

# **COPING, STRESS AND SUICIDE IDEATION IN THE SOUTH AFRICAN POLICE SERVICE IN LIMPOPO PROVINCE**

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## REMARKS

The reader is reminded of the following:

- The references as well as the editorial style as prescribed by the *Publication Manual (5th edition)* of the American Psychological Association (APA) were followed in this dissertation. This practice is in line with the policy of the Programme in Industrial Psychology of the PU for CHE to use APA style in all scientific documents as from January 1999.
- The mini-dissertation is submitted in the form of a research article. The editorial style specified by the *South African Journal of Industrial Psychology* (which agrees largely with the APA style) is used, but the APA guidelines were followed in constructing tables.

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## **CONFIRMATION**

### **PROOFREADING OF MANUSCRIPT**

I, Therese Adele EBERLANZ, an accredited member of the South African Translators' Institute (SATI), confirm that I have proofread this mini-dissertation for language and typing errors.

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## SUMMARY

**Title:** Coping, stress and suicide ideation in the South African Police Service in Limpopo Province.

**Key terms:** Coping, stress, suicide, suicide ideation, police, police official, law enforcement.

If the way employees die is a direct cause of their working environment, the employer has a certain responsibility to address or prevent these contributing conditions in the environment. Research reports indicate that police officers have higher suicide rates compared to the rates of the general population. Increasing suicide rates for police officers in recent years have been reported for the United States and Australia. Very limited research data for this phenomenon, especially within the South African Police Service, Limpopo Province was found. Previous research on suicide ideation focused on social and individual factors. A research project was launched to determine the relationship between certain demographic variables, coping strategies and stress factors which can be linked to suicide.

Research was conducted by means of a cross-sectional survey design. A random, stratified sample ( $n=204$ ) of uniformed police members was taken from police stations in the province. The Adult Suicide Ideation Questionnaire, the Police Stress Inventory, the Coping Orientations to the Problems Experienced Questionnaire and a biographical questionnaire were administered.

Results of a stepwise discriminant analysis showed that the combination of race, the use of seeking emotional support as coping strategy and size of police stations can predict 75% of high suicide ideation cases and 25% of low ideation cases. It was found that 5,88% of the police officials had significant suicide ideation levels.

Recommendations for future research were made.

## OPSOMMING

**Onderwerp:** Coping, stres en selfmoorddenkbeeldvorming in die Suid-Afrikaanse Polisie in Limpopo Provinsie.

**Sleuteltermes:** Coping, stres, selfmoord, selfmoorddenkbeeldvorming, polisie, polisiebeampte, wetstoepassing.

Indien die manier waarop werknemers sterf 'n direkte oorsaak van die werksomgewing is, het die werkgever 'n sekere verantwoordelikheid om faktore wat kan bydrae te bestuur of waar moontlik, te voorkom. Navorsing toon dat polisiebeamptes hoër vlakke van selfmoord as die breë publiek openbaar. Toenemende gevalle van selfmoord is die afgelope paar jaar vir die Verenigde State van Amerika en Australië gerapporteer. Beperkte navorsingsgegewens oor die fenomeen, veral binne die Suid-Afrikaanse Polisie, is vir die Limpopo Provinsie beskikbaar. Vorige navorsing oor selfmoorddenkbeeldvorming het gefokus op sosiale en individuele faktore. 'n Navorsingsprojek is geloods om die verband tussen sekere demografiese veranderlikes, coping-strategieë en stresfaktore wat aanleiding kan gee tot selfmoord, te bepaal.

Navorsing is gedoen deur van 'n dwarsdeursnee-ontwerp gebruik te maak. 'n Gestratifiseerde ewekansige steekproef ( $n=204$ ) is van uniformdraende lede uit polisiestasies in die provinsie geneem. Die Volwasse Selfmoorddenkbeeldvormingsvraelys, die Polisiestres-opname, die Coping Orientations to the Problems Experienced-vraelys en 'n biografiese vraelys is afgeneem.

Resultate van 'n stapsgewyse diskriminantanalise het aangetoon dat 'n kombinasie van ras, die gebruik van soeke na emosionele ondersteuning, as 'n coping-strategie en grootte van polisiestasies gebruik kan word om 75% van hoër selfmoorddenkbeeldvormingsgevalle en 25% van laer gevalle te kan voorspel. Daar is bevind dat 5,88% van die polisiebeamptes oor beduidende selfmoorddenkbeeldvormingsvlakke beskik het.

Voorstelle vir toekomstige navorsing is gedoen.



# **CHAPTER 1**

## **INTRODUCTION**

This mini-dissertation focuses on the relationships between suicide ideation, coping and stress within the South African Police Service (SAPS) in Limpopo Province.

In this chapter the problem statement and the research objectives (both general and specific) are discussed. Then follows an explanation of the research method and a division of the chapters.

### **1.1 PROBLEM STATEMENT**

The life cycle of human birth and death is familiar to everybody and nobody will escape from it. However, human beings have some influence on the way they live and the way they die. If the way employees die is a direct cause of their working environment, the employer has a certain responsibility to address or prevent these contributing conditions in the environment. The problem is that certain employees do exercise suicidal behaviour, and this behaviour can possibly lead to completed suicide. Suicide according to Microsoft Encarta 98 Encyclopaedia (1998) can be defined as "...intentional, self-inflicted death". Suicidal behaviour can, according to Reynolds (1991a), be categorised as suicide completion, overt intention, suicide attempt, and suicide ideation. Jin and Zhang (1998) also found a strong association between suicide ideation and suicide.

It is important to firstly put suicide in the South African Police Service into the context of world trends. Research shows an increasing incidence of suicide among police members (Janik & Kravitz, 1994). Studies report that police officers have higher suicide rates compared to the rates of the general population. Increasing suicide rates for police officers in recent years have also been reported for the United States (Violanti, 1995), and Australia (Cantor, Tyman & Slater, 1995). Schmidtke, Fricke and Lester (1999) reported an average suicide rate of 23,03 per 100 000 police officers in Germany in 1996. In the

United States of America, 300 police officials within a population of 700 000 members committed suicide during 1994 (Violanti, 1995).

The suicide rates per 100 000 members of the SAPS from 1994 to 2000 are given in Table 1 (C.M. Swanepoel, personal communication, April 15, 2003).

Table 1

*The suicide rate of SAPS members from 1994 to 2000 (per 100 000)*

Year	1994	1995	1996	1997	1998	1999	2000
Frequency	200	200	150	130	110	110	130

Table 1 shows that the number of suicides in the SAPS decreased from 1995 to 1999, and then increased again to 130 per 100 000 members in 2000 (Rossouw, 1997, 1998). Owing to the moratorium on statistics of suicides in the SAPS, statistics after 2000 are not available (C.M. Swanepoel, personal communication, April 15, 2003). The fact that a moratorium was placed on the publication of police suicide statistics in 2000 points to the severity of this phenomenon. The suicide rate is also much higher than the average rate of 18 per 100 000 of the general population in South Africa. It was with great anticipation that the 2002/03 SAPS Annual Report was awaited. The moratorium on crime statistics was lifted and findings were published in the SAPS's Annual Report for 2002-2003 (SAPS Annual Report, 2002/2003). Unfortunately no statistics were published on police suicides.

With the historical change during 1995/96 when the former South African Police and police agencies of the former self-governing states were merged into one South African Police Service, Limpopo Province was the only province where four different agencies amalgamated. The Limpopo Province constitutes an area of 123 910 square kilometres with a total population of 5 273 642 (11,8% of national total). Only 20,8% of the population have a grade 12 and higher education level (20+ years). The unemployment

rate is 48,8%, with the age spread between 0 to 25 years, which represents 52,9% of the total population (Statistics South Africa, 2002).

There are 9 719 police officials in Limpopo Province, with 79,1% male and 26,9% female. The national ratio of police officers to civilians is 1:450 (1 police official for every 450 citizens) while in Limpopo Province this ratio is 1:768 (1 police official for every 768 citizens) (South African Police Service, 2002).

The constant confrontation of SAPS members with crime and excessive violence causes them to become the victims of crime themselves (Roosendaal, 2002). Since the abolition of apartheid in the mid-nineties, most state departments and state-funded organisations, including the police, have undergone major transformation in the form of downsizing, affirmative action and general restructuring. These changes have surely affected the internal solidarity of the organisation; former political enemies having become work colleagues, for example. The organisational change, coupled with one of the highest crime rates in the world, which creates further stress, presents a volatile situation in terms of mental health in the SAPS (Pienaar, 2002).

Previous research on suicide ideation focused on social factors (e.g. the effects on family, religion, interpersonal relations and social support) and individual factors (e.g. stress and depression) (Zhang & Jin, 1998). The SAPS National Suicide Prevention Project (1998), as part of its aims and objectives, mentions the broader social environment in which the individual works (policing) as another influential factor regarding suicidal behaviour. The political and social development in South Africa which has taken place since 1994 put the police, as “society’s guardians of power, in the shoes of symptom bearers of a society in the painful process of adapting to change” (Swanepoel, 1998). Swanepoel (1998, p. 4) makes it clear when she states: “It is unfortunately no simple task for police officials to adapt to all the changes, which clearly affect their own lives and work, while also having to ensure stability, law and order in a society in the process of transformation”.

Suicide ideation refers to the thoughts and cognition about suicidal behaviour and intent, and may be considered as an early marker of more serious suicidal behaviour (Bonner & Rich; Reynolds, 1991a; Shea, 1998). Suicide ideation can be characterized as ranging from relatively mild, general thoughts and wishes that one was dead to serious ideation of specific plans and means of taking one's own life. Reynolds (1991a) defines suicide ideation as the domain of thoughts and ideas about death, suicide and serious self-injurious behaviour, and includes thoughts related to the planning, conduct and outcome of suicidal behaviour, particularly as the last-mentioned relates to thoughts about the response of others.

Suicide ideation as a psychological construct is more phenomenological than theoretical in nature (Reynolds, 1991a). Individuals measuring high on 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 worth when they are dead. They have thoughts of killing themselves, as well as thoughts on specific methods they can use and the time and place where to kill themselves.

A number of researchers have focused on suicide ideation as an important aspect of suicidal behaviour. Schotte and Clum (1982) found a relationship between the frequency of suicide ideation and the likelihood of attempts at suicide. Bonner and Rich (1987) formulated a stress-vulnerability model of suicidal behaviour in college students in which suicide ideation represents a key variable in the development of more serious suicidal behaviour. Suicide ideation is consistent with a cognitive-behavioural focus and may be viewed as a domain of self-statements.

Police members work in circumstances of chronic stress (Maynard, Maynard, Mccubin, & Shao, 1980). Irregular working hours, poor working conditions and constant fear and trauma make police members more susceptible to suicide (Maynard et al., 1980; Rothmann & Strijdom, 2002). Shift work, the dangers involved in police work, poor working conditions and low salaries seem to be related to job dissatisfaction, stress and

suicide tendencies (Kruger, 1996; Lott, 1995). According to McCafferty (1992), suicide of police could largely be ascribed to stressors at work. Factors that may cause distress include authoritarian structure, lack of participation in decision-making, lack of administrative support, unfair discipline, unfair promotion and the nature of police work. It is therefore necessary to study suicide ideation of police members and possible correlates thereof. Janik and Kravitz (1994) found that marital problems and job suspension were important contributing factors to a police officer's decision to attempt suicide. Farmer (1990) acknowledges the existence of universal-acute stressors in policing, but literature does not attempt to recognize individual responses. A stressor can cause one person to become very anxious, while another cannot understand the fuss caused.

Coping mechanisms (strategies) refer to internal sources of emotional strength which mediate a person's reaction to perceived stress (Horesh et al., 1996). Kleinke (1991, p. 3) defined coping as "the efforts we make to manage situations we have appraised as potentially harmful or stressful". Coping refers to perceptual, cognitive or behavioural responses that are used to manage, avoid or control situations that could be regarded as difficult (Folkman & Lazarus, 1994; Moos, 1994; Zeidner & Endler, 1996). The term "coping" could be used to refer to strategies or results (Fleishman, 1984). As a strategy, coping refers to the different methods that a person applies to manage his or her circumstances. These strategies can be emotion-focused, problem-focused or focused on obtaining social support (Lazarus & Folkman, 1984). Emotion-focused strategies refer to what an individual was thinking and the thoughts which were used to regulate emotional responses during stressful events. Problem-focused coping strategies refer to actions taken to address the situation and seeking social support describes attempts to seek support from others (informational, tangible and emotional). Horesh et al. (1996) in their research identified four coping styles which correlate negatively with suicide risk (minimization, replacement, mapping and reversal) and three which correlate positively (suppression, blame and substitution).

Research by Hageman (1978) has shown that non-coping with stressors in the work environment may be related to suicide ideation.

Suicide ideation has been associated with depression and anxiety disorders (Zhang, 1996). Vilhjalmsón, Kristjansdóttir and Sveinbjarnardóttir (1998) agree that suicide ideation is related to numerous risk factors but that the causal relationship needs to be further researched. However, only one study was found in the South African literature that determined the level of suicide ideation of police members. Rothmann and Strijdom (2002) found in a study of police members in North West Province that sense of coherence was related to suicide ideation in the case of White police members.

Jin and Zhang (1998) found that psychological well-being was a much stronger predictor of suicide than physical well-being, especially when depression is introduced as an intervening variable in the model. Many factors may contribute to suicidal behaviour of police members, including the demands of the work situation, factors outside the work situation and personal characteristics (Jacobs, 1998; Rossouw, 1998).

The fact that police members exhibit suicidal behaviour puts pressure on the South African Police Service as organisation to take preventative actions. This resulted in the National Suicide Prevention Action Plan which was approved by the Divisional Commissioner: Human Resource Management in 1996, the establishment of a National Suicide Prevention Committee to coordinate the actions (NSPC) in 1997, the SAPS Annual Plan for 1997/98 in which suicide prevention was identified as a national priority, and the approval of a National Suicide Prevention Project in 1998. The fact is that police suicides are still taking place and the objective of this research is to determine the relationship between suicide ideation, stress and coping of police members in Limpopo Province.

From the problem statement above the following research questions emerge:

- What is the level of suicide ideation in the SAPS in Limpopo Province?
- Which factors contribute to job stress in the SAPS in Limpopo Province?
- What are the relationships between stress, coping strategies and suicide ideation in the SAPS in Limpopo Province?
- Can stress, coping strategies and biographical variables be used to predict suicide ideation of police members in Limpopo Province?
- Which recommendations can be made to prevent and manage suicide ideation in the SAPS in Limpopo Province?

## **1.2 RESEARCH OBJECTIVES**

The research aims are divided into a general aim and specific objectives.

### **1.2.1 General aim**

The general aim of this research is to investigate relationships between coping, stress and suicide ideation within the SAPS in Limpopo Province.

### **1.2.2 Specific objectives**

The specific research objectives are:

- To determine the level of suicide ideation in Limpopo Province.
- To highlight the most important stressors in the SAPS in Limpopo Province.
- To establish the relationships between stress, coping strategies and suicide ideation in the SAPS in Limpopo Province.
- To predict suicide ideation of police members in Limpopo Province by making use of coping, stress and biographical variables.
- To make recommendations on the prevention and/or management of suicide ideation in the SAPS in Limpopo Province.

## **1.3 RESEARCH METHOD**

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

### **1.3.1 Literature review**

The literature review focuses on suicide ideation in the police services as well as the role of coping and stress in 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 design will be used to achieve the research objective. The specific design is the cross-sectional design, whereby a sample is drawn from a population at one time (Shaughnessy & Zechmeister, 1997). Information collected is used to describe the population at that time. This design can be used also to assess interrelationships among variables within a population. According to Shaughnessy and Zechmeister (1997), this design is ideally suited to the descriptive and predictive functions associated with correlational research.

#### **1.3.2.2 Study population**

A stratified, random sample ( $n = 204$ ) of uniformed police members in Limpopo Province from the post level of constable to that of senior superintendent will be taken for this study. Stations will be divided into small (fewer than 25 staff members), medium (25 to 100 staff members) and large stations (more than 100 staff members). All police members at



randomly identified small and medium stations in each of the provinces will be asked to complete the questionnaire. Student and civilian members will not be included in this study. In the large stations stratified random samples will be taken according to sex and race.

### 1.3.2.3 Measuring instruments

Four questionnaires are used in the empirical study, namely a *Biographical Questionnaire*, the *Adult Suicide Ideation Questionnaire* (ASIQ) (Reynolds, 1991a), the *Police Stress Inventory* (PSI) (Pienaar & Rothmann, 2003), and the *COPE Questionnaire* (COPE) (Carver, Scheier & Weintraub, 1989).

- A **Biographical Questionnaire** is developed to gather information about the demographic characteristics of the participants. This questionnaire gives participants the option of supplying their names and service numbers. Other information that is gathered includes: station, age, sex, years of service, years in current position (to assess advancement), educational qualifications, marital status, satisfaction with relationships with significant other person, language, history of disciplinary action, self-rated performance, self-rated job satisfaction, medical conditions, use of prescription and over-the-counter medicines, 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.
- The **Adult Suicide Ideation Questionnaire** (ASIQ) (Reynolds, 1991a) is a measure of suicidal ideation and is used to assess the degree to which individuals have been thinking about killing themselves over the past month. Each of the items measures a specific suicidal behaviour or thought. Reynolds (1991a) reported that the internal consistency (coefficient alpha) of the ASIQ was 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. Rothmann and van Rensburg (2001) found that the internal consistency of the ASIQ was acceptable at 0,51 (0,15  $r$  0,50, Clarke & Watson, 1994). According to Rothmann and Strijdom (2002), the internal consistencies of the ASIQ are 0,98 and 0,95 for Whites and Blacks respectively. Pienaar (2002) found an alpha value of 0,97 in a national sample of police officers. These internal consistencies could be regarded as acceptable according to Nunnally and Bernstein (1994).

- The **Police Stress Inventory (PSI)** (Pienaar & Rothmann, 2003a) is used to measure participants' job stress. The PSI focuses on common work situations that often result in psychological strain. Each of the 44 items describes a job-related stressor event and assesses both the perceived severity and frequency occurrence of that event. Firstly, participants rated each of the 44 items regarding the intensity of stress on a 9-point scale. The frequency part of the questionnaire asked "how many times in the last six months did you experience the source of stress". Pienaar and Rothmann (2003) subjected the PSI to a principal components factor analysis with a varimax rotation. Three internally consistent factors were extracted, namely Job demands (17 items), Lack of resources (14 items), and Police stressors (8 items). The alpha coefficients of the three scales are 0,92; 0,92; and 0,89 respectively. All these values are acceptable (0,70, Nunnally & Bernstein, 1994), and thus indicate the internal consistency of the factors of the PSI.
- The **COPE Questionnaire (COPE)** is used to measure participants' coping strategies. The COPE is a multidimensional 53-item coping questionnaire that indicates the different ways that people cope in different circumstances (Carver, Scheier & Weintraub, 1989). Although the original questionnaire measures 13 different coping strategies, Pienaar and Rothmann (2003b) subjected the COPE to a principal components factor analysis with a varimax rotation. Three internally consistent factors were extracted, namely Problem-focused coping (16 items), Passive coping

(13 items), and Seeking social support (7 items). The alpha coefficients of the three scales are 0,93; 0,86; and 0,87 respectively. All these values are acceptable (Nunnally & Bernstein, 1994), and thus indicate the internal consistency of the factors of the PSI. Test-retest reliability varies from 0,46 to 0,86 and from 0,42 tot 0,89 (applied after two weeks).

#### 1.3.2.4 Statistical analysis

The statistical analysis will be carried out by using the SAS-program (SAS Institute, 2000). Cronbach alpha coefficients, inter-item correlation coefficients and confirmatory factor analysis will be used to assess the reliability and validity of the measuring instruments (Clark & Watson, 1995). Descriptive statistics (e.g. means, standard deviations, skewness and kurtosis) will be used to analyse the data.

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

A discriminant analysis will be carried out to determine which combination of independent variables could be used to classify police members who obtained low versus high suicide ideation scores into groups. 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 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. Included will be a letter requesting participation and motivation of the research. With regard to the research, ethical aspects will be discussed with the participants. The test battery will be administered in small groups at the work premises on suitable dates.

#### **1.5 DIVISION OF CHAPTERS**

Chapter 1: Introductions, problem statement and research objectives.

Chapter 2: Research article.

Chapter 3: Conclusion, limitations and recommendations.

#### **1.6 CHAPTER SUMMARY**

In this chapter, the problem statement, the aims of the study and the research method were discussed. A prospective chapter division was also indicated.

Chapter 2 contains the research article.

## REFERENCES

- Bonner, R.L., & Rich, A.R. (1987). Toward a predictive model of suicide ideation and behavior: Some preliminary data in college students. *Suicide and Life-Threatening Behavior, 17*, 50-63.
- Burke, R.J. (1994). Stressful events, work-family conflict, coping, psychological burnout, and well-being among police officers. *Psychological Reports, 75*, 787-800.
- Cantor, C. H., Tyman, R., & Slater, P. J. (1995). A historical survey of police suicide in Queensland, Australia, 1843-1992. *Suicide and Life-Threatening Behavior, 25*, 4, 499-507.
- Carver, C. S., Sheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology, 56*, 267-283.
- Clark, L.A. & Watson, D. (1995). Construct validity: Basic issues in objective scale development. *Psychological Assessment, 7*, 309-319.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2<sup>nd</sup> ed.). Hillsdale, NJ: Lawrence Erlbaum & Associates.
- 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.
- Farmer, R.E., (1990). Clinical and managerial implications of stress research on the police. *Journal of Police Science and Administration, 17*( 3), 205-218.
- Fleishman, J.A. (1984). Personality characteristics and coping patterns. *Journal of Health and Social Behavior, 25*, 229-234.
- Folkman, S. & Lazarus, R.S. (1984). *Stress, appraisal and coping*. New York: Springer.
- Hageman, M.J.C. (1978). Occupational stress and marital relationships. *Journal of Police Science and Administration, 6*, 402-411.
- Hirsch, J. & Ellis, J.B. (1995). Family support and other social factors precipitating suicidal ideation. *International Journal of Social Psychiatry, 41*, 26-30.

- Horesh, N., Rolnick, T., Iancu, I., Dannon, P., Lepkifker, E., Apter, A. & Kotler, M. (1996). Coping styles and suicide risk. *Acta Psychiatr Scand*, 93, 489-493.
- 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 Behavior*, 24, 267-274.
- Jin, S. & Zhang, J. (1998). The effects of physical and psychological well being on suicide ideation. *Journal of Clinical Psychology*, 54, 401-413.
- Kerlinger, F. N., & Lee, H. B. (2000). *Foundations of behavioral research* (4<sup>th</sup> ed.). London: Harcourt College Publishers.
- Kleinke, C.L. (1991). *Coping with life challenges*. San Francisco, CA: Brooks/Cole.
- Kruger, G. (1996, January 30). SAPD-stres; 'n Kultuur teen sielkunde kwel: Geestesgesondheid moet prioriteit wees. *Beeld*, p. 11.
- Lester, D. (1987). Suicidal preoccupation and dysthymia in college students. *Psychological Reports*, 61, 762.
- Lester, D. & Francis, L.J. (1993). Is religiosity related to suicide ideation after personality and mood are taken into account? *Personality and Individual Differences*, 15, 591-592.
- Lott, L.D. (1995, November). Deadly secrets: Violence in the police family. *FBI Law Enforcement Bulletin*, 64, 12-16.
- 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.
- McCafferty, F.L. (1992). Stress and suicide in police officers: Paradigm of occupational stress. *Southern Medical Journal*, 85, 233-243.
- Microsoft(R) Encarta(R) 98 Encyclopaedia (1998). *Suicide*. Microsoft Corporation (1993-1997).
- Moos, R.H. (1994, July). *Conceptional and empirical advances in stress and coping theory*. Paper presented at the 23<sup>rd</sup> International Congress of Applied Psychology, Madrid, Spain.

- 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* (3<sup>rd</sup> ed.). New York: McGraw-Hill.
- Osman, A., Kopper, B.A., Linehan, M.M., Barios, 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, G.T. (2000). Demographic factors as predictors of coping strategies among police officers. *Psychological Reports*, 2000, 87, 275-283.
- Pienaar, J. (2002). *Coping, stress and suicide ideation in the South African Police Service*. Unpublished Doctoral Thesis, Potchefstroom University for Christian Higher Education, Potchefstroom.
- Pienaar, J. & Rothmann, S. (2003a). *Occupational stress in the South African Police Service*. Paper presented at the 15<sup>th</sup> Conference of the South African Institute for Management Scientists, Potchefstroom, 28-30 September 2003.
- Pienaar, J. & Rothmann, S. (2003b). *Coping strategies in the South African Police Services*. Paper presented at the 6<sup>th</sup> Annual Conference of the Society for Industrial and Organisational Psychology, Sandton, Johannesburg, 25-27 June 2003.
- Pieterse, J.J. (1993). 'n Psigologiese outopsie van polisie selfmoord. Ongepubliseerde meestergraadskripsie, Universiteit van Suid-Afrika, Pretoria.
- Reynolds, W.M. (1991). *Suicide Ideation Questionnaire: Professional Manual*. Odessa, FL: Psychological Assessment Resources.
- Reynolds, W.M. (1991b). Psychometric Characteristics of the Adult Suicide Ideation Questionnaire in College Students. *Journal of Personality Assessment*, 56, 289-307.
- Roosendaal, P (2002, July). *SAPD-lede slagoffers van misdaad: Die eindresultaat...: Selfmoord*. Servamus, Safety and Security Magazine, 95(7), 20-25.
- Rossouw, L. (1997). *Police suicide: Research findings - 1994 to 1997*. Pretoria: South African Police Service.

- Rossouw, L. (1998). *Selfmoord in die SAPD: Navoringsbevindings - 1994 - 1997*. Pretoria: Sielkundige Dienste.
- Rothmann, S. & Agathagelou, A.M. (2000). Die verband tussen lokus van beheer en werkstevredenheid 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. *Journal of Industrial Psychology*, 28(1) 44-48.
- Rothmann, S. & Van Rensberg, 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.
- Roy, E., Rylander, G., & Sarchiapone, M. (1997). Genetic studies of suicidal behavior. *The Psychiatric Clinics of North America*, 20(3), 595-611.
- Rudd, M.D., Ellis, T.E., Rajab, M.H. & Weirly, T. (2000). Suicide and Life Threatening Behaviour. *The American Association of Suicidology*, 30(3), 199-212.
- SAS Institute. (2000). *The SAS System for Windows Release 8*. Cary, NC: SAS Institute Inc.
- Schotte, D.E., & Clum, G.A. (1982). Suicide ideation in a college population: A test of a model. *Journal of Consulting and Clinical Psychology*, 50, 690-696.
- Schmidtke, A., Fricke, S., & Lester, D. (1999). Suicide among German Federal and State police officers. *Psychological Reports*, 84, 157-166.
- Swanepoel, C.M. (National Co-ordinator) (1998). National Suicide Prevention Project. *Business Plan (Final)*: Pretoria.
- Shaughnessy, J.J. & Zechmeister, E.B. (1997). *Research methods in psychology* (4<sup>th</sup> ed.) New York: McGraw-Hill.
- Shea, S.C. (1998). The chronological assessment of suicide events: A practical interviewing strategy for the elicitation of suicide ideation. *Journal of Clinical Psychiatry*, 59, 58-72.
- South African Police Service. (2003). *SAPS Annual Report, 2002/2003*. Pretoria.
- South African Police Service. (2002). *HRM. Personnel Statistics 2002*. Pretoria.
- Statistics South Africa. (2002). *Stats in brief 2002*. Pretoria.



- Van Rensburg, P.J. (1998, February). *An analysis of the suicide statistics of the SAPS: North West Province*. Paper presented at the SAPS Congress, Johannesburg.
- Velting, D.M. (1999). Suicide ideation and the five-factor model of personality. *Personality and Individual Differences*, 27, 943-952.
- Violanti, J. M.(1995). Trends in police suicides. *Psychological Reports*, 77, 688-690.
- Vilhjalmsson, R., Kristjansdottir, G. and Sveinbjarnardottir, E. (1998). Factors associated with suicide ideation in adults. *Soc Psychiatry Psychiatr Epidemiol*. 33, 97-103.
- Zeidner, M. & Endler, N.S. (1996). *Handbook of coping: Theory, research, applications*. New York: Wiley.
- Zhang, J. (1996). Suicides in Beijing, China, 1992-1993. *Suicide and Life-Threatening Behavior*, 26, 175-180.
- Zhang, J. & Jin, S. (1998). Interpersonal relations and suicide ideation in China. *Genetic, Social and General Psychology Monographs*, 124, 79-94.

## **CHAPTER 2**

### **RESEARCH ARTICLE**

# **COPING, STRESS AND SUICIDE IDEATION IN THE SOUTH AFRICAN POLICE SERVICE IN LIMPOPO PROVINCE\***

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## **ABSTRACT**

The objective of this research was to determine whether suicide ideation in the South African Police Service in Limpopo Province could be predicted based on demographic variables, coping strategies and stress. A cross-sectional survey design was used. A random, stratified sample ( $n=204$ ) of uniformed police members was taken from small, medium and large police stations in the province. The Adult Suicide Ideation Questionnaire, the Police Stress Inventory, the Coping Orientations to the Problems Experienced Questionnaire and a biographical questionnaire were administered. Results of a stepwise discriminant analysis showed that race, insufficient emotional support and size of police stations could be used to predict suicide ideation in the SAPS.

## **OPSOMMING**

Die doelstelling van hierdie navorsing was om vas te stel of selfmoorddenkbeeldvorming in die Suid-Afrikaanse Polisie (SAPD) in Limpopo Provinsie op grond van demografiese veranderlikes, coping-strategieë en stres voorspel kan word. 'n Dwarsdeursnee-ontwerp is gebruik. 'n Gestratifiseerde ewekansige steekproef ( $n=204$ ) is geneem van uniformdraende lede uit klein, medium en groot polisie-stasies in die

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provinsie. Die Volwasse Selfmoord-denkebeeldvormingsvraelys, die Polisiestres-opname, die Coping Orientations to the Problems Experienced-vraelys en 'n biografiese vraelys is afgeneem. Resultate van die stapsgewyse diskriminant-analise het aangetoon dat ras, onvoldoende emosionele ondersteuning en grootte van polisiestasies gebruik kan word om selfmoord-denkebeeldvorming in die SAPD te voorspel.

The life cycle of human birth and death is familiar to everybody and nobody will escape from it. However, human beings have some influence in the way they live and the way they die. If the way employees die is a direct cause of their working environment, the employer has a certain responsibility to address or prevent such factors. The problem is that certain employees do exercise suicidal behaviour and this behaviour could possibly lead to suicide. Suicide according to Microsoft Encarta 98 Encyclopedia (1998) can be defined as “...intentional, self-inflicted death”. Suicidal behaviour can, according to Reynolds (1991a), be categorised as suicide completion, overt intention, suicide attempt, and suicide ideation. A strong association has also been found between suicide ideation and suicide (Jin & Zhang, 1998).

Research shows an increasing incidence of suicide among police members (Janik & Kravitz, 1994). Increasing suicide rates for police officers in recent years have been reported for the United States (Violanti, 1995) and Australia (Cantor, Tyman & Slater, 1995). Schmidtke, Fricke and Lester (1999) reported an average suicide rate of 23,03 per 100 000 police officers in Germany in 1996. In the United States of America, 300 police officials within a population of 700 000 members committed suicide in 1994 (Violanti, 1995).

The suicide rates per 100 000 members of the South African Police Service (SAPS) from 1994 to 2000 are given in Table 1 (C.M. Swanepoel, personal communication, April 15, 2003).

Table 1

*The Suicide Rate of SAPS Members from 1994 to 2000 (per 100 000)*

Year	1994	1995	1996	1997	1998	1999	2000
Frequency	200	200	150	130	110	110	130

Table 1 shows that the number of suicides in the SAPS decreased from 1995 to 1999, and

then increased again to 130 per 100 000 members in 2000 (Rossouw, 1998, 2000). A moratorium on statistics for suicides in the SAPS prohibits the availability of statistics after 2000 (C. Swanepoel, personal communication, April 15, 2003). The fact that a moratorium was placed on the publication of police suicide statistics in 2000 points to the severity of this phenomenon. The suicide rate is also much higher than the average rate of 18 per 100 000 of the general population in South Africa. It was with great anticipation that the 2002/03 SAPS Annual Report was awaited. The moratorium on crime statistics was lifted and findings were published in the Annual Report (SAPS Annual Report, 2002/2003). Unfortunately, no statistics referring to police suicides were published.

With the historical change during 1995 and 1996 when the former South African Police and police agencies of the former self-governing states were merged into one South African Police Service, the Limpopo Province was the only province where four different agencies were amalgamated. The Limpopo Province constitutes an area of 123 910 square kilometres with a total population of 4 929 368 (12,1% of the national total). Only 20,8% of the population have a grade 12 and higher education level (20+ years). The unemployment rate is 48,8%, with the age spread 0 to 25 years, which represents 52,9% of the total population (Statistics South Africa, 2002).

There are 9 719 police officials in Limpopo Province, 79,1% male and 26,9% female. The national ratio for police officers to civilians is 1:450 (1 police official for every 450 citizens), while in Limpopo Province this ratio is 1:768 (1 police official for every 768 citizens) (South African Police Service, 2002).

The constant confrontation of SAPS members with crime and excessive violence causes them to become the victims of crime themselves (Roosendaal, 2002). Since the dissolution of apartheid in the mid-nineties, most state departments and state-funded organisations, including the police, have undergone major transformation in the form of downsizing, affirmative action and general restructuring. These changes have surely affected the internal solidarity of the organisation; former political enemies having become work colleagues, for

example. The organisational change, coupled with one of the highest crime rates in the world, which creates further stress, presents a volatile situation as regards mental health in the SAPS (Pienaar, 2002).

Previous research on suicide ideation focused on social factors (e.g. the effects on family, religion, interpersonal relations and social support) and on individual factors (e.g. stress and depression) (Zhang & Jin, 1998). The SAPS National Suicide Prevention Project (Swanepoel, 1998), as part of its aims and objectives, mentions the broader social environment in which the individual works (policing) as another influential factor regarding suicidal behaviour. The political and social development in South Africa which has taken place since 1994 put the police, as “society’s guardians of power, in the shoes of symptom bearers of a society in the painful process of adapting to change” (Swanepoel, 1998). It is unfortunately no simple task for police officials to adapt to all internal changes, which clearly affect their own lives and work, while also having to ensure stability, law and order within a society in the process of transformation.

Suicide ideation refers to the thoughts and cognition about suicidal behaviour and intent, and may be considered as an early marker of more serious suicidal behaviour (Bonner & Rich, 1988a; Reynolds, 1991a; Shea, 1998). Suicide ideation can be characterised as ranging from relatively mild, general thoughts and wishes that one was dead, to serious ideation of specific plans and means of taking one’s own life. Reynolds (1991a) defines suicide ideation as the domain of thoughts and ideas about death, suicide and serious self-injurious behaviour and includes thoughts relating to the planning, conduct and outcome of suicidal behaviour, particularly as the last mentioned relates to thoughts about the response of others.

Suicide ideation as a psychological construct is more phenomenological than theoretical in nature (Reynolds, 1991a). Individuals measuring high on 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 worth when they are dead. They have thoughts of killing themselves, as well as thoughts on specific methods they can use, times when and places

where to kill themselves.

A number of researchers have focused on suicide ideation as an important aspect of suicidal behaviour. Schotte and Clum (1982) found a relationship between the frequency of suicide ideation and the likelihood of attempts at suicide. Bonner and Rich (1987) formulated a stress-vulnerability model of suicidal behaviour in college students in which suicide ideation represents a key variable in the development of more serious suicidal behaviour. Suicide ideation is consistent with a cognitive-behavioural focus and may be viewed as a domain of self-statements. Suicide ideation has been associated with depression and anxiety disorders (Zhang, 1996). Vilhjalmsson, Kristjansdottir and Sveinbjarnardottir (1998) agree that suicide ideation is related to numerous risk factors but the causal relationship needs to be further researched. However, only one study was done in South Africa to determine the level of suicide ideation of police members. Rothmann and Strijdom (2002) found that amongst police members in North West Province in South Africa, a sense of coherence was related to suicide ideation in the case of White police members. Many factors may contribute to suicidal behaviour of police members, including the demands of the work situation, factors outside the work situation, and personal characteristics (Jacobs, 1998; Rossouw, 1998).

Police members work in circumstances of chronic stress (Maynard, Maynard, McCubin, & Shao, 1980). Irregular working hours, poor working conditions and constant fear and trauma make police members more susceptible to suicide (Maynard et al., 1980; Rothmann & Strijdom, 2002). Shift work, the dangers involved in police work, poor working conditions and low salaries seem to be related to job dissatisfaction, stress and suicide tendencies (Kruger, 1996; Lott, 1995). According to McCafferty (1992), suicide amongst police officials could largely be ascribed to stressors at work. Factors that may cause distress include authoritarian structure, lack of participation in decision-making, lack of administrative support, unfair discipline, unfair promotion and the nature of police work. Janik and Kravitz (1994) found that marital problems and job suspension were important contributing factors to a police officer's decision to attempt suicide. Farmer



(1990) acknowledges the existence of universal-acute stressors in policing, but states that literature does not attempt to recognize individual responses. A stressor can cause one person to become very anxious, while another cannot understand the fuss caused.

Coping mechanisms (strategies) refer to internal sources of emotional strength, which mediates a person's reaction to perceived stress (Horesh et al., 1996). Kleinke (1991, p. 3) defined coping as "the efforts we make to manage situations we have appraised as potentially harmful or stressful". Coping refers to perceptual, cognitive or behavioural responses that are used to manage, avoid or control situations that could be regarded as difficult (Folkman & Lazarus, 1994; Moos, 1994; Zeidner & Endler, 1996). The term "coping" could be used to refer to strategies or results (Fleishman, 1984). As a strategy, coping refers to the different methods that a person applies to manage his or her circumstances. These strategies can be emotion-focused, problem-focused or focused on seeking social support (Folkman & Lazarus, 1984). Emotion-focused strategies refer to what an individual was thinking and the thoughts which were used to regulate emotional responses during stressful events. Problem-focused coping strategies refer to actions taken to address the situation. Seeking social support describes attempts to seek support from other (informational, tangible and emotional). Horesh et al. (1996) in their research identified four coping styles which correlate negatively with suicide risk (minimization, replacement, mapping and reversal) and three which correlate positively (suppression, blame and substitution). Research by Hageman (1978) has shown that non-coping with stressors in the work environment may be related to suicide ideation.

Studying research results, police members seem unlikely to seek social support, because of the police culture. Police officers are trained to take control, and are controlling individuals (Nel, 1994). The expression of personal feelings is still a silent taboo in the police culture, and the cliché of "Cowboys don't cry" is still very much alive. As professionals trained to serve and protect, police members are expected to be able to "handle it". Somehow police members maintain their composure and distance themselves from intense emotional reactions. According to Nel (1994), other symptoms are reported,

like alcohol abuse, lack of patience, tension, aggression, moodiness, depression, emotional numbness, loss of motivation and loss of interest in the outside world. This affects the ability to function in the family, social and professional worlds. Violanti (1995) states that when police officers lose the ability to cope in normal ways, they may turn to the ultimate solution to relieve the pressure of stress. It was also found that suicides tend to occur more frequently under non-white male employees of the SAPS, due to the cultural taboos placed on them, i.e. talking about emotions and pressures within the work place (Swanepoel, 1998).

Jacobs (1998) states that unfortunately the biggest problem in the SAPS is the perception of a lack of confidentiality of the psychological and social work services, which prevents personnel from making use of these services. These services should constitute a primary social support resource in the police organisation. Limited funds and staff shortages also influence the availability and effectiveness of support structures within the SAPS.

The fact that police members exhibit suicidal behaviour puts pressure on the South African Police Services as an organization to take preventative actions. This resulted in the National Suicide Prevention Action Plan which was approved by the Divisional Commissioner: Human Resource Management in 1996, the establishment of a National Suicide Prevention Committee to coordinate the actions (NSPC) in 1997, the SAPS Annual Plan for 1997/98 in which suicide prevention was identified as a national priority, and the approval of a National Suicide Prevention Project in 1998.

The fact that police suicides are still occurring puts pressure on the SAPS to intervene with tailored programmes, which are focussed on members at risk. During the information gathering phase (completion of the questionnaires), the need to interact on a one-to-one basis was identified. The aim of this research could assist with the re-focus of ventures and specific interventions addressing suicide in the SAPS.

## **METHOD**

### **Research design**

A cross-sectional survey design (Shaughnessy & Zechmeister, 1997) was used to achieve the research objectives. This design allows for the description of the population at a specific point in time, and can thus indicate the participants' current levels of suicide ideation, stress and coping (Shaughnessy & Zechmeister, 1997).

### **Study population**

Random samples ( $n=204$ ) were taken from police stations in Limpopo Province. Stations were divided into small (fewer than 25 staff members), medium (25 to 100 staff members) and large stations (more than 100 staff members). All police members at randomly identified small and medium stations were asked to complete the questionnaire. Student and civilian members were not included in this study. In the large stations stratified random samples were taken according to sex and race. Table 2 presents some of the characteristics of the participants.

Table 2

*Characteristics of the Study Population (n = 204)*

Item	Category	Frequency	Percentage
Race	White	31	15,20
	Black	168	82,35
	Coloured	2	0,98
	Indian	1	0,49
	Other	2	0,98
Rank	Constable	15	7,35
	Sergeant	34	16,67
	Inspector	120	58,82
	Captain	32	15,69
	Senior Superintendent	3	1,47
Area	Bushveld	119	58,33
	Giyani	24	11,76
	Central	22	10,78
	Far North	39	19,12
Size of station	Small	78	38,24
	Medium	93	45,59
	Large	33	16,18
Sex	Male	168	82,35
	Female	36	17,65
Status	Single	37	18,14
	Married	101	49,51
	Divorced	63	30,88
	Separated	1	0,49
	Remarried	2	0,98
Language	Afrikaans	31	16,40
	English	9	4,76
	Sepedi	68	35,98
	Sesotho	11	5,82
	Setswana	18	9,52
	IsiSwati	1	0,53
	Tshivenda	32	16,93
	IsiNdebele	4	2,12
	IsiXhosa	2	1,06
	Other	13	6,88
Previously charged in terms of disciplinary code	Yes	48	23,88
	No	153	76,12

From Table 1 it can be seen that Black members represent 82,35% of the study population, followed by White members at 15,20%. Inspectors (58,82%) represent more than half of the study population. The Bushveld Area made the biggest contribution to the sample population with the three other areas tailing in close proximity to each other. Medium stations (25 to 100 staff members) contributed to 45,59% of the sample, followed by small stations and lastly large stations. The sample is predominantly male (82,35%). The largest proportion of the sample is married (49,51%), with 30,88% divorced and 18,14% single. Language representivity is mainly Sepedi (35,98%), with Tshivenda and Afrikaans at 16,93% and 16,40% respectively. Only 23,88% of the participants were previously charged in terms of the disciplinary code. The mean age is 36,87 years (standard deviation 5,86) and the average years of service in the SAPS is 13,57 (standard deviation 5,92). Average years in the current position is 3,87. On a five-point scale, marital satisfaction was rated 4,52 and job satisfaction at 4.

### **Measuring instruments**

The measuring instruments used in this research included the Adult Suicide Ideation Questionnaire (Reynolds, 1991a), the Police Stress Inventory (Pienaar & Rothmann, 2003a), the COPE (Carver, Scheier & Weintraub, 1989) and a biographical questionnaire.

- The *Adult Suicide Ideation Questionnaire* (ASIQ) (Reynolds, 1991a) was 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. Pienaar (2002) found an alpha value of 0,97 for the ASIQ in a national police sample.

- The *Police Stress Inventory* (PSI) consists of 88 items and was developed for measuring stress in the SAPS (Pienaar & Rothmann, 2003a). Firstly, participants rated each of 44 items regarding the intensity of stress on a 9-point scale. The frequency part of the questionnaire asked "how many times in the last six months did you experience the source of stress". The PSI was subjected to a principal components factor analysis with a varimax rotation. Three internally consistent factors were extracted, namely Job Demands ( $\alpha = 0,88$ ), Lack of Job Resources ( $\alpha = 0,89$ ), and Inherent Police Stressors ( $\alpha = 0,85$ ). Acceptable alpha values ( $\alpha > 0,70$ , Nunnally & Bernstein, 1994) indicate the internal consistency of the factors of the PSI.
- The *Coping Orientations to Problems Experienced* (COPE) questionnaire (Carver et al, 1989) was designed to measure both situational and dispositional coping strategies. In the present study, the dispositional version consisting of 53 items was used. Response choices were from 1 (I usually don't do this at all) to 4 (I usually do this a lot). Although the original questionnaire measures 14 different coping strategies, Pienaar and Rothmann (2003b) subjected the COPE to a principal components factor analysis with a varimax rotation. Four internally consistent factors were extracted, namely Problem-focused Coping ( $\alpha = 0,91$ ), Passive Coping ( $\alpha = 0,80$ ), Seeking Emotional Support ( $\alpha = 0,84$ ), and Turning to Religion ( $\alpha = 0,83$ ). The alpha coefficients of the four scales are acceptable ( $\alpha > 0,70$ , Nunnally & Bernstein, 1994), and thus indicate the internal consistency of the factors of the COPE.
- A questionnaire was developed to gather information about the demographic characteristics of the participants. This questionnaire gave participants the option of supplying their name and service number. Other information that was gathered included: province and station, age, sex, years of service, years in current position (to assess advancement), educational qualifications, marital status, satisfaction with relationship with significant other person, language, history of disciplinary action, self-rated performance, self-rated job satisfaction, medical condition, use of prescription and over-the-counter medicine, reasons for medication, number of alcoholic drinks per

week, smoking behaviour, amount of cigarettes per day, other drug use, exercise behaviour and previous suicide attempt.

### **Statistical analysis**

The statistical analysis was carried out with the help of the SAS program (SAS Institute, 2000). Cronbach alpha coefficients, inter-item correlation coefficients, and confirmatory factor analysis were used 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 police members into groups that obtained low versus high suicide ideation scores. The combination of variables was found to eventually classify 75% of the high suicide ideation cases and 84,17% of the low ideation cases correctly. 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 3 shows the descriptive statistics, Cronbach alpha coefficients and inter-item correlation coefficients of the ASIQ, PSI and COPE.

Table 3

*Descriptive Statistics, Inter-Item Correlation Coefficients and Cronbach Alpha Coefficients of the Measuring Instruments (n = 204)*

Item	Mean	SD	Skewness	Kurtosis	r - Mean	$\alpha$
Job Demands	85,95	24,96	-0,28	-0,14	0,30	0,88
Lack of Job Resources	79,04	23,29	-0,21	-0,50	0,37	0,89
Inherent Police Stressors	40,12	15,83	-0,12	-0,91	0,41	0,85
Problem-focused Coping	73,83	13,56	-1,22*	2,26*	0,30	0,91
Passive Coping	28,89	7,76	0,29	-0,15	0,24	0,80
Seeking Emotional Support	21,38	5,24	-0,78	0,01	0,44	0,84
Turning to Religion	13,30	16,27	-1,36*	1,21*	0,56	0,83
ASIQ total	9,42	18,45	4,06*	19,46*	0,55	0,96

\* High skewness and kurtosis

Table 2 shows that acceptable Cronbach alpha coefficients ( $\alpha > 0,70$ ) were obtained for all of the scales (see Nunnally & Bernstein, 1994). The mean inter-item correlations of all the scales except Turning to Religion and suicide ideation (ASIQ) are also acceptable ( $0,15 \leq r \leq 0,50$ , Clark & Watson, 1995). The confirmatory factor analysis resulted in acceptable loads on the various factors, which confirm their construct validity. It is evident from Table 2 that most of the various measuring instruments are relatively normally distributed, with low skewness and kurtosis. However, the coping scales of Turning to Religion and Problem-focused Coping both show smaller indications of skewness and kurtosis, while the ASIQ shows high skewness and kurtosis.

The product-moment correlation coefficients between the ASIQ, PSI and COPE factors are reported in Table 4. In the case of the correlation between the ASIQ, Turning to Religion and Problem-focused Coping and the other measuring instruments, Spearman correlation coefficients were computed because of the skew distribution of scores. The scores on the other measuring instruments are normally distributed and Pearson correlation coefficients were computed.



**Table 4**  
*Correlation Coefficients between the Measuring Instruments*

	Lack of Job Resources	Inherent Police Stressors	Problem-focused Coping	Passive Coping	Seeking Emotional Support	Turning to Religion	ASIQ
Job Demands	0,73 <sup>+++</sup>	0,37 <sup>+</sup>	0,13	0,28 <sup>*</sup>	0,10	0,12	0,21 <sup>*</sup>
Lack of Job Resources		0,51 <sup>+++</sup>	0,08	0,14	0,05 <sup>*</sup>	0,11	0,18 <sup>*</sup>
Inherent Police Stressors			0,18 <sup>*</sup>	0,17 <sup>*</sup>	0,15 <sup>*</sup>	0,16 <sup>*</sup>	0,05
Problem-focused Coping				0,31 <sup>**</sup>	0,73 <sup>+++</sup>	0,50 <sup>+++</sup>	-0,09
Passive Coping					0,32 <sup>+</sup>	0,16 <sup>*</sup>	0,09
Seeking Emotional Support						0,49 <sup>++</sup>	-0,05
Turning to Religion							-0,02

\* 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 4 shows a practically significant correlation (large effect) between Job Demands and Lack of Job Resources. A practically significant correlation (medium effect) was found between Job Demands and Inherent Police Stressors. Statistically significant correlations were found between Job Demands and Passive Coping and Job Demands and ASIQ. A practically significant correlation (large effect) was found between Lack of Job Resources and Inherent Police Stressors, and statistically significant correlations between Lack of Job Resources, Seeking Emotional Support and the ASIQ. Statistically significant correlations exist between Inherent Police Stressors and Problem-focused Coping, Passive Coping, Seeking Emotional Support and Turning to Religion. Practically significant correlations (large effect) were detected between Problem-focused Coping and Seeking Emotional Support and Turning to Religion, and a practically significant correlation (medium effect) between Problem-focused Coping and Passive Coping. A practically significant correlation (medium effect) also exists between Passive Coping and Seeking Emotional Support, and a statistically significant correlation between Passive Coping and Turning to Religion. Lastly, Seeking Emotional Support correlates practically significant (medium) with Turning to Religion.

Table 5 gives the correlation coefficients between the measuring instruments and biographical variables. In the case of the correlation between the ASIQ, Turning to Religion and Problem-focused Coping and the biographical variables, Spearman correlation coefficients were computed because of the skewed distribution of scores. The scores on the other measuring instruments are normally distributed and Pearson correlation coefficients were computed.

Table 5  
*Correlation Coefficients between Biographical Variables and Measuring Instruments*

	JD	LOR	IPS	PFC	PC	SES	TTR	ASIQ
Race	0,02	-0,1	-0,15*	0,17*	0,13	0,19*	0,02	0,07
Rank	0,03	-0,04	-0,11	-0,01	-0,03	-0,01	0,07	-0,14*
Size	-0,03	-0,01	0,10	-0,03	-0,16*	-0,03	0,04	-0,11
Years in SAPS	0,14	0,01	-0,04	-0,11	0,05	-0,16*	-0,11	0,14
Sex	-0,02	-0,07	0,09	0,07	0,02	0,11	0,17*	-0,13
Status	-0,07	-0,09	-0,13	-0,16*	0,01	-0,06	-0,17*	0,04
Charge	0,003	-0,11	-0,02	0,05	-0,08	0,08	-0,001	0,03
Smoke	0,12	0,04	0,06	0,09	0,04	0,13	0,17*	-0,08
Attempt	-0,13	-0,16*	-0,12	0,01	-0,15*	0,08	-0,05	-0,18*

JD = Job Demands; LOR = Lack of Job Resources; IPS = Inherent Police Stressors; PFC = Problem-focused Coping; PC = Passive Coping; SES = Seeking Emotional Support; TTR = Turning to Religion; ASIQ = ASIQ Total.

- \* Statistically significant correlation:  $p \leq 0,05$
- + Practically significant correlation (medium effect):  $r \geq 0,30$
- ++ Practically significant correlation (large effect):  $r \geq 0,50$

Race correlates statistically significant with Inherent Police Stressors (negative correlation), Problem-focused Coping and with Seeking Emotional Support. Rank shows a statistically significant negative correlation with ASIQ Total. Size correlates statistically significant (negatively) with Passive Coping. Years in SAPS shows a statistically significant, negative correlation with Seeking Emotional Support. Sex correlates significantly with Turning to Religion. Status correlates negatively with both Problem-focused Coping and Turning to Religion. Smoke correlates statistically significant with Turning to Religion. Previous suicide attempt also correlates negatively with Lack of Job Resources, Passive Coping and

ASIQ Total. Table 4 shows that no practically significant correlations exist between biographical variables and any of the measuring instruments.

The intensity, frequency and severity of items of the Police Stress Inventory (PSI) are presented in Table 6.

Table 6

*The Intensity, Frequency and Severity of Police Stress Items*

Items	Intensity	Frequency	Severity
Assignment of disagreeable duties	4.81	3.19	15.34
Having to work overtime	5.32	4.53	24.14
Lack of opportunity for advancement	5.41	3.88	20.99
Assignment of new or unfamiliar duties	4.92	4.21	20.71
Fellow workers not doing their work	5.97	4.99	29.79
Inadequate support by supervisor	5.6	4.23	23.69
Having to deal with crisis situations	5.45	4.28	23.33
Lack of recognition of good work	6.0	4.46	26.72
Performing tasks not in job description	5.32	4.98	26.04
Inadequate or poor quality equipment	5.81	5.63	29.22
Assignment of increased responsibility	5.33	5.61	26.70
Periods of inactivity	4.90	3.13	15.34
Difficulty getting along with supervisor	4.94	3.52	17.39
Experiencing negative attitudes towards the organization	5.06	3.8	19.23
Insufficient personnel to handle an assignment	5.74	4.84	27.78
Making critical on-the-spot decisions	5.0	3.57	17.81
Personal insult from customer/consumer/colleague	4.84	3.57	17.28
Lack of participation in policy-making decisions	5.18	3.71	19.22
Inadequate salary	6.50	5.23	34.00
Competition for advancement	5.02	3.98	19.98
Poor or inadequate supervision	5.38	3.74	20.12
Noisy work area	4.80	3.72	17.86
Frequent interruptions	5.18	4.2	21.76
Frequent changes from boring to demanding activities	4.55	3.87	17.61
Excessive paper work	5.08	4.95	25.15
Meeting deadlines	5.08	4.40	22.35
Insufficient personal time	4.71	4.2	19.78
Covering work for another employee	5.42	4.72	25.58
Poorly motivated co-workers	5.91	4.83	28.55
Conflict with other departments	4.90	3.48	17.05
Shift work	4.48	4.02	18.00
Too much supervision	4.80	3.93	18.86
Delivering a death message or bad news to someone	4.51	2.83	12.76
Attending to incidences of domestic violence	5.5	4.6	25.3
Reorganization and transformation within the organisation	5.01	3.95	19.79
Staff shortages	6.52	5.93	38.66
Killing someone in the line of duty	4.89	1.69	8.26
Fellow officer killed in the line of duty	5.46	2.24	12.23
Racial conflict	5.72	3.39	19.39
Having to handle a large crowd/mass demonstration	4.62	2.75	12.71
A forced arrest or being physically attacked	5.10	2.79	14.20
Having to go to court	4.18	3.58	14.96
Having to deal with the media	3.45	1.9	6.56
Seeing criminals go free	6.38	4.42	28.2

Table 6 shows that the five items with the highest severity are: staff shortages, followed

by inadequate salary, fellow workers not doing their work, inadequate or poor quality equipment, and criminals who go free.

Items that have the highest intensity levels are: staff shortages, followed by inadequate salary, seeing criminals go free, lack of recognition of good work, and fellow workers not doing their work.

Items which scored the highest on frequency were: staff shortages, followed by inadequate or poor quality equipment, inadequate salary, and assignment of increased responsibilities. In fifth position was performing tasks not in the job description.

Next a stepwise discriminant analysis was performed in order to determine which variables discriminate between police members with a high and those with a low level of suicide ideation. The resulting linear discriminant function for members with low and high suicide ideation is given in Table 7.

Table 7

*The Linear Discriminant Function for Police Members with Low and High Suicide Ideation*

Variable	High Suicide Ideation	Low Suicide Ideation
Constant	-203,77	-191,44
Race	9,80	8,13
Rank	4,07	4,02
Size	-2,12	-0,86
Years in police service	0,15	0,08
Years in current position	1,25	1,32
Sex	7,87	7,19
Status	9,39	9,05
Previously charged in terms of disciplinary code	18,54	17,99
Self-rated Job Satisfaction	3,46	3,85
Medical	19,45	17,76
Alcohol	8,96	8,54
Attempt	94,61	91,11
Job Demands	0,09	0,06
Lack of Job Resources	0,21	0,24
Inherent Police Stressors	-0,02	-0,03
Coping problem	0,44	0,46
Passive Coping	0,67	0,62
Social Support	-1,16	-0,99

By applying the discriminant analysis it was found that all the above listed variables should be retained for the discriminant analysis. Table 8 summarises the frequencies and percentages of police members that can be classified as belonging to the high or low suicide ideation groups (based on the above variables).

Table 8

*Classification of Membership of High/Low Suicide Ideation Groups*

Group	High Suicide Ideation	Low Suicide Ideation	Total
High Suicide Ideation	6	2	8
Low Suicide Ideation	19	101	120

Table 8 shows that the combination of variables classifies correctly 75% of the high suicide ideation cases and 84,17% the low suicide ideation cases. A total of 15,83% of the high and 25% of the low suicide ideation cases are classified incorrectly. In total, 83,59% (107 out of 128) of the cases were correctly classified according to the discriminant function.

Finally, a stepwise discriminant analysis was conducted. The variables that best predict suicide ideation of police members are given in Table 9.

Table 9

*Variables that Predict Suicide Ideation in Police Members*

Variables	Partial R-Square	F-Value
Race	0,35	4,54
Seeking Emotional Support	0,05	6,54
Size	0,02	2,71

Table 9 indicates that the variables race, seeking emotional support and the size of the police station can be used to predict suicide ideation of police members in Limpopo Province.

## DISCUSSION

Cronbach alpha coefficients and mean inter-item correlations for all instruments indicated their internal consistency. The confirmatory factor analysis resulted in acceptable loadings on the various factors, which confirm their construct validity.

Research findings on suicide ideation figures by Pienaar (2002) found the average national percentage for significant suicide levels amongst respondents to be 8.64%. The percentage for respondents in Limpopo Province was identified as 5,88%. Compared with a cut-off raw score of 31 (the 97<sup>th</sup> percentile on a norm table for community adults in the United States of America, Reynolds, 1991a), 12 of the police officials in this sample have

significant suicide ideation levels. Pienaar (2002) further reported that Gauteng, Free State and the North West Province had the highest suicide ideation levels among police officials.

Statistically significant correlations were found between job demands and a lack of resources and suicide ideation. These correlations further support research findings that a number of factors may contribute to suicidal behaviour in police members. Factors mentioned are: the demands of the work situation, factors outside the work situation, and personal characteristics (Jacobs, 1998; Rossouw, 1998; Pienaar, 2002). The fact that irregular working hours, poor working conditions and constant fear and trauma make police members more susceptible to suicide (Maynard et al., 1980; Rothmann & Strijdom, 2002) can also be supported. The top five stress inducers according to the Police Stress Inventory were staff shortages, inadequate salary, fellow workers not doing their work, inadequate or poor quality equipment, and the fact that criminals go free. Research found that shift work, the dangers involved in police work, poor working conditions and low salaries seem to be related to job dissatisfaction, stress and suicide tendencies (Kruger, 1996; Lott, 1995). Items which have been identified with the highest intensity contributing to stress are: staff shortages (Lack of Job Resources), followed by inadequate salary (Lack of Job Resources), seeing criminals go free (Inherent Police Stressors), lack of recognition of good work (Job Demands) and fellow workers not doing their work (Job Demands).

Items which scored the highest on frequency were: staff shortages (Lack of Job Resources), followed by inadequate or poor quality equipment (Lack of Job Resources), inadequate salary (Lack of Job Resources), assignment of increased responsibilities (Job Demands) and performing tasks not in the job description (Job Demands). Lack of resources and job demands can be identified as the factors with the highest frequency contributing to stress. Storm and Rothmann (in press) pointed out that avoiding stressors and experiencing stress because of job demands, lack of job resources and inherent police stressors could contribute to suicide ideation. Storm and Rothmann (in press) further



indicated that police officers who used avoidance as coping strategies and who reported high job demands and a lack of resources, could experience higher emotional exhaustion. Denying problems, while becoming emotionally exhausted and constantly being confronted with organisational stress, will deplete individual resources in fighting suicide ideation.

It can be argued that seeking emotional support as a coping strategy, together with the demographical factors, influences suicide ideation. Race was identified as a significant predictor of suicide ideation with Black police members, who represented the largest percentage in the research sample. Close-family systems and extended families with strong family support structures can possibly act as coping mechanisms against feelings of suicide ideation. Research findings by Horesh et al. (1996), which have shown that suicide risk could be predicted by coping styles, can thus possibly be supported, especially taking the relatively low suicide ideation percentage for Limpopo Province into consideration.

An alarming factor that has been identified while working in Limpopo Province, and which was confirmed in discussions and interviews with SAPS members, is the fact that the most recent promotions forced members to relocate. In most cases families were left behind to tend to the property and family members, while the police member travels on a daily, weekly or twice monthly basis between home and work. The absence of an emotional support environment can influence suicide ideation.

Another factor that was found to play a very important role was financial implications caused by relocations due to promotions. In quite a number of cases SAPS members had to provide for their property back home while also having to pay for their own accommodation at their place of work, resulting in financial difficulties with resultant additional stress. The fact that seeking emotional support was found to be a significant predictor of current suicide ideation in police members might be influenced by this abrupt discontinuation of social support.

Biggam and Power (1996) found that working in an urban environment may contribute to negative affectivity, due to the greater presence of potential stressors. Pienaar (2002) made a similar finding by showing that provinces with varying levels of urbanisation also reflected different levels of suicide ideation. Moreover, Limpopo Province is geographically very isolated from the rest of South Africa, the former Venda (Far North Area) especially, where remaining strong traditional practices may possibly lessen external influences. The fact that size of the police station was identified as one of the variables which could possibly indicate suicide ideation, needs serious further research.

### **RECOMMENDATIONS**

The variables race, seeking emotional support and size of the police station were found to be possible suicide ideation indicators for police members in Limpopo Province.

When taking race into consideration, the research population is made up primarily of Black members (82.52%). The provincial distribution of race groups shows that Blacks represent 97,2%. Rossouw (2000) also found Black police members most likely to commit suicide. A significant correlation was found between race and seeking emotional support, and a negative correlation between race and inherent police stressors. Further research needs to focus on ethnic groupings to determine whether certain ethnic groupings are more susceptible to suicide ideation than others.

Anshel (2000) found that poor coping skills also appear to be a significant factor in determining the intensity with which stress is experienced in police work. The fact that seeking emotional support was included as predictor of suicide ideation, supports these findings. Seeking emotional support as a coping mechanism can influence thoughts and ideas about suicide ideation. Intensive research needs to be conducted on which variables do influence seeking emotional support. After the introduction of the Suicide Prevention Project in 1998, a positive attitude was demonstrated by Top Management to address suicide ideation. Lectures and group discussions are still held on suicide prevention

(Suicide Prevention Workshops). Findings from this research can assist with the re-focusing of interventions to ascertain the prevention of suicides.

The size of the police station was the third variable that was identified as an indicator of suicide ideation. Three categories of police stations were included in this research. Stations were divided into small (fewer than 25 staff members), medium (25 to 100 staff members) and large stations (more than 100 staff members). Size correlates negatively with Passive Coping. One can speculate why size of a police station can influence suicide ideation. The bigger a police station usually results in more stress factors to cope with. The interrelationship between size of police stations and suicide ideation needs to be researched further.

Although the SAPS implemented a suicide prevention project with a resulting awareness training programme, the effectiveness of this programme should be evaluated, because it focuses only on knowledge of suicide symptoms and causes, while little is done as regards coping styles and behaviour of individuals utilising relevant training methodologies. Interventions could rather include individual therapy as well as training and development programmes which focus on self-development, stress, coping and team building.

Line function interventions should also be implemented to improve the quality of management in the SAPS, 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 on variables that are not addressed within this research model, e.g. spirituality, promotion, life skills, HIV/Aids and also the relationship between personality dimensions, coping strategies, stress and suicide ideation. Kop, Euwema and Schaufeli (1999) point out that attention needs to be paid to the positive aspects of policing. This is important, as these can be expected to compensate for the stressful aspects.

Further limitations include the research population and the study design. As a general rule,

the larger the sample, the more precise the findings will be. A larger research population could have influenced results. A number of unforeseen factors, like special duties, emergencies and leave (especially study leave) influenced the number of respondents. The time allocated for data collection was also a constraint.

The cross-sectional survey design is also a disadvantage. Data is susceptible to 'time of measurement' effects. Tendencies not taken into consideration could have biased research results, and it is not possible to establish causal relationships between the different variables.

## REFERENCES

- Anshel, M.H. (2000). A conceptual model and implications for coping with stressful events in police work. *Criminal Justice and Behavior*, 27(3), 375-400.
- Biggam, F. H., & Power, K. G. (1996). The personality of the Scottish police officer: The issue of positive and negative affectivity. *Personality and Individual Differences*, 20(6), 661-667.
- Bonner, R. L., & Rich, A. R. (1987). Toward a predictive model of suicidal ideation and behavior: Some preliminary data in college students. *Suicide and Life-Threatening Behavior*, 17, 50-63.
- Bonner, R. L., & Rich, A. R. (1988a). A prospective investigation of suicidal ideation in college students: A test of a model. *Suicide and Life-Threatening Behavior*, 18, 245-258.
- Cantor, C. H., Tyman, R., & Slater, P. J. (1995). A historical survey of police suicide in Queensland, Australia, 1843-1992. *Suicide and Life-Threatening Behavior*, 25, 4, 499-507.
- Carver, C. S., Sheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology*, 56, 267-283.
- Clark, L.A. & Watson, D. (1995). Construct validity: Basic issues in objective scale development. *Psychological Assessment*, 7, 309-319.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2<sup>nd</sup> ed.). Hillsdale, NJ: Lawrence Erlbaum & Associates
- Farmer, R.E., (1990). Clinical and managerial implications of stress research on the police. *Journal of Police Science and Administration*. 17( 3), 205-218.
- Fleishman, J.A. (1984). Personality characteristics and coping patterns. *Journal of Health and Social Behavior*, 25, 229-234.
- Folkman, S. & Lazarus, R.S. (1984). *Stress, appraisal and coping*. New York: Springer.
- Hageman, M.J.C. (1978). Occupational stress and marital relationships. *Journal of Police Science and Administration*, 6, 402-411.

- Horesh, N., Rolnick, T., Iancu, I., Dannon, P., Lepkifker, E., Apter, A. and Kotler, M. (1996). Coping styles and suicide risk. *Acta Psychiatr Scand*, 93, 489-493.
- 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 Behavior*, 24, 267-274.
- Jin, S. & Zhang, J. (1998). The effects of physical and psychological well being on suicide ideation. *Journal of Clinical Psychology*, 54, 401-413.
- Kerlinger, F. N., & Lee, H. B. (2000). *Foundations of behavioral research* (4<sup>th</sup> ed.). London: Harcourt College Publishers.
- Kleinke, C.L. (1991). *Coping with life challenges*. San Francisco, CA: Brooks/Cole.
- Kop, N., Euwema, M., & Schaufeli, W. (1999). Burnout, job stress and violent behaviour among Dutch police officers. *Work & Stress*, 13(4), 326-340.
- Kruger, G. (1996, January 30). SAPD-stres: 'n Kultuur teen sielkunde kwel: Geestesgesondheid moet prioriteit wees. *Beeld*, p. 11.
- Lott, L. D. (1995). Deadly secrets. Violence in the police family. *FBI Law Enforcement Bulletin*, November.
- 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.
- McCafferty, F.L. (1992). Stress and suicide in police officers: Paradigm of occupational stress. *Southern Medical Journal*, 85, 233-243.
- Microsoft Encarta Encyclopedia (1998). *Microsoft Corporation* (1993-1997).
- Moos, R.H. (1994, July). *Conceptual and empirical advances in stress and coping theory*. Paper presented at the 23<sup>rd</sup> International Congress of Applied Psychology, Madrid, Spain.
- 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. & Bernstein, I.H. (1994). *Psychometric theory*. (3<sup>rd</sup> 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.
- Pienaar, J. (2002). *Coping, stress and suicide ideation in the South African Police Service*. Unpublished Doctoral Thesis, Potchefstroom University for Christian Higher Education, Potchefstroom.
- Pienaar, J. & Rothmann, S. (2003a). *Occupational stress in the South African Police Service*. Paper presented at the 15<sup>th</sup> Conference of the South African Institute for Management Scientists, Potchefstroom, 28-30 September 2003.
- Pienaar, J. & Rothmann, S. (2003b). *Coping strategies in the South African Police Services*. Paper presented at the 6<sup>th</sup> Annual Conference of the Society for Industrial and Organisational Psychology, Sandton, Johannesburg, 25-27 June 2003.
- Reynolds, W. M. (1991a). *Adult 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.
- Rosendaal, P. (2002). SAPS officials - victims of crime: The end result - suicide. *Servamus*, August.
- Rossouw, L. (1998). *Police suicide: Annual report - 1998*. Pretoria: South African Police Services.
- Rossouw, L. (2000). *Police Suicide: Annual Report - 2000*. Pretoria: South African Police Services.
- 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.
- SAS Institute. (2000). *The SAS System for Windows Release 8*. Cary, NC: SAS Institute Inc.

- Schmidtke, A., Fricke, S., & Lester, D. (1999). Suicide among German Federal and state police officers. *Psychological Reports, 84*, 157-166.
- Schotte, D.E. & Clum, G.A. (1982). Suicide ideation in a college population: A test of a model. *Journal of Consulting and Clinical Psychology, 50*, 690-696.
- Shaughnessy, J.J. & Zechmeister, E.B. (1997). *Research methods in psychology* (4th ed.). New York: McGraw-Hill.
- Shea, S.C. (1998). The chronological assessment of suicide events: A practical interviewing strategy for the elicitation of suicide ideation. *Journal of Clinical Psychiatry, 59*, 58-72.
- South African Police Service. (2003). *SAPS Annual Report, 2002/2003*. Pretoria.
- South African Police Service. (2002). *HRM. Personnel Statistics 2002*. Pretoria.
- Statistics South Africa. (2002). *Stats in brief 2002*. Pretoria.
- Storm, K. & Rothmann, S. (in press). *Causal models of burnout and engagement in the South African Police Service*. Manuscript submitted for publication.
- Swanepoel, C.M. (National Co-ordinator) (1998). National Suicide Prevention Project. *Business Plan (Final)*. Pretoria.
- Vilhjalmsson, R., Kristjansdottir, G. and Sveinbjarnardottir, E. (1998). Factors associated with suicide ideation in adults. *Soc Psychiatry Psychiatr Epidemiol. 33*, 97-103.
- Violanti, J. M. (1995). Trends in police suicide. *Psychological Reports, 77*, 688-690.
- Zeidner, M. & Endler, N.S. (1996). *Handbook of coping: Theory, research, applications*. New York: Wiley.
- Zhang, J. (1996). Suicides in Beijing, China, 1992-1993. *Suicide and Life-Threatening Behaviour, 26*, 175-180.
- Zhang, J. & Jin, S. (1998). Interpersonal relations and suicide ideation in China. *Genetic, Social and General Psychology Monographs, 124*, 79-94.



## **CHAPTER 3**

### **CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS**

This chapter sets out the conclusions come to from the literature findings and the results of the empirical study. Furthermore, the limitations of the present study are discussed and recommendations made for the organisation and future research.

#### **3.1 CONCLUSIONS**

The conclusions are set out under the specific objectives set for the present study.

- To determine the level of suicide ideation in Limpopo Province.

Research findings on suicide ideation figures show that the average national percentage for significant suicide levels amongst respondents is 8,64% (Pienaar, 2002). The percentage for respondents in Limpopo Province is 5,88%. Compared with a cut-off raw score of 31 (the 97<sup>th</sup> percentile on a norm table for community adults in the United States of America, Reynolds, 1991b), 12 of the police officials in this sample have significant suicide ideation levels. Pienaar (2002) further reports that Gauteng, Free State and the North West Province have the highest suicide ideation levels among police officials.

- To determine levels of stress and to highlight the most important stressors in the SAPS in Limpopo Province.

The results from the Police Stress Inventory (PSI) were categorised into items influencing stress intensity, items with the highest frequency contributing to stress, and, lastly, items with the highest severity scores.

Items that have the highest intensity levels are: staff shortages, followed by inadequate

salary, seeing criminals go free, lack of recognition of good work, and fellow workers not doing their work.

Items which scored the highest on frequency were: staff shortages, followed by inadequate or poor quality equipment, inadequate salary, and assignment of increased responsibilities. In fifth position was performing tasks not in the job description.

The five items with the highest severity are: staff shortages, followed by inadequate salary, fellow workers not doing their work, inadequate or poor quality equipment, and criminals who go free.

The stress factors, in nominal order, which were depicted by the highest severity scores on the PSI are: lack of job resources, job demands, and inherent police stressors.

- To establish the relationships between stress, coping strategies and suicide ideation in the SAPS in Limpopo Province.

Statistically significant correlations were found between job demands and a lack of resources and suicide ideation. Seeking emotional support as a coping strategy, together with the demographical factors, can be argued to influence suicide ideation. Race was identified as a significant predictor of suicide ideation with Black police members, who represented the largest percentage in the research sample.

Research findings, after a stepwise discriminant analysis, indicate that the variables of race, seeking emotional support as coping strategy and the size of the police station can be used to predict suicide ideation of police members in Limpopo Province. This combination of variables can correctly classify 75% of the high suicide ideation cases and 84,17% of the low suicide ideation cases. A total of 15,83% of the high and 25% of the low suicide ideation cases are classified incorrectly. In total, 83,59% (107 out of 128) of the cases were correctly classified according to the discriminant function.

### **3.2 LIMITATIONS OF THE STUDY**

The following limitations emerged during the study:

- The study design did not make provision for accommodating all variables. A wider range of possible predictors of suicide ideation could have been included.
- The sample size was initially set at  $N=500$ . The research population which participated was only  $n=204$ . Quite a few obstacles were encountered during the data gathering phase, which could not have been foreseen beforehand and unfortunately led to a smaller sample participating. With a larger study population it could have been possible to generalise the findings more.
- The use of self-report measures has also been identified as a limitation. Self-interpretation and lack of commitment in completing the questionnaires influenced the validity of the data.

### **3.3 RECOMMENDATIONS**

Recommendations pertaining to the South African Police Service are made in this section, as well as recommendations on future research.

#### **3.3.1 Recommendations for the organisation**

Although the SAPS implemented a suicide prevention project with a resulting awareness training programme, the effectiveness of this programme should be evaluated, because it focuses only on knowledge of suicide symptoms and causes and little is done regarding coping styles and behaviour of individuals. Interventions could rather include individual therapy as well as training and development programmes which focus on self-development, stress, coping and team building.

With the administration of questionnaires, a desire was identified amongst the research population to discuss issues and to receive feedback. Pienaar (2002) pointed out that line function interventions should also be implemented to improve the quality of management in the SAPS, to increase the levels of trust in the organization, to optimize the organisational structure and to ensure a balance between job demands and job resources. The SAPS could further help to prevent suicidal thoughts and ultimately suicide by implementing programmes that would help police officers to cope constructively with work-related problems and relationship difficulties. The help of psychologists should be made available to members and to close relatives of police members. Maladaptive coping mechanisms should be examined and methods found to neutralise the negative effects that follow such behaviour (Pienaar, 2002).

### **3.3.2 Recommendations for future research**

More research is needed on variables that are not addressed in this research model, e.g. spirituality, the effects of re-location on SAPS members, and other variables such as personality dimensions and the causal relationship between them. The size of the police station as a possible predictor of suicide ideation also warrants future research.

## REFERENCES

- Pienaar, J. (2002). *Coping, stress and suicide ideation in the South African Police Service*. Unpublished Doctoral Thesis, Potchefstroom University for Christian Higher Education, Potchefstroom.
- Reynolds, W.M. (1991b). Psychometric characteristics of the Adult Suicide Ideation Questionnaire with college students. *Journal of Personality Assessment*, 56, 289-307.