

**PSYCHOLOGICAL STRENGTHS, STRESS AND SUICIDE
IDEATION OF CORRECTIONAL OFFICIALS**

C. J. Botha Hons, B.A.

Mini-dissertation submitted as partial fulfillment of the requirements for the degree
Magister Artium in Industrial Psychology at the Potchefstroomse Universiteit vir
Christelike Hoër Onderwys.

Supervisor: Dr. J. Pienaar

November 2003

Potchefstroom

ACKNOWLEDGEMENTS

I would hereby like to thank the following individuals and organisations, which assisted and contributed to the completion of this mini-dissertation:

- My Lord and Saviour, for being a gracious and loving God.
- Dr. Jaco Pienaar, my study leader, for his guidance, tremendous encouragement and contributions, and the statistical analysis.
- Professor Ian Rothmann, for his generous involvement and ideas from the start.
- To the individuals from Groenpunt Correctional Services, especially Leon Joubert, for their administrative contributions and cooperation with the collection of the data.
- To Marié who always believes in me, supports me and carries me through.
- To my Dad, Mom, brother and sisters who have loved and supported me as long as I can remember.
- To the rest of my family who cared and prayed for me.
- To the library personnel of the Ferdinand Postma Library for their assistance.
- To Christien Terblanche, Antoinette de Vos from MPI and Lynn Mari de Jager who assisted me with the editing of this dissertation.

The assistance of the Department of Correctional Services (DCS) towards this research is hereby acknowledged. Opinions expressed and conclusions arrived at are those of the author and are not necessarily to be attributed to the Department of Correctional Services.

TABLE OF CONTENTS

	CHAPTER 1: INTRODUCTION	Page
1.1	Problem Statement	1
1.2	Aim of the Research	7
1.2.1	General Aim	7
1.2.2	Specific Aims	7
1.3	Research Method	8
1.3.1	Literature Review	8
1.3.2	Empirical Study	8
1.3.2.1	Research Design	8
1.3.2.2	Study Population	8
1.3.2.3	Measuring Battery	9
1.3.2.4	Statistical Analysis	11
1.4	Research Procedure	12
1.5	Division of Chapters	12
1.6	Chapter Summary	12
	REFERENCES	
	CHAPTER 2: RESEARCH ARTICLE	
	CHAPTER 3: CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS	
3.1	Conclusions	53
3.2	Limitations	55
3.3	Recommendations	56
3.3.1	Recommendations for the organisation	56
3.3.2	Recommendations for future research	57
	REFERENCES	

LIST OF TABLES

Table	Description	Page
Table 1	Characteristics of the Study Population	26
Table 2	Factor Loadings, Communalities (h^2), Percentage Variance and Covariance for Principal Factor Extraction and Oblique Rotation on COSI items	30
Table 3	Factor Loadings, Communalities (h^2), Percentage Variance and Covariance for Principal Factor Extraction and Oblique Rotation on WLCS items	32
Table 4	Factor Loadings, Communalities (h^2), Percentage Variance and Covariance for Principal Factor Extraction and Oblique Rotation on Affectometer 2 items	33
Table 5	Descriptive Statistics, Alpha Coefficients and Mean Inter-item Correlation Coefficients of the Measuring Instruments	34
Table 6	Correlation Coefficients between the Work Locus of Control Scale, OLQ, Affectometer 2, COSI Factors, and ASIQ	35
Table 7	Descriptive Statistics of Stressor Intensity and Frequency Items of the COSI	37
Table 8	The Intensity, Frequency and Severity of Experienced Stressors as Measured by the COSI	39
Table 9	The Linear Discriminant Function for Correctional Officials With Low and High Suicide Ideation	40
Table 10	Classification of Officials of High/Low Suicide Ideation Groups	41
Table 11	Variables that Predict Suicide Ideation in Correctional Officials	41

ABSTRACT

Title: Psychological strengths, stress and suicide ideation of correctional officials

Key terms: Stress, suicide ideation, locus of control, sense of coherence, affect, correctional official.

Suicide ideation is a growing phenomenon that can be observed in stressful environments such as those of a correctional official, and it is a cause for concern. Suicide ideation is seen as the first step of suicidal behaviour and refers to thoughts, cognitions and overt intent to kill oneself. The root causes for correctional officials experiencing such a severe state of hopelessness that they feel death must be the only escape, can be ascribed to different factors.

The objective of this research is to establish the relationship between psychological strengths, stress and suicide ideation of employees of the Department of Correctional Services (DCS). Three concepts of psychological strength namely locus of control, sense of coherence and affect as independent variables, were compared, with suicide ideation as a dependant variable. The relationship between suicide ideation and stress as an independent variable was also established.

A cross-sectional design was used. A simple random sample ($n=157$) was taken from correctional officers from a management area in the Free State Province. The Work Locus of Control Scale, Orientation to Life Questionnaire, Affectometer 2, and the Adult Suicide Ideation Questionnaire were administered. In addition, the Correctional Officer Stress Inventory was developed and administered. Principal component and factor extraction with Oblique rotation, Cronbach alpha and inter-item correlation coefficients, factor analysis, a discriminant analysis and a stepwise multiple regression analysis were used to analyse the data. Results showed that positive affect and external locus of control were associated with suicide ideation.

Recommendations are made for future research.

OPSOMMING

Titel: Psigologiese kragte, stress en selfmoord denkbeeld-vorming van korrektiewe beamptes.

Sleutelterme: Stress, selfmoord denkbeeld-vorming, lokus van kontrole, koherensiesin, affek, korrektiewe beampte.

Selfmoord denkbeeld-vorming is 'n groeiende verskynsel wat waarneembaar is in stressvolle werksomgewings soos in die van die korrektiewe beampte en gee rede tot kommer. Selfmoord denkbeeld-vorming word gesien as die eerste stap van selfmoordgedrag en verwys na die gedagtes, kennisies en owerste voorneme om jouself dood te maak. Die kern oorsake vir korrektiewe beamptes wat so 'n intense staat van hopeloosheid ervaar dat hulle voel die dood is die enigste ontvlugting, kan aan verskillende faktore toegeskryf word.

Die doelstelling van hierdie navorsing is om vas te stel wat die verband is tussen psigologiese kragte, stress en selfmoord denkbeeld-vorming van werknemers van die Korrektiewe Dienste (DKD). Drie konsepte van psigologiese kragte naamlik lokus van kontrole, koherensiesin en affek as onafhanklike veranderlikes is vergelyk, met selfmoord denkbeeld-vorming as afhanklike veranderlike. Die verband tussen selfmoord denkbeeld-vorming en stress as onafhanklike veranderlike is ook ondersoek.

'n Dwarsdeursnee-ontwerp is gebruik. 'n Eenvoudige ewekansige steekproef ($n=157$) is geneem van korrektiewe beamptes in 'n bestuursarea van die Vrystaat Provinsie. Die Werk Lokus van Kontrole Skaal, Lewensorientasie Vraelys, Affektometer 2, en die Selfmoord Idealiserings Vraelys Vir Volwassenes is afgeneem. Die Korrektiewe Beampte Stress Opname is daarby as meetinstrument ontwikkel en afgeneem. Primêre komponent en faktor ekstraksie met Oblique rotasie, Cronbach alfa en inter-item korrelasie koëffisiënte, faktor analise, 'n diskriminant analise en stapsgewyse meervoudige regressie analise is gebruik om die data te analiseer. Resultate toon dat positiewe affek en eksterne lokus van kontrole geassosieer word met selfmoord denkbeeld-vorming.

Aanbevelings vir toekomstige navorsing word voorgelê.

CHAPTER ONE

INTRODUCTION

This study deals with the possible relationships between psychological strengths, stress and suicide ideation of correctional officials. This chapter focuses on the problem statement, objectives and basic hypothesis, as well as the research method.

1.1 PROBLEM STATEMENT

Although correctional officials render a very important service to the community, their overall well-being is often disregarded. Members of Correctional Services work in a stressful environment where they are responsible for the lives and safety of others. This field increasingly becomes even more demanding, according to Flanagan, Johnson and Wesley (1996). Anson et al. (1997) elaborates on this by observing an immense load of stress created by role conflict between rehabilitating inmates and the custodial demands of correctional work.

High rates of turnover, absenteeism and impaired job performance as a result of passivity, disinterest, negativity and displaced hostility in the Correctional Services, do not only culminate in soaring organisational costs, but also threaten custodial control, with increasing frequency of violent incidents (Chaka, 1998). Anson et al. (1997) found little difference between police officers and prison guards, and showed them to have high levels of chronic stress, depersonalisation, tedium and physical, mental or emotional exhaustion. They further point out that correctional officials have more instances of sickness, ulcers, hypertension and heart disease than the compared sample of police officers. Remarkably high rates of divorce, disease and suicide further distinguish correctional officers. Some writers maintain that the role of correctional officers may even be more stressful than that of police officers (Anson et al, 1997; Brodsky, 1997; Cheek & Miller, 1983). Higher overall stress levels than any other occupation may contribute to thoughts of suicide (Chaka, 1998; Anson et al., 1997).

After two correctional officials had committed suicide at one management area in just a period of two weeks, National Commissioner of Correctional Services, Linda Mti, acknowledged that South African correctional officials work in difficult circumstances because of over-crowding (Karabus, 2002). This, following his argument, results in stress and other problems. Bhoodram (personal communication, 12 September 2003), manager of the Department's Employee Assistance division, confirms that high numbers of prisoners per responsibility of 1 official might lead to serious instances of suicide attempts and suicides. It could also be related to a lack of employee support as a result of a general shortage of professionals like social workers, psychologists and personnel practitioners. According to Bergh (1997), South-African prisons are facing a crisis, where some professionals might leave their jobs because of increasing demands and continuous stress. Information on the possible relationship between individual psychological strengths and stress could be a good starting point in countering such a trend. This might also add to the understanding, handling and prevention of tragic behaviour such as suicide ideation and suicide.

Attention has recently been focused on suicide in stress-related working contexts (Nel, 1994; Rothmann & Agathagelou, 2000; Rothmann & Strijdom, 2002). Suicidal behaviour varies from ideation (suicidal thoughts) to intent (inflicting behaviour), and then from attempt to completion. Understanding this, it implies that there is a stepwise hierarchy of actions with an underlying gradient of severity (Vilhjalmsson, Kristjandottir & Sveinbjarnardottir, 1998). Suicide ideation could therefore be seen as the first step towards suicide and may be viewed as an important and critical component in evaluating adult mental health (Reynolds, 1991a).

Shneidman (1985) explains that the common stimulus in suicide is the intolerable psychological pain that suicidal people try to escape from. Thoughts and ideas about death consequently begin and may lead to serious self-injurious behaviour and suicide. Reynolds (1991a) declares that individuals with high levels of suicide ideation wish they had never been born, feel life is not worth living, wish they were dead and think that others would realise their value only when they are dead. The ultimate belief is that death is an escape from intolerable emotion, unendurable pain and unacceptable anguish (Shneidman, 1985).

Although the minimum of studies have been conducted on suicide ideation amongst correctional officials (Anson et al., 1997), it is known that their environment and behaviour correlate highly with factors potentially related to suicide ideation in adults. Vilhjalmsen et al. (1998) studied factors associated with suicide ideation in adults and found that life-stress, stress perceptions, social support, personality, alcohol use, chronic conditions, distress symptoms and socio-demographic background are potentially related to suicide ideation. In addition to this, financial hardship, legal stress, family difficulties and low moral support are also significantly related to suicidal thoughts (Renberg, 2001; Vilhjalmsen et al., 1998, Weissman et al., 1999).

Rossouw (1997) recently studied the impact of prison violence on correctional officials and found that most of the subjects of the study have been involved in controlling riots and gang-related incidents and were threatened and intimidated by prisoners. As a result of this, correctional officials inevitably make certain amendments in both their professional and personal lives, some of which might have lethal implications, such as suicide (Jacobs, 1998; Rossouw, 1997).

Gathering scientific information on suicide ideation among correctional officials is an undeniably difficult task. According to Rossouw (1997), correctional officials lack professional assistance. If this is true, the Department of Correctional Services (DCS) needs to intervene to increase and maintain the psychological health of its members. This research may therefore contribute to the understanding and prevention of suicide ideation among correctional officials by studying the influence of psychological strengths and stressors on this phenomenon.

Chaka (1998) describes the demands and stressors of correctional officials as having a high degree of responsibility for people, genuine threats to personal safety, rotating shifts and unpleasant physical surroundings. Cheek and Miller (1983) have identified factors such as communication breakdown with superiors, potentially dangerous inmates, lack of standardised policies in dealing with inmates, legal liability, the constant vigilance necessary in prisons and meager salaries as continuous stressors on correctional officials.

Dispositional factors such as the psychological strengths of employees in organisations are related to suicide ideation and suicide (Vilhjalmsson et al., 1998). In this research, the relationship between psychological strengths and suicide ideation is studied from a fortigenic perspective. Constructs focused on in this paradigm include the concepts of locus of control (Rotter, 1966), sense of coherence (Antonovsky, 1987, 1991), and affect (Kamman & Flett, 1983). The well-being of individuals is related to these factors (Petrie & Brook, 1992; Rothmann & Strijdom, 2002; Rothmann & Van Rensburg, 2001).

Rotter (1966) coined the term “locus of control”. Locus of control can be described as internal and external constructs that pertain to generalised expectancy, relating behaviour to reinforcements in diverse situations (Lefcourt, 1992). The internal pole of locus of control refers to the individual’s beliefs that outcomes are the consequences of own ability, initiative and striving. On the other hand, the external pole refers to the individual’s beliefs that outcomes are independent of their own behaviour (Rotter, 1966). Locus of control is a personality variable that denotes the degree to which individuals perceive that they control or are controlled by their environment.

Although it could be expected that individuals with an internal locus of control would be less inclined to suicide ideation because of their perceived ability to control situations, research results are inconsistent with such a hypothesis (Lester & Young, 1999). Lester (1998) reported that college students with a history of attempting suicide had a lower mean external score than equally depressed students without such a history. This is explained on the basis that students with a high external locus of control blame their environment for their fate. This does not imply that one should assume the opposite to be true for wellness in individuals. Janik and Kravitz (1994) suggest that anger, which is externalised by blaming others rather than oneself, serves as protection against self-criticism and self-destructive behaviour.

In a study of individuals younger than twenty-five years of age, Beautrais, Joyce and Mulder (1999) found that risk of suicidal behaviour increases when a high external locus of control, hopelessness and neuroticism are combined. Goldney (1982) detected that women who had attempted suicide had a higher mean external score than non-suicidal individuals.

Information on positive and negative associations between external and internal locus of control with suicide and suicide ideation may therefore assist in the process of understanding, dealing with and preventing suicide among correctional officials.

Antonovsky (1987) developed the construct "sense of coherence". Sense of coherence can be characterised as a global orientation that expresses the degree to which one has a pervasive, enduring though dynamic feeling of confidence that one's external and internal environments are calculable, and that there is an elevated probability that that aspect will work out as well as can be reasonably forecasted.

Rothmann and Strijdom (2002) found that a weak sense of coherence relates to suicide ideation, low generalised self-efficacy, an external locus of control and low job-satisfaction amongst police officers. According to Rothmann and Van Rensburg (2001), police officers who consume more than 14 alcoholic drinks per week (compared to those who have fewer drinks) had a weaker sense of coherence, lower self-efficacy, a higher external locus of control and more dysfunctional coping strategies, less job-satisfaction and higher suicide ideation.

Positive affectivity is an individual's disposition to be happy across a relatively broad time span and a variety of situations, whereas negative affectivity is an individual's disposition to experience discomfort across a similar time span and the same variety of situations (Chiu & Kosinski, 1999). Previous research, measuring positive and negative affect with prototype versions of the Affectometer, found high correlations with depression (close to 0.70) and neuroticism, anxiety and somatic complaints with a sum of life domain satisfactions (close to 0.80) (Kamman & Flett, 1983). Considering the very important criteria of diagnosed depression, according to the American Psychiatric Association: Diagnostic and Statistical Manual of Mental Disorders (2000) fourth edition, suicidal thoughts are very indicative of depression.

A study of the relationship between affect and suicide ideation may assist in the understanding of the well-being of correctional officials.

The objective of this research is to determine the relationship between psychological strengths (locus of control, sense of coherence, and affect), stress and suicide ideation of correctional officials. Such a relationship may potentially impact on recruitment, selection, induction, training and development and performance management, and these programmes should consequently be reconsidered. This will facilitate the development of psychological strengths and the appropriate prevention and management of stress to reduce suicide ideation in the Correctional Services and ensure organisational effectiveness.

The following research questions are derived from the problem statement:

- How is suicide and suicide ideation conceptualised in literature?
- What is stress and which situational factors contribute to stress and suicide ideation in the Correctional Services?
- What is the internal consistency and construct validity of a job stress inventory in the Correctional Services?
- How are psychological strengths such as locus of control, sense of coherence, and affect conceptualised in literature?
- What are current levels of psychological strengths, stress and suicide ideation in correctional officials in a management area of the Freestate Province?
- What are the relationships between psychological strengths, stress and suicide ideation of correctional officials in a management area of the Freestate Province?
- Can psychological strengths and stress be used to predict suicide ideation of correctional officials in a management area of the Freestate Province?
- Can recommendations be made to prevent and manage stress and suicide ideation of correctional officials in a management area of the Freestate Province?

1.2 AIM OF THE RESEARCH

The research aim can be divided into a general aim and specific objectives.

1.2.1 General aim

The general aim of this research is to establish the relationship between psychological strengths, stress and suicide ideation of correctional officials in a management area of the Freestate Province.

1.2.2 Specific aims

- To conceptualise suicide and suicide ideation from literature.
- To conceptualise stress and to evaluate the situational factors that contribute to stress and suicide ideation in the Correctional Services.
- To determine the internal consistency and validity of a job stress inventory in the Correctional Services.
- To conceptualise psychological strengths such as locus of control, sense of coherence, and affect from literature.
- To determine current levels of psychological strengths, stress and suicide ideation manifesting in correctional officials in a management area of the Freestate Province.
- To determine the relationship between psychological strengths, stress and suicide ideation of correctional officials in a management area of the Freestate Province.
- To determine whether psychological strengths and stress could be used to predict suicide ideation of correctional officials in a management area of the Freestate Province.
- To make recommendations to prevent and manage stress and suicide ideation of correctional officials in a management area of the Freestate Province.

1.1 RESEARCH METHOD

The research method consists of a literature review and an empirical study.

1.3.1 Literature review

The literature review focuses on psychological strengths (sense of coherence, locus of control and affect), stress and suicide ideation. An overview is given on how suicide ideation, stress and psychological strengths are conceptualised in literature, as well as the relationship between psychological strengths, stress and suicide ideation.

1.3.2 Empirical study

The empirical study consists of the research design, study population, measuring battery and the statistical analysis.

1.3.2.1 Research design

A survey will be utilised to attain the research objectives. The specific design is a cross-sectional design, whereby a sample is drawn from a population at one time (Shaughnessy & Zechmeister, 1997). The information collected is utilised to report on the population at that time. The design can also be used to assess interrelationships among variables within the populations. According to Shaughnessy and Zechmeister (1997) this design is ideal to address the descriptive and predictive functions associated with correlational research.

1.3.2.2 Study population

A simple random sample ($n=157$) will be taken from the total population ($N=540$) of correctional officials working at Groenpunt management area in the Freestate Province.

1.3.2.3 Measuring battery

Five questionnaires will be used in the empirical study, namely the Work Locus of Control Scale (WLCS) (Spector, 1988), the Orientation to Life Questionnaire (OLQ) (Antonovsky, 1987), the Affectometer 2 (Kamman & Flett, 1983), the Correctional Officer Stress Inventory (COSI) and the Adult Suicide Ideation Questionnaire (ASIQ) (Reynolds, 1991a). A biographical questionnaire will be added to determine the demographic characteristics of the study population.

- The *Work Locus of Control Scale* (WLCS) (Spector, 1988) will be used to measure participants' locus of control within the work environment. The WLCS consists of 16 items. Spector (1988) found alpha coefficients for the WLCS varying between 0,75 and 0,85. Maram and Miller (1998) and Spector (1988) found evidence for the construct validity of the WLCS.
- The *Orientation to Life Questionnaire* (OLQ) (Antonovsky, 1987) will be used to measure participants' sense of coherence. The OLQ consists of 29 items. Antonovsky (1993) reported alpha coefficients of the OLQ in 29 research studies varying between 0,85 and 0,91. Test-retest reliability studies found coefficients between 0,41 and 0,97 (Antonovsky, 1993). Rothmann (2000) reported an alpha coefficient of 0,89 for the OLQ, which can be regarded as acceptable (Nunnally & Bernstein, 1994). Regarding the construct validity of the OLQ, it was found that there is a negative relationship between the OLQ and experienced stress and that the OLQ correlates negatively with the "State-Trait Anxiety Inventory" and the "Beck Depression Inventory" (Frenz, Carey & Jorgensen, 1993).
- The *Affectometer 2* (Kamman & Flett, 1983) is a self-report scale that assesses general happiness or a sense of well-being, based on measurement of the balance of positive and negative feelings. It contains 40 items and is described as a 5-minute inventory with high reliability, high validity, and slight contamination by current mood and social desirability. An alpha of 0.95 was found on reliability whereas its validity was tested in comparison to 12 other well-being and related scales.

- The *Correctional Officer Stress Inventory* (COSI) consists of 94 items and was developed for the purpose of this study. A number of research studies have been published regarding stressors specific to the correctional environment (Anson, et. al., 1997; Biggam et al., 1997; Finn, 1998; Hurst & Hurst, 1997; Jarred, 1996; McLaren, Gollan & Horwell, 1998; Patterson, 1992; Sanabria, 1997; Simmons, Cochran & Blount, 1997; Slate, Johnson & Wells, 2000). These sources were used in the construction of the current instrument. In line with recommendations by Biggam et al. (1997, p. 130), this study addressed both the intensity and frequency of stressors. Firstly, participants will rate each of 47 items regarding the intensity of stress on a 9-point scale. Secondly, the frequency part of the questionnaire will ask "how many times in the last six months" the source of stress had been experienced. An understanding of the severity of the stressor is gauged as the product of intensity and frequency.
- The *Adult Suicide Ideation Questionnaire* (ASIQ) (Reynolds, 1991a) will be used to measure participants' current level of suicide ideation. Each of the items measures a specific suicidal behaviour or thought. Reynolds (1991a) reported that the internal consistency (coefficient alpha) of the ASIQ is 0,96, while Osman et al. (1999) found an alpha coefficient of 0,98. The test-retest reliability of the ASIQ varies between 0,86 and 0,95 (Reynolds, 1991b). Reynolds (1991a) provided evidence for the content, construct and criterion-related validity of the ASIQ. Osman et al. (1999) found that the ASIQ differentiated significantly between suicide attempt and psychiatric control groups. In recent South African research, alpha values of 0,98 for White and 0,95 for Black police members have been found for this instrument in the South African Police Service in the North West Province (Rothmann & Strijdom, 2002; Rothmann & Van Rensburg, 2001). Pienaar (2002) found an alpha value of 0,97 in a national sample of police officers.
- A biographical questionnaire will be developed to gather information about the characteristics of the participants. This questionnaire will give participants the option of supplying their name and personnel number.

Other information that will be gathered include: age, sex, years of service, years in current position (to assess advancement), educational qualifications, marital status, satisfaction with relationship with significant other, language, history of disciplinary action, self-rated performance, self-rated job satisfaction, medical conditions, use of prescription and over-the-counter medicine, reasons for medication, number of alcoholic drinks per week, smoking behaviour, number of cigarettes per day, other drug use, exercise behaviour and previous suicide attempts.

1.3.2.4 Statistical analysis

The statistical analysis will be carried out with the help of the SAS-program (SAS Institute, 2000). Principal factor extraction with oblique rotation will be performed through SAS FACTOR on the 16 items of the WLCS, 20 items of the Affectometer 2, and 47 intensity items of the COSI for a sample of 157 correctional officers. Principal component extraction will be used prior to principal factor extraction to estimate the number of factors, presence of outliers and factorability of the correlation matrices.

Cronbach alpha coefficients, inter-item correlation coefficients and factor analysis will be utilised to assess the reliability and validity of the measuring instruments (Clark & Watson, 1995). Descriptive statistics such as means, standard deviations, skewness and kurtosis, and inferential statistics will be used to analyse the data.

Pearson product-moment correlation coefficients will be used to specify the relationships between the variables. In the case where the distribution of scores is skew, Spearman correlation coefficients will be computed. A cut-off point of 0,30 (medium effect, Cohen, 1988) will be set for the practical significance of correlation coefficients.

A discriminant analysis will be carried out to determine which combination of independent variables will be used to classify correctional officials into groups that obtained low versus high suicide ideation scores.

The resulting discriminant function will separate the members of the groups maximally. The assumption of discriminant analysis is that the independent variables are continuous but that the dependent variable is categorical (Kerlinger & Lee, 2000). A stepwise multiple regression analysis will be used to determine the proportion of variance in the dependent variable (suicide ideation) that is explained by the independent variables.

1.4 RESEARCH PROCEDURE

The measuring battery will be compiled. A letter requesting participation and motivation of the research will be included. Ethical aspects will be discussed with the participants. The test battery will be administered within small groups at the work premises on suitable dates.

1.5 DIVISION OF CHAPTERS

Chapter 1: Introduction, problem statement and research objectives

Chapter 2: Research article

Chapter 3: Conclusion, Limitations and recommendations

1.6 CHAPTER SUMMARY

This chapter sets out the problem statement, the aims of the research, the research method employed and the chapter division. Chapter 2 is the research article.

REFERENCES

- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.
- Anson, R.H., Johnson, B. & Anson, N.W. (1997). Magnitude and source of general and occupation-specific stress among police and correctional officers. *Journal of Offender Rehabilitation*, 25, 103-113.
- Antonovsky, A. (1987). *Unravelling the mystery of health: How people manage stress and stay well*. San Francisco, CA: Jossey-Bass.
- Antonovsky, A. (1991). The structural sources of salutogenic strengths. In C.L. Cooper & R. Payne (Eds.), *Personality and stress: Individual differences in the stress process*. New York: Wiley.
- Antonovsky, A. (1993). The structure and properties of the Sense of Coherence Scale. *Social Science and Medicine*, 36, 725-733.
- Beautrais, A.L., Joyce, P.R. & Mulder, R.T. (1999). Personality traits and cognitive styles as risk factors for serious suicide attempts among young people. *Suicide and life threatened behaviour*, 19, 37-47.
- Bergh, L. (1997, October). Trauma and stress: the incidence of trauma and stress amongst correctional officers and offenders in the Department of Correctional Services. *Nexus*, 3, 19-21.
- Biggam, F.H., Power, K.G., MacDonald, R.R., Carcary, W.B. & Moodie, E. (1997). Self-perceived occupational distress in a Scottish police force. *Work and Stress*, 11, 118-133.
- Brodsky, C. (1997). Long-term stress in teachers and prison guards. *Journal of Occupational Medicine*, 19, 133-138.
- Chaka, L.T. (1998). *An investigation into the perceived sources of stress and coping amongst correctional officers of the Department of Correctional Services: Pietermaritzburg, Kwazulu/Natal, South Africa*. Unpublished master's dissertation, University of Natal, Pietermaritzburg.
- Cheek, F. & Miller, M. (1983). The experiences of stress for correctional officers: a doublebind theory of correctional stress. *Journal of Criminal Justice*, 2, 105-120.

- Chiu, R.K. & Kosinski, F.A. Jnr. (1999). The role of affective dispositions in job satisfaction and work strain: comparing collectivist and individualist societies. *International Journal of Psychology*, 34, 19-28.
- Clark, L.A., & Watson, D. (1995). Constructing validity: Basic issues in objective scale development. *Psychological Assessment*, 7, 309-319.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (Rev.ed.). Orlando: Academic Press.
- Finn, P. (1998). Correctional officer stress: a cause for concern and additional help. *Federal Probation*, 62, 65-75.
- Frenz, A.W., Carey, M.P. & Jorgensen, R.S. (1993). Psychometric evaluation of Antonovsky's sense of coherence scale, *Psychological Assessment*, 5, 145-153.
- Flanagan, T.J., Johnson, W. & Wesley, W. (1996). Job satisfaction among correctional executives: a contemporary portrait of wardens of state prisons for adults. *Prison Journal*, 76 (4), 13-15.
- Goldney, R. (1982). Locus of control in young women who have attempted suicide. *Journal of Nervous and Mental disease*, 170, 198-210.
- Hurst, M.M. & Hurst, T.E. (1997). Gender differences in mediation of severe occupational stress among correctional officers. *American Journal of Criminal Justice*, 22, 121-136.
- Jacobs, Q. (1998, August). Selfmoord in die SAPD: Die laaste uitweg, of is dit! *Union Post*, 3, 4.
- Janik, J. & Kravitz, H.M. (1994). Linking work and domestic problems with police suicide. *Suicide and Life Threatening Behaviour*, 24, 267-274.
- Jarred, S.H. (1996). *County jail correctional officers and occupational stress: the gender dimension*. Unpublished doctor's dissertation, A and M University, Texas.
- Kamman, R. & Flett, R. (1983). Affectometer 2: a scale to measure current level of general happiness. *Australian Journal of Psychology*, 35 (2), 259-265.
- Karabus, J. (2002, December 31). Jail suicides: Two deaths 'two too many'. *Daily Sun*, p. 5.
- Kerlinger, F.N. & Lee, H.B. (2000). *Foundations of behavioral research* (4th ed.) Orlando, FL: Harcourt.
- Lefcourt, H.M. (1992). Perceived control, personal effectiveness and emotional states. In B.N. Carperter (Ed.), *Personal coping: Theory, research and application*. Westport, CT: Praeger.
- Lester, D. (1998). Locus of control and anger. *Activitas Nervosa Superior*, 30, 315-316.

- Lester, D. & Young, L. (1999). External versus internal attributes in suicide and the implications for crisis intervention and suicide prevention. *Psychological Reports*, 85, 393-396.
- Maram, A. & Miller, K. (1998). An empirical assessment of the construct "work locus of control". *Journal of Industrial Psychology*, 24(3), 48-51.
- McLaren, S., Gollan, W., & Horwell, C. (1998). Perceived stress as a function of occupation. *Psychological Reports*, 82, 794.
- Nel, J. (1994). *A contextual approach to post-shooting trauma in the South African Police Service*. Unpublished master's dissertation, Rand Afrikaans University, Johannesburg.
- Nunnally, J.C. & Bernstein, I.H. (1994). *Psychometric theory* (3rd ed.). New York: McGraw-Hill.
- Osman, A., Kopper, B.A., Linehan, M.M., Barrios, F.X., Gutierrez, P.M. & Bagge, C.L. (1999). Validation of the Suicide ideation Questionnaire and the Response for Living Inventory in an adult psychiatric inpatient sample. *Psychological Assessment*, 11, 115-123.
- Patterson, B.L. (1992). Job experience and perceived job stress among police, correctional, and probation/parole officers. *Criminal Justice and Behavior*, 19, 260-285.
- Petrie, K. & Brook, R. (1992). Sense of coherence, self-esteem, depression and hopelessness as correlates of reattempting suicide. *British Journal of Clinical Psychology*, 31, 293-300.
- Pienaar, J. (2002). *Coping, stress and suicide ideation in the South African Police Service*. Unpublished doctoral thesis, PU for CHE, Potchefstroom.
- Renberg, E.S. (2001). Self-reported life weariness, death wishes, suicidal ideation, suicidal plans and suicide attempts in general population surveys in the north of Sweden 1986 and 1996. *Psychiatric Epidemiology*, 36, 429-436.
- Reynolds, W. M. (1991a). *Suicide ideation Questionnaire: Professional Manual*. Odessa, FL: Psychological Assessment Resources.
- Reynolds, W.M. (1991b). Psychometric characteristics of the Adult Suicide Ideation Questionnaire with college students. *Journal of Personality Assessment*, 56, 289-307.
- Rossouw, A. (1997, October). The impact of prison violence on the correctional officer at Brandvlei maximum prison. *Nexus*, 3, 22-23.
- Rotter, J.B. (1966). Generalised expectancies for internal versus external control of reinforcement. *Psychological Monographs*, 80, 1-28.
- Rothmann, S. & Agathagelou, A.M. (2000). Die verband tussen lokus van beheer en werks-tevredenheid by senior polisiepersoneel. *Tydskrif vir Bedryfsielkunde*, 26(2), 20-26.

- Rothmann, S. & Strijdom, G. (2002). Suicide ideation in the South African Police Services in the North West Province. *South African Journal of Industrial Psychology*, 28(1), 44-48.
- Rothmann, S. & Van Rensburg, P. (2001, September). *Correlates of suicide ideation the South African Police Services in the North West Province*. Poster session presented at 13th Conference of the South African Institute of Management Sciences, Stellenbosch.
- Sanabria, R.L. (1997). *Personal variables and critical incident stress among correctional officers*. Unpublished doctor's dissertation, Indiana State University, Terre Haute.
- SAS Institute. (2000). *The SAS Systems of Windows: Release 8.01*. Cary, NC: SAS Institute Inc.
- Shaughnessy, J.J. & Zechmeister, E.B. (1997). *Research methods in psychology* (4th ed.). NY: McGraw-Hill.
- Shneidman, E. (1985). *Definition of suicide*. New York: Wiley.
- Simmons, C., Cochran, J.K. & Blount, W.R. (1997). The effects of job-related stress and job satisfaction on probation officers' inclinations to quit. *American Journal of Criminal Justice*, 21, 213-229.
- Slate, R.N., Johnson, W.W. & Wells, T.L. (2000). Probation officer stress: Is there an organizational solution? *Federal Probation*, 64, 56-59.
- Spector, P.E. (1988). Development of the work locus of control scale. *Journal of Occupational Psychology*, 61, 335-340.
- Vilhjalmsson, R., Kristjandottir, G. & Sveinbjarnardottir, E. (1998). Factors associated with suicide ideation in adults. *Psychiatric Epidemiology*, 33, 97-103.
- Weissman, M.M., Bland, R.C., Canino, G.J., Greenwald, S., Hwu, H.G., Joyce, P.R., Karam, E.G., Lee, C.K., Lellouch, J., Lepine, J.P., Newman, S.C., Rubio-Stipec, M., Wells, J.E., Wickramaratne, P.J., Wittchen, H.U. & Yeh, E.K. (1999). Prevalence of suicide ideation and suicide attempts in nine countries. *Psychological Medicine*, 29, 9-17.

CHAPTER TWO

RESEARCH ARTICLE

PSYCHOLOGICAL STRENGTHS, STRESS AND SUICIDE IDEATION OF CORRECTIONAL OFFICIALS*

C. J. BOTHA

Department of Correctional Services, Freestate

J. PIENAAR

WorkWell: Research Unit for People, Policy and Performance, Research Programme "Human Resource Management for Development", Faculty of Economic and Management Sciences, Potchefstroom University, Private Bag X6001, Potchefstroom, 2520

ABSTRACT

The objective of this research is to establish the relationship between psychological strengths, stress and suicide ideation of employees of the Department of Correctional Services (DCS). Three concepts of psychological strength namely locus of control, sense of coherence and affect as independent variables were compared to suicide ideation as a dependant variable. The relationship between suicide ideation and stress as an independent variable was also established. A cross-sectional design was used. A simple random sample ($n = 157$) was taken from correctional officials from a management area in the Freestate Province. The Work Locus of Control Scale, Orientation to Life Questionnaire, Affectometer 2 and the Adult Suicide Ideation Questionnaire were administered. The Correctional Officer Stress Inventory was developed and administered additionally. Statistical analysis showed that negative affect and external locus of control were associated with suicide ideation.

*The assistance of the Department of Correctional Services (DCS) towards this research is hereby acknowledged. Opinions expressed and conclusions arrived at, are those of the author and are not necessarily to be attributed to the DCS.

OPSOMMING

Die doelstelling van hierdie navorsing is om die verband tussen psigologiese kragte, stress en selfmoord denkbeeld-vorming van werknemers van die Departement van Korrektiewe Dienste (DKD) vas te stel. Drie konsepte van psigologiese kragte naamlik lokus van kontrole, koherensiesin en affek as onafhanklike veranderlikes is vergelyk met selfmoord denkbeeld-vorming as afhanklike veranderlike. Die verband tussen selfmoord denkbeeld-vorming en stress as onafhanklike veranderlike is ook vasgestel. 'n Dwarsdeursnee-ontwerp is gebruik. 'n Eenvoudige ewekansige steekproef ($n = 157$) is geneem van korrektiewe beamptes in 'n bestuursarea van die Vrystaat Provinsie. Die Werk Lokus van Kontrole Skaal, Lewensoriëntasie Vraelys, Affektometer 2 en die Selfmoord Denkbeeld-vorming Vraelys Vir Volwassenes is afgeneem. Die Korrektiewe Beampte Stress Opname is daarby as meetinstrument ontwikkel en afgeneem. Statistiese ontleding dui daarop dat negatiewe affek en 'n eksterne lokus van kontrole geassosieer word met selfmoord denkbeeld-vorming.

Maintaining the very important role of correctional services and safe custody, it is important to the community that correctional officials should be optimally functioning and well balanced. However, the unique working environment of these public servants increasingly jeopardises the fulfilment of these expectations. Correctional officials are subjected to severe stress (Anson, Johnson & Anson, 1997; Flanagan, Johnson & Wesley, 1996). The seriousness of the physical and psychological effects of stress on the correctional official (heart disease, hypertension, peptic ulcers, sickness, alcoholism, depression, suicidal tendencies, anxiety, as well as other mental disorders) as posited by Anson et al., (1997) and De Carlo and Gruenfeld, (1989) is becoming more and more important to this type of organisation on an international level.

Bhoo-dram (personal communication, 12 September, 2003), manager of the Department's Employee Assistance division, declares that instances of suicide, including suicide attempts, occurred more than in any other public services department in South Africa for the year 2002. He provides statistics of 42 attempted suicides and 39 actual suicides for that given year. From January to June 2003, a number of 21 attempted suicides and 20 actual suicides were already available at the time of the interview. This reflects a load of 23.5 cases per 1000 employees, approximately 6 times higher than what is found to be the norm in other departments.

Suicide ideation could be viewed as the first phase of suicidal behaviour followed by steps increasing in severity. Suicide ideation may be understood after an explanation of the three stages of suicidal behaviour (Reynolds, 1991a; Vilhjalms-son, Kristjandottir & Sveinbjarnardottir, 1998):

- Ideation - it refers to a series of suicidal thoughts, cognitions and overt intent that occurs over an indefinite period of time;
- Attempt - it refers to inflicting behaviour with specific plans and means of taking one's life; and
- Completion - finalisation of the act resulting in death.

Thoughts and ideas about death may lead to serious self-injurious behaviour and may even result in the actual completion of the act of suicide. Reynolds (1991a) declares that individuals with high levels of suicide ideation wish they had never been born, feel life is not worth living, wish they were dead and think that others would realise their value only when they are dead. The ultimate belief is that death is an escape from intolerable emotion, unendurable pain and unacceptable anguish (Shneidman, 1985). A desire to kill themselves, methods on how it may be executed and times and places may be well formulated in their minds.

Research recently focused on suicide and suicide ideation among employees working in stressful occupations (Anson et al., 1997; Chaka, 1998; Cheek & Miller, 1983; Nel, 1994; Pienaar, 2002; Rothmann & Agathagelou, 2000; Rothmann & Strijdom, 2002). Higher stress levels were identified in the Correctional Services than in any other occupation, and this may contribute to thoughts of suicide (Anson et al., 1997; Chaka, 1998). Chaka (1998) describes the demands and stressors of correctional officials as having a high degree of responsibility for people, genuine threats to personal safety, rotating shifts and unpleasant physical surroundings. Patterson (1992) is confident that suicide by correctional officers could largely be ascribed to their stressful working environment. Cheek and Miller (1983) have identified factors in this environment such as communication breakdown with superiors, potentially dangerous inmates, lack of standardised policies in dealing with inmates, legal liability, the constant vigilance necessary in prisons and meager salaries as continuous stressors on correctional officials. According to Bergh (1997), South-African prisons are facing a crisis, where some professionals might leave their jobs because of increasing job demands and continuous stress.

Correctional authorities have difficulty hiding complex dynamics currently at work on a national level (Joubert, personal communication, 25 October 2003). The public is not only informed about overcrowding in prisons and the difficulties in dealing with it, but also about shocking behaviour displayed by officials in their immediate working environments (Mabasa, 2002). Cases of corruption involving high profiled officials of the Correctional Services, investigated and revealed by the Scorpions, entertained South-Africa through the headlines of the media recently (Motsoeneng, 2003; Olivier, 2002; Paul, 2002; Thomas, 2002).

A high level of absenteeism is described as a huge concern for this department (Esmeraldo, 1997). According to Rossouw (1997), prison violence is also seen as one of the major challenges authorities have to deal with. Such a holistic picture of stressors in the correctional services environment leaves much room for one's imagination concerning the experiences of correctional officials in South-African prisons. The communities to whom their services are rendered, expect these authorities to provide and ensure a healthy and effective workforce.

The Department of Correctional Services (DCS) needs to realise the impact of suicidal behaviour and create interventions to pro-actively assist correctional officials. The study of suicide ideation as a real phenomenon that correlates with other potential factors is therefore of importance. General factors ascribed to the occurrence of suicidal behaviour may vary from work-environmental factors, external environment factors to dispositional factors and personal characteristics (Rothmann & Strijdom, 2002).

With a focus on dispositional factors, three constructs of psychological strengths namely locus of control, sense of coherence and affect could be related to suicidal behaviour.

Locus of control can be depicted as internal and external constructs that pertain to generalised expectancy, relating behaviour to reinforcements in diverse situations (Lefcourt, 1992). The internal pole of locus of control refers to the individual's beliefs that outcomes are the consequences of own ability, initiative and striving. On the other hand, the external pole refers to the individual's beliefs that outcomes are independent of their own behaviour (Rotter, 1966). Locus of control is a personality variable that denotes the degree to which individuals perceive that they control or are controlled by their environment.

Sense of coherence can be characterised as a global orientation of positive feelings. This orientation can be described as feelings that express the degree to which one has a pervasive, enduring though dynamic feeling of confidence that one's external and internal environments are calculable and that there is an elevated probability that that aspect will work out as well as can be reasonably forecasted (Antonovsky, 1987).

Positive affectivity is an individual's disposition to be happy across a relatively broad time span and a variety of situations, whereas negative affectivity is an individual's disposition to experience discomfort across similar time spans and situations (Chiu & Kosinski, 1999).

The current research focuses on the possible relationship between psychological strengths (Antonovsky, 1987; Kamman & Flett, 1983; Spector, 1988,) stress (Biggam, Power, MacDonald, Carcary & Moodie, 1997; Spielberger & Vagg, 1999) and suicide ideation (Reynolds, 1991a). No previous studies regarding suicide ideation among correctional officials in South Africa seem to have been undertaken. This research can therefore contribute in establishing an understanding of the impact of suicide ideation in the organisation.

Psychological strengths, job stress and suicide ideation

Stressful working environments may have an influence on job-satisfaction and can jointly make officers more susceptible to suicide (Maynard, Maynard, Mccubbin & Shao, 1980; Rothmann & Strijdom, 2002). Rossouw (1997) investigated the impact of prison violence on officials. He found that most of the participants in a study conducted at Brandvlei Maximum Prison, were either exposed to or involved in controlling riots and gang related incidents and were threatened and intimidated by prisoners. As a result of this, correctional officials inevitably make certain amendments in both their professional and personal lives, some of which might have lethal implications, such as suicide (Jacobs, 1998; Rossouw, 1997).

Psychological well-being and psychological strengths (viewed as healthy, positive, and pro-social), such as locus of control, sense of coherence, positive affect and self-efficacy, could be expected to counter suicide ideation (seen as unhealthy, negative and asocial) (Strümpfer, 1995).

Although it would normally be expected that individuals with an internal locus of control would be less inclined to suicide ideation because of their perceived ability to control situations, research results are inconsistent (Lester & Young, 1999). Lester (1998) reported that college students with a history of attempting suicide had a lower mean external score than equally depressed students without such a history.

This is explained on the basis that students with a high external locus of control blame their environment for their fate. Janik and Kravitz (1994) suggested that anger, which is externalised by blaming others rather than oneself, serves to protect against self-criticism and self-destructive behaviour. This does not imply that one should assume the opposite to be true for wellness in individuals.

However, in a study of individuals younger than twenty-five years of age, Beautrais, Joyce and Mulder (1999) found that the risk of suicidal behaviour increases when a high external locus of control, hopelessness and neuroticism are combined. Goldney (1982) detected that women who had attempted suicide had a higher mean external score than non-suicidal individuals. Information on positive and negative associations between external and internal locus of control with suicide and suicide ideation may assist in the process of understanding, dealing with and preventing suicide among correctional officials.

Rothmann and Strijdom (2002) found that a weak sense of coherence, low generalised self-efficacy, an external locus of control and low job-satisfaction relates to suicide ideation amongst police officers. According to Rothmann and Van Rensburg (2001), police officers who consume more than 14 alcoholic drinks per week (compared to those who have fewer drinks) had a weaker sense of coherence, lower self-efficacy, a higher external locus of control and more dysfunctional coping strategies, less job-satisfaction and higher suicide ideation.

Previous research measuring positive and negative affect with prototype versions of the Affectometer, found high correlations with depression (close to 0.70) and neuroticism, anxiety and somatic complaints with a sum of life domain satisfactions (close to 0.80) (Kamman & Flett, 1983). Knowing the very important criteria of diagnosed depression, suicidal thoughts are very indicative of depression (American Psychiatric Association: Diagnostic and Statistical Manual of Mental Disorders, 2000). By studying the relationship between affect and suicide ideation, gathered information might assist in the understanding of the well-being of correctional officials.

Vilhjalmsson et al. (1998) previously studied factors associated with suicide ideation in adults and found that life-stress, stress perceptions, social support, personality, alcohol use, chronic conditions, distress symptoms and socio-demographic background are potentially related to suicide ideation. In addition to this, financial hardship, legal stress, family difficulties and low moral support are significantly related to suicidal thoughts (Renberg, 2001; Vilhjalmsson et al., 1998, Weissman et al., 1999).

METHOD

Research Design

A survey design was utilised to attain the research objectives. The specific design is a cross-sectional design, whereby a sample was drawn from the population at one time (Shaughnessy & Zechmeister, 1997). Information collected was utilised to report the population at that time and to indicate current levels of psychological strengths, stress and suicide ideation of participants (Shaughnessy & Zechmeister, 1997). The design can also be used to assess interrelationships among variables within the population. According to Shaughnessy and Zechmeister (1997) this design is ideal to address the descriptive and predictive functions affiliated with correlational research.

Participants

The participants were employees of the Correctional Services from a management area within the Freestate Province ($n = 157$). A random sample of all officials, including day and night shift workers of that specific management area, was taken. Officials from different categories according to the nature of their job were represented in the sample. These categories included officials conducting internal and external custody, working as administrative personnel as well as artisans and professionals. The characteristics of the participants are shown in Table 1.

Table 1

Characteristics of the Study Population (N = 157)

Item	Category	Percentage
Race	White	39,49
	Black	54,14
	Coloured	6,37
	Indian	0,00
Age	Total Sample	34,12
Years of Service	Total Sample	10,66
Rank	Correctional Official Grade 3	21,02
	Correctional Official Grade 2	33,12
	Correctional Official Grade 1	40,13
	Senior Correctional Officials	5,73
Nature of Job	External Custody	33,12
	Internal Custody	24,20
	Administrative	32,48
	Artisan / Professional	10,19
Level of Education	Grade 10	10,19
	Grade 11	3,82
	Grade 12	63,69
	Technical college diploma	3,82
	Technicon diploma	7,64
	University degree	4,46
	Postgraduate degree	6,37
Sex	Male	76,43
	Female	23,57
Marital status	Single	23,57
	Married	61,15
	Divorced	12,74
	Separated	1,91
	Remarried	0,64

Table 1 shows that just more than half the sample was made up of Black members (54,14%). The average age of the participants was 34,12 years and they had an average of 10,66 years of service. The sample included ranks from the entry level of junior correctional officials (grade 3) to the top of junior correctional officials (grade 1), as well as senior correctional officials. Mostly correctional officials with a Grade 1 ranking (40,13%) were included.

Roughly equal numbers of external custodial and administrative officials were included, with a little less from internal custody. The sample is predominantly made up of males, and most officials are married. More than half the sample (63.69%) has Grade 12 schooling, equal to 12 years of formal schooling.

Measuring Instruments

The following measuring instruments were used in this study:

- The *Work Locus of Control Scale* (WLCS) (Spector, 1988) were used to measure participants' locus of control within the work environment. The WLCS consists of 16 items. Spector (1988) found alpha coefficients for the WLCS varying between 0,75 and 0,85. Maram and Miller (1998) and Spector (1988) found evidence for the construct validity of the WLCS.
- The *Orientation to Life Questionnaire* (OLQ) (Antonovsky, 1987) was used to measure participants' sense of coherence. The OLQ consists of 29 items. Antonovsky (1993) reported alpha coefficients of the OLQ in 29 research studies varying between 0,85 and 0,91. Test-retest reliability studies found coefficients between 0,41 and 0,97 (Antonovsky, 1993). Rothmann (2000) reported an alpha coefficient of 0,89 for the OLQ, which can be regarded as acceptable (Nunnally & Bernstein, 1994). Regarding the construct validity of the OLQ, it was found that there is a negative relationship between the OLQ and experienced stress and that the OLQ correlates negatively with the "State-Trait Anxiety Inventory" and the "Beck Depression Inventory" (Frenz, Carey & Jorgensen, 1993).
- The *Affectometer 2* (Kamman & Flett, 1983) is a self-report scale that assesses general happiness or a sense of well-being, based on measuring the balance of positive and negative feelings. It contains 40 items and is described as a 5-minute inventory with high reliability, high validity, and slight contamination by current mood and social desirability. An alpha of 0.95 was found on reliability whereas its validity was tested in comparison to 12 other well-being and related scales.

- The *Correctional Officer Stress Inventory* (COSI) consists of 94 items and was developed for the purpose of this study. A number of research studies have been published regarding stressors specific to the correctional environment (Anson, et. al., 1997; Biggam et al., 1997; Finn, 1998; Hurst & Hurst, 1997; Jarred, 1996; McLaren, Gollan & Horwell, 1998; Patterson, 1992; Sanabria, 1997; Simmons, Cochran & Blount, 1997; Slate, Johnson & Wells, 2000). These sources were used in the construction of the current instrument. In line with recommendations by Biggam et al. (1997, p. 130) this study addressed both the severity and frequency of stressors. Firstly, participants rated each of the 47 items regarding the intensity of stress on a 9-point scale. Secondly, the frequency part of the questionnaire asked "how many times in the last six months" the source of stress had been experienced. An understanding of the severity of the stressor is gauged as the product of intensity and frequency.
- The *Adult Suicide Ideation Questionnaire* (ASIQ) (Reynolds, 1991a) will be used to measure participants' current level of suicide ideation. Each of the items measures a specific suicidal behaviour or thought. Reynolds (1991a) reported that the internal consistency (coefficient alpha) of the ASIQ is 0,96, while Osman et al. (1999) found an alpha coefficient of 0,98. The test-retest reliability of the ASIQ varies between 0,86 and 0,95 (Reynolds, 1991b). Reynolds (1991a) provided evidence for the content, construct and criterion-related validity of the ASIQ. Osman et al. (1999) found that the ASIQ differentiated significantly between suicide attempt and psychiatric control groups. In recent South African research, alpha values of 0,98 for White and 0,95 for Black police members have been found for this instrument in the South African Police Service in the North West Province (Rothmann & Strijdom, 2002; Rothmann & Van Rensburg, 2001). Pienaar (2002) found an alpha value of 0,97 in a national sample of police officers.

Statistical Analysis

The statistical analysis was carried out with the help of the SAS-program (SAS Institute, 2000). Principal factor extraction with oblique rotation was performed through SAS FACTOR on the 16 items of the WLCS, 20 items of the Affectometer 2 and the 47 intensity items of the COSI for a sample of 157 correctional officials.

Cronbach alpha coefficients, inter-item correlation coefficients and factor analysis was utilised to assess the reliability and validity of the measuring instruments (Clark & Watson, 1995). Descriptive statistics (e.g. means, standard deviations, skewness and kurtosis) and inferential statistics were used to analyse the data.

Pearson product-moment correlation coefficients were used to specify the relationships between the variables. In cases where the distribution of scores were skew, Spearman correlation coefficients were computed. A cut-off point of 0,30 (medium effect, Cohen, 1988) was set for the practical significance of correlation coefficients.

A discriminant analysis was carried out to determine which combination of independent variables could be used to classify correctional officials into groups that obtained low versus high suicide ideation scores. The resulting discriminant function separates the members of the groups maximally. The assumption of discriminant analysis is that the independent variables are continuous but that the dependent variable is categorical (Kerlinger & Lee, 2000). A stepwise multiple regression analysis was used to determine the proportion of variance in the dependent variable (suicide ideation) that is explained by the independent variables.

RESULTS

Table 2

Factor Loadings, Communalities (h^2), Percentage Variance and Covariance for Principal Factor Extraction and Oblique Rotation on COSI items

Item	F_1^a	F_2	F_3	h^2
Deadlines that have to be met	0,71	0,00	0,00	0,51
More paperwork than you can handle	0,59	0,00	0,00	0,35
Being assigned more responsibility	0,64	0,00	0,00	0,45
Having to do someone else's work	0,62	0,00	0,00	0,42
Having to deal with crisis situations	0,59	0,00	0,00	0,44
Reorganisation and transformation within the organisation	0,51	0,00	0,00	0,30
Being given new duties, or duties not previously performed	0,50	0,00	0,00	0,30
Lack of recognition for work well done	0,00	0,67	0,00	0,47
Lack of officials to handle specific tasks	0,00	0,65	0,00	0,46
Periods of inactivity	0,00	0,61	0,00	0,39
Lacking opportunities for advancement	0,00	0,54	0,00	0,30
Inadequate or poor quality equipment	0,00	0,59	0,00	0,40
Supervisor's support is lacking	0,00	0,57	0,00	0,34
Inadequate salary	0,00	0,55	0,00	0,33
Other officials not doing their job	0,00	0,57	0,00	0,37
Strong competition for advancement	0,00	0,53	0,00	0,35
Exposure to body fluids / faeces and contagious diseases	0,00	0,00	0,74	0,57
Having to handle a large crowd/mass demonstration	0,00	0,00	0,68	0,47
Inmate escapes	0,00	0,00	0,66	0,46
Danger and possibilities of physical attacks	0,00	0,00	0,66	0,47
Sexual harassment	0,00	0,00	0,64	0,43
Racial conflict	0,00	0,00	0,54	0,34
Having to work shift work	0,00	0,00	0,51	0,28
Unpleasant odours	0,00	0,00	0,55	0,35
Too much supervision	0,00	0,00	0,53	0,37
Problems from home, affecting work	0,00	0,00	0,48	0,27
Squared multiple correlations (SMC)	0,87	0,88	0,90	
Percentage variance	11,64	10,94	9,93	
Percentage covariance	29,18	35,27	35,55	

a Factor labels: F1 Job Demand F2 Lack of Job Resources F3 Inherent Correctional Stressors

Inspection of Table 2 shows that three factors were extracted, accounting for 32,51 % of the total variance in the data. Inter-factor correlations range between 0,27 and 0,39. As indicated by the SMC's, all factors were internally consistent and well defined by the variables. Variables were also reasonably well defined by this factor solution. Communality values, as seen in Table 3, tend to be moderate. With a cut-off of 0,45 for inclusion of a variable in interpretation of a factor, 21 of 47 variables did not load on the three factors. This included items such as being assigned unpleasant duties, being expected to work overtime, performing tasks not in the job description, having difficulty getting along with the supervisor, experiencing negative attitudes toward the organisation, making critical and on-the-spot decisions, dealing with personal insults from prisoners or other correctional officials, not participating in policy-making decisions, receiving poor or inadequate supervision, dealing with frequent interruptions, experiencing frequent changes from exciting activities to boredom, lacking personal time, dealing with other poorly motivated officials, inter-departmental conflict, having low public recognition or a low image with the public, staff shortages, working in a hierarchical or bureaucratic climate, lack of training, boredom in the work context, sexual harassment and role conflict.

Items loading on the first factor relate to job demands in the correctional services environment. It deals with realities such as the demands of prisoners, crisis situations and personal responsibility, the unpleasant nature of administrative tasks and transformation and reorganisation within the environment. The second factor seems to address a lack of organisational support or, as it is stated, a lack of job resources. The items that loaded on this factor are related to the equipment being used, opportunities for advancement, poor pay, and a lack of cooperation and motivation among officials and a lack of staff. The third factor consists of stressors mostly found only in a correctional environment, including exposure to body fluids and faeces, inhalation of unpleasant odours and dealing with contagious diseases. It also includes having to deal with violent or potentially violent situations, the threat of inmate escapes, having to work shifts, having to handle conflict and problems from home, affecting work.

Table 3 shows the factor loadings, communalities (h^2), percentage variance and covariance for the principal factor extraction and oblique rotation on work locus of control items.

Table 3

Factor Loadings, Communalities (h^2), Percentage Variance and Covariance for Principal Factor Extraction and Oblique Rotation on WLCS items

Item	F_1^a	F_2	h^2
Promotions are usually a matter of good fortune	0,73	0,00	0,53
In order to get a really good job you need someone in a high place	0,67	0,00	0,48
When it comes to getting a really good job, who you know is more important than what you know	0,64	0,00	0,44
Making money is primarily a matter of good fortune	0,63	0,00	0,40
To make a lot of money you have to know the right people	0,61	0,00	0,40
The difference between people who make lots of money and people who make a little is only luck	0,59	0,00	0,35
Getting the job you want is mostly a matter of luck	0,48	0,00	0,24
A job is what you make of it	0,00	0,72	0,54
People can pretty much accomplish whatever they set out to, in most jobs	0,00	0,63	0,41
Most people are capable of doing their job well if they make the effort	0,00	0,60	0,38
People who perform their job well generally get rewarded for it	0,00	0,57	0,35
If employees are unhappy with decisions made by their boss, they should do something about it	0,00	0,49	0,24
If you know what you want out of a job, you can find a job that gives it to you	0,00	0,46	0,21
Squared multiple correlations (SMC)	0,84	0,79	
Percentage variance	45,43	40,33	
Percentage covariance	56,79	43,21	

a Factor labels: F1 External Work Locus of Control F2 Internal Work Locus of Control

Table 3 shows that two factors, namely internal and external locus of control were extracted, accounting for 85,76 % of the total variance in the data. As expected, a negative inter-factor correlation is evident between internal and external work locus of control (-0,06). The SMC's indicates that both factors were internally consistent and well defined by the variables. It is also evident that the variables were reasonably well defined by this factor solution. Communality values tend to be moderate. With a cut-off of 0,45 for inclusion of a variable in interpretation of a factor, 3 of 16 variables did not load on the two factors. This included one item implying that it takes a lot of luck to be an outstanding employee on most jobs, another stating that most employees have more influence on their supervisors than they think they do, and the last item saying that promotions are given to employees who perform well in their job. Items loading on the first factor relate to an external work locus of control in the correctional services environment. It deals with the idea of success based on good fortune, other people or just luck.

The second factor seems to address an internal work locus of control with items referring to own responsibility, drive, accomplishment and energy that ensure success in the workplace. It further includes a sense of confidence, assertiveness and awareness of rewards for effort in the job.

Table 4 shows the factor loadings, communalities (h^2), percentage variance and covariance for the principal factor extraction and oblique rotation on the Affectometer 2.

Table 4

Factor Loadings, Communalities (h^2), Percentage Variance and Covariance for Principal Factor Extraction and Oblique Rotation on Affectometer 2 items

Item	F_1^a	F_2	h^2
I feel there must be something wrong with me	0,69	0,00	0,47
Nothing seems a lot of fun anymore	0,60	0,00	0,37
I feel like a failure	0,58	0,00	0,41
My life seems stuck in a rut	0,58	0,00	0,41
I feel as though the best years of my life are over	0,54	0,00	0,34
My thoughts go around in useless circles	0,48	0,00	0,23
I seem to be left alone when I don't want to be	0,48	0,00	0,25
I like myself	0,00	0,59	0,35
I have energy to spare	0,00	0,59	0,36
I think clearly and creatively	0,00	0,53	0,37
My future looks good	0,00	0,52	0,35
I smile and laugh a lot	0,00	0,52	0,26
I feel close to people around me	0,00	0,52	0,28
Squared multiple correlations (SMC)	0,80	0,76	
Percentage variance	44,29	43,67	
Percentage covariance	54,2	45,8	

a Factor labels: F1 Negative Affectivity F2 Positive Affectivity

Inspection of Table 4 shows that two factors, namely positive and negative affect, were extracted, accounting for 87,96 % of the total variance in the data. As indicated by the SMC's, both factors were internally consistent and well defined by the variables. Variables were also reasonably well defined by this factor solution. Communality values, as seen in Table 4, tend to be low to moderate. With a cut-off of 0,45 for inclusion of a variable in interpretation of a factor, 7 of 20 variables did not load on the two factors.

This included one item dealing with a wish to change some part of a person's life, one stating the loss of interest in other people and a sense of carelessness for others, and another with a lack of interest in doing anything. Other items dealt with certainties such as thoughts of a person's life being on the right track, a feeling of being loved and trusted and a feeling of being able to do whatever one would want to.

Items loading on the first factor relate to negative affectivity. It deals with feelings such as something being wrong with the person's life or with oneself. The second factor in contrast addresses positive affectivity. The items that loaded on this factor are related to positive feelings about the environment, other people, oneself and thoughts of a good future.

Table 5

Descriptive Statistics, Alpha Coefficients and Mean Inter-item Correlation Coefficients of the Measuring Instruments

Item	Mean	SD	Skewness	Kurtosis	r-Mean	α
OLQ						
Orientation to Life (Total)	0,12	0,15	-0,43	0,41	0,20	0,88
Work Locus of Control						
Internal Locus	0,09	0,19	0,77	0,31	0,33	0,74
External Locus	0,10	0,24	0,29	-0,41	0,39	0,82
Affectometer 2						
Negative Affect	0,08	0,19	0,45	-0,57	0,33	0,78
Positive Affect	0,07	0,19	0,90	0,80	0,31	0,73
COSI						
Job Demands	0,09	0,19	0,17	-0,27	0,35	0,79
Lack of Resources	0,06	0,21	0,47	0,22	0,37	0,84
Correctional Stressors	0,09	0,27	0,08	-0,76	0,38	0,83
ASIQ						
Suicide Ideation	0,14	0,23	3,32*	13,78*	0,58	0,97

* High Skewness and Kurtosis

Table 5 shows that the scores of the measuring instruments are normally distributed. Only the ASIQ shows high skewness and kurtosis. The alpha coefficients of all the scales are highly acceptable compared to the guideline of 0,70 (Nunnally & Bernstein, 1994). Since the sub-scales of the OLQ reflect low alpha values, the total score for orientation to life was used.

According to Clark and Watson's (1995) guideline, the mean inter-item correlation coefficients are in the recommended range ($0,15 < r < 0,50$) and therefore confirm the internal consistency of all factors, except for the ASIQ that scores just above the recommended range.

The product correlation coefficients between the Work Locus of Control Scale, OLQ, Affectometer 2, COSI, and ASIQ are given in Table 6. In the case of the correlation between the ASIQ and the other measuring instruments, Spearman correlation coefficients were computed because of the skew distribution of suicide ideation scores. The scores on the other measuring instruments are normally distributed and Pearson correlation coefficients were computed.

Table 6

Correlation coefficients between the Work Locus of Control Scale, OLQ, Affectometer 2, COSI factors, and ASIQ

Item	IL	EL	OLQ	PA	NA	JD	LJR	ICS
Work Locus								
Internal Locus of Control	-	-	-	-	-	-	-	-
External Locus of Control	-0,18*	-	-	-	-	-	-	-
OLQ								
Orientation to Life (Total)	0,45**	-0,38**	-	-	-	-	-	-
Affectometer 2								
Positive Affect	0,49**	-0,19*	0,53***	-	-	-	-	-
Negative Affect	-0,27*	0,22*	-0,55***	-0,34**	-	-	-	-
COSI								
Job Demands	-0,13	0,19*	-0,29*	-0,30**	0,13	-	-	-
Lack of Job Resources	-0,23*	0,22*	-0,28*	-0,19*	0,16*	0,54***	-	-
Inherent Correctional Stressors	0,12	-0,01	-0,23*	-0,25*	0,06	0,36**	0,54***	-
ASIQ								
Adult Suicide Ideation (Total)	0,22*	0,22*	-0,35**	-0,50***	0,19*	0,20*	0,09	0,15

IL= Internal Locus of Control; EL= External Locus of Control; OLQ= Orientation to Life Questionnaire Total; PA= Positive Affect; NA= Negative Affect; JD= Job Demands; LJR= Lack of Job Resources; ICS= Inherent Correctional Stressors; ASIQ= Adult Suicide Ideation Questionnaire total.

* Statistically significant correlation: $p \leq 0,05$

+ Practically significant correlation (medium effect): $r \geq 0,30$

++ Practically significant correlation (large effect): $r \geq 0,50$

Table 6 shows a statistically significant negative correlation between Internal Locus of Control, External Locus of Control, Negative Affect and Lack of Job Resources. A statistically significant positive correlation is reflected between Internal Locus of Control, Orientation to Life (practically significant, medium effect) and Positive Affect (practically significant, medium effect). Negative correlations between External Locus of Control, Orientation to Life (practically significant, medium effect) and Positive Affect are reflected. External Locus of Control is positively correlated with Negative Affect, Job Demands and Lack of Job Resources. Orientation to Life positively correlates with Positive Affect (practically significant, large effect) and negatively correlates with Negative Affect (practically significant, large effect) Job Demands, Lack of Job Resources and Inherent Correctional Stressors. Positive Affect showed negative correlations with Negative Affect (practically significant, medium effect), Job Demands (practically significant, medium effect), Lack of Job Resources and Inherent Correctional Stressors. Negative Affect showed a positive correlation with Lack of Job Resources. Positive correlations between Job Demands, Lack of Job Resources (practically significant, large effect) and Inherent Correctional Stressors (practically significant, medium effect) are reflected. Lack of Job Resources positively correlated with Inherent Correctional Stressors (practically significant, large effect).

The ASIQ showed statistically significant positive correlations with Internal Locus of control, External Locus of Control, Negative Affect and Job Demands. Negative correlations between the ASIQ and Orientation to Life (practically significant, medium effect) and between the ASIQ and Positive Affect (practically significant, large effect) are reflected.

Descriptive statistics for the intensity and frequency part of the COSI are given in Table 7.

Table 7

Descriptive Statistics of Stressor Intensity and Frequency Items of the COSI

Variable	Intensity				Frequency			
	Mean	SD	Skewness	Kurtosis	Mean	SD	Skewness	Kurtosis
Lacking opportunities for advancement	6,72	2,27	-0,88	-0,18	5,03	3,63	-0,18	-1,62
Being given new duties, or duties not previously performed	4,51	2,22	0,16	-0,61	3,36	3,23	0,59	-1,00
Other officials not doing their job	6,28	2,37	-0,63	-0,72	5,71	3,24	-0,48	-1,20
Supervisor's support is lacking	5,78	2,59	-0,47	-1,04	4,35	3,40	0,16	-1,44
Having to deal with crisis situations	5,15	2,18	-0,15	-0,64	4,96	3,13	-0,07	-1,25
Lack of recognition for work well done	6,14	2,58	-0,55	-0,92	5,06	3,44	-0,22	-1,49
Inadequate or poor quality equipment	5,61	2,62	-0,27	-1,04	4,06	3,28	0,33	-1,26
Being assigned more responsibility	5,00	2,39	0,11	-0,88	4,16	3,08	0,21	-1,16
Being inactive for periods of time	4,71	2,07	0,22	-0,33	3,28	3,13	0,63	-0,86
Lack of officials to handle specific tasks	5,47	2,29	-0,24	-0,70	4,74	3,23	0,00	-1,40
Inadequate salary	7,03	2,08	-1,00	0,25	6,04	3,13	-0,67	-0,95
Strong competition for advancement	5,20	2,23	-0,13	-0,77	4,18	3,18	0,12	-1,34
Unpleasant odours	5,18	2,79	0,11	-1,33	3,70	3,54	0,42	-1,42
More paperwork than you can handle	4,51	2,54	0,20	-1,03	4,00	3,45	0,24	-1,48
Deadlines that have to be met	4,57	2,58	0,17	-1,06	4,11	3,40	0,15	-1,48
Having to do someone else's work	5,38	2,46	-0,22	-0,90	5,00	3,29	-0,17	-1,38
Having to work shifts	4,38	2,80	0,26	-1,22	3,45	3,54	0,51	-1,32
Too much supervision	5,07	2,60	-0,03	-1,07	3,90	3,38	0,25	-1,39
Reorganisation and transformation within the organisation	5,36	2,65	-0,13	-1,12	4,04	3,19	0,23	-1,27
Racial conflict	5,73	2,68	-0,23	-1,26	4,04	3,58	0,23	-1,56
Having to handle a large crowd/mass demonstration	4,85	2,63	0,11	-1,19	3,15	3,35	0,66	-1,05
Dealing with danger and possibilities of physical attacks	5,56	2,65	-0,22	-1,20	4,38	3,69	0,13	-1,68
Exposure to body fluids / faeces and contagious diseases	5,43	2,90	-0,18	-1,42	3,61	3,78	0,41	-1,59
Dealing with inmates escapes and possibilities thereof	5,06	2,97	-0,05	-1,45	2,58	3,39	0,96	-0,70
Problems from home, affecting work	4,17	2,71	0,45	-1,03	2,47	3,14	1,08	-0,24

Table 7 shows that the highest means for the intensity items were recorded for items dealing with inadequate salary, lacking opportunities for advancement, other officials not doing their job, lack of recognition for work well done and a lack of supervisor support.

The responses to most items show a normal distribution, although the distribution was skew on one item (relating to an inadequate salary).

Table 7 also shows that the highest means for frequency items were recorded for items dealing with inadequate salaries, other officials not doing their job, lack of recognition for work well done, lack of opportunities for advancement, having to do someone else's work and having to deal with crisis situations. The responses to most items show a normal distribution, although the distribution was skew on one item (relating to an inadequate salary).

In Table 8 the severity of experienced stressors by correctional officials as measured by the COSI will be shown.

Table 8

The Intensity, Frequency and Severity of Experienced Stressors as Measured by the COSI

Item	Intensity	Frequency	Severity
Job Demands			
Assignment of new or unfamiliar duties	5	3	15
Dealing with crisis situations	5	5	26
Assignment of increased responsibility	5	4	21
Excessive paperwork	5	4	18
Meeting deadlines	5	4	19
Covering work for another employee	5	5	27
Lack of Resources			
Lack of opportunity for advancement/ promotion	7	5	34
Fellow employees lack of job performance	6	6	36
Lack of support from supervisor	6	4	25
Lack of recognition for good work	6	5	31
Inadequate or poor quality equipment	6	4	23
Periods of inactivity	5	3	14
Insufficient personnel to handle an assignment	6	5	26
Inadequate salary	7	6	43
Competition for advancement	5	4	22
Correctional Official Stressors			
Noisy work area and unpleasant odours	5	4	19
Shiftwork	4	3	15
Too much supervision	5	4	20
Racial Conflict	6	4	23
Handling a large crowd or mass demonstrations and riots	5	3	15
Danger and possibilities of physical attacks	6	4	24
Exposure to body fluids / faeces and diseases	5	4	20
Inmate escapes	5	3	14
Problems from home affecting work	4	3	10

Those items most prominent under Lack of Resources were; inadequate salary, fellow employees lacking in job performance, lacking opportunities for advancement, lack of recognition, insufficient personnel and a lack of support from the supervisor. The most prominent items under Job Demands were; covering work for another, handling crisis situations and increased responsibility. The only item under correctional stressors that showed a high severity has to do with being in danger or the threat of being physically attacked.

Table 9 gives the linear discriminant function for correctional officials with low and high suicide ideation.

Table 9

The Linear Discriminant Function for Correctional Officials with Low and High Suicide Ideation

Variable	High Suicide Ideation	Low Suicide Ideation
Constant	-181.78	-180.05
Age	0.59	0.65
Years in correctional service	-0.38	-0.47
Years in current position	0.06	0.13
Education level	2.06	2.18
Gender	12.60	12.82
Status	4.62	4.96
Language	0.96	0.86
Previously charged in terms of disciplinary code	8.12	7.78
Self-rated performance	7.89	7.52
Job Satisfaction	0.68	0.61
Suffering from a medical condition	9.03	8.54
Alcoholic drinks per week	8.99	8.97
Smoke	2.23	2.42
Exercise	-0.94	-0.99
Attempt	29.93	31.67
Total Orientation to Life	0.51	0.52
Job Demands	-0.22	-0.24
Lack of Job Resources	0.49	0.51
Inherent Correctional Stressors	0.31	0.28
Internal Locus of Control	0.66	0.68
External Locus of Control	0.89	0.82
Negative Affect	2.18	1.99
Positive Affect	-0.38	-0.28

By applying the discriminant analysis, it was found that all the above listed variables should be retained for the discriminant analysis. Table 10 summarises the frequencies and percentages of correctional officials that can be classified as belonging to the high or low suicide ideation groups (based on these variables).

Table 10

Classification of Officials of High/Low Suicide Ideation Groups

Group	High Suicide Ideation	Low Suicide Ideation	Total
High Suicide Ideation	42 (79,25%)	11 (20,75%)	53 (100%)
Low Suicide Ideation	11 (19,64%)	45 (80,36%)	56 (100%)

Table 10 shows that the combination of variables of correctional officials classifies 79,25% of the high suicide ideation cases and 80,36% of the low suicide ideation cases correctly. A total of 20,75% of the high and 19,64% of the low suicide ideation cases are classified incorrectly.

Finally a stepwise discriminant analysis was conducted. The variables that best predict suicide ideation of correctional officials are given in Table 11.

Table 11

Variables that Predict Suicide Ideation in Correctional Officials

Variables	Partial R-Square	F-Value
Negative Affect	0,30	44,96
External Locus of Control	0,03	3,33

Table 11 shows that the two variables, namely negative affect and an external locus of control, can be used to predict the suicide ideation of correctional officials.

DISCUSSION

Results from the current research confirm higher levels of suicide ideation than what was found in a national study in the South African Police Service recently (Pienaar, 2002). This study found high levels of suicide ideation in the SAPS in 8,64% of a nation-wide sample. The current analysis shows 10.19% of Correctional Officials to measure high on suicide ideation. The difference in sample size does however caution interpretation. The former study was based on a national sample, while the current study focused on only one management area of Correctional Services in the Freestate Province.

The Cronbach alpha coefficients of the measuring instruments all point to the validity of the instruments used. The mean inter-item correlation coefficients for all the scales were in the recommended range ($0,15 < r < 0,50$) and therefore confirm the internal consistency of all factors, except for the ASIQ that scores just above the recommended range. Regarding Orientation to Life, only the total score was used. The factor analyses reflected acceptable loadings on the different factors, confirming their construct validity.

Three factors, namely Job Demands, Lack of Job Resources and Inherent Correctional Stressors were extracted from the Correctional Officer Stress Inventory (COSI) intensity items. With previous research done in the South African Police Services (SAPS) (Pienaar & Rothmann, 2003) and other police studies (Alexander, Walker, Innes & Irving, 1993; Biggam et al., 1997; Brown & Campbell, 1990, 1994; Brown, Fielding & Grover, 1999; Gulle, Tredoux & Foster, 1998; Mitchell, Cowan & Hamilton, 1998), a similar structure of three factors was confirmed. In accordance with previous research done in police settings, it was found that stressors inherent to the nature of the job were less prominent than both a lack of resources and job demands.

Items in the category of Lack of Resources showed the highest severity. Items in this category are interpreted as more severe than the other two factors because of frequent exposure and the intensity of the experience for the individual. Difficulties such as an inadequate salary, fellow employees lacking in job performance, lacking opportunities for advancement, lack of recognition, lacking support from supervisors and insufficient personnel should be dealt with regularly. The second most prominent stressor was Job Demands.

The items loading on this factor refer to covering work for another, handling crisis situations and increased responsibility. This finding is similar to findings in previous police studies, which also showed the overwhelming source of stress among police members to be organisational (Crank & Caldero, 1991; Hart, Wearing & Headey, 1995; Kop & Euwema, 2001).

Correctional stressors, which have to do with events that would only take place in the performance of a job as a correctional official, was the least prominent stressor. Only one item showed high severity in this category. This item referred to being in danger or the threat of being physically attacked. Anshel, Robertson and Caputi (1997), posit that an inverse relationship exists between the frequency and intensity of typical stressors found only in a policing environment. Though these are a source of acute stress, the relative infrequency with which they are experienced reduces their effect on police officials. In light of the current findings it might be postulated that organisational stress in the Department of Correctional Services is more similar to organisational stress in the South African Police Service. This finding seems logical, given the similar nature of the organisations.

Suicide ideation was negatively related to sense of coherence. This implies that officials who dispose of positive feelings that their futures are calculable and feel that things will probably work out as well as can be reasonably forecasted, did not display suicidal thoughts. This result confirms findings of both Petrie and Brook (1992) and Rothmann and Strijdom (2002). Suicide ideation was negatively related to positive affect and positively related to negative affect, which is an individual's disposition to experience discomfort across similar time spans and situations (Chiu & Kosinski, 1999). In addition, negative affect was positively correlated with job demands. High job demands might therefore increase negative affect, while the latter again increases the prevalence of suicide ideation. In establishing variables that predict suicide ideation, both negative affect and external locus of control were found to be predictive. The relationship between negative affect and job demands, representing the stressful work environment, and external locus of control, representing psychological strengths, is therefore confirmed. Most interestingly, a previous suicide attempt was not a significant predictor of current levels of suicide ideation.

This is in strong divergence from numerous previous studies that have shown a previous suicide attempt to be the best predictor of current suicide ideation (Baker & Baker, 1996; Canapary, Bongar & Cleary, 2002; Gliatto & Rai, 1999; Pienaar, 2002; Preuss et al., 2003, Rossouw, 2000; Sachs, Yan, Swann & Allen, 2001; Staal & Hughes, 2002; Vilhjalmsson, et al., 1998).

Antonovsky (1979) showed that salutogenic factors increasingly become important with a higher stress load, because they unlock coping-possibilities in individuals. Results of the stepwise discriminant analysis indicated that suicide ideation could be predicted by a high external locus of control and negative affect. This implies a distortion with regard to psychological strengths and consequential maladaptive coping with stress, resulting in the individual developing suicide ideation. This confirms previous findings that the well-being of individuals is related to factors such as positive affect and an internal locus of control (Beautrais et. al., 1999; Goldney, 1982; Kamman & Flett, 1983; Petrie & Brook, 1992; Rothmann & Strijdom, 2002; Rothmann & Van Rensburg, 2001). Strümpfer, (1995) studied the locus of control of people in combat. He confirms the abovementioned by postulating that positive illusions in a military environment about the self, one's control, and the future become self-rescue and successful coping.

Chiu and Kosinski, (1999) compared the affectivity of qualified nurses with their demonstrated psychological strain. They found that individuals functioning under high work strain who reflect high positive affectivity experience little psychological strain and high job satisfaction. They argue that a positive disposition induces perceived satisfaction, while it reduces psychological strain. The current research found a significant relationship between suicide ideation and negative affect. It is therefore assumed that high positive affect protects the individual, whereas a low score indicates a contributing factor to suicide ideation.

RECOMMENDATIONS

It is of extreme importance that the Correctional Services should realise the seriousness of the growing incidence of suicides amongst employees. A pro-active stance should be taken timeously in identifying suicidal thoughts. The mere recognition of the existence of suicidal behaviour and reacting as a result of a critical incident might no longer suffice to prevent suicides.

After identification of suicide ideation, the DCS needs to attend to the possible culmination of these emotions amongst correctional officials. Different variables, such as an external locus of control and negative affect, were shown to be important for the prediction of suicidal behaviour of officials. Sensitivity training and the empowerment of senior personnel as paraprofessionals may assist with identification of the absence of psychological strengths. As coping mechanism to a stressful environment, psychological strengths of officials could be enhanced with self-development programmes. Support from employee assistance practitioners and psychological services may be rendered with more interventions, such as stress management, suicide awareness campaigns, health programmes, in-house training for problem-focused coping skills and organisational development programmes.

Understanding the work context and day-to-day practices of the correctional official as team players, team-based interventions will assist employees in dealing with stress and consequently reduce suicide ideation.

With inadequate salaries showing the highest intensity and frequency among the lack of resources experienced by correctional officials, top management should be made aware of the emotional impact of inadequate remuneration on officials. Salary issues and more or alternative reward systems will have to be researched.

Addressing needs expressed by Bhoodram (personal communication, 12 September, 2003), support from top management would include the strengthening of the employee assistance services by appointing more qualified and experienced psychological staff.

However, such a strategy will not be effective if changes in other organisational practices pertaining to staff support (e.g. recruitment, selection, remuneration and training and development) are not implemented. Viewed holistically, management and organisational development interventions should be implemented to improve the quality of management in the Department of Correctional Services, to increase the levels of trust in the organisation, to optimise the organisational structure and to ensure a balance between job demands and job resources.

More research is needed regarding the relationship between variables of psychological strengths, coping strategies, and stress and suicide ideation in the Department of Correctional Services. It is also necessary to include personality variables in future, in order to explore the underlying mechanisms of personality that may be related to suicidal patterns. Keenan and McBain (1979) found a significant relationship between personality, role stress and psychological strain and strongly advised more research in this regard to ensure more effective work-related outcomes.

The fact that the current study focused on stressful events can be regarded as a limitation. The severity of stressors and their impact did not significantly relate to suicide ideation. A focus on alternative causes to suicide ideation, such as a lack of coping skills, could have added positive value. Further limitations include the use of self-report measures and the cross-sectional design. It should also be remembered that members of only one management area were included, and therefore the results could not be generalised to other areas and provinces. The high inter-item correlations for the ASIQ suggest that a shortened version of this questionnaire might be used in future studies.

REFERENCES

- Alexander, D.A., Walker, L.G., Innes, G. & Irving, B.L. (1993). *Police stress at work*. London: Police Foundation.
- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.
- Anshel, M.H., Robertson, M. & Caputi, P. (1997). Sources of acute stress and their appraisals and reappraisals among Australian police as a function of previous experience. *Journal of Occupational and Organizational Psychology*, 70, 337-356.
- Anson, R.H., Johnson, B. & Anson, N.W. (1997). Magnitude and source of general and occupation-specific stress among police and correctional officers. *Journal of Offender Rehabilitation*, 25, 103-113.
- Antonovsky, A. (1979). *Health, stress and coping*. San Francisco, CA: Jossey-Bass.
- Antonovsky, A. (1987). *Unravelling the mystery of health: How people manage stress and stay well*. San Francisco, CA: Jossey-Bass.
- Antonovsky, A. (1993). The structure and properties of the Sense of Coherence Scale. *Social Science and Medicine*, 36, 725-733.
- Baker, T.E. & Baker, J.P. (1996) Preventing Police Suicide. Retrieved September 8, 2002 from the World Wide Web: <http://www.fbi.gov/publication/feb/1996/oct966.txt>
- Beautrais, A.L., Joyce, P.R. & Mulder, R.T. (1999). Personality traits and cognitive styles as risk factors for serious suicide attempts among young people. *Suicide and life threatened behaviour*, 19, 37-47.
- Bergh, L. (1997, October). Trauma and stress: the incidence of trauma and stress amongst correctional officers and offenders in the Department of Correctional Services. *Nexus*, 3, 19-21.
- Biggam, F.H., Power, K.G., MacDonald, R.R., Carcary, W.B. & Moodie, E. (1997). Self-perceived occupational distress in a Scottish police force. *Work and Stress*, 11, 118-133.
- Brown, J., Fielding, J. & Grover, J. (1999). Distinguishing traumatic, vicarious and routine operational stressor exposure and attendant adverse consequences in a sample of police officers. *Work and Stress*, 13, 312-325.

- Brown, J.M. & Campbell, E.A. (1990). Sources of occupational stress in the police. *Work and Stress*, 4, 305-318.
- Brown, J.M. & Campbell, E.A. (1994). *Stress and policing: Sources and strategies*. Chichester: Wiley.
- Canapary, C., Bongar, B. & Cleary, K.M. (2002). Assessing risk for completed suicide in parents with alcohol dependence: Clinicians' views of clinical factors. *Professional Psychology: Research and Practice*, 33, 464-469.
- Chaka, L.T. (1998). *An investigation into the perceived sources of stress and coping amongst correctional officers of the Department of Correctional Services: Pietermaritzburg, Kwazulu/Natal, South Africa*. Unpublished master's dissertation, University of Natal, Pietermaritzburg.
- Cheek, F. & Miller, M. (1983). The experiences of stress for correctional officers: a doublebind theory of correctional stress. *Journal of Criminal Justice*, 2, 105-120.
- Chiu, R.K. & Kosinski, F.A. Jnr. (1999). The role of affective dispositions in job satisfaction and work strain: comparing collectivist and individualist societies. *International Journal of Psychology*, 34, 19-28.
- Clark, L.A., & Watson, D. (1995). Constructing validity: Basic issues in objective scale development. *Psychological Assessment*, 7, 309-319.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (Rev.ed.). Orlando: Academic Press.
- Crank, J.P. & Caldero, M. (1991). The production of occupational stress in medium-sized police agencies: A survey of line officers in eight municipal departments. *Journal of Criminal Justice*, 19, 339-349.
- DeCarlo, D.T. & Gruenfeld, D.H. (1989). *Stress in the American workplace: Alternatives for the working wounded*. Fort Washington, PA: LRP Publications
- Esmeraldo, T. (1997, October). High level of absenteeism: a concern for the Department of Correctional Services. *Nexus*, 3, 8-9.
- Finn, P. (1998). Correctional officer stress: a cause for concern and additional help. *Federal Probation*, 62, 65-75.

- Flanagan, T.J., Johnson, W. & Wesley, W. (1996). Job satisfaction among correctional executives: a contemporary portrait of wardens of state prisons for adults. *Prison Journal*, 76 (4), 13-15.
- Frenz, A.W., Carey, M.P. & Jorgensen, R.S. (1993). Psychometric evaluation of Antonovsky's sense of coherence scale, *Psychological Assessment*, 5, 145-153.
- Gliatto, M.F. & Rai, A.K. (1999). *Evaluation and treatment of patients with suicidal ideation*. Retrieved March 3, 2002 from the World Wide Web: <http://www.aafp.org/afp/990315ap/1500.html>.
- Goldney, R. (1982). Locus of control in young women who have attempted suicide. *Journal of Nervous and Mental disease*, 170, 198-210.
- Gulle, G., Tredoux, C. & Foster, D. (1998). Inherent and organisational stress in the SAPS: an empirical survey in the Western Cape. *South African Journal of Psychology*, 28, 129-134.
- Hart, P.M., Wearing, A.J. & Headey, B. (1995). Police Stress and well-being: Integrating personality, coping and daily work experiences. *Journal of Occupational and Organizational Psychology*, 68, 133-156.
- Hurst, M.M. & Hurst, T.E. (1997). Gender differences in mediation of severe occupational stress among correctional officers. *American Journal of Criminal Justice*, 22, 121-136.
- Jacobs, Q. (1998, August). Selfmoord in die SAPD: Die laaste uitweg, of is dit! *Union Post*, 3, 4.
- Janik, J. & Kravitz, H.M. (1994). Linking work and domestic problems with police suicide. *Suicide and Life Threatening Behaviour*, 24, 267-274.
- Jarred, S.H. (1996). *County jail correctional officers and occupational stress: the gender dimension*. Unpublished doctor's dissertation, A and M University, Texas.
- Kamman, R. & Flett, R. (1983). Affectometer 2: a scale to measure current level of general happiness. *Australian Journal of Psychology*, 35 (2), 259-265.
- Keenan, A. & McBain, G.D.M. (1979). Effects of type A behaviour, intolerance of ambiguity, and locus of control on the relationship between role stress and work-related outcomes. *Journal of Occupational Psychology*, 52, 277-285.
- Kerlinger, F.N. & Lee, H.B. (2000). *Foundations of behavioral research* (4th ed.) Orlando, FL: Harcourt.
- Kop, N. & Euwema, M.C. (2001). Occupational stress and the use of force by Dutch police officers. *Criminal Justice and Behaviour*, 28, 631-652.

- Lefcourt, H.M. (1992). Perceived control, personal effectiveness and emotional states. In B.N. Carperter (Ed.), *Personal coping: Theory, research and application*. Westport, CT: Praeger.
- Lester, D. & Young, L. (1999). External versus internal attributes in suicide and the implications for crisis intervention and suicide prevention. *Psychological Reports*, 85, 393-396.
- Lester, D. (1998). Locus of control and anger. *Activitas Nervosa Superior*, 30, 315-316.
- Mabasa, T. (2002, June 25). I'll jail you: Jali warns officials. *Citizen*, p.1.
- Maram, A. & Miller, K. (1998). An empirical assessment of the construct "work locus of control". *Journal of Industrial Psychology*, 24(3), 48-51.
- Maynard, P., Maynard, N., Mccubin, H.I. & Shao, D. (1980) Family life and the police profession: coping patterns wives employ in managing job stress and the family environment. *Family Relations*, 29, 495-501.
- McLaren, S., Gollan, W., & Horwell, C. (1998). Perceived stress as a function of occupation. *Psychological Reports*, 82, 794.
- Mitchell, M., Cowan, M. & Hamilton, R. (1998). *Facing violence: Assessing the training and support needs of police constables in Scotland*. Edinburgh: Scottish Office Central Research Unit.
- Motsoeneng, C. (Executive Producer). (2003, June 30). *SABC 2 News*. Bloemfontein: Public Broadcasting Service.
- Nel, J. (1994). *A contextual approach to post-shooting trauma in the South African Police Service*. Unpublished master's dissertation, Rand Afrikaans University, Johannesburg.
- Nunally, J.C. & Bernstein, I.H. (1994). *Psychometric theory* (3rd ed.). New York: McGraw-Hill. NY: McGraw-Hill.
- Olivier, P. (2002, June 20). Corruption horror in all jails. *Citizen*, p.1.
- Osman, A., Kopper, B.A., Linchan, M.M., Barrios, F.X., Gutierrez, P.M. & Bagge, C.L. (1999). Validation of the Suicide ideation Questionnaire and the Response for Living Inventory in an adult psychiatric inpatient sample. *Psychological Assessment*, 11, 115-123.
- Patterson, B.L. (1992). Job experience and perceived job stress among police, correctional, and probation/parole officers. *Criminal Justice and Behavior*, 19, 260-285.
- Paul, O. (2002, June 19). Shock jail exposure: Child sex for sale. *Citizen*, p.1.
- Petrie, K. & Brook, R. (1992). Sense of coherence, self-esteem, depression and hopelessness as correlates of reattempting suicide. *British Journal of Clinical Psychology*, 31, 293-300.

- Pienaar, J. (2002). *Coping, stress and suicide ideation in the South African Police Service*. Unpublished doctoral thesis, PU for CHE, Potchefstroom.
- Pienaar, J. & Rothmann, S. (2003). *The internal consistency and construct validity of the Police Stress Inventory in the South African Police Service*. Paper presented at the 15th Conference of the South African Institute for Management Scientists, Potchefstroom, 28-30 September 2003.
- Preuss, U.W., Schuckit, M.A., Smith, T.L., Danko, G.P., Bucholz, K.K., Hesselbrock, M.N., Hesselbrock, V. & Kramer, J.R. (2003). Predictors and correlates of suicide attempts over 5 years in 1,237 alcohol-dependent men and woman. *American Journal of Psychiatry*, 160, 56-63.
- Renberg, E.S. (2001). Self-reported life weariness, death wishes, suicidal ideation, suicidal plans and suicide attempts in general population surveys in the north of Sweden 1986 and 1996. *Psychiatric Epidemiology*, 36, 429-436.
- Reynolds, W. M. (1991a). *Suicide ideation Questionnaire: Professional Manual*. Odessa, FL: Psychological Assessment Resources.
- Reynolds, W.M. (1991b). Psychometric characteristics of the Adult Suicide Ideation Questionnaire with college students. *Journal of Personality Assessment*, 56, 289-307.
- Rossouw, A. (1997, October). The impact of prison violence on the correctional officer at Brandvlei maximum prison. *Nexus*, 3, 22-23.
- Rossouw, L. (2000). *Police Suicide: Annual Report - 2000*. Pretoria: South African Police Services.
- Rothmann, S. & Agathagelou, A.M. (2000). Die verband tussen lokus van beheer en werks-tevredenheid by senior polisiepersoneel. *Tydskrif vir Bedryfsielkunde*, 26(2), 20-26.
- Rothmann, S. & Strijdom, G. (2002). Suicide ideation in the South African Police Services in the North West Province. *South African Journal of Industrial Psychology*, 28(1), 44-48.
- Rothmann, S. & Van Rensburg, P. (2001, September). *Correlates of suicide ideation the South African Police Services in the North West Province*. Poster session presented at 13th Conference of the South African Institute of Management Sciences, Stellenbosch.
- Rothmann, S. (2000, July). *Sense of coherence, locus of control and job satisfaction*. Paper presented at the 28th International Congress of Psychology, Stockholm, Sweden.

- Rotter, J.B. (1966). Generalised expectancies for internal versus external control of reinforcement. *Psychological Monographs*, 80, 1-28.
- Sachs, G.S., Yan, L.J., Swann, A.C. & Allen, M.H. (2001). Integration of suicide prevention into outpatient management of Bipolar Disorder. *Journal of Clinical Psychiatry*, 62(25), 3-11.
- Sanabria, R.L. (1997). *Personal variables and critical incident stress among correctional officers*. Unpublished doctor's dissertation, Indiana State University, Terre Haute.
- SAS Institute. (2000). *The SAS Systems of Windows: Release 8.01*. Cary, NC: SAS Institute Inc.
- Shaughnessy, J.J. & Zechmeister, E.B. (1997). *Research methods in psychology* (4th ed.).
- Shneidman, E. (1985). *Definition of suicide*. New York: Wiley.
- Simmons, C., Cochran, J.K. & Blount, W.R. (1997). The effects of job-related stress and job satisfaction on probation officers' inclinations to quit. *American Journal of Criminal Justice*, 21, 213-229.
- Slate, R.N., Johnson, W.W. & Wells, T.L. (2000). Probation officer stress: Is there an organizational solution? *Federal Probation*, 64, 56-59.
- Spector, P.E. (1988). Development of the work locus of control scale. *Journal of Occupational Psychology*, 61, 335-340.
- Spielberger, C.D. & Vagg, P.R. (1999). *Job Stress Survey: Professional manual*. Odessa, FL: Psychological Assessment Resources, Inc.
- Staal, M.A. & Hughes, T.G. (2002) Suicide Prediction in the U.S. Air Force: Implications for Practice. *Professional Psychology: Research and Practice*, 33(2), 190-196.
- Strümpfer, D.J.W. (1995). The origins of health and strength: From salutogenesis to fortigenesis. *South African Journal of Psychology*, 25, 81-89.
- Thomas, M. (2002, June 21). Prison boss refuse to burn video tapes. Citizen, p.3.
- Vilhjalmsson, R. Kristjansdottir, G. & Sveinhjarnardottir, E. (1998). Factors associated with suicide ideation in adults. *Social Psychiatry and Psychiatric Epidemiology*, 33, 97-103.
- Weissman, M.M., Bland, R.C., Canino, G.J., Greenwald, S., Hwu, H.G., Joyce, P.R., Karam, E.G., Lee, C.K., Lellouch, J., Lepine, J.P., Newman, S.C., Rubio-Stipec, M., Wells, J.E., Wickramaratne, P.J., Wittchen, H.U. & Yeh, E.K. (1999). Prevalence of suicide ideation and suicide attempts in nine countries. *Psychological Medicine*, 29, 9-17.

CHAPTER 3

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

This chapter puts forth conclusions pertaining to the literature review and the empirical study. The limitations of the research are also pointed out. Recommendations are provided for the organisation as well as suggestions for future research.

3.1 CONCLUSIONS

The general aim of this research was to establish the relationship between psychological strengths, stress and suicide ideation of correctional officials in a management area of the Freestate province. The following conclusions are made with regard to the constructs of psychological strengths, with specific reference to locus of control, sense of coherence and affect, and stress and suicide ideation.

Suicidal behaviour is understood by approaches explaining that suicidal people believe death to be an escape from intolerable emotion, unendurable pain and unacceptable anguish. Suicide ideation is interpreted as the first step towards suicide and may be viewed as an important and critical component in evaluating adult mental health. Individuals with high levels of suicide ideation wish they had never been born, feel life is not worth living, wish they were dead and think that others would realise their value only when they are dead (Reynolds, 1991a; Vilhjalmsón, Kristjandóttir & Sveinbjarnardóttir, 1998)

Stress emphasises a relationship between an individual and the environment where the individual appraised this relationship as exceeding his resources and consequently endangering his well-being (Brodsky, 1997). Work in a correctional environment could be very stressful and some individuals may have difficulty in dealing with such a job (Rossouw, 1997).

Psychological strengths, from a fortigenic approach, are seen as dimensions of human functioning that assist general well-being. Psychological strengths such as locus of control, sense of coherence and affect (viewed as healthy, positive, and pro-social) could be expected to counter suicide ideation (seen as unhealthy, negative and asocial) (Strümpfer, 1995).

Sense of coherence refers to a global orientation that expresses the degree to which one has a pervasive, enduring though dynamic feeling of confidence that one's external and internal environments are calculable, and that there is an elevated probability that that aspect will work out as well as can be reasonably forecasted (Antonovsky, 1987). Locus of control comprises of two constructs: the internal and external pole, relating behaviour to reinforcements in diverse situations (Lefcourt, 1992). The internal pole of locus of control refers to the individual's beliefs that outcomes are the consequences of own ability, initiative and striving. On the other hand, the external pole refers to the individual's beliefs that outcomes are independent of their own behaviour (Rotter, 1966). Positive affectivity is an individual's disposition to be happy across a relatively broad time span and a variety of situations, whereas negative affectivity is an individual's disposition to experience discomfort across similar time spans and situations (Chiu & Kosinski, 1999).

From literature it can be deduced that an increase in occupational stressors and maladaptive psychological strengths contribute to suicide ideation. Conclusions on empirical findings are discussed below.

Negative affect and external locus of control were positively related to suicide ideation for the current sample. Sense of Coherence was negatively related to suicide ideation. Analysis reflected that scores on negative affect and high external locus of control could predict suicide ideation of correctional officials. No significant findings were made relating organisational stressors to suicide ideation. Current levels of suicide ideation portrayed that 10,19% of the officials were at risk. For the current sample this indicates high levels of suicide ideation in 16 people. The need for intervention from the Department of Correctional Services is obvious.

A three-factor solution best fitted the data to describe correctional stress in the sample of officials from a management area in the Free state province. The factors that were extracted show similarity to factors previously extracted in other studies of police stress (Alexander et al., 1993; Biggam et al., 1997; Brown & Campbell, 1990, 1994; Brown et al., 1999; Gulle et al., 1998; Mitchell et al., 1998; Pienaar & Rothmann, 2002). Factors that were extracted showed internal consistency and point to the utility of the instrument developed in the current research.

Lack of job resources, job demands, and the inherent nature of the job are three factors reflected in correctional work. The most prominent of the three stressors was lack of resources. Items such as an inadequate salary, fellow employees lacking in job performance, lacking opportunities for advancement, lack of recognition, insufficient personnel, and lacking support from supervisor loaded on this factor. The next prominent stressor was job demands. The items loading on this factor referred to covering work for another, handling crisis situations and increased responsibility. Correctional stressors were the least prominent stressor, with only one item being prominent, namely being in danger or the threat of being physically attacked. Assumptions from the analysis imply that most of the factors showed a moderate intensity and lower frequency.

From the results it can be concluded that high external locus of control and negative affect predict suicide ideation. Stress is best described with high levels on lack of job resources, job demands and inherent correctional stressors, but with the current research the effect of the stressful working environment is only reflected by a lack of resources being positively related to negative affectivity.

3.2 LIMITATIONS

The fact that the current study focused on stressful events can be regarded as a limitation. The severity of stressors and their impact did not significantly relate to suicide ideation. A focus on alternative causes to suicide ideation, such as a lack of coping skills could have added positive value. Further limitations include the use of self-report measures and the cross-sectional design. It should also be remembered that members of only one management area were included, and therefore the results could not be generalised to other areas and provinces.

3.3 RECOMMENDATIONS

3.3.1 Recommendations for the organisation

A pro-active stance should be taken, timeously identifying suicidal thoughts. The mere recognition of the existence of suicidal behaviour and reacting as a result of a critical incident might no longer suffice to prevent suicides. If authorities and sources of support intervene in time with regard to suicidal behaviour by identifying and dealing with suicide ideation, extreme actions such as decisions to commit suicide, can be prevented.

After identification of suicide ideation, the Department of Correctional Services needs to attend to the possible culmination of such emotions amongst correctional officials. Different variables such as an external locus of control and negative affect were shown to be important with the prediction of the suicidal behaviour of officials. Sensitivity training and the empowerment of senior personnel as paraprofessionals may assist with identification of the absence of psychological strengths.

As coping mechanisms to a stressful environment, psychological strengths of officials could be enhanced with self-development programmes. Support from employee assistance practitioners and psychological services may be rendered with more interventions, such as stress management programmes, suicide awareness campaigns, health programmes, in house training for problem-focused coping skills and organisational development programmes.

Understanding the work context and day-to-day practices of the correctional official as team players, team-based interventions will assist employees in dealing with stress and consequently reduce suicide ideation.

With inadequate salaries showing the highest intensity and frequency among the lack of resources experienced by correctional officials, top management should be made aware of the emotional impact of inadequate remuneration on officials. Salary issues and emphasis on more or alternative reward systems will have to be researched.

Support from top management would include the strengthening of the employee assistance services by appointing more qualified and experienced psychological staff. However, such a strategy will not work effectively if changes in other organisational practices pertaining to staff support (e.g. recruitment, selection, training and development, and remuneration) are not implemented. Viewed holistically, management and organisational development interventions should be implemented to improve the quality of management in the Department of Correctional Services to increase the levels of trust in the organisation, to optimise the organisational structure and to ensure a balance between job demands and job resources.

3.3.2 Recommendations for future research

- Future research is needed regarding the relationship between variables of psychological strengths, coping strategies, and stress and suicide ideation in the Department of Correctional Services.
- Personality variables could be included in future in order to explore the underlying mechanisms of personality that may be related to suicidal patterns.
- Evaluating the effectiveness of the intervention, research on suicide ideation should be conducted before and after stress management intervention.
- Research should be conducted before and after a coping skills intervention to determine the results on suicide ideation. Suicide ideation levels measured before and after the coping skills intervention would conclude how effective the intervention was pertaining to the prevention of suicidal behaviour.
- The high inter-item correlations for the ASIQ suggest that a shortened version of this questionnaire might be used in future studies.

- Similar studies might be undertaken on a provincial or national level. The current study only focused on one management area of Correctional Services. The results could therefore not be generalised to other areas or provinces.

REFERENCES

- Alexander, D.A., Walker, L.G., Innes, G. & Irving, B.L. (1993). *Police stress at work*. London: Police Foundation.
- Antonovsky, A. (1987). *Unravelling the mystery of health: How people manage stress and stay well*. San Francisco, CA: Jossey-Bass.
- Biggam, F.H., Power, K.G., MacDonald, R.R., Carcary, W.B. & Moodie, E. (1997). Self-perceived occupational distress in a Scottish police force. *Work and Stress*, 11, 118-133.
- Brodsky, C. (1997). Long-term stress in teachers and prison guards. *Journal of Occupational Medicine*, 19, 133-138.
- Brown, J.M. & Campbell, E.A. (1990). Sources of occupational stress in the police. *Work and Stress*, 4, 305-318.
- Brown, J.M. & Campbell, E.A. (1994). *Stress and policing: Sources and strategies*. Chichester: Wiley.
- Brown, J., Fielding, J. & Grover, J. (1999). Distinguishing traumatic, vicarious and routine operational stressor exposure and attendant adverse consequences in a sample of police officers. *Work and Stress*, 13, 312-325.
- Chiu, R.K. & Kosinski, F.A. Jnr. (1999). The role of affective dispositions in job satisfaction and work strain: comparing collectivist and individualist societies. *International Journal of Psychology*, 34, 19-28.
- Gulle, G., Tredoux, C. & Foster, D. (1998). Inherent and organisational stress in the SAPS: an empirical survey in the Western Cape. *South African Journal of Psychology*, 28, 129-134.
- Lefcourt, H.M. (1992). Perceived control, personal effectiveness and emotional states. In B.N. Carperter (Ed.), *Personal coping: Theory, research and application*. Westport, CT: Praeger.
- Mitchell, M., Cowan, M. & Hamilton, R. (1998). *Facing violence: Assessing the training and support needs of police constables in Scotland*. Edinburgh: Scottish Office Central Research Unit.
- Pienaar, J. & Rothmann, S. (2003). *The internal consistency and construct validity of the Police Stress Inventory in the South African Police Service*. Unpublished doctoral thesis, PU for CHE, Potchefstroom.

- Reynolds, W. M. (1991). *Suicide ideation Questionnaire: Professional Manual*. Odessa, FL: Psychological Assessment Resources.
- Rossouw, A. (1997, October). The impact of prison violence on the correctional officer at Brandvlei maximum prison. *Nexus*, 3, 22-23.
- Rotter, J.B. (1966). Generalised expectancies for internal versus external control of reinforcement. *Psychological Monographs*, 80, 1-28.
- Strümpfer, D.J.W. (1995). The origins of health and strength: From salutogenesis to fortigenesis. *South African Journal of Psychology*, 25, 81-89.
- Vilhjalmsson, R., Kristjandottir, G. & Sveinbjarnardottir, E. (1998). Factors associated with suicide ideation in adults. *Psychiatric Epidemiology*, 33, 97-103.