

THE INFLUENCE OF DISPOSITIONAL AND CONTEXTUAL FACTORS AS POSSIBLE DETERMINANTS ON ADOLESCENT SUICIDE IDEATION

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ABSTRACT

The incidence of adolescent suicide has become a source of concern in our societies, as suicide rates have nearly trebled in some industrialised countries, with South Africa showing a similar increase. To investigate factors contributing to this concern, a quantitative, cross-sectional and correlational approach was used. By utilising an existing data set, a group of 981 Grade 10 learners were selected through random sampling. The sample encompassed urban and rural areas and was distributed across race, gender, and socio-economic groups. The Suicide Ideation Questionnaire, Resilience Scale, Satisfaction with Life, South African Substance Abuse Inventory, and the Stressful Life Events Scale were used to measure the required variables. A hierarchical regression analysis was performed with dispositional and contextual factors significantly contributing to the variance in adolescent suicide ideation. This study concluded that dispositional factors appeared to have a strong determining influence on adolescent suicide behaviour, alluding to the importance of one's disposition. However, other contextual factors such as family structure and received and perceived social support systems cannot be discounted.

Keywords: dispositional and contextual factors; resilience; satisfaction with life; stressful life experience; suicide ideation

INTRODUCTION

The enormous increase of suicide behaviour among adolescents between the ages of 15 and 19 poses a serious public health matter (National Youth Development Agency 2010; Schlebusch 2005, 2012). For decades, suicide has been identified as one of the



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leading causes of death among young people between the ages of 15 and 24 (Kerr Owen and Capaldi 2008; Tomasula, Anderson, Littleton and Riley-Tillman 2012). According to Govender and Killian (2001) suicide behaviour in children is triggered through depression, high levels of violence, family problems and drug related behaviours. This increasing prevalence of suicide behaviour, especially among the youth is not merely a health but also a social concern (Meehan Peirson and Fridjhon 2007).

In South Africa, several studies documented a continuing increase in the prevalence of adolescent suicide (National Injury Mortality Surveillance System (NIMSS) 2007; Reddy, James, Sewpaul, Koopman, Funani, Sifunda, Josie, Masuka, Kambaran and Omaidien 2010). The South African Depression and Anxiety Group (SADAG) (2013) reported a daily rate of 230 attempts and 23 completed suicides across all ages. Findings from the first South African stress and health survey indicate that the Free State province has one of the highest prevalences of anxiety and mood disorders, a factor that significantly contributes to an increased risk for suicide behaviour (Stein, Seedat, Herman, Heeringa, Moomal, Myer and Williams 2007). Studies conducted in the Free State reported suicide ideation rates between 11 per cent and 12 per cent (Du Plessis 2012; Mashego and Madu 2009). Studies conducted by Botha (2014), De Jager (2015), Du Plessis 2012, Pepile (2015) and Wolmarans (2010) in secondary schools of the Free State province have all highlighted personal and social challenges such as high suicide ideation, self-harming and substance abuse rates, financial struggles as well as high levels of traumatic experiences among adolescents.

According to the World Health Organization (WHO) (2010), suicide is a deliberate attack on oneself with the expectation of a fatal outcome, while suicide ideation is defined as cognitive processes in which a person imagines killing himself/herself without actively putting it into action (Palmer 2008). Historically, suicide behaviour was viewed along a one-dimensional causal pathway that afforded attribution primarily to either social influences (Bronfenbrenner 1979; Durkheim 1951) or psychological causes (Berman, Jobes and Silverman 2006). A changing view of suicide behaviour led to consideration of both dispositional factors (personality traits, self-esteem, etc.) and social factors such as family dissolution and social isolation (Durkheim 1951; Lester 1988). More recent findings by Beautrais (2000) and Schlebusch (2005) support the notion that suicide behaviour should be approached from a multifactorial aetiological basis. Therefore, this study aimed to investigate the extent to which both dispositional (personal) and contextual (socio-environmental) factors influence adolescent suicide.

FACTORS INFLUENCING SUICIDE BEHAVIOUR

Dispositional factors

Literature exploring resilient children highlighted the presence of various protective factors on intrapersonal and interpersonal levels. Interpersonal aspects refer to family support and strong peer group relationships, whereas intrapersonal factors include cognitive skills and skills to regulate emotions and behaviour appropriately (O'Dougherty, Masten and Narayan 2013). According to Larson, Wilson and Mortimer (2002), the family is regarded as the central source of support for adolescents worldwide. Pillay and Wassenaar (1997) concluded that conflicting relationships between adolescents and their parents contribute to a high incidence of self-destructive behaviours by adolescents. Additional research by Alpaslan (2003) and Engelbrecht and Van Vuuren (2000) supports the stance that disruptive and disorganised families act as a precursor to suicide behaviour by adolescents.

Sebate (1999) and Rigby (2000) found that peer pressure could have a negative effect on adolescents' well-being, as it damages their self-concept and interferes with identity formation. Problems in romantic relationships have been found to be a significant contributor towards suicide behaviour. Exploring the impact of romantic relationships on adolescents, Engelbrecht and Van Vuuren (2000) reported that 17 per cent of the subjects stated relationship problems as a reason for considering suicide. In a study by Pillay (1995), peer relationship problems were found to be second only to parent-adolescent conflict as a cause of suicide behaviour. Another area of significant interaction constitutes the school arena. Having a supportive teacher-learner relationship is considered a moderating factor against suicide behaviour, and enhances how adolescents cope with self-destructive thoughts (Paulson and Everall 2001; Rigby 2000). High-school learners who experienced life as satisfying displayed a healthier self-concept, and appeared more positive about their futures (McCullough, Heubner and Laughlin 2000).

A survey concerning the prevalence of suicide behaviour in the Free State province (Mashego, Peltzer, Williamson and Setwaba 2003) concluded that a high level of self-esteem acted as a protective factor against suicide behaviour in adolescents. Alternatively, low self-esteem was found to show a strong correlation with the development of a negative attributional style of interaction with the environment, thereby predisposing individuals towards acts of self-blame and self-reproach (Brown and Dutton 1995; Dutton and Brown 1997). Being positive about one's abilities to accomplish tasks (self-efficacy) has been found an important contributor toward adolescent well-being. Researchers appear in agreement that self-efficacy behaviour decreases anxiety, stressful behaviour, and the development of depression while increasing academic performance and overall levels of self-confidence (Louw and Edwards 1995; Nasir, Mustaffa, Wan Shahrazard, Khairudin and Syed Salim 2011; Santrock 2005). Not being able to control or regulate one's

emotions effectively was reported as a stressor by secondary school learners (George and Van den Berg 2011), while poor emotional reactivity was found to increase the risk for suicide ideation in adolescents (Wolmarans 2010). Seeking emotional support was found to increase adolescents' ability to manage stressful experiences more successfully and increase their level of optimism in dealing with future problems (Bryant-Davis 2005; Rutter and Estrada 2006). Louw, Louw and Ferns (2007) describe friendships as a reciprocating process that allows teenagers to cope with adolescent stressors, counteract loneliness and isolation, as well as increases their sensitivity towards and providing for other's needs. Having good social support systems acts as a buffer against the risk for suicide ideation (George 2005, 2009).

How satisfied people are with their lives appears an obvious question when one explores suicide behaviour. Valois, Zullig, Heubner and Drane (2004) conducted a study on secondary school learners to examine the relationship between perceived life satisfaction and suicide. They concluded that suicide behaviour is related to the degree of life satisfaction experienced by learners. Supportive findings draw a link between low satisfaction with life and depressive symptoms, poor health and high stress levels, and suicide behaviour (Heubner 2004; Malinauskas 2010; Zawawi and Hamaideh 2009).

As a psychological factor, resilience refers to the dynamic process within which individuals display positive adaptations, despite their adverse or traumatic experiences (Luthar and Cicchetti 2000; Masten 2009). Poorer adjustment is found to be related to increased risk for recurrent major depressive episodes that, in turn, enhances the likelihood of suicide behaviour. A comparative study investigating the effects of resilience on participants reports high levels of resilience are perceived as a protective buffer that decreases the effects of negative experiences (Wood and Tarrier 2010). Participants experiencing low levels of resilience are more likely to display enhanced reactivity to stressful events, and have more difficulty regulating their negative emotions (Ong, Bergeman, Bisconti and Wallace 2006). According to De Longis and Holtzman (2005), high levels of mastery and sense of relatedness are viewed as buffers, while a high level of emotional reactivity increases the probability of poor adjustment and other related mental health problems such as suicide. Being able to regulate one's emotions effectively allows individuals to anticipate their own emotional reactions (and importantly those of others), which assists them in managing emotionally arousing situations in a manner that reduces common stressors and adversities (Goldstein and Brooks 2006). Low self-esteem and a low sense of mastery are both associated with suicide thoughts (Vilhjalmsson, Kristjansdottir and Sveinbjarnardottir 1998). A person's sense of mastery is composed of elements such as self-efficacy, optimism, and adaptability (Weiss 2008).

Personality and cognitive factors have also been associated with influencing suicide behaviour. Poor problem-solving abilities, hopelessness, neuroticism, external locus of control, and low self-esteem are some traits that were found to significantly increase the risk of suicide (Beautrais 2000; Schlebusch 2005; Steele and Doey 2007). Impulsivity

as a personality trait seems most prominent during adolescence, with a higher degree of impulsivity increasing adolescents' risk for suicide (Steele and Doey 2007). However, dispositional factors cannot be viewed in isolation from contextual determinants that also have reported significant interactions with suicide behaviour.

CONTEXTUAL FACTORS

Dramatic changes in the adolescent's social environment are often blamed for the increase in psychological and social problems that have been noted in youth risk surveys (Reddy et al. 2010). Because of these social and environmental challenges, adolescence is perceived as a stressful period. Environmental stressors include but are not limited to peer pressure, school achievement, and the availability of drugs and alcohol.

At a social level, increased social disintegration gives rise to a reduction in the extent of adult support and guidance available to teenagers (Van den Berg, George, Du Plessis, Botha, Basson, De Villiers and Makola 2013). Researchers (Nduna and Jewkes 2012; Shilubane, Ruiter, Bos, Van den Borne, Sewpaul, James and Reddy 2013) are of the opinion that adolescents are exposed to a myriad of stressful life situations such as living in unsafe neighbourhoods, physical and sexual assault, crime, and domestic violence, amongst others. Such experiences may influence the well-being of individuals negatively and further reduce their capacity to cope (American Psychiatric Association [APA] 2013; Sadock, Sadock and Ruiz 2015). Consequently, adolescents who are exposed to trauma may be more distressed and present with depressive and post-traumatic symptoms.

Another social evil that appears to have invaded every area of society is the harmful use of substances. Substance use is a growing risk among adolescents worldwide (Degenhardt, Whiteford and Hall 2014). Alcohol, cannabis, and methamphetamine ("tik") are some of the most frequently used substances among the South African youth, with alcohol having a life-time prevalence of 25 per cent to 40 per cent (Department of Health 1999). Engaging in alcohol and/or drug use is in itself considered a behavioural risk, however, it also provides a feeding source for other risk behaviours such as violence and unsafe sexual behaviour (Otwombe, Dietrich, Sikkema, Coetzee, Hopkins, Laher and Gray 2015). A national survey investigating risk behaviour among youth reported one in two learners had been exposed to alcohol use with 34.9 per cent of learners having used alcohol on one or more days, while 28.5 per cent had engaged in binge-drinking episodes within the 30 days prior to the survey (Reddy et al. 2010). More specifically, the Free State province has been identified as one of the provinces with the highest prevalence of alcohol consumption among school learners (Reddy et al. 2010). Substances such as alcohol with its depressant effects, cause raised levels of impulsivity and altered thought patterns that have been linked to suicide behaviour (Sadock, Sadock and Ruiz 2015). Findings by Shilubane et al. (2013) concluded that

substance use contributed to increased levels of hopelessness, which raised the risk for suicide ideation and attempted suicide behaviours.

Impaired parent-child relationships and generally negative relationship experiences within the family including parents having low expectations of their children have been associated with raised levels of suicide-risk, while the converse has shown protective effects for the adolescents (Beautrais 2000, Nduna and Jewkes 2012). Being willing to accept support from others as well as to actively seek support increases the adolescent's access to social resources that have a direct influence on reducing their suicide risk (Walsh and Eggert 2007). South African adolescents are still being confronted with a number of social-political adjustments and challenges that are experienced as stressful for some. Being able to perceive that available resources are at their disposal enhances their perceptions that are able to cope with the challenges while simultaneously decreases their levels of suicide ideation (Hutchinson, Stuart and Pretorius 2007; Meehan, Peirson and Fridjhon 2007).

From the above literature, it can be seen that dispositional factors (satisfaction with life, personal strengths, and resilience) and contextual factors appear to have some influence on suicide behaviour. Given the multi factorial nature of suicide behaviour, more research is needed if the increasing tide of suicide behaviour by adolescents is to be stemmed. This study aimed to investigate the influence of dispositional and contextual factors on adolescent suicide ideation.

RESEARCH METHODS

Research design

This study adopted a quantitative non-experimental research approach using a cross-sectional research design.

Research question

In the light of the follow-up national survey conducted by Reddy et al. (2010) as well as the comparative analyses of Shilubane et al. (2013) that expressed concern about adolescent well-being, highlighting suicide behaviour, substance abuse and high rates of depression amongst others as current concerns, this study investigated a group of high school learners in the Free State province with the aim of investigating what influence dispositional and contextual factors have on the suicide ideation (viewed as a risk factor) of adolescents. To answer this question the following research questions were considered:

Hypothesis: Do dispositional and contextual factors significantly determine suicide ideation in adolescent learners in the Free State province?

Null hypothesis: There is no significant relationship between dispositional and contextual factors and the level of suicide ideation in adolescents.

Alternative hypothesis: There is a significant relationship between dispositional and contextual factors and the level of suicide ideation in adolescents.

Participants and research procedure

This study consisted of a sample size of 981 adolescents from a population of Grade 10 learners from nine schools that represented all five districts of the Free State province in South Africa. Participants were selected across gender, from both rural and urban environments, and came from various socio-economic backgrounds. Questionnaires were administered during a school day, extending over a two- to three-hour period. Participants were given a break halfway through the test battery, during which a food packet was served to them. Using the back-translation method (Brislin 1986), questionnaires were translated from English into Afrikaans and Sesotho for purposes of administration. Completion of the questionnaire was conducted in class groups of 20 to 30, under the supervision of registered psychometrists and psychologists.

Owing to the voluntary nature of the study, clearance to conduct the research was obtained from the Ethics Committee of the Faculty of Humanities of the University of the Free State. Permission was also obtained from the Free State Department of Education and the school principals. Informed consent was obtained from all participants' parents, and participants were all required to give assent before participation. The research objectives were explained to the participants, and each was informed of his or her right to withdraw from the study at any time. Furthermore, participants were assured that all information would be treated anonymously and with the strictest confidentiality. In compliance with ethical standards of social research, professional staff was available to assist participants with any questions, debrief them, and initiate a referral process should the need arise.

The sample characteristics were as follows: The mean age was 16.34 years, and there were 410 males (41.8%), and 571 females (58.1%). The sample consisted of 703 Black (71.6%), 168 White (17.2%), 86 Coloured (8.8%), and 24 Asian (2.4%) participants, with eight incomplete data sets. The majority of the participants reported their first language as Sesotho (44.8%), followed by Afrikaans (23.5%), and Setswana (13.2%) as dominant languages.

Measuring instruments

The Satisfaction with Life Scale (SWL) is an assessment of individuals' general sense of satisfaction with their lives as a whole (Pavot and Diener 2008). This inventory consists of five items, each measured on a seven-point Likert scale, scoring from "strongly disagree" to "strongly agree" (Pavot and Diener 2008). The minimum and maximum scores range from 5 to 35, with higher scores indicating a higher sense of satisfaction

with life (Pavot and Diener 2008). Pavot and Diener (2008) reported a Cronbach alpha coefficient of 0.80, while Basson (2008) obtained an alpha coefficient of 0.71 for South African adolescents.

The Resiliency Scale for Children and Adolescents (RSCA) (Prince-Embury 2006) was used to assess the areas of perceived strength and/or vulnerability related to the resilience of participants. It consists of 64 items measured on a seven-point Likert scale. There are three subscales, namely Sense of Mastery, Sense of Relatedness and Emotional Reactivity. Alpha coefficients ranging from 0.74 to 0.83 were reported for a sample in the United States of America (Prince-Embury 2006). In a South African study, De Villiers (2009) has reported alpha coefficients ranging from 0.90 to 0.93, indicating good internal consistency for the scale.

The Suicidal Ideation Questionnaire for Adolescents (SIQ-A) (Reynolds 1988) measures the frequency and intensity of suicide thoughts. The instrument consists of 30 items that are measured along a seven-point Likert scale, and the total score ranges from 0 to 180 (Reynolds 1988). This original measuring instrument was found to be reliable, with Cronbach's alpha coefficients ranging from 0.93 to 0.97 (Reynolds 1988). In a South African study by George (2005), an alpha coefficient of 0.97 was obtained.

A shortened version of the Stressful Life Events Questionnaire (SLEQ) (Goodman, Corcoran, Turner, Yaun and Green 1998) identifies the type and frequency of stressful/traumatic life events to which one has been exposed. The questionnaire includes 12 identified traumatic life themes to which participants may have been exposed either directly or indirectly. The questionnaire consists of a nominal scale to which participants must answer "yes" or "no". All "yes" responses are explored further in terms of the context of the traumatic event. As a clinical screening measure, Goodman et al. (1998) reported a gamma alpha coefficient of 0.76 for men and 0.85 for woman who experienced stressful life events.

The Behavioral and Emotional Rating Scale (BERS-2) (Epstein and Sharma 1998) consists of 52 self-report items that measure participants' emotional and behavioural strengths. The BERS consists of five subscales, namely Interpersonal Strength, Intrapersonal Strength, Family Involvement, School Functioning and Affective Strength. Items are scored along a four-point Likert Scale with the minimum/maximum score range being 0–135. Original Cronbach alpha coefficients for the five subscales ranged between 0.860 and 0.970. A South African study on primary school learners reported coefficients ranging from 0.662 to 0.773 (De Villiers 2009).

The Substance Abuse Subtle Screening Inventory (SASSI-A2) (Miller, Renn and Lazowski, 2001) is an adolescent measure that screens for abuse of alcohol and other substances. The SASSI-A2 contains 28 items along a four-point Likert Scale. An additional five face-valid questions exploring current and past substance use and the history of any legal problems are included. The original test-retest coefficient reported was 0.89, while a Cronbach alpha coefficient of 0.75 was found. Higher scores indicate a higher probability for substance use.

All Cronbach alpha coefficients were of an acceptable standard above the 0.70 range, as is deemed acceptable for all non-cognitive constructs (Nunnally and Bernstein 1994).

Statistical procedures

Statistical analyses of the data were undertaken using the Statistical Package for the Social Sciences, Version 20 (2011). Frequencies and descriptive statistics were calculated to describe the sample. Cronbach alpha coefficients were calculated to determine the internal consistency reliabilities of the various scales and subscales. Pearson's product-moment correlation coefficients were obtained to determine the direction and strength of the relationships between the dependent and independent variables. The correlation coefficients were examined in accordance with Cohen's (Steyn 1999) recommendation that coefficients $r = 0.30$ be regarded as practically significant. Hierarchical regression analyses were performed to investigate the predictive effects of the independent variables SWL, Resilience, Substance Abuse, Behavioural Strengths and Stressful Life Events on adolescent Suicide Ideation as dependent variable. For purposes of interpretation, only the one per cent and five per cent levels of significance were considered.

Results and discussion

In reporting the descriptive results, learners who acknowledged using alcohol constituted 45.6 per cent of the sample. Considering participants who reported using alcohol, the highest percentage (18.3%) used it less than once a month, 12.3 per cent used one to three times a month, 5.4 per cent used once a week, 2.9 per cent used twice a week, and 6.1 per cent used alcohol more than twice a week.

Table 1: Frequency of traumatic themes as measured by the SLEQ (N = 981)

Traumatic themes	Frequency	%
Lost loved one due to trauma	421	43.0
Exposure to corpses	346	35.3
Loved one having a life-threatening illness	328	33.6
Robbery by force	313	31.9
Been seriously injured	288	29.8
Feared serious injury or death	279	28.5
Involuntary separation form loved one	182	18.5
Physical assault	174	17.8
Witnessed violence	168	17.2

Traumatic themes	Frequency	%
Domestic violence	111	11.4
Natural disasters	95	9.7
Sexual assault	84	8.7

An analysis of the frequency with which participants were exposed to different traumatic experiences is reflected in Table 1. From the results, personal loss appears to have affected participants more than any other traumatic theme. However, it must be acknowledged that 38 participants were orphaned, while 69 were living in State homes. This theme is followed by exposure to corpses or dead persons as well as having loved ones suffering from a life-threatening illness and being robbed by the use of force. For this group of adolescents, natural disasters and being sexually assaulted were reported as occurring less frequently.

Table 2: Alfa-coefficients for the different measuring instruments

Scales	Mean	SD	Skew	Kurt	α coefficient
Suicide ideation	38.920	42.887	1.240	.630	.978
Satisfaction with life	22.636	6.399	-.518	-.15	.719
Res (Sense of resilience and sense of mastery combined)	115.219	23.048	-.710	.700	.919
Res (Emotional reactivity)	30.946	14.859	.486	.980	.902
BERS (Interpersonal)	24.398	5.619	.130	-.507	.840
BERS (Intrapersonal)	16.322	3.900	.453	-.820	.785
BERS (Family involvement)	15.624	3.797	.687	.213	.757
BERS (School functioning)	15.266	3.679	.163	.440	.787
BERS (Affective strengths)	11.614	2.953	.264	-.158	.741
Stressful life events	2.827	1.944	.874	1.135	

Results for all coefficients in Table 2 have satisfactory values, with all scales and subscales reporting values above 0.70 for non-cognitive measuring instruments, as stipulated by Nunnally and Bernstein (1994). Skewness and kurtosis fall within acceptable ranges, except for Suicide Ideation and Stressful Life Events, which were expected. With regard to the SLEQ, it was decided not to measure the internal consistency reliability, as traumatic events are considered independent from each other. Therefore, it is unlikely

that learners' responses will show consistency among the items. Consequently, the internal reliability of the SLEQ was omitted, as it would not make sense to determine it (Wilson and MacLean 2011).

To explore if dispositional and contextual factors interacted on a significant level with Suicide Ideation, a hierarchical regression analysis was performed.

Table 3: Predictive effect of dispositional and contextual factors with suicide ideatio

Model	R	R ²	Adjstd R ²	Std. error of the estimate	Change statistics					Durbin-Watson
					R ² change	F change	df1	df2	Sig. F change	
1	.145a	.021	.020	39.802	.021	15.334	1	713	.000	
2	.197b	.039	.031	39.575	.018	2.641	5	708	.022	
3	.517c	.267	.252	34.764	.228	27.192	8	700	.000	.513
a. Predictors: (Constant), SLEQ										
b. Predictors: (Constant), SLEQ, Once a week, About twice a per week, Between one and three times a month, More than twice a week, Less than once a month										
c. Predictors: (Constant), SLEQ, Once a week, About twice a week, between one and three times a month, More than twice a week, Less than once a month, Intrapersonal strengths total, SWL, emotional reactivity total, combination for sense of resilience and sense of mastery, school functioning total, affective strengths total, family involvement total, interpersonal strengths total										
d. Dependent variable: SIQ total										

The results in Table 3 (Model 3) show a statistically significant relationship at the 0.01 per cent level of significance between Stressful Life Events, Alcohol/Drug Abuse, Satisfaction with Life, Resilience and Strengths, and Suicide Ideation ($F[14,700] = 18.196$; $p = 0.000$). The various dispositional and contextual factors predicted 25.2 per cent of the variance in Suicide Ideation (Adjusted $R^2 = 0.252$). The addition of Alcohol/Substance Abuse (Model 2) significantly increased the percentage variance explained in Suicide Ideation (over and above the variance explained by Trauma exposure alone in Model 1) by explaining an additional 1.8 per cent of the variance (R^2 change=0.018, F change $[5, 708] = 2.641$, $p = 0.022$). The addition of Satisfaction with life and esilience and strengths (Model 3) to Model 2 also led to a statistically significant increase in the variance explained in suicide ideation by explaining an additional 22.8 per cent of the variance, over and above the variance already explained by the previously entered independent variables (R^2 change = 0.228, F change $[8,700] = 27.192$, $p = 0.000$).

From Table 4 below can be seen that the combination of resilience: sense of mastery (SoM) and sense of relatedness (SoR) ($t = -6.692$, $p = 0.000$), resilience: emotional reactivity ($t = 9.718$, $p = 0.000$), intrapersonal strengths ($t = 2.639$, $p = 0.008$), and affective strengths ($t = -2.729$, $p = 0.007$) were found to contribute significantly toward suicide ideation on the one per cent level of significance, while trauma exposure ($t = 2.393$, $p = 0.017$), alcohol/drug abuse representing using alcohol or drugs once a week ($t = 2.125$, $p = 0.034$), satisfaction with life ($t = -2.354$, $p = 0.019$), interpersonal strengths ($t = 2.226$, $p = 0.026$) all reported significant contributions to predicting suicide ideation on the five per cent level of significance.

Table 4: Regression weights, t-tests and effect sizes of the moderating effects of suicide ideation

Model Beta		Standardised coefficients	t zero order	Sig. partial	Correlations		
					Part		
3	(Constant)		5.959	.000			
	Stressful events	.081	2.393	.017	.145	.090	.077
	Once a week	.071	2.125	.034*	.070	.080	.069
	SWL	-.082	-2.354	.019*	-.211	-.089	-.076
	Combination SoR and SoM	-.255	-6.692	.000**	-.297	-.245	-.217
	Emotional reactivity	.328	9.718	.000**	.385	.345	.315
	Interpersonal strengths	-.113	-2.226	.026*	.059	-.084	-.072
	Intrapersonal strengths	.130	2.639	.008**	.162	.099	.085
	Affective strengths	-.124	-2.729	.007**	.000	-.103	-.088

** $p \leq 0.01$; * $p \leq 0.05$

In Table 4, the combined SoM and SoR indicates that an increase of one unit in the combination variable led to a 0.488 unit decrease in suicide ideation.

This significant negative relationship implies that participants who viewed their environment as overwhelming and uncontrollable while still having difficulty forming and maintaining satisfying relationships are at a higher risk for suicide ideation.

According to De Longis and Holtzman (2005), high levels of SoM and SoR correlate negatively with suicide behaviour. Not being able to exercise a degree of certainty and control over one's environment (Nasir et al. 2011; Santrock 2005) and experiencing unsatisfactory parental, peer or learner-educator relationships (Engelbrecht and Van Vuuren 2000; George and Van den Berg 2011; Paulson and Everall 2001) seem to increase the risk of adolescents engaging in suicide behaviour. Participants who struggle to adjust to their environments, for instance having difficulty adapting to a new school and new friends and having a poor support base may consider suicide thoughts more frequently than those who adjust to their environments.

Table 4 shows that one unit increase in emotional reactivity leads to a 0.969 unit increase in suicide ideation. From this significantly positive relationship can be deduced that adolescents who respond emotionally when confronted with challenges are at greater risk for suicide ideation. Adolescents who are unable to effectively regulate their emotions report this as a stressful experience (George and Van den Berg 2011) and are more likely to react negatively to stressful events (Ong et al. 2006). According to De Longis and Holtzman (2005) and Wolmarans (2010), poor emotional reactivity increases the probability of poor adjustment to stressful situations and consequently the risk for suicide ideation.

The intrapersonal strengths reflected in Table 4 show an increase of one unit in intrapersonal strengths led to an increase of 1.405 units in suicide ideation. From these results, it appears that adolescent participants who viewed their own competencies and abilities more favourably were at greater risk for engaging in suicide ideation. This finding contradicts prevailing research, which supports the understanding that people who feel and are positive about their abilities and accomplishments are more likely to have lower levels of anxiety and show greater resistance to developing depression and other stressful behaviour (Louw and Edwards 1995; Nasir et al. 2011; Santrock 2005). Another interpretation to be considered would be that excessive intrapersonal strength could make some too reliant on themselves to the point of neglecting coping abilities such as seeking and receiving support, both traits which are linked to an increase for suicide risk.

As seen in Table 4, affective strengths show a significantly negative relationship with suicide ideation. An increase of one unit of affective strengths led to a decrease of 1.688 units in suicide ideation. Accordingly, participants who are able to give and receive affection from others are at lower risk for developing suicide ideation. Being able to receive emotional support by approaching others increases adolescents' ability to manage stressful experiences while building their levels of self-efficacy (Bryant-Davis 2005; Rutter and Estrada 2006). The emotional reciprocity in friendships increases the establishment of positive social relations (Louw et al. 2007) while decreasing the risk of suicide behaviour (George 2005, 2009).

CONCLUSION

In exploring the influence of dispositional and contextual factors on adolescent suicide, it appears that the former made a significantly greater contribution in explaining adolescent suicide ideation. Although this study did not explore all possible contextual factors, the findings offer a hopeful and optimistic result that puts outcomes such as suicide behaviour back in the dominion of personal control. The research findings lean toward an understanding that, amidst the many social, relational, and political difficulties, our disposition towards these circumstances can ultimately act as a buffer against risky behaviour such as suicide. This result needs to be translated and reinforced into the development of school-based workshops and various other training opportunities. Such learning opportunities should focus on increasing and strengthening dispositional attributes in adolescents, thereby equipping them with a greater degree of robustness against difficulties and demands they face so frequently. Adapting and extending these research findings to parents may serve a twofold purpose: 1) expanding adults' perceptions of their ability to influence matters in their own families' lives and to become an integral part of the adolescents' support system, while 2) a direct spin-off from changed parental perceptions could lead to improved parent-adolescent relationships as parents show greater reliance on dispositional strategies in managing their personal and family's challenges.

This research is a welcome result placing emphasis on human beings' ability to buffer adverse circumstances with their dispositional orientations. However, it must be noted that human behaviour is sometimes best understood when observed over a longer period, unlike cross-sectional studies which investigated a specific "slice" of time. Therefore the current findings did not measure change over time or consider important developmental influences that mature over time. Longitudinal studies may add to the richness of information and possibly yield different results regarding the contribution of contextual and dispositional factors to suicide behaviour. The absence of variables related to received or perceived social support as a well-documented contributing factor to suicide behaviour must also be acknowledged. Future studies should consider including dispositional variables such as self-esteem and a sense of coherence, including the addition of more contextual factors (for example, social support) in exploring the phenomenon. A considerable number of studies focusing on suicide behaviour are of a quantitative nature, and further qualitative exploration may yield different yet complementary findings to what has already been established.

REFERENCES

- Alpaslan, A. H. 2003. "Reflections on the Experiences and Needs of Adolescents Who Have Attempted Suicide: A Qualitative Study." *Journal of Social Work* 39 (3): 251–269.

- American Psychiatric Association 2013. *Diagnostic and Statistical Manual of Mental Disorders (DSM 5)*. Arlington: APA.
- Basson, N. 2008. “*The Influence of Psychosocial Factors on the Subjective Well-being of Adolescents.*” Master’s dissertation, University of the Free State.
- Beautrais, A. L. 2000. “Risk Factors for Suicide and Attempted Suicide among Young People.” *Australian and New Zealand Journal of Psychiatry* 34 (3): 420–436.
- Berman, A. L., D. A. Jobes, and M. M. Silverman. 2006. *Adolescent Suicide: Assessment and Intervention*. Washington DC: APA.
- Botha, A. 2014. “*The Influence of Risk and Resilience Factors on the Life Satisfaction of Adolescents.*” PhD thesis, University of the Free State.
- Brislin, R. W. 1986. “The Wording and Translation of Research Instruments.” In *Field Methods in Cross-cultural Psychology*, edited by W. J. Lonner and J. W. Berry, 137–164. Newbury Park, California: Sage.
- Bronfenbrenner, U. 1979. *The Ecology of Human Development: Experiments by Nature and Design*. Massachusetts: Harvard University Press.
- Brown, J. D., and K. A. Dutton. 1995. “The Thrill of Victory, the Complexity of Defeat: Self-esteem and People’s Emotional Reactions to Success and Failure.” *Journal of Personality and Social Psychology* 68: 712–722.
- Bryant-Davis, T. 2005. *Thriving in the Wake of Trauma: A Multicultural Guide*. Westport, CT: Praeger.
- Degenhardt, L., H. Whiteford, and W. Hall. 2014. “The Global Burden of Disease Projects: What Have We Learned about Illicit Drug Use and Dependence and their Contribution to the Global Burden of Disease?” *Drug and Alcohol Review* 33 (1): 4–12.
- De Jager, M. 2015. “*Factors Affecting Risk Behaviour among Middle and late Adolescents: An Ecological Systems Perspective.*” Master’s dissertation, University of the Free State.
- De Longis, A., and S. Holtzman. 2005. “Coping in Context: The Role of Stress, Social Support, and Personality in Coping.” *Journal of Personality* 73: 1633–1656.
- Department of Health. 1999. *South Africa Demographic and Health Survey, 1998*. Pretoria, South Africa: South African Department of Health.
- De Villiers, M. 2009. “*Die Ontwikkeling en Evaluering van ’n Intervensieprogram om Kinders se Stresweerstandigheid te Bevorder.*” PhD thesis, University of the Free State.
- Du Plessis, E. D. 2012. “*Psychosocial Factors as Predictors of Suicide Ideation amongst Adolescents in the Free State Province: A Cross-Cultural Study.*” PhD thesis, University of the Free State.
- Durkheim, E. 1951. *Suicide*. New York: Free Press.

- Dutton, K. A., and J. D. Brown. 1997. "Global Self-esteem and Specific Self-views as Determinants of People's Reactions to Success and Failure." *Journal of Personality and Social Psychology* 73 (1): 139–148.
- Engelbrecht, M. C., and S. J. E. J. van Vuuren. 2000. "Three Communities' Knowledge, Attitudes and Behaviour Regarding Suicide." *Social Work/Maatskaplike Werk* 36 (1): 44–52.
- Epstein, M., and J. M. Sharma. 1998. *Emotional and Behavioural Rating Scale: A Strengths Based Approach to Assessment*. Austin, Texas: Pro-Ed.
- George, A. A. 2005. "The Influence of Psychosocial Factors and Resources on Suicide Ideation of Adolescents." Master's dissertation, University of the Free State.
- George, A. A. 2009. *Risk and Resilience in Adolescent Suicide Ideation*. Phd thesis, University of the Free State.
- George, A. A., and H. S. van den Berg. 2011. "The Experience of Psychosocial Stressors amongst an Adolescent Population." *Journal of Psychology in Africa* 21 (4): 521–526.
- Goodman, L., C. Corcoran, K. Turner, N. Yuan, and B. L. Green. 1998. "Assessing Traumatic Event Exposure: General Issues and Preliminary Findings for the Stressful Life Event Screening Questionnaire." *Journal of Traumatic Stress* 11: 521–542.
- Goldstein, S., and R. B. Brooks, eds. 2006. *Handbook of Resilience in Children*. New York: Springer Science and Business Media.
- Govender, K., and B. J. Killian. 2001. "The Psychological Effects of Chronic Violence on Children Living in South African Townships." *South African Journal of Psychology* 31 (2): 1–11.
- Heubner, E. S. 2004. "Research on Assessment of Life Satisfaction of Children and Adolescents." *Social Indicators Research* 66 (1/2): 3–33.
- Hutchinson, A. K., A. D. Stuart, and H. G. Pretorius. 2007. "Coping with Stressors on Late Adolescence/Young Adulthood: A Salutogenic Perspective." *Health SA Gesondheid* 12 (3): 37–45.
- Kerr, D. C. R., L. D. Owen, and D. M. Capaldi. 2008. "Suicide Ideation and Its Recurrence in Boys and Men from Early Adolescence to Early Adulthood: An Event History Analysis." *Journal of Abnormal Psychology* 117 (3): 625–636.
- Larson, R. W., S. Wilson, and J. T. Mortimer. 2002. "Conclusions: Adolescents' Preparation for the Future." *Journal of Research on Adolescence* 12 (1): 159–166.
- Lester, D. 1988. *Suicide from a Psychological Perspective*. Springfield Illinois: Charles, C. Thomas.
- Louw, D. A., and D. J. A. Edwards. 1995. *Psychology: An Introduction for Students in Southern Africa*. Johannesburg: Lexicon Publishers.
- Louw, A., D. A. Louw, and I. Ferns. 2007. "Adolescence." In *Child and Adolescent Development*, edited by D. Louw and A. Louw, 278–347. Bloemfontein South Africa: Psychology Publications.

- Luthar, S. S., and D. Cicchetti. 2000. "The Construct of Resilience: Implications for Intervention and Social Policy." *Development and Psychopathology* 12: 857–885.
- Malinauskas, R. 2010. "The Associations among Social Support, Stress, and Life Satisfaction as Perceived by Injured College Athletes." *Social Behaviour and Personality* 38 (6): 741–752.
- Mashego, T. B. B., K. Peltzer, G. Williamson, and M. Setwaba. 2003. *Suicide Prevention: Recognition and Intervention for Suicide Learners in School*. Pretoria: Health Behaviour Research Unit.
- Mashego, T. A. B., and S. N. Madu. 2009. "Suicide-Related Behaviours among Secondary School Adolescents in Welkom and Bethlehem Areas of the Free State Province (South Africa)." *South African Journal of Psychology* 39 (4): 489–497.
- Masten, A. S. 2009. "Ordinary Magic: Lessons from Research on Resilience in Human Development." *Education Canada* 49(3): 28–32.
- McCullough, G., S. Heubner, and E. Laughlin. 2000. "Life Events, Self-Concept and Adolescents' Positive Subjective Well-Being." *Psychology in the Schools* 37 (3): 281–290.
- Meehan, S., A. Peirson, and P. Fridjhon. 2007. "Suicide Ideation in Adolescent South Africans: The Role of Gender and Coping Strategies." *South African Journal of Psychology* 37 (3): 552–575.
- Nasir, R., M. B. Mustafa, W. S. Wan Shahrazard, R. Khairudin, and S. S. Syed Salim. 2011. "Parental Support, Personality, Self-Efficacy as Predictors for Depression among Medical Students." *Pertanika Journal of Social Science and Humanities* 19 (S): 9–15.
- National Injury Mortality Surveillance System. 2007. "A Profile of Fatal Injuries in South Africa. Sixth Annual Report." <http://www.sahealthinfo.org/violence/national2004.pdf> (accessed 11 June 2015).
- Nduna, M., and R. Jewkes. 2012. "Disempowerment and Psychological Distress in the Lives of Young People in Eastern Cape, South Africa." *Journal of Child and Family Studies* 21: 1018–1027.
- Nunnally, J., and I. H. Bernstein. 1994. *Psychometric Theory*. New York: McGraw-Hill.
- O'Dougherty, W. M., A. S. Masten, and A. J. Narayan. 2013. "Resilience Process in Development: Four Waves of Research on Positive Adaptation in the Context of Adversity." In *Handbook of Resilience in Children*, edited by S. Goldstein, and R. B. Brooks, Second Edition, 15–37. New York: Springer Science + Business Media.
- Ong, A. D., C. S. Bergeman, T. L. Bisconti, and K. A. Wallace. 2006. "Psychological Resilience, Positive Emotions, and Successful Adaptation to Stress in Later Life." *Journal of Personality and Social Psychology* 91: 730–749.
- Otwombe, K. N., J. Dietrich, K. J. Sikkema, J. Coetzee, K. L. Hopkins, F. Laher, and G. E. Gray. 2015. "Exposure to, and Experiences of Violence among Adolescents in Lower Socio-Economic Groups in Johannesburg, South Africa." *BMC Public Health* 15: 450.
- Palmer, S. 2008. *Suicide: Strategies and Interventions for Reduction and Prevention*. East Sussex: Routledge.
- Paulson, B. L., and R. D. Everall. 2001. "The Teen Suicide Research Project." *The Alberta Journal of Education Research* XLVII (1): 91–94.

- Pavot, W., and E. Diener. 2008. "The Satisfaction with Life Scale and the Emerging Construct of Life Satisfaction." *The Journal of Positive Psychology* 3 (2): 137–152.
- Pepile, S. T. 2015. "Traumatic Exposure and Coping as Predictors of Self-Harm among Adolescents in the Free State Province, South Africa." Master's dissertation, University of the Free State.
- Pillay, B. J. 1995. "A Study of Suicide Behaviour at a Secondary School." In *1943- Suicide Behaviour 3: Proceedings of the Third South African Conference on Suicidology, 12 –13 May*, edited by L. Schlebusch. Durban: South Africa.
- Pillay, A. L., and D. R. Wassenaar. 1997. "Recent Stressors and Family Satisfaction in Suicide Adolescents in South Africa." *Journal of Adolescence* 20: 155–162.
- Prince-Embury, S. 2006. *Resiliency Scales for Children and Adolescents: A Profile of Personal Strengths*. San Antonio, Texas: Harcourt Assessment.
- Reddy, S. P., S. James, R. Sewpaul, F. Koopman, N. I. Funani, S. Sifunda, J. Josie, P. Masuka, N. S. Kambaran, and R. G. Omardien. 2010. *Umthente Uhlaba Usamila – The 2nd South African National Youth Risk Behaviour Survey*. Cape Town: South African Medical Research Council. http://www.timeslive.co.za/multimedia/archive/00609/yrbs_2008_final_rep_609325a.pdf (accessed 13 August 2011).
- Reynolds, W. M. 1988. *Suicide Ideation Questionnaire for Adolescents*. Odessa, Florida: Psychological Assessment Resources.
- Rigby, K. 2000. "Effects on Peer Victimization in Schools and Perceived Social Support on Adolescent Well-Being." *Journal of Adolescence* 23: 57–68.
- Rutter, P. A., and D. Estrada. 2006. "Suicide Risk and Protective Factors: Are There Differences among Young Adults?" *Guidance and Counseling* 21 (2): 88–96.
- Sadock, B. J., V. A. Sadock, and M. D. Ruiz. 2015. *Kaplan and Sadock's Synopsis of Psychiatry: Behavioural Sciences/Clinical Psychiatry*. Philadelphia: Lippincott.
- Santrock, J. W. 2005. *Adolescence*. New York: McGraw-Hill.
- Schlebusch, L. 2005. *Suicide Behaviour in South Africa*. Scottsville: University of KwaZulu-Natal Press.
- Schlebusch, L. 2012. "Suicide Prevention: A Proposed National Strategy for South Africa." *African Journal of Psychiatry* 15: 436–440.
- Sebate, K. M. 1999. "Some Psychosocial Variable Related to Parasuicide in the Ga-Rankuwa Hospital." Master's dissertation, Medical University of South Africa.
- Shilubane, H. N., R. A. C. Ruiters, A. E. R. Bos, B. van den Borne, R. Sewpaul, S. James, and P. S. Reddy. 2013. "Psychosocial Determinants of Suicide Attempts among Black South African Adolescents: A Quantitative Analysis." *Journal of Youth Studies* 15(2):177–189.
- South African Depression and Anxiety Group (SADAG). 2013. "SADAG Survey Reveals Shocking Teen Suicide Stats." http://www.sabc.co.za/news/a/170e8b004e8_5c2c699bcfb7da4cd6ad7/SADAG-survey-reveals-shocking-teen-suicide-stats-0131202 (accessed 13 June 2015).

- Steele, M. M., and T. Doey. 2007. "Suicide Behaviour in Children and Adolescents. Part I: Etiology and Risk Factors." *The Canadian Journal of Psychology* 52: 21–33.
- Stein, D. J., S. Seedat, A. A. Herman, S. G. Heeringa, H. Moomal, L. Myer, and D. Williams 2007. *Findings from the First South African Stress and Health Study*. Cape Town: South African Medical Research Council.
- Steyn, H. S. 1999. *Praktiese Beduidendheid: Die Gebruik van Effekgroottes*. Potchefstroom: Publikasiebeheer Komitee, PU vir CHO.
- Tomasula, J. L., L. M. Anderson, H. L. Littleton, and T. C. Riley-Tillman. 2012. "The Association between Sexual Assault and Suicide Activity in a National Sample." *School Psychology Quarterly* 27 (2): 109–119.
- Valois, R. F., K. J. Zullig, E. S. Heubner, and J. W. Drane. 2004. "Life Satisfaction and Suicide among High School Adolescents." *Social Indicators Research* 66: 81–105.
- Van den Berg, H. S., A. A. George, E. D. du Plessis, A. Botha, N. Basson, M. de Villiers, and S. Makola. 2013. "The Pivotal Role of Social Support in the Well-Being Adolescents." In *Well-Being Research in South Africa: Cross-Cultural Advancements in Positive Psychology*, edited by M. P. Wissing, 315–339. Dordrecht: Springer.
- Vilhjalmsson, R., G. Kristjansdottir, and E. Sveinbrjarnardottir. 1998. "Factors Associated with Suicide Ideation in Adults." *Social Psychiatry and Psychiatric Epidemiology* 33: 97–103.
- Walsh, E., and L. L. Eggert. 2007. "Suicide Risk and Protective Factors among Youth Experiencing School Difficulties." *International Journal of Mental Health Nursing* 16: 349–359.
- Weiss, L. G. 2008. "Toward the Mastery of Resiliency." *Canadian Journal of School Psychology* 23: 127–137.
- Wilson, S., and R. MacLean. 2011. *Research Methods and Data Analysis for Psychology*. London: McGraw-Hill Higher Education.
- Wolmarans, L. 2010. "The Influence of Emotional Regulation on Suicide Ideation of Adolescents." Master's dissertation, University of the Free State.
- Wood, A. M., and N. Tarrrier. 2010. "Positive Clinical Psychology: A New Vision and Strategy for Integrated Research and Practice." *Clinical Psychology Review* 30 (7): 819–829.
- World Health Organization (WHO). 2010. *Intervention Guide for Mental, Neurological and Substance Use Disorders in Non-Specialized Health Settings: Version 1.0*. Helsinki, Finland: WHO. http://www.who.int/mental_health/publications/mhgap_pubs/en/index.html (accessed 18 July 2009).
- Zawawi, J. A., and S. H. Hamaideh. 2009. "Depressive Symptoms and Their Correlates with Locus of Control and Satisfaction with Life among Jordanian College Students." *Europe's Journal of Psychology* 4:71–103.