashego, 2008). It is also significantly higher than international figures ranging from 2,6% for Chennai (India) to 18,6% for Campinas City (Brazil) (Bertolote et al., 2005). It is therefore clear that the incidence of suicide risk in the current study is noticeable higher than the incidence found in other research. This finding implies that the psychosocial risk factors indicated should be regarded as a reliable reflection on reasons for suicide among the participating adolescents'.

Thematic analysis of responses

The following five risk factor themes were extracted from the responses of the adolescents of the current study. The critical characteristics and definitions associated

with each theme provide boundaries for inclusion/exclusion of experiences under each of the themes:

- Individual factors: behavioural, emotional and cognitive dimensions of individual functioning.
- Family factors: interactions that happen within the family.
- Peer group and romantic relationships: interactions within the peer group.
- Stressful life events: situations or happenings not conducive to healthy adolescent development.
- Socio-economic status: influence of finance-related factors.

Each of the identified themes that refer to participant responses will be discussed next. Hobfoll's Conservation of Resources theory (mentioned earlier in this article) (Hobfoll, 1989) will be used as the theoretical framework within which the results of the current study are conceptualized.

Individual factors (203 responses)

The most commonly reported risk factor (in 42,8% of responses) concerned individual functioning that is risk factors in the behavioural, cognitive and emotional domains of functioning. The reported individual risk factors of substance abuse, academic achievement, stress, rejection, depression, negative future perspective, problem-solving skills, and self-esteem will be discussed in this section.

Participant responses indicated substance abuse as the individual factor that most frequently led to suicide risk. According to COR theory, people with insufficient coping resources try to conserve what resources they have through adapting a defensive style of coping. Avoidant coping is an example of how the person tries to escape stress by means of substance abuse. This can be the scenario leading to the situation where alcohol abuse poses a significant risk to South African adolescents. According to *The 2nd South African Youth Risk Behaviour Survey* which shows that nationally 28,5% of learners are binge drinkers (Reddy et al., 2010). This is a 5,5% increase on the first survey done in 2002 (Reddy et al., 2003). Substance-related disorders have been found to be the second most prominent diagnostic factors in

adolescent suicide cases (Fleischmann, Bertolote, Belfer & Beautrais, 2005). They pose a threat to various dimensions of the individual's resources of health and safety (physical, emotional, social, moral, and cognitive) and interrupt or harm his or her capacity for developmental task completion (Windle & Windle, 2006). The adolescent's developmental task of obtaining new resources are hijacked by the influence of substance abuse through distancing possible positive support systems from the individual, interrupting academic achievement and increasing the risk for injury. Morojele and Brook (2006) found that South African adolescents who use legal and illegal substances are also more exposed to the substance use of others in their social environment (parents and peers), and to the possibility of trauma such as sexual abuse. Substance abuse, which was initially intended as an attempt to avoid stress, in fact causes additional stress and a secondary loss of resources. A cause for concern is also the fact that the families of most substance-abusing adolescents lack important resources thereby putting these adolescents in a vulnerable position from the outset. According to the findings of a South African study (Amoateng, 2006), there is less regulation by parents, high levels of marital conflict and family stress in such families. Under these home circumstances, the adolescents' capacity to cultivate and guard their resources is diminished when they constantly also have to deal with emotional turmoil and social uncertainty within such a family.

Academic achievement/ progress is one of the major criteria for success in adolescence and certainly a critical condition resource from where further resource building can be launched. However, the current group of adolescents associates schoolwork with "the pressure to perform" (Part. 116) which suggests that schoolwork is related to stress "stress about school" (Part. 248, 261). The acquisition and facilitation of resources such as academic achievement/ progress is a central motivational construct according to COR theory (Hobfoll, 2002). If a central resource such as this is not achieved, the motivation to attain the associated resources of career development and economic independence is jeopardized as well. If the prospects of future success are fragile, it is understandable that general motivation can deteriorate. This will increase the risk of suicide. Findings from South African studies confirm that academic failure, among other factors, trigger suicide attempts (Mhlongo &

Peltzer, 1999) while unmet school goals are a predictor of suicide risk in a suicide risk group (Peltzer et al., 2008). This disappointment is further influenced by parents' educational aspirations, family values about the importance of learning, the provision of material resources for studying and ongoing academic support and involvement by parents (Catan, 2004). If these social resources are scarce, the adolescent struggles to progress at school and will be stressed by this threat of failure.

People experience stress when resources are perceived to be insufficient to deal with demands. To be in such a position can be overwhelming and distressing to the adolescent who lacks coping experience. The most prominent emotional experience described by the current adolescent group was that of being stressed, worried, anxious and afraid. They expressed it as "suffer from stress" (Part. 38), "stress over your problems" (Part. 72), "worry too much about things, you are under too much stress" (Part. 326). The awareness of stress starts with the adolescent's perception of his/ her environment as being taxing to and threatening of resources (Aldwin, 2007). The findings of a South African study by Peltzer et al. (2008) showed that adolescent's perceived stress was a significant predictor of the risk of suicide. By implication, adolescents can be overwhelmed by their experience of stress and then resort to ineffective coping strategies like taking an emotional way out - such as suicide. On the other hand, stress has the potential to promote growth when resources are gained in the process of handling both traumatic and everyday/ chronic stressors successfully (see Aldwin, 2007). Resources that an individual can gain are the increased competence in problem-solving and decision-making skills, wisdom, empathy and self-understanding, for example. It also happens that during stressful times one can discover hidden resources such as when one's friends suddenly offer their support and assistance. It can be assumed that a resource gain cycle in the case of suicidal adolescents, is much more difficult to achieve.

Those adolescents better endowed with resources are less negatively affected by the resource drain or loss that occurs in the face of stressful conditions (Hobfoll, 2002). However, those who lack personal, social, and perhaps other resources are more likely to disengage from goal-directed coping and seek emotional solace or dwell on their

negative emotions (Holahan, Moos, Holahan & Brennan, 1997). Some adolescents in the current group experienced rejection. This is implicit in the statements that they "feel that people don't want me there" (Part. 180), "there is no-one on my side" (Part. 353), "no-one cares about me" (Part. 59), "feel you're not loved" (Part. 181) which culminate in the testimony that they "always think what if I were not born" (Part. 365) - as well as depression, unhappiness and anger as factors contributing to their suicidal risk. If this is the adolescents' reaction to difficult situations, one must assume that they feel overwhelmed by their circumstances and that this deprives them of active coping in the situation and increases their negative emotions. Holahan et al. (1999) found that a preponderance of negative life events and psychosocial resource depletion were associated with increased depression over time.

According to COR theory, an individual's initial resources predict the coping strategies that will be used to adapt to stressful circumstances (Hobfoll, 1998). A person with fewer personal resources will rely more on maladaptive coping strategies. These should predict more negative long-term effects and subsequent decreases in mastery (Hobfoll, Freedy, Green & Solomon, 1996). Adolescents are likely to have fewer resources at their disposal due to their limited life experience and opportunities to develop certain resources. The cognitive resources of optimism for the future, problem-solving orientation, and self-esteem are examples of such personal resources that develop over time and with overcoming of past stressors.

The lack of these cognitive resources is especially evident when one is confronted with problems. The present group of adolescents' lack of optimism for the future is evident in the comments such as "want to get rid of their lives" (Part. 13), "you hate your life" (Part. 165), "feel life sucks" (Part.159), "don't want to live anymore" (Part. 123), "you wish you were never alive" (Part.165). These utterances reflect hopelessness, that prevent individuals from overcoming stressful situations because they do not see a way out of a difficult situation (Hendricks, 1999). The adolescents who also have a negative attitude towards problem-solving see problems as a threat, they don't think of themselves as efficient in solving their problems, and their problems can cause feelings of upset and frustration (McMurran, 2009). This will

clearly interfere with the adolescent's ability to invent effective or adapting coping responses to specific difficult situations (Carris, Sheeber & Howe, 1998). It was found that adolescents with a high suicide risk have a negative problem orientation (cognitions of pessimism and self-blame) and use more avoidant problem-solving (characterised as procrastination and passivity) and impulsiveness/ carelessness styles (characterised as narrowed and hurried) in dealing with everyday problems than other adolescents (Becker-Weidman, Jacobs, Reinecke, Silva & March, 2010).

A sense of low self-esteem manifesting itself as a low sense of personal agency and ability to exert control over one's world (Peltzer et al., 2008) will be an extra hindrance to approach problems with confidence. In the current group of adolescents' self-esteem plays a role in their being "uncertain about themselves" (Part. 534) and "not being satisfied with themselves" (Part. 220). Peltzer et al. (2008) have found low self-esteem to predict the suicide risk for a group of South African adolescents and, in another South African study, low self-esteem (specifically in the family context) was independently associated with suicide ideation, and differentiated significantly between suicide attempters and ideators (Wild, Flisher & Lombard, 2004). If problems cannot be addressed effectively, the adolescent is further overwhelmed by his/her situation and suicide becomes an option.

These cognitive abilities do not only affect the way problems are dealt with but also how interpersonal resources are attained. This was described by the current adolescents as follows: they "don't know how to deal with problems" (Part. 373) and "don't talk about their problems" (Part. 461). Suicide then becomes a solution to "solve problems" (Part. 55) when the impression is that "there is no other way out" (Part. 116), or when they are "wanting to get attention" (Part. 20). Many of the adolescents in the current study indicated that they are overwhelmed by their problems. An avoidant and narrow-minded style of solving problems prevents the adolescent from seeing the benefits of support and therefore they have low help-seeking intentions which are associated with high levels of suicidal ideation (Carlton, & Deane, 2000). A low level of self-esteem makes it less likely that these adolescents will make friends in new contexts because of the negative self-representation. This

process adversely affects the chances of establishing the supportive interpersonal relations that can protect them from stress caused by rejection, bullying etc. (Alsaker & Kroger, 2006; Tomori & Zalar, 2000).

Family factors (130 responses)

In 27,5% of responses from participants in the present study, the family system is indicated as a potential risk area. Emphasis was placed on family-related factors such as problematic parent-child relationships, troubled home life, and a disagreement with disciplinary actions of parents.

The family is a central source of support to adolescents (Larson et al., 2002) and vital in the total bundle of resources possessed. This corresponds to what Hobfoll (1998, 2001) meant by *resource caravans*, implying that having one major resource is typically linked with having other resources, and likewise for their absence. A supportive family environment acts as a protective resource through its ability to provide the circumstances of cohesion, warmth and an absence of discord (Bynner, 2001; Catan, 2004). These positive family resources stimulate the growth of resources in the adolescent such as self-value, emotional stamina and relationship skills, which are important assets to the adolescent's repertoire of possible solutions for dealing with stress. For the current group of adolescents with high suicide risk, the opposite is true - with many family interactions characterized as "maltreatment and abuse" (Part. 25, 77, 275, 307). These adolescents rather experience that "parents don't take them seriously" (Part. 475), that they are "hated at home" (Part. 354).

The number of resources available plays a role in the vulnerability of the adolescent. This implies that the fewer the resources, the greater the vulnerability (Hobfoll, 1998, 2001). When young people have plenty of inner resources, a supportive family and social contexts, a capacity for constructive adaptation to adversity (which is an aspect of resiliency) can be enhanced (Olsson, Bond, Burns, Vella-Brodrick & Sawyer, 2003). It is also very reassuring to the individual in times of loss and emotional distress (i.e. losing friendships) that they have a family to fall back on. The findings from South African studies done by Van Renen and Wild (2008) show that low

family connection (especially with the father) and frequent parent-child conflict are the most important independent predictors of adolescent suicidal ideation. Pillay and Wassenaar (1997) found the same for an Indian adolescent group, where suicidal subjects indicated lower levels of family satisfaction.

The responses indicate that parent-child conflict is to a large extent associated with parental discipline. The current adolescents refer to parental discipline in the following ways: "reject any form of control over you while you are still young" (Part. 383), "reject parental control" (Part. 365), "you are not allowed to go out with friends" (Part. 341), "are treated as children" (Part. 202), but would rather "want to control their parents" (Part. 320). Their reactions to the intended parental discipline are described in the following statements: "don't want to be warned" (Part. 320), "don't want to listen" (Part. 320), "wants to do as he/ she likes" (Part. 323). In the end, the responsibility is completely directed away from themselves e.g., their "parents make them angry" (Part. 518). Resource gain cycles are most likely to emerge as people seek to identify and mobilize resources during highly stressful times. This principle of COR is confirmed in the process of parent-child conflict, which can be a major threat to an adolescent's well-being or an opportunity for growth (Louw, Louw & Ferns, 2007). Well-being is threatened when the adolescent's striving towards greater autonomy and freedom distance the adolescent form the needed resources of parental involvement, management, discipline, and supervision of adolescent behaviour, which protects them against stress and injury (O'Brien & Scott, 2007). In support of this argument, a South African study has found that higher levels of substance use are reported by youths of all population groups who were less regulated by their parents, a condition that was significantly predicted by higher levels of overt hostility between the parents and higher levels of family stress (Amoateng et al., 2006). In terms of the potential that growth can come from parent-child conflict, the adolescent learns and exercises much needed skills in communication, decision-making, problem-solving etc. in the resolution of conflict with parents (Louw et al., 2007).

COR theory has a central socio-cultural component of the "individual nested in family nested in tribe" principle (Hobfoll, 2001: p338). This suggests that an individual's appraisals and coping strategies are guided by cultural and family virtues arising from the process of socialization. The adolescent's psychological resources are therefore adopted from the context of socio-familial resources. Adolescents participating in the present study often lived in a troubled home environments described in the following words: "you do not like it at home" (Part. 373) probably because of "violence at home" (Part. 25), "parents fight" (Part. 209, 275), "you have been shouted at by people at home" (Part. 389) and "parents shout at them all the time" (Part. 533). Adolescents in such circumstances are more likely to show negative coping resources in areas of conflict resolution, emotional regulation, and pro-social behaviours. The findings of a South African study on exposure to violence at home, demonstrates that such violence contributes to dating violence in the adolescent witnesses in gender specific ways (Kubeka, 2008).

Peer group and romantic relationships (67 responses)

The adolescents' relationships with friends and romantic partners were described as very stressful in 14,1% of the responses. Peer relationships were characterized by peer pressure and victimization/ bullying where, for example, they were "teased about how you look" (Part.145). This can create psychological stress and are indicated as a suicide risk (La Greca & Harrison, 2005). These relationships may challenge young people's interpersonal, emotional, and cognitive resources such as the demand for self- and emotional regulation when the interpersonal experience elicits strong feelings, i.e. sadness and guilt. The adolescents who are still lacking in the interpersonal experience may struggle to overcome the stress and be at an increased risk for depression. This is particularly true of adolescents with personal and family resources that have already been compromised (La Greca, Davila & Siegel, 2009).

Many responses by the participants who took part in the present study suggest that they often experience romantic relationships as very stressful, especially when threatened break-ups have to be negotiated. The current adolescent group indicated romantic break-ups, described as "your relationship that you were in, is broken up"

(Part. 603) as the most pervasive kind of relationship loss experienced. Romantic break-ups have similarly been identified as the single most prominent psychosocial risk factor for suicidal ideation in South African adolescents (George, 2005). When this is interpreted from the basic tenets of the COR theory (Hobfoll, 1998), the actual loss of a relationship involves threats to personal and social resources such as self-esteem and social status and acceptance. It also constitutes that the investment made in terms of commitment can fail and trigger the adolescent's rejection sensitivity (La Greca et al., 2009) as illustrated by the following response "be rejected by your boyfriend" (Part. 343). The abandonment and associated social exclusions experienced add to negative affect and conclusions related to self-blame (Furman, McDunn & Young, 2009) associated with suicide.

Peer relationships play a vital role in the lives of adolescents by providing a context wherein all the dimensions of development (i.e. social, physical, cognitive, emotional, moral, sexual and personality) can manifest themselves (LaGreca et al., 2009; Louw et al., 2007). It is also of special importance to the adolescent's sense of belonging and acceptance (Newman, Lohman, & Newman, 2007). This corresponds with the notion of COR that resources hold both instrumental and symbolic value and when peer relationships are troubled, the implied loss pertains to both these values.

Stressful life events (52 responses)

Stressful life events are extremely demanding - and this can cause the adolescent to be overwhelmed by the situation when the initial trauma triggers a chain of events that contain multiple losses and threats (Hobfoll et al., 1996). This was the case in 11% of the responses from participants in this study. During stressful life events, the existing coping resources are not effective, either because of inadequate resources to deal with the challenge or owing to circumstances that are too overwhelming no matter how many resources are available (Hobfoll, 2002). In such situations, resource deterioration and negative sequelae will occur in increasingly rapid and critical loss cycles (Kaniasty & Norris, 1995). For the current group, teenage pregnancy, molestation and rape are examples of stressful life events that they have had to endure. Kaye (2008) noted the negative loss cycles that occur when the pregnant

adolescent experiences a reduced quality of life because of the interference of a pregnancy with educational expectations, self-realization, marital prospects, and economic prosperity. These adolescents most often distance themselves from services and help because of their confusion about options available and worry and shame about the moral judgement of society (Richter, Norris & Ginsburg, 2006). Molestation and rape relate to the high incidence of exposure to direct and indirect violence in neighbourhoods and families in South Africa (Suliman, Kaminer, Seedat & Stein, 2005).

The stress that is experienced when a resource is lost is underlined by responses such as "when one has lost both parents" (Part. 374). This event of loss can cause extreme stress when the adolescent is thereby deprived of a core resource and guide. These youngsters are exposed to unpredictable futures and uprooted environments (Borges et al., 2008) and this is compounded and complicated by the grieving process. In South Africa parental death is especially pronounced because of the AIDS pandemic. This is clear from Cluver and Gardner's (2006) report that more than two million children have already lost their parents to AIDS in this country. COR posits that those who have experienced the interpersonal loss of important attachments will adopt a defensive style of coping and be hesitant to invest resources of trust, time and commitment in new relationships because they feel insecure (Hazan & Shaver, 1994; Hobfoll, 2001). The reasons of which can be found in warm, supportive and involved relationships with parents that are associated with improved psychological well-being and consequently a protection for adolescents from suicidal behaviour (Connor & Rueter, 2006; Flouri & Buchanan, 2002).

Socio-economic status (22 responses)

Poverty was indicated as a potential risk for suicide in 4,6% of participant responses. This is a surprising finding, because national statistics and individual studies indicate that a much larger percentage of youths in South Africa live in poverty. Haarmann (1999) found that income per capita in the poorest 40% of South African households is insufficient to provide for all household members' basic needs. Possible explanations for the result in the current study can be the following: firstly, although

the negative impact of poverty is widely acknowledged it seems that the specific effect on suicide risk is not as high as for other problems arising from socio-economic factors such as substance abuse; secondly, however, poverty can objectively be seen as a risk factor, although it might not be the experience of the adolescent.

Socio-economic factors affect the lives of participants in the current study through unfulfilled needs demonstrated in descriptions such as "have absolutely nothing" (Part. 394) and " to be hungry" (Part. 346). This lack of resources associated with poverty clearly reflects the spiral principle of Hobfoll's theory, which posits that the lack of resources can impede future resource accumulation. This is especially pronounced when it comes to school enrolment, attendance and attainment which are strongly influenced by the inability to pay school fees and utensils, with parents who do not value education, and a lack of space and time at home for homework (Noble, Wright & Cluver, 2006). This diminished opportunity for education, increases the possibility of the emergence of factors such as hopelessness, poor physical health, and associated mental health problems such as anxiety and depression (Corrigall, Lund, Patel, Plagerson & Funk, 2008; Patel & Kleinman, 2003). A person in such a disadvantaged position might also be hindered from developing the necessary abilities and skills to deal with situations and are less likely to benefit from support services because of scarce societal resources in poor communities (Kaniasty & Norris, 1995). The associated outcome will inevitably include emotional and behavioural reactions such as substance abuse, teenage pregnancy, and feelings of despair (Call et al., 2002; Kuruvilla & Jacob, 2007). For these reasons it is understandable that someone who experiences such dissatisfaction with their lot in life (this is also known as relative poverty) can very well become victims of social exclusion and eventual emotional distress because relative poverty is based on adolescent's aspirations for socially perceived necessities - including the participation in social activities (Noble et al., 2006). Therefore it is certain that the experience of poverty and the associated multi-dimensional deprivations (i.e. material, adequate care, physical safety, health) due to living standards imply a loss or even a complete break down of resources. In circumstances like this, where the psychological well-being of the adolescent has also been put in jeopardy through the limited resources that such a family can provide for

their adolescent members in terms of trust, safety and security (Call et al., 2002; Carter, & Murdock, 2001), suicidal behaviour could appear to be an option to some. Nevertheless, low socio-economic status does not necessarily have to be detrimental to academic performance, as proved by the findings of a South African study on disadvantaged youths (Dass-Brailsford, 2005). This study shows that personal resources such as goal orientation, initiative, motivation, a feeling of personal agency, family and school support, helped these youngsters to still achieve academic success irrespective of circumstances.

CONCLUSION AND RECOMMENDATIONS

The noticeably higher rate of suicide risk (36%) found in the present study should be alarming to all policy makers and stakeholders concerned with adolescent mental health and well-being, especially in the Western Cape. Hence the results of the present study is of utmost importance:

For the participants of the current study individual factors seem to exert the most prominent influence in their risk for suicide. Factors indicated were: negative emotional experiences of rejection and depression, academic problems, low self-esteem and difficulty in problem-solving. However, the factor of substance abuse was revealed as the most prevalent. These adolescents with high suicide risk might experience themselves as fragile and show signs of being vulnerable in times of demand, pressure and difficulty which might increase the likelihood of choosing dysfunctional coping strategies such as substance abuse to alleviate stress. However, substance abuse can rather increase stress, which could add to the feeling of being overwhelmed. Dysfunctional coping strategies have been shown to correlate with suicidal ideation in South African adolescents (Loots, 2008; Meehan, Peirson & Fridjhon, 2007).

The relationship with parents and a troubled home life contributed to the risk of suicide in the current group significantly more than other factors. The family as a protective factor provides the adolescent with an emotional and behavioural knowledge base and value system to guide them on how to cope with difficulties.

When adolescents are disconnected from this system of support (both instrumental and symbolically) by conflict and disruption of the family environment, it will probably increase their overall vulnerability when faced with stressful situations. A number of South African studies have shown that family functioning is a predictor of suicidal behaviour (Pillay, & Wassenaar, 1997; Van Renen, & Wild, 2008).

The fact that stress was the overall emotional experience of the participants who are greatly at risk in terms of suicide demonstrates that their emotional well-being is compromised in the process of dealing with often overwhelming demands.

As a general comment it should be mentioned that it is not possible to assume direct causality from the risk factors reported by the participants of the present study. A factor becomes a risk when there is a unique interaction between the individual's vulnerability and certain environmental demands that seem overwhelming at a specific time. Risk factors act interdependently making different factors equally important in assessing the risk of suicide. There may be multiple developmental pathways or combination of risks leading to the same outcome; or, conversely, a single component or factor that is common across individuals will not inevitably result in a common outcome but rather may result in varied outcomes among individuals (Cicchetti & Rogosch, 1999). For example, the presence of a mood disorders are a significant risk factor for suicide but only few individuals with affective disorders commit suicide (Bryan & Rudd, 2006).
The results of this study provide some understanding of the risk factors confronting South African adolescents whereby deficits in available resources are made clear by these identified risk factors.

Limitations

The most important limitations of the study should be kept in mind when interpreting the results:

- A relatively small sample of participants drawn from a specific region in South Africa does not necessarily represent the circumstances of the greater

multi-cultural society. The results of this study can therefore only be generalized to adolescents with a similar demographic background.

- All the population groups are not represented equally in the current study. Although the white and Indian/ Asian groups are underrepresented, the black and Coloured representation reflects the population composition of the Western Cape region.
- The open-ended question was the only qualitative method employed in the current study. The use of an additional qualitative strategy such as follow-up semi-structured interviews could have yielded supportive detail of the risk factors reported.

Recommendations

If South Africa wants to adopt a pro-active approach, efforts should be aligned towards a health perspective which will focus on providing and enhancing and not only curing and healing. The aim can be to assist young people to be successful in the performance of mental functions (i.e. motivation, positive mood, self-regulation, self-confidence), resulting in productive activities, fulfilling relationships with other people, and the ability to adapt to change and to cope with adversity (definition adapted from Surgeon General Report) (US Department of Health and Human Services, 1999). The results of this study are a step in the direction of informing the practice of mental health promotion or resource development by providing initial insight into the risks that confront the adolescent population. Future research could join in this endeavour by broadening the knowledge of the resources needed by adolescents and their families for coping with stress and adversity. The following specific resources can be recommended for further investigation (also see Beasley, Thompson, Davidson, 2003; Herrman et al., 2005; Olssen et al., 2003; Peltzer et al., 2008; Pillay & Wassenaar, 1997; Schlebusch, 2005; Van Renen & Wild, 2008; Wild et al., 2004).

Individual level resources:

- perseverance after disappointment;

- tolerance of negative affect;
- motivation/ goal orientation;
- optimism;
- communication skills;
- problem-solving skills;
- emotional and self regulation; and
- stress relief strategies.

Family level resources:

- parental involvement and support; and
- positive parent-child interactions.

Community/school level resources:

- youth counselling services; and
- safe schools.

REFERENCES

Aldwin, C.M. (2007). *Stress, coping, and development: An integrative perspective*. New York: Guilford Press.

Alsaker, F.D., & Kroger, J. (2006). Self-concept, self-esteem and identity. In S. Jackson & L. Goossens (Eds.), *Handbook of adolescent development.* New York: Psychology Press.

Amoateng, A.Y., Barber, B.K., & Erickson, L.D. (2006). Family predictors of adolescent substance use: The case of high school students in the Cape metropolitan area, Cape Town, South Africa. *Journal of Child & Adolescent Mental Health, 18*(1), 7-15.

Beasley, M., Thompson, T., & Davidson, J. (2003). Resilience in response to life stress: The effects of coping style and cognitive hardiness. *Personality and Individual Differences, 34*, 77-95.

Beautrais, A.L. (2000). Risk factors for suicide and attempted suicide among young people. *Australian and New Zealand Journal of Psychiatry, 34*, 420-436.

Becker-Weidman, E.G., Jacobs, R.H., Reinecke, M.A., Silva, S.G., & March, J.S. (2010). Social problem-solving among adolescents treated for depression. Behaviour Research and Therapy, 48, 11-18.

Berg, B. L. (2007). *Qualitative research methods for the social sciences* (6th ed.). New York: Pearson.

Bertolote, J., Fleischmann, A., DeLeo, D., Bolhari, J., Botega, N., De Silva, D., Thanh, H., Phillips, M., Schlebusch, L., Va Rnik, A., & Vijayakumar, L. (2005). Suicide attempts, plans, and ideation in culturally diverse sites: The WHO SUPRE-MISS community survey. *Psychological Medicine, 35*(10), 1457-1465.

Borges, G., Benjet, C., Medina-Mora, M.E., Orozco, R., Molnar, B.E., & Nock, M.K. (2008). Traumatic events and suicide-related outcomes among Mexico City adolescents. *Journal of Child Psychology and Psychiatry, 49*(6), 654-666.

Bryan, C.J., & Rudd, M.D. (2006). Advances in the assessment of suicide risk. *Journal of Clinical Psychology: In Session, 62*(2), 185-200.

Bynner, J. (2001). Childhood risks and protective factors in social exclusion. *Children & Society, 15*(5), 285-301.

Call, K.T., Riedel, A.A., Hein, K., McLoyd, V., Petersen, A., & Kipke, M. (2002). Adolescent health and well-being in the twenty-first century: A global perspective. *Journal of Research on Adolescence, 12*(1), 69-98.

Carlton, P., & Deane, F. (2000). Impact of attitudes and suicidal ideation on adolescent's intentions to seek professional psychological help. *Journal of Adolescence, 23*, 35-45.

Carris, M.J., Sheeber, L., & Howe, S. (1998). Family rigidity, adolescent problem-solving deficits, and suicidal ideation: A mediational model. *Journal of Adolescence, 21*, 459-472.

Carter, A.S., & Murdock, K.K. (2001). The family as a context of psychological functioning. In E. L. Grigorenko and R. J. Sternberg (Eds.), *Family environment and intellectual functioning* (pp. 1-22). New Jersey: Lawrence Erlbaum Publishers.

Catan, L. (2004). *Becoming adult: Changing youth transitions in the 21st century: A synthesis of findings from the ESRC research programmes. Youth, Citizenship and Social Change 1998-2003.* Brighton: Trust for the Study of Adolescence.

Centers for Disease Control and Prevention (2008). Youth risk behavior surveillance-United States, 2007: Surveillance Summaries. *Morbidity and Mortality Weekly Report*, 57(4). Retrieved January, 27, 2010 from http://www.cdc.gov/mmwr/PDF/ss/ss5704.pdf

Cicchetti, D., & Rogosch, F.A. (1999). Psychopathology as risk for adolescent substance use disorder: a developmental psychopathology perspective. *Journal of Clinical Child and Adolescent Psychology, 28*(3), 355-365.

Cluver, L., & Gardner, F. (2006). The psychological well-being of children orphaned by AIDS in South Africa. A*nnals of General Psychiatry, 5*,8.

Coleman, J., & Hagell, A. (2007). *Adolescence, risk and resilience: Against the odds.* Sussex: John Wiley & Sons.

Connor, J.J. & Rueter, M.A. (2006). Parent-child relationships as systems of support or risk for adolescent suicidality. *Journal of Family Psychology, 20*, 143-155.

Corrigall, J., Lund, C., Patel, V., Plagerson, S., & Funk, M.K. (2008). Poverty and mental illness: Fact of fiction? A commentary on Das, Do, Friedman, McKenzie & Scott (65:3, 2007, 467-480). *Social Science & Medicine, 66*, 2061-2063.

Dass-Brailsford, P. (2005). Exploring resiliency: Academic achievement among disadvantaged black youth in South Africa. *South African Journal of Psychology, 35*(3), 574-591.

Fergusson, D.M., Woodward, L.J., & Horwood, L.J. (2000). Risk factors and life processes associated with the onset of suicidal behaviour during adolescence and early adulthood. *Psychological Medicine, 30*, 23-39.

Fleischmann, A., Bertolote, J.M., Belfer, M., & Beautrais, A. (2005). Completed suicide and psychiatric diagnoses in young people: A critical examination of the evidence. *American Journal of Orthopsychiatry, 75*(4), 676-683.

Flisher, A., Liang, H., Laubscher, R., & Lombard, C. (2004). Suicide trends in South Africa, 1968-90. *Scandinavian Journal of Public Health, 32(*6), 411-418.

Flouri, E., & Buchanan, A. (2002). The protective role of parental involvement in adolescent suicide. *Crisis, 23*(1), 17-22.

Furman, W., McDunn, C., & Young, B.J. (2009). The role of peer and romantic relationships on adolescents affective development. In N.B. Allen and L. Sheeber (Eds.), *Adolescent emotional development and the emergence of depressive disorders* (pp.299-317). New York: Guilford Press.

George, A.A. (2005). *The influence of psychosocial factors and resources on suicidal ideation of adolescents.* Unpublished master's dissertation, University of the Free State, Bloemfontein, South Africa.

Gould M. S., Greenberg, T., Velting, D.M., & Shaffer, D. (2003). Youth suicide risk and preventive interventions: A review of the past 10 years. *Journal of the American Academy of Child and Adolescent Psychiatry, 42*(4), 386-405.

Haarmann, D. (1999). The living conditions of South Africa's children. *Research Monograph, Series, No. 9.*

Hazan, C., & Shaver, P.R. (1994). Attachment as an organizational framework for research on close relationships. *Psychological Inquiry, 5*(1), 1-22.

Hendricks C. (1999). Perpetual determinants of early adolescent health promoting behaviours: Model development. J*ournal of Theory Construction and Testing, 2*(1), 13–22.

Herrman, H., Saxena, S., & Moodie, R. (2005). *Promoting mental health: Concepts, emerging evidence, practice. S*ummary report / a report from the World Health Organization, Department of Mental Health and Substance Abuse in collaboration with the Victorian Health Promotion Foundation and the University of Melbourne. Geneva: World Health Organization. Retrieved April 25, 2010, from http://www.who.int/mental_health/evidence/MH_Promotion_Book.pdf

Hobfoll, S.E. (1988). *The ecology of stress*. New York: Hemisphere Publishing Corporation.

Hobfoll, S.E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist, 44*, 513-524.

Hobfoll, S.E. (1998). *Stress, culture, and community. The psychology and philosophy of stress.* New York.: Plenum Press.

Hobfoll, S.E. (2001). The influence of culture, community, and the nested-self in the stress process: Advancing conservation of resources theory. Applied Psychology: *An International Review, 50(*3), 337-421.

Hobfoll, S.E. (2002). Social and psychological resources and adaptation. *Review of General, 6*(4), 307-324.

Hobfoll, S.E., Freedy, J.R., Green, B.L. & Solomon, S.D. (1996). Coping in reaction to extreme stress: The roles of resource loss and resource availability. In M. Zeidner and N.S. Endler (Eds.), *Handbook of Coping* (pp. 322-349). New York: John Wiley & Sons, Inc.

Holahan, C.J., Moos, R.H., Holahan, C.K., & Brennan, P.L. (1997). Social context, coping strategies and depressive symptoms: An expanded model with cardiac patients. *Journal of Personality and Social Psychology, 72*, 918-928.

Holahan, C.J., Moos, R.H., Holahan, C.K., Cronkite, R.C. (1999). Resource loss, resource gain, and depressive symptoms: A 10-year model. *Journal of Personality and Social Psychology, 77*, 620-629.

Hsieh, H. F., & Shannon, S.E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research, 15*(9), 1277-1288.

Kaniasty, K., & Norris, F. (1995). In search of altruistic community: Patterns of social support mobilization following Hurricane Hugo. *American Journal of Community Psychology, 23*(4), 447-477.

Kaye, D.K. (2008). Negotiating the transition from adolescence to motherhood: Coping with prenatal and parenting stress in teenage mothers in Mulago hospital, Uganda. *BMC Public Health, 8*, 83-88.

Knopf, D., Park, M.J., & Paul-Mulye, T. (2008). The mental health of Adolescents: A National Profile, 2008. San Francisco, CA: National Adolescent Health Information Center, University of California, San Francisco.

Kubeka, A.M. (2008). Exposure to violence at home: A qualitative exploration of experiences and perceptions of black adolescents in South Africa. *South Africa Review of Sociology, 39*(2), 282-300.

Kuruvilla, A., & Jacob, K.S. (2007). Poverty, social stress & mental health. Indian *Journal of Medical Research, 126*, 273-278.

Larson, R.W., Wilson, S., & Mortimer, J.T. (2002). Conclusions: Adolescents' preparation for the future. *Journal of Research on Adolescence, 12*(1), 159-166.

La Greca, A.M., & Harrison, H.M. (2005). Adolescent peer relations, friendships, and romantic relationships: Do they predict social anxiety and depression? *Journal of Clinical and Child and Adolescent Psychology, 34*(1), 49-61.

La Greca, A.M., Davila, J., & Siegel, R. (2009). Peer relations, friendships, and romantic relationships: Implications for the development and maintenance of depression in adolescents. In N.B. Allen and L.B. Sheeber (Eds.), *Adolescent emotional development and the emergence of depressive disorders* (pp. 318-336). Cambridge: Cambridge University Press.

Loots, S. (2008). *The role of exposure to suicide and coping strategies in the suicidal ideation of adolescents.* Unpublished master's dissertation, University of the Free State, Bloemfontein, South Africa.

Louw, A.E., Louw, D.A., & Ferns, I. (2007). Adolescence. In D.A. Louw and A.E. Louw (Eds.), *Child and adolescent development* (pp. 278-347). Bloemfontein: Psychology Publications.

Meehan, S., Peirson, A., & Fridjhon, P. (2007). Suicidal ideation in adolescent South Africans: The role of gender and coping strategies. *South African Journal of Psychology, 37*(3), 552-575.

McMurran, M. (2009). Social problem solving, personality disorder and violence. In M. McMurran and R.C. Howard (Eds.), *Personality, personality disorder and violence: An evidence based approach* (pp. 265-280). Chichester: John Wiley & Sons, Ltd.

Mhlongo,T., & Peltzer, K. (1999). Parasuicide among youth in a general hospital in South Africa. *Curationis, 22*(2), 72-76.

Morojele, N. K., & Brook, J.S. (2006). Substance use and multiple victimization among adolescents in South Africa. *Addictive Behaviours, 31*, 1163-1176.

Newman, B.M., Lohman, B.J., & Newman, P.R. (2007). Peer group membership and a sense of belonging: Their relationship to adolescent behaviour problems. *Adolescence, 42*(166), 241-263.

Noble, M., Wright, G., & Cluver, L. (2006). Developing a child-focused and multidimensional model of child poverty for South Africa. *Journal of Children & Poverty, 12*(1), 39-53.

O'Brien, & Scott (2007). The role of the family. In J. Coleman and A. Hagell, (Eds.), *Adolescence, risk and resilience against the odds* (pp. 17-40). Chichester: John Wiley & Sons, Ltd.

Olsson, C.A., Bond, L., Burns, J.M., Vella-Brodrick, D.A., & Sawyer, S.M. (2003). Adolescent resilience: A concept analysis. *Journal of Adolescence, 26*, 1-11.

Patel, V., Flisher, A.J., Nikapota, A., & Malhotra, S. (2008). Promoting child and adolescent mental health in low and middle income countries. *Journal of Child Psychology and Psychiatry, 49*(3), 313-334.

Patel, V. & Kleinman, A. (2003). Poverty and common mental disorders in developing countries. *Bulletin of the World Health Organization, 81*, 609-615.

Peltzer, K., Kleintjies, S., Van Wyk, B., Thompson, E.A., & Mashego, T.B. (2008). Correlates of suicide risk among secondary school students in Cape Town. *Social Behavior and Personality, 36*(4), 493-502.

Pillay, A. L., & Wassenaar, D.R. (1997). Family dynamics, hopelessness and psychiatric disturbance in parasuicidal adolescents. *Australian and New Zealand Journal of Psychiatry, 31*(2), 227-231.

Reddy, S.P., James, S., Sewpaul, R., Koopman, F., Funani, N.I., Sifunda, S., Josie, J., Masuka, P., Kambaran, N.S., Omardien, R.G. (2010). *Umthente uhlaba usamila – The 2nd South African national youth risk behaviour survey 2008*. Cape Town: South African Medical Research Council, 2010. Retrieve April 24, 2010, from http://www.timeslive.co.za/multimedia/archive/00609/yrbs_2008_final_rep_609325a.pdf

Reddy, S.P., Panday, S., Swart, D., Jinabhai, C.C., Amosum, S.L., Monyeki, K.D., Stevens, G., Morejele, N., Kambaran, N.S., Omardien, R.G., & Van den Borne, H.W. (2003). *Umthenthe uhlaba usamila: The 1st South African national youth risk behaviour survey 2002*. Cape Town: South African Medical Research Council. Retrieved April 13, 2009, from http://www.mrc.ac.za//healthpromotion/YRBSpart2.pdf

Republic of South Africa (2002). Act No. 17, 2002: Mental Health Care Act, 2002. *Government Gazette, 449* (No. 24024). Retrieved May 5, 2010, from http://www.info.gov.za/view/DownloadFileAction?id=68051

Republic of South Africa (2006) Act No. 38, 2005: Children's Act, 2005. *Government Gazette, 492* (No. 28944). Retrieved March 17, 2010, from http://www.info.gov.za/view/DownloadFileAction?id=67892

Reynolds, W.M. (1999). *Suicidal ideation questionnaire for adolescents*. Odessa, Florida: Psychological Assessment Resource.

Richter, L.M., Norris, S.A., & Ginsburg, C. (2006). The silent truth of teenage pregnancies: Birth to twenty cohort's next generation. *South African Medical Journal, 96*(2), 122-124.

Schlebusch, L. (2005). *Suicidal behaviour in South Africa.* Scottsville, South Africa: University of KwaZulu-Natal Press.

Scott, J., Treas, J., & Richards, M. (2004). *The Blackwell companion to the sociology of families*. Oxford: Blackwell.

Suliman, S., Kaminer, D., Seedat, S., & Stein, D.J. (2005). Assessing post-traumatic stress disorder in South African adolescents: Using the child and adolescent trauma survey (CATS) as a screening tool. *Annals of General Psychiatry, 4*(2), 1-10.

Tomori, M., & Zalar, B. (2000). Characteristics of suicide attempters in a Slovenian high school population. *Suicide and Life Threatening Behavior, 30*(3), 222-238.

United States Department of Health and Human Services. (1999). *Mental health: A report of the Surgeon General*. Rockville, MD, Office of the Surgeon General: U.S. Public Health Service. Retrieved May 10, 2010, from http://www.surgeongeneral.gov/library/mentalhealth/home.html

Van Renen, L.J., & Wild, L.G. (2008). Family functioning and suicidal ideation/behaviour in adolescents: A pilot study. *Journal of Child and Adolescent Mental Health, 20*(2), 111-121.

Waldvogel, J.L., Rueter, M., & Oberg, C.N. (2008). Adolescent suicide: Risk factors and prevention strategies. *Current Problems in Paediatric Adolescent Health Care, 38*, 110-125.

Wasserman, D., Cheng, Q., & Jiang, G. (2005). Global suicide rates among young people aged 15-19. *World Psychiatry, 4*(2), 114-120.

Wild, L.G., Flisher, A.J., & Lombard, C. (2004). Suicidal ideation and attempts in adolescents: Association with depression and six domains of self-esteem. *Journal of Adolescence 27*, 611-624.

Windle, M., & Windle, R. (2006). Alcohol and other substance use and abuse. In G.R. Adams and M.D. Berzonsky (Eds.), *Blackwell handbook of adolescence* (pp. 450-469). Oxford: Blackwell Publishing.