COPING, STRESS AND SUICIDE IDEATION IN THE SOUTH AFRICAN POLICE SERVICES IN THE EASTERN CAPE

René Meyer, Hons. B.Com

Mini-dissertation submitted in partial fulfilment of the requirements for the Magister
Commercii in Industrial Psychology at the Potchefstroom University for Christian Higher
Education

Supervisor: Prof. S. Rothmann

Date: November 2002

REMARKS

The reader is reminded of the following:

- The references as well as the editorial style as prescribed by the *Publication Manual (4th 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.

ACKNOWLEDGEMENTS

I would like to thank the following persons in helping me to complete this study:

- In the first place I would like to thank my Heavenly Father for the talent, perseverance, strength and opportunity He gave me to complete this study.
- My mentor, Prof Ian Rothmann, for his guidance, support, motivation, insight and faith in me throughout the pursuit of this study.
- Prof Ian Rothmann for the statistical processing.
- Prof Annette Combrink for the language editing of this article.
- The South African Police Services and Psychological Services in the Eastern Cape for making this study possible.
- Rochelle Vorster, the Provincial Project Manager of the Suicide Prevention Project in the Eastern Cape, for all her help and support in conducting this research.
- My parents, sister and brother in law, Willie, Ansie, Yolanda and Nils for their encouragement, financial support, prayers and love.
- All my friends and family, especially Marina, Pieter, Hennie, Kobus, Marlize, Deon and Dirk for all their inspiration, love and support.

The financial assistance of the National Research Foundation (NRF) towards this research is hereby acknowledged. Opinions expressed and conclusions arrived at, are those of the author and are not necessarily to be attributed to the National Research Foundation.

TABLE OF CONTENTS

List of tables	IV
Summary	V
Opsomming	VI
CHAPTER 1: INTRODUCTION	1
1.1 Problem statement	1
1.2 Research objectives	5
1.2.1 General objectives	5
1.2.2 Specific objectives	5
1.3 Research method	6
1.3.1 Literature review	6
1.3.2 Empirical study	6
1.3.2.1 Research design	6
1.3.2.2 Study population	7
1.3.2.3 Measuring battery	7
1.3.2.4 Statistical analysis	9
1.4 Division of chapters	9
1.5 Chapter summary	10
CHAPTER 2: ARTICLE	11
CHAPTER 3: CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS	41
3.1 Conclusions	41
3.1.1 Conclusions in terms of the specific literature review objectives of the study	41
3.1.2 Conclusions in terms of the specific empirical objectives of the study	42
3.2 Limitations of the present study	43
3.3 Recommendations	44
3.3.1 Recommendations for the organisation	44
3.3.2 Recommendations for future research	45

LIST OF TABLES

Table	Description	Page
1.	Number of police officers who committed suicide	13
2.	Descriptive statistics, Cronbach alpha coefficients and inter-item correlations coefficients of the measuring instruments	23
3.	Correlation coefficients between measuring instruments	24
4.	Correlation coefficients between COPE, PSI, ASIQ, relationship satisfaction, job satisfaction, amount of support (am) and adequacy of support (ad)	25
5.	Differences between suicide ideation of different demographic items	26
6.	Differences between male and female police officers	27
7.	Intensity and frequency of job demands, lack of resources and police stressors	28
8.	The linear discriminant function for police members with low and high suicide ideation	30
9.	Classification of membership of high/low suicide ideation groups	30
10.	Variables that predict suicide ideation in police members	31

SUMMARY

Topic: Coping, stress and suicide ideation in the South African Police Services in the Eastern Cape

Key terms: Suicide, suicide ideation, police, stress, coping.

The suicide rate in the South African Police Services is relatively high compared with other suicide statistics. The objective of this study was to investigate relationships between coping, stress and suicide ideation within the SAPS in the Eastern Cape.

A cross-sectional survey design was used. The study population consisted of 307 uniformed police members from the job level of constable to that of senior superintendent in the Eastern Cape. The COPE Questionnaire, Police Stress Inventory, Adult Suicide Ideation Questionnaire and a Biographical Questionnaire were administered. Statistical analysis was carried out with the SAS-programme. Cronbach alpha coefficients, inter-item correlations and confirmatory factor analysis were done to assess the reliability and validity of the measuring instruments. Descriptive statistics were used to analyse the data. T-tests and one-way analysis of variance were used to determine differences between the sub-groups in the sample. A discriminant analysis was carried out to determine which combination of independent variables could be used to classify police members into groups who obtained low versus high suicide ideation scores.

The results indicate that almost 5% of the uniformed police members had significant suicide ideation levels. A positive correlation between passive coping and suicide ideation was found. Furthermore, passive coping shows a positive correlation with job demands. The results showed that lack of resources was the stressor with the highest intensity and frequency. The results also indicate that suicide attempts, passive coping, medical conditions, alcohol abuse, problem-focused coping and police stressors could be used to classify police members into groups of low and high suicide ideation.

The recommendations for the organisation and future research were made.

OPSOMMING

Onderwerp: Coping, stres en selfmoord-denkbeeldvorming in die Suid-Afrikaanse Polisiediens in die Oos-Kaap.

Sleuteltermes: Selfmoord, selfmoorddenkbeeldvorming, polisie, stres, coping.

Die selfmoordsyfer in die Suid-Afrikaanse Polisiediens is relatief hoog in vergelyking met ander selfmoordstatistieke. Die doelstelling van hierdie studie was om die verband tussen coping, stres en selfmoord-denkbeeldvorming in die SAPD in die Oos-Kaap te ondersoek.

‘n Eenmalige dwarsnitontwerp is gebruik. Die ondersoekgroep het 307 funksionele polisielede, vanaf die ranggroep konstabel tot senior superintendent, binne die Oos-Kaap provinsie ingesluit. Die COPE Vraelys, Polisiestresvraelys, Volwasse Selfmoord-denkbeeldvormingsvraelys en ‘n Biografiese Vraelys is geadministreer. Statistiese analise is uitgevoer met behulp van die SAS-program. Cronbach alfa koëffisiënte, inter-item korrelasies en bevestigende faktorontledings is gebruik om die geldigheid en die betroubaarheid van die meetinstrumente te bepaal. Beskrywende statistiek is gebruik om die data te ontleed. T-toetse en eenrigting variansieontleding is gebruik om verskille tussen die subgroepe in die steekproef te bepaal. ‘n Diskriminantontleding is gebruik om die kombinasie onafhanklike veranderlikes te bepaal wat polisielede verdeel in groepe van lae en hoë selfmoord-denkbeeldvorming.

Die resultate toon dat ongeveer 5% van die funksionele polisielede betekenisvolle selfmoordenkbeeldvormingsvlakke het. ‘n Positiewe korrelasie is gevind tussen passiewe coping en selfmoord-denkbeeldvorming. Passiewe coping toon ook ‘n positiewe verband met die stressor werkseise. Die resultate toon dat ‘n gebrek aan hulpbronne die stressor is met die hoogste intensiteit en frekwensie. Die resultate toon ook dat selfmoordpoging, passiewe coping, mediese toestande, alkohol misbruik, probleem-gerigte coping en polisie stressore gebruik kan word om polisielede te klassifiseer in groepe van lae en hoë selfmoordenkbeeldvorming.

Aanbevelings vir toekomstige navorsing is aan die hand gedoen.

CHAPTER 1

INTRODUCTION

This mini-dissertation focuses on the relationships between coping, stress and suicide ideation within the SAPS in the Eastern Cape.

In this chapter the problem statement and the research objectives (including the general and the specific objectives) are discussed. Following this, the research method is discussed and a division of chapters is given.

1.1 PROBLEM STATEMENT

An effective police service is an important contributor to the stability and resulting economic growth and development of countries. This is also the case in South Africa, where the level of crime remains a threat to investment and economic growth in South Africa (Rothmann & Van Rensburg, 2001). Therefore, research is needed regarding ways by means of which to improve the effectiveness of the police service.

In South Africa, members of the police services are faced by various potential stressors, such as a high crime level, organisational transformation and a lack of resources (Pienaar, 2002). According to Anshel (2000), law enforcement is one of the most stressful occupations world-wide. In addition to experiencing job-related stressors such as dealing with unlawful, often dangerous actions of citizens, there is abusive treatment in the workplace and a general lack of social support. Not surprisingly, increased rates of illness, post-traumatic stress, burnout, alcohol abuse and suicides, and decreased levels of job satisfaction and job performance, as compared to norms for the general population, are found in research with police members (Anshel, 2000; Nel, 1994; Rothmann & Agathagelou, 2000; Rothmann & Strijdom, 2002).

There has been an increasing incidence of suicide among police members world-wide (Janik & Kravitz, 1994) and in South Africa this is a serious problem. Although substantially lower than in South Africa, the suicide rate of New York city police officers is estimated at 29 per 100 000 a year. However, the problem is often ignored, misunderstood, misrepresented and

under researched. Police suicide is not a subject easily discussed in most police departments or by the families of police officers who have taken their own lives. A study of police suicide conducted in 1995 indicated that South African Police Services (SAPS) officials were eleven times more likely to commit suicide than the general South African population (<http://www.iss.co.za/Pubs/Crime%20Index/00Vol4No5/forbidden.html>). However, even though statistics show a remarkable decrease in police suicide over the past six years, the situation between provinces varies substantially. The Eastern Cape seems to be one of the risk areas. The high number of police suicides in this province correlates with the high police population in this province and this is also one of the provinces with high levels of recorded crime (<http://www.iss.co.za/Pubs/Crime%20Index/00Vol4No5/forbidden.html>).

Suicidal behaviour may be considered a domain of psychological disturbance and is associated with potentially severe mental and/or physical health outcomes. According to Reynolds (1991a), suicidal behaviour may be categorised as including suicide completion, overt intention, suicide attempt and suicide ideation. Suicidal behaviour can be plotted on a continuum varying in severity from ideation through intent and attempt to completion. Suicide ideation therefore constitutes but one aspect of suicidal behaviour (Reynolds, 1991a). Research about suicide ideation may be viewed as an important and critical component in evaluating and promoting adult mental health. A strong association exists between suicide ideation and suicide (Jin & Zhang, 1998). Reynolds (1991a) states that all suicide attempts, as well as threats, should be considered indications of significant psychological distress.

Suicide ideation, which refers to the thoughts and cognitions about suicidal behaviour and intent, may be considered an early marker of more serious suicidal behaviour (Bonner & Rich, 1987; Reynolds, 1991a; Shea, 1998). Suicide ideation can be characterised as ranging from relatively mild, general thoughts and wishes that one were dead to serious ideation about specific plans and means of taking one's 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 relates to thoughts about the response of others. 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 only when they are dead. They have thoughts of killing themselves, as well as thoughts on specific methods they can use and times or places at which to kill themselves. Schotte and Clum (1982) as well as Bonner and

Rich (1987) found a relationship between the frequency of suicide ideation and the likelihood of suicide attempts. Suicide ideation is consistent with a cognitive-behavioural focus and may be viewed as a domain of self-statements.

In a study in the SAPS in the North West Province, Rothmann and Van Rensburg (2001) found that 10,58% of the uniformed police members showed significant suicide ideation levels. It was also found that suicide ideation was higher in the case of police members who were working in police stations than in the case of those who were in training. The risk areas include the Northern Cape, Eastern Cape, Northern Province, Gauteng, Mpumalanga, North West and Natal (<http://www.iss.co.za/Pubs/Crime%20Index/00Vol4No5/forbidden.html>). This research will focus on suicide in the police in the Eastern Cape.

The SAPS needs to intervene to increase and/or maintain the psychological health and decrease the suicidal behaviour of police members. However, little information is available about the reasons for the high suicide rate in the SAPS. Only one study was done to determine the level of suicide ideation of members of the SAPS in the North West Province (see Rothmann & Strijdom, 2002). Therefore, it is necessary to study suicide ideation of police members and possible correlates thereof.

Many factors may contribute to suicidal behaviour of police members, including demands of the work situation, factors outside the work situation and personal characteristics, as well as the interaction between these variables (Jacobs, 1998; Rossouw, 1998; Schmidtke et al., 1999). According to McCafferty (1992), suicide of police members could largely be ascribed to stressors at work. Factors that may cause distress include authoritarian structure, lack of participation in decision-making, poor interpersonal relationships with supervisors, lack of administrative support, unfair discipline, unfair promotional practices and the nature of police work. Irregular working hours, poor working conditions, constant fear and trauma make police members more susceptible to suicide (Maynard, Maynard, Mccubin & Shao, 1980; Rothmann & Strijdom, 2002). Shift work, the dangers involved in police work and low salaries seem to be related to stress and suicidal tendencies (Kruger, 1996; Lott, 1995). Janik and Kravitz (1994) found that marital problems and job suspension were important contributing factors to a police officer's decision to attempt suicide. Supportive families can buffer and diminish the occupational stresses that police officers experience (Graf, 1986). Alcohol abuse accelerates their isolation from both family and administrative relationships.

One of the basic issues in the suicidal behaviour domain concerns coping, or ways in which an individual can attempt to deal with job stressors to ward off aversive strains (Beehr, Johnson & Nieva, 1995). Kohn (1996) contends that "the most important thing about how a person copes with everyday hassles ...is its circumstantial appropriateness, how well it fits the specific demands of the situation" (p. 182). Anshel (2000) expresses concern about the tendency that alcohol is not only used but very generally accepted as a way of coping with stress in the police service. Research by Hageman (1978) has shown that non-coping with stressors in the work environment may be related to suicide ideation.

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, 1984; Moos, 1994; Zeidner & Endler, 1996). Beehr et al. (1995) showed that problem-focused coping strategies were negatively related to strains (somatic complaints, emotional exhaustion, depersonalisation and thoughts of suicide) among police officers. Emotion-focused coping strategies were related to every police strain except the abuse of alcohol. One maladaptive coping strategy in police work is the excessive intake of alcohol to help reduce stress and improve psychological well-being. Anshel (2000) states that alcohol or drug intake might serve as a means of coping with stress, but that it is not effective. Evens and Coman (1992) found a tendency towards ineffective coping among police officers who reported being unsentimental and emotionally detached and refusing to share their emotional reactions to job stressors with others (such as their partners or families). Burke (1993) found high use of alcohol, drugs, cigarettes and physical isolation from others to be methods of coping with job-related stress among police officers.

The research problem can be summarised as follows: It is clear that the suicide rate is high in the South African Police Services (almost five times higher compared with international police suicide statistics), and more especially in the Eastern Cape. Although programmes have been implemented in the past to relieve the problem, the interventions do not seem to be working. Current ways to study suicides (e.g. ex-post facto studies) provide limited information for interventions to be implemented. Furthermore, there is a lack of research regarding causal (dispositional and situational) factors in stress and suicide in the SAPS. If it is found that suicide ideation is related to coping and stress, programmes such as recruitment, selection, induction, training and development, and performance management could be

considered to facilitate the development of constructive coping strategies, to reduce suicide ideation in the police service.

From the problem statement the following research questions emerge:

- How is suicide ideation conceptualised in the literature?
- What is stress and which situational factors contribute to stress and suicide ideation in the South African Police Services?
- How are coping and its relationship with stress and suicide ideation conceptualised in the literature?
- What are the relationships between coping, stress and suicide ideation in the SAPS in the Eastern Cape?
- Can coping strategies and stressors predict suicide ideation in the SAPS in the Eastern Cape?
- Which recommendations can be made to prevent and manage suicide ideation in the SAPS in the Eastern Cape?

1.2 RESEARCH OBJECTIVES

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

1.2.1 General objective

The general objective of this research is to investigate relationships between coping, stress and suicide ideation within the SAPS in the Eastern Cape.

1.2.2 Specific objectives

The specific objectives of this research are to:

- conceptualise suicide ideation from the literature;
- conceptualise stress and to evaluate the situational factors that contribute to stress and suicide ideation in the SAPS in the Eastern Cape;

- conceptualise coping and its relationship with stress and suicide ideation from the literature;
- determine the relationship between coping, stress and suicide ideation in the SAPS in the Eastern Cape;
- determine whether coping strategies and stress could be used to predict suicide ideation in the SAPS in the Eastern Cape;
- make recommendations to prevent and manage suicide ideation in the SAPS in the Eastern Cape.

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. The results are used to determine the relationship among coping, stress and suicide ideation.

1.3.2 Empirical study

The empirical study entails that the specifically stated objectives can be achieved as follows:

1.3.2.1 Research design

A survey design is used to achieve the research objectives. 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 also be used 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 ($n = 307$) of uniformed police members from the job level of constable to that of senior superintendent in the Eastern Cape was taken for this study.

1.3.2.3 Measuring battery

Four questionnaires were used in the empirical study, namely the *COPE Questionnaire* (COPE) (Carver, Scheier & Weintraub, 1989), the *Police Stress Inventory* (PSI) (Pienaar, 2002), *Adult Suicide Ideation Questionnaire* (ASIQ) (Reynolds, 1991a), and a *Biographical Questionnaire* (Pienaar, 2002).

- 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 in which people cope in different circumstances (Carver, Scheier & Weintraub, 1989). Although the original questionnaire measures 13 different coping strategies, Pienaar (2002) 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 ($\alpha > 0,70$, Nunnally & Bernstein, 1994), and thus indicate the internal consistency of the factors of the COPE. Test-retest reliability varies from 0,46 to 0,86 and from 0,42 tot 0,89 (applied after two weeks).
- The **Police Stress Inventory** (PSI) (Pienaar, 2002) 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 (2002) 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 ($\alpha > 0,70$, Nunnally & Bernstein, 1994), and thus indicate the internal consistency of the factors of the PSI.

- 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 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. Rothmann en Van Rensburg (2001), found that the internal consistency of the ASIQ is acceptable at 0,51 ($0,15 \leq r \leq 0,50$, 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. These internal consistencies could be regarded acceptable according to Nunnally and Bernstein (1994).
- A **Biographical Questionnaire** was developed to gather information about the demographic characteristics of the participants. This questionnaire gives participants the option of supplying their name and service number. Other information gathered includes: province and station, age, sex, years of service, years in current position (to assess advancement), educational qualifications, marital status, satisfaction with relationships with significant other, language, history of disciplinary action, self-rated performance, self-rated job satisfaction, medical conditions, use of prescription and over-the-counter medicine, reasons for medication, number of alcoholic drinks per week, smoking behaviour, amount of cigarettes per day, other drug use, exercise behaviour and previous suicide attempt (Pienaar, 2002).

1.3.2.4 Statistical analysis

The statistical analysis was carried out using the SAS-programme (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) were used to analyse the data.

T-tests and one-way analysis of variance were used to determine differences between the sub-groups in the sample. A cut-off point of 0,50 (medium effect, Cohen, 1988)) was set for the practical significance of differences between means. Pearson product-moment correlation coefficients were used to specify the relationships between the variables. In the case where the distribution of scores was 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 who obtained low versus high suicide ideation scores. The resulting discriminant function separated the members of the groups maximally. The assumption of the discriminant analysis was that the independent variables were continuous but that the dependent variable was categorical (Kerlinger & Lee, 2000).

1.4 DIVISION OF CHAPTERS

The chapters are presented as follows in this mini-dissertation:

Chapter 1: Introduction

Chapter 2: Research article

Chapter 3: Conclusions, limitations and recommendations.

1.5 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.

CHAPTER 2

RESEARCH ARTICLE

COPING, STRESS AND SUICIDE IDEATION IN THE SOUTH AFRICAN POLICE SERVICES IN THE EASTERN CAPE*

R MEYER

S ROTHMANN

*Research Programme "Human Resource Management for Development", Research Unit
"Decision-making and Management for Economic Development", PU for CHE*

ABSTRACT

The objective of this research was to determine the relationship between coping and stress on the one hand and suicide ideation among police members on the other hand. A cross-sectional design was used. The study population ($N = 307$) consisted of uniformed police members in the Eastern Cape. The COPE, Police Stress Inventory, Adult Suicide Ideation Questionnaire and a Biographical Questionnaire were used as measuring instruments. The results showed that passive coping strategies are related to suicide ideation. A discriminant analysis showed that suicide attempt, passive coping strategies, medical conditions, use of alcohol, problem-focused coping strategies and police stressors correctly classified 64,29% of participants who scored high on suicide ideation.

OPSOMMING

Die doelstelling van hierdie navorsing was om die verband tussen coping en stres enersyds en selfmoord-denkebeeldvorming van polisieëde andersyds te bepaal. 'n Dwarsnee-ontwerp is gebruik. Die studiepopulasie ($N = 307$) het bestaan uit funksionele polisieëde in die Oos-Kaap Provinsie. Die COPE, Polisieëstresvraelys, Volwasse Selfmoorddenkebeeld-vormingsvraelys en 'n Biografiese Vraelys is as meetinstrumente gebruik. Die resultate het aangetoon dat passiewe coping-strategieë verband hou met selfmoord-denkebeeldvorming. 'n Diskriminantontleding het aangetoon dat selfmoord-pogings, passiewe coping-strategieë, mediese toestande, die misbruik van alkohol, probleem-gerigte coping-strategieë en polisieëstressore 64,29% van die deelnemers met hoë tellings ten opsigte van selfmoord-denkebeeldvorming korrek geklassifiseer het.

---

* The financial assistance of the National Research Foundation (NRF) towards this research is hereby acknowledged. Opinions expressed and conclusions arrived at, are those of the author and are not necessarily to be attributed to the NRF.

Police suicides have shown a consistent increase over the past two decades and according to Violanti (1995), there are a few possible precursors and correlates of police suicide. The immediate availability of firearms, continuous exposure to death and injury, social strain resulting from shift-work, a general lack of social support, and the negative public image of police officers have been suggested as possible stressors and reasons for police suicide (Biggam, Power, MacDonald, Carcary & Moodie, 1997; Janik & Kravitz, 1994; Nel & Burgers, 1998; Schmidtke, Fricke & Lestor, 1999; Violanti, 1995). Not surprisingly increased rates of illness, post-traumatic stress, burnout, alcohol abuse and suicides, and decreased levels of job satisfaction and job performance, as compared to norms for the general population, are found in research with police members (Anshel, 2000; Nel, 1994; Rothmann & Agathagelou, 2000; Rothmann & Strijdom, 2002).

A study on police suicide conducted in 1995 indicated that South African Police Services (SAPS) officers were eleven times more likely to commit suicide than the general South African population. However, while recent statistics show a remarkable decrease in police rates over the past six years, the situation between provinces varies substantially. The Eastern Cape seems to be one of the risk areas. The high number of police suicides in this province correlates with the high police population in this province. This is also one of the provinces with one of the highest levels of recorded crime compared with other provinces (<http://www.iss.co.za/Pubs/Crime%20Index/00Vol4No5/forbidden.html>). The number of police officials who committed suicide in the Eastern Cape from 1996 to 1999 is given in Table 1.

Table 1

Number of Police Officers who Committed Suicide, 1996-1999

Year	1996	1997	1998	1999
Frequency	13	16	14	19

Suicidal behaviour may be considered a domain of psychological disturbance and is associated with potentially severe mental and/or physical health outcomes. According to Reynolds (1991a), suicidal behaviour may be categorised as including suicide completion, overt intention, suicide attempt, and suicide ideation. Suicide ideation constitutes one aspect of suicidal behaviour (Reynolds, 1991a). Research about suicide ideation may be viewed as

an important and critical component in evaluating and promoting adult mental health. A strong association exists between suicide ideation and suicide (Jin & Zhang, 1998). Reynolds (1991a) states that all suicide attempts, as well as threats, should be considered indications of significant psychological distress.

Many factors may contribute to suicidal behaviour of police members. According to Jacobs (1998), Rossouw (1998), and Schmidtke et al. (1999), these factors include inappropriate coping strategies, demands of the work situation and factors outside the work situation, as well as the interactions among these variables. Previous research on suicide ideation focused on social factors (e.g. the effects of family, religion, interpersonal relations and social support) and individual factors (e.g. stress and depression) (Zhang & Jin, 1998). According to Vilhjalmsson et al. (1998), thoughts of suicide appear to be unrelated to gender and educational attainment, but may be more prevalent among unmarried and younger individuals. Those who are depressed, dissatisfied, pessimistic and hopeless, experience frequent pains such as stomach pain or headache or migraine or abuse alcohol or drugs, or engage in illegal activities are also more likely to think about suicide. Furthermore, life stress in general and family stress in particular (in the form of negative events and persistent difficulties), is associated with suicide ideation. The lack of social interaction and support from relatives and friends are also indicated in suicide ideation (Anshel, 2000; Hirsch & Ellis, 1995; Nel, 1994; Vilhjalmsson et al., 1998).

Police work is highly stressful, since it is one of the few occupations where an employee is continually required to face physical dangers and to put his or her life on the line at any time. According to Fain and McCormick (1988) some people consider stress to be events external to the organism that make demands on it, while others suggest that it is the organism's response to events that challenge it. Coping behaviour is an important aspect of the stress process and refers to both overt and covert behaviours that reduce or eliminate psychological distress or stressful conditions (Fain & McCormick, 1988). The way an individual copes depends on his or her understanding of the stressful situation, making sense of it, and developing appropriate responses to it. However, research indicates that police officers utilise coping mechanisms (for example, alcohol, drugs, deviance, and cynicism) that increase, rather than alleviate their stress (Violanti, 1995).

Anshel (2000) defines effective coping as the efficacy with which individuals deal with their emotional responses to stressors and act to resolve the stressors and the cost of their effectiveness to the individual. Maladaptive coping was found in a Canadian study of police stress by Burke (1994) in which officers who coped by using alcohol and drugs, anger, and withdrawal were more likely to suffer from health problems than officers who used more adaptive coping skills. According to Anshel (2000) the result of maladaptive coping is job burnout and leaving the profession. Thus, an examination of the coping process in police stress should clearly delineate proper from improper coping strategies.

The SAPS needs to intervene to prevent suicidal thoughts and intentions. Such prevention should probably emphasise helping the individual police member cope with serious financial and family events and difficulties by enhancing self-esteem, mastery and support (if needed), and by offering treatment if alcohol abuse or serious distress are present. These efforts support measures that lead to increase in psychological health in society in general (Vilhjalmsson et al., 1998). However, while little information is available about the reasons for the high suicide rate in the SAPS, many factors may contribute to suicidal behaviour of police members. Only one study has been done to determine the level of suicide ideation of members of the SAPS - in the North West Province (see Rothmann & Strijdom, 2002). Therefore, it is necessary to study suicide ideation of police members and possible correlates thereof.

The objective of this research was to determine the relationship between coping, stress and suicide ideation of police members in the Eastern Cape.

Suicide ideation, coping and stress

According to Pieterse (1992), suicide is an act with a fatal outcome that is deliberately initiated and performed by the deceased himself, in the knowledge or expectation of its fatal outcome, and with the outcome being considered by the actor as instrumental in bringing about desired changes in consciousness and social conditions. Suicidal behaviour is an area of psychological disturbance and is associated with potentially severe mental and/or physical health outcomes. It can be plotted on a continuum varying in severity from ideation through intent and attempt to completion. Reynolds (1991a) states that suicidal behaviour may be categorised to include suicide completion, overt intention, suicide attempts, and suicidal

ideation. Suicide ideation therefore constitutes but one aspect of suicidal behaviour (Reynolds, 1991a) and shows a strong association with suicide (Jin & Zhang, 1998).

Reynolds (1991a) defines suicide ideation as thoughts and ideas about death, suicide, serious self-injurious behaviour, and thoughts related to the planning, conduct and outcome of suicidal behaviour (which relates to the thoughts about the response of others). Suicidal ideation can be operationalised as ranging from relatively mild, general thoughts about death and wishes that one were dead to serious ideation about specific plans and means of taking one's life. It may also be considered a primary marker for the risk of more suicidal behaviours (Bonner & Rich, 1987; Reynolds, 1991a; Shea, 1998).

Schotte and Clum (1982) as well as Bonner and Rich (1987) found a relationship between the frequency of suicide ideation and the likelihood of attempts at suicide, but Reynolds (1991a) found that a larger proportion of individuals think about suicide than actually attempt suicide. According to Vilhjalmsson et al. (1998), suicide ideators tend not to go through subsequent steps in the suicidal process. Research also shows that a clear majority of suicide attempters (over 60%) have tried to kill themselves at least once before and only a small fraction (about 1%) of the attempts result in death. Suicidal ideation itself is maladaptive, consistent with a cognitive-behavioural focus, viewed as a domain of self-statements, a realistic precursor of suicide attempts, and regarded as a normal, non-pathological reaction to seemingly intolerable conditions.

Coping is conceptualised as the cognitive and behavioural efforts used to manage, master, tolerate and reduce external and/or internal demands that are appraised as taxing or exceeding a person's resources (Bishop et al., 2001; Horeish et al., 1996; Lazarus & Folkman, 1984; Patterson, 2000). According to Bishop et al. (1996), coping is viewed as a dynamic process that changes according to the situation and the corresponding appraisal made by the individual. It appears that individuals do have consistent coping preferences or dispositions that are employed across a wide range of situations. Parkes (1986) found that coping may be influenced not only by the nature of the stressful episode but also by the resources, both intra-individual and environmental, available to the person concerned. Callan (1993) defines non-coping as failed efforts to cope, accompanied by various physical and psychosocial disturbances, which result in higher stress. Thus, the use of effective coping strategies and a

strong support system protect individuals from psychological distress by reducing or eliminating distress (Patterson, 1999).

Horesh et al. (1996), Folkman and Lazarus (1984) and Patterson (2000) distinguish between problem-focused and emotion-focused coping. Problem-focused coping strategies refer to actions taking during the stressful event aimed at managing, improving and changing the unpleasant experience or reducing the effects thereof. Emotion-focused coping strategies refer to what the individual was thinking during the stressful event and describe thoughts to regulate emotional responses which can arise as a result of exposure to a stressful event. Beehr, Johnson and Nieva (1995) showed that problem-focused coping strategies were negatively related to strains (somatic complaints, emotional exhaustion, depersonalisation and thoughts of suicide) among police officers. Emotion-focused coping strategies were related to every police strain except the abuse of alcohol. However, successful coping may not only involve solving problems and managing emotions but may also involve maintaining and protecting social relationships, particularly when stressors occur in interpersonal contexts.

Police literature on stress has identified numerous coping strategies used by police officers to manage occupational and personal stress. According to Patterson (1999) aloofness, alcoholism, authoritarianism, cynicism, depersonalisation, emotional detachment and suspiciousness are all factors that have been identified as either coping strategies or personality characteristics that develop in police officers over the length of their careers. Despite being used on the assumption that they will assist coping, these factors are rarely effective in helping officers manage stressful events. Female police officers tend to make more use of passive coping strategies such as detachment and denial (Anshel, 2000). In the study by Patterson (2000), coping was conceptualised as 'active' coping, i.e., physical exercise, and 'passive' coping, i.e., the use of medication. Similarly, Fain and McCormick (1988) investigated and reported use of adaptive coping, i.e., problem-solving techniques, and maladaptive coping, i.e., alcohol and drug use, cynicism, and deviance. The results of these studies suggest that coping responses following exposure to stressful work events is independent of police officers' gender, work assignment duties, marital status and rank. Hageman (1978) has shown that non-coping with stressors in the work environment may be related to suicide ideation.

According to Crank and Caldero (1991), police stress is conceptualised as any condition that has adverse consequences for a police officer's well-being and can be linked to negative emotional outcomes such as divorce rates, suicidal behaviour and alcoholism. Physical disorders such as hypertension, gastric and duodenal ulcers, and kidney and cardiovascular diseases also have been attributed to stress among police personnel (Crank & Caldero, 1991; Mearns & Mauch, 1998). Janik and Kravitz (1994) state that stress emanating either from work or from the home can establish a vicious cycle of demands and frustrations that will at best lead to deterioration in functioning and at worst become superimposed on pre-existing psychological impairment. It is obviously best to prevent police officers from becoming stressed and to identify certain signs that act as stress indicators (Lowenstein, 1999).

Research by Hageman (1978) has shown that stressors in the work environment may be related to suicide ideation. According to Rothmann and Strijdom (2002) irregular working hours, poor working conditions, constant fear and trauma make police members more susceptible to suicide. Shift-work (Burke, 1994; Violanti, 1995), the dangers involved in police work (Violanti, 1995), poor working conditions and inadequate salaries (Biggam et al., 1997; Gulle, Tredoux & Foster, 1998; Kop, Euwema & Schaufeli, 1999) seem to be related to job satisfaction, stress and suicide tendencies (Kruger, 1996; Lott, 1995). Perceived staff shortages, inadequate resources, time pressure, lack of communication and work overload also emerged as prime stressors (Biggam et al., 1997; Kop et al., 1999). Gulle et al. (1998) examined the frequency by which stressful events occurred (within a month) in the SAPS. In their study, they found that excessive paperwork, insufficient manpower, fellow officers not doing their job, inadequate or poor quality equipment, and inadequate salaries were among the stressors which occurred most frequently within the police. According to Anshel (2000) poor coping skills appear to be a significant factor in determining the intensity and frequency with which stress is experienced in police work.

Biggam et al. (1997) state that there are important reasons why police stress should warrant serious consideration. The police play an important role in the maintenance of society and to fulfil this duty successfully, the work-force must be effective – and stress potentially undermines the efficiency of the police service. The effects of police stress may have an adverse effect on the development and maintenance of working relationships with the public. Also, on a more individual basis, it is possible that officers under stress can pose a real threat to their own safety and that of others.

METHOD

Research design

A survey design was used to reach 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).

Sample

The study population ($N = 307$) includes samples of uniformed police members in the Eastern Cape. The following formula proposed by Kerlinger and Lee (2000) was used to determine the sample size for this study:

$$n' = \frac{n}{1 + \frac{n}{N}}$$

and

$$n = z^2 \times \frac{SD^2}{d^2}$$

where n' = estimated sample size; n = the estimated sample size using the formula; N = the size of the population; z = standard score corresponding to the specified probability of risk; SD = the standard deviation of the population, and d = the specified deviation.

The values of z , SD and d have been determined in previous studies of suicide ideation in the SAPS (Rothmann & Strijdom, 2002; Rothmann & Van Rensburg, 2001). The stations were divided into small (less than 25 staff members), medium (between 25 and 100 staff members) and large (more than 100 staff members) stations. All the police members at randomly identified small and medium-sized stations in the Eastern Cape were asked to complete the questionnaire. Stratified random samples according to race and sex, were taken in the large stations.

The sample consisted mainly of captains ($n = 170$) and sergeants ($n = 57$) with a mean age of 34,92. A total of 234 participants were male while 65 were females. Various language groups were included in the study, namely Afrikaans ($n = 162$), English ($n = 25$), Xhosa ($n = 13$), Ndebele ($n = 3$) and Sesotho ($n = 1$). The study population consisted of various race groups, including White ($n = 104$), Black ($n = 119$) and Coloured ($n = 67$). A total of 150 of the participants are married, 81 are divorced and 61 are single. About 26% of the participants had been formally charged. A total of 41 (13%) of the participants had medical conditions that could affect their quality of work. Regarding the use of alcohol, 57% indicated that they took 0-4 drinks per week, 13,36% indicated that they took 5-7 drinks per week, while 4,56% indicated that they took 15 or more drinks per week. A total of 7 (2,28%) of the participants have attempted suicide before.

Measuring instruments

Four questionnaires were used in the empirical study, namely the *COPE Questionnaire* (COPE) (Carver, Scheier & Weintraub, 1989), the *Police Stress Inventory* (PSI) (Pienaar, 2002), the *Adult Suicide Ideation Questionnaire* (ASIQ) (Reynolds, 1991a) and a *Biographical Questionnaire* (Pienaar, 2002).

The *COPE Questionnaire* (COPE) was used to measure participants' coping strategies. The COPE is a multidimensional 53-item coping questionnaire that indicates the different ways that people use to cope in different circumstances (Carver, Scheier & Weintraub, 1989). Although the original questionnaire measures 13 different coping strategies, Pienaar (2002) 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 ($\alpha > 0,70$, Nunnally & Bernstein, 1994), and thus indicate the internal consistency of the factors of the COPE. Test-retest reliability varies from 0,46 to 0,86 and from 0,42 to 0,89 (applied after two weeks).

The *Police Stress Inventory* (PSI) was used to measure participants' job stress. The JSS 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 (2002) 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 ($\alpha > 0,70$, Nunnally & Bernstein, 1994), and thus indicate the internal consistency of the factors of the PSI.

The *Adult Suicide Ideation Questionnaire* (ASIQ) (Reynolds, 1991a) is a measure of suicidal ideation and was 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 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. Rothmann and Van Rensburg (2001), found that the internal consistency of the ASIQ is acceptable at 0,51 ($0,15 \leq r \leq 0,50$, Clarke & Watson, 1995). According to Rothmann and Strijdom (2002), the internal consistencies of the ASIQ are 0,98 and 0,95 for whites and blacks respectively. These internal consistencies could be regarded as acceptable according to Nunnally and Bernstein (1994).

A *Biographical 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 relationships with significant other, language, history of disciplinary action, self-rated performance, self-rated job satisfaction, medical conditions, use of prescription and over-the-counter medicine, reasons for medication, number of alcoholic drinks per week, smoking behaviour, number of

cigarettes per day, other drug use, exercise behaviour and previous suicide attempts (Pienaar, 2002).

Statistical analysis

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

T-tests and analysis of variance were used to determine differences between the sub-groups in the sample. The following formula was used to determine the practical significance of differences (d) when t-tests were used (Steyn, 1999):

$$d = \frac{Mean_A - Mean_B}{SD_{MAX}}$$

where

$Mean_A$ = Mean of the first group

$Mean_B$ = Mean of the second group

SD_{MAX} = Highest standard deviation of the two groups

The following formula was used to determine the practical significance of means of more than two groups (Steyn, 1999):

$$d = \frac{Mean_A - Mean_B}{\text{Root MSE}}$$

where

$Mean_A$ = Mean of the first group

$Mean_B$ = Mean of the second group

Root MSE = Root Mean Square Error

A cut-off point of 0,50 (medium effect - Cohen, 1988) was set for the practical significance of differences between means.

Pearson product-moment correlation coefficients were used to specify the relationships between the variables. In the case where the distribution of scores was 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 what combination of independent variables could be used to classify police members into groups who obtained low versus high suicide ideation scores. The resulting discriminant function separated 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. Structured Equation Modelling was used to test the model that predicts suicide ideation.

RESULTS

Table 2 shows the descriptive statistics, Cronbach alpha coefficients and inter-item correlation coefficients of the COPE, PSI and ASIQ.

Table 2

Descriptive Statistics, Cronbach Alpha Coefficients and Inter-item Correlation Coefficients of the Measuring Instruments (N = 307)

Item	Mean	SD	Skewness	Kurtosis	r	α
Problem-focused Coping	69,74	13,26	-0,77	1,11	0,33	0,92
Passive Coping	26,63	7,58	0,33	-0,32	0,30	0,85
Social Support	18,89	5,17	-0,44	-0,57	0,46	0,86
Job Demands	78,07	26,60	-0,31	-0,33	0,39	0,92
Lack of Resources	76,78	23,70	-0,53	-0,00	0,42	0,91
Police Stressors	41,74	16,19	-0,45	-0,72	0,49	0,88
ASIQ	8,27	17,02	4,62*	28,15*	0,61	0,97

*High skewness and kurtosis

Table 2 shows that acceptable Cronbach alpha coefficients ($\alpha > 0,70$) were obtained for all the scales (see Nunnally & Bernstein, 1994). The mean inter-item correlations of most of the scales are also acceptable ($0,15 \leq r \leq 0,50$, Clark & Watson, 1995), except for the ASIQ scale that is somewhat higher. 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. The only exception is the ASIQ, which shows relatively high skewness and kurtosis.

The product correlation coefficients between the COPE, PSI and ASIQ are reported in Table 3. In the case of the correlation between the ASIQ and the other measuring instruments, Spearman correlation coefficients were computed because of the skew distribution of suicide ideation scores. The scores on the other measuring instruments are normally distributed and Pearson correlation coefficients were computed for them.

Table 3
Correlation Coefficients between Measuring Instruments

Item	Problem-focused Coping	Passive Coping	Social Support	Job Demands	Job Resources	Police Stressors	ASIQ
Problem-focused Coping	-	-	-	-	-	-	-
Passive Coping	0,29 ⁺	-	-	-	-	-	-
Social Support	0,66 ⁺⁺⁺	0,33 ⁺⁺	-	-	-	-	-
Job Demands	0,09	0,26 ⁺⁺	0,5	-	-	-	-
Job Resources	0,70	0,04	-0,00	0,72 ⁺⁺⁺	-	-	-
Police Stressors	0,11	0,11	0,00	0,58 ⁺⁺⁺	0,65 ⁺⁺⁺	-	-
ASIQ	-0,09	0,25 ⁺⁺	-0,03	0,05	-0,00	0,08	-

- * 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 3 shows practically significant correlation coefficients of medium effect between Passive Coping on the one hand and suicide ideation (ASIQ), Job Demands and Problem-focused Coping on the other hand. Practically significant correlation coefficients of large effect also exist between police stressors on the one hand and Job Demands and Lack of Resources on the other hand. A practically significant correlation coefficient of large effect exists between Lack of Resources and Job Demands. There is also a practically significant

correlation of large and medium effect between social support on the one hand and Problem-focused Coping and Passive Coping on the other hand.

The product correlation coefficients between the COPE, PSI, ASIQ, Relationship satisfaction, Job satisfaction, Amount of support, Adequacy of support and Accessibility of support are reported in Table 4. In the case of the correlation between the ASIQ and the other measuring instruments, Spearman correlation coefficients were computed because of the skew distribution of suicide ideation scores. The rest of the measuring instruments are normally distributed and Pearson correlation coefficients were computed for them.

Table 4

Correlation coefficients between the COPE, PSI, ASIQ, Relationship Satisfaction, Job Satisfaction, Amount of Support and Adequacy of Support

Item	Problem-focused Coping	Passive Coping	Social Support	Job Demands	Job Resources	Police Stressors	ASIQ
SATISFACTION							
Satisfaction-Relationship	0,05	-0,16*	0,12*	-0,13*	-0,14*	-0,10	-0,27**
Satisfaction-Job	0,04	0,02	0,13*	-0,25**	-0,30**	-0,24**	-0,08
AMOUNT OF SUPPORT							
SAPS in general	0,01	-0,05	0,07	-0,18*	-0,29**	-0,23*	-0,03
Top management	-0,03	-0,01	-0,00	-0,24*	-0,36**	-0,27**	-0,07
Colleagues	-0,03	-0,09	-0,00	-0,06	-0,06	-0,07	-0,15*
Family	0,07	-0,03	0,11	-0,07	0,02	-0,02	-0,14*
Friends	0,10	-0,10	0,14*	-0,15*	-0,06	-0,04	-0,24*
Religion	0,18*	-0,04	0,20*	-0,02	-0,07	-0,05	-0,18*
ADEQUACY OF SUPPORT							
SAPS in general	-0,04	-0,01	0,09	-0,18*	-0,30**	-0,27**	-0,01
Top management	-0,03	0,01	0,11	-0,23*	-0,33**	-0,27**	-0,05
Direct commander	-0,14*	-0,06	0,18*	-0,17*	-0,24*	-0,16*	-0,13*
Colleagues	0,11	-0,11	0,14*	-0,19*	-0,20*	-0,17*	-0,18*
Family	0,00	-0,07	0,07	-0,11	-0,04	-0,08	-0,20*
Friends	0,10	-0,08	0,20*	-0,17*	-0,08	-0,10	-0,24*
Religion	0,19*	-0,03	0,18*	-0,07	-0,12	-0,14*	-0,25**

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

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

Table 4 shows practically significant (negative) correlation coefficients of medium effect between suicide ideation (ASIQ) on the one hand and relationship satisfaction and adequacy of support from religion on the other hand. A practically significant (negative) correlation coefficient of medium effect exists between Job Demands and job satisfaction. Practically significant (negative) correlation coefficients of medium effect also exist between Lack of Resources on the one hand and job satisfaction, amount of support and adequacy thereof from the SAPS in general, and amount of support and adequacy thereof from top management. There is also a practically significant (negative) correlation of medium effect between Police Stressors on the one hand and job satisfaction, amount of support and adequacy thereof from top management, and adequacy of support from SAPS in general.

The differences between the suicide ideation of different demographic items (gender, formally charged and suicide attempt) are shown in Table 5.

Table 5

Differences between the Suicide Ideation of Different Demographic Groups (N = 307)

Item	ASIQ Group 1		ASIQ Group 2		<i>p</i>	<i>r</i>
	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>		
Gender	7,37	12,36	9,49	22,28	0,46	-
Charged	10,69	20,89	7,24	15,53	0,19	-
Attempt	53,58	50,94	7,10	13,66	0,05*	0,90 ⁺⁺

* 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 5 shows that group 1 obtained a practically significantly higher score (of large effect) than group 2 regarding suicide attempts.

The differences between the social support, Passive Coping and Problem-focused Coping of police members of the male and female gender groups are shown in Table 6.

Table 6

Differences between Male and Female Police Members

Item	Male (<i>n</i> = 234)		Female (<i>n</i> = 65)		<i>p</i>	<i>r</i>
	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>		
Social Support	18,37	5,10	20,79	4,89	0,00*	0,47**
Passive Coping	26,19	7,35	27,33	8,21	0,32	-
Problem-focused Coping	68,86	13,22	72,80	13,15	0,04*	0,30+

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

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

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

Table 6 shows that female police members (compared with male police members) obtained practically significantly higher scores on social support (large effect) and on Problem-focused Coping (medium effect).

The analysis of the intensity and frequency of the extracted factors on the PSI, namely Job Demands, Lack of Resources and police stressors, is given in Table 7.

Table 7

The Intensity and Frequency of Job Demands, Lack of Resources and Police Stressors

Factor and Items	Intensity	Frequency
Job Demands		
Being assigned more responsibility	4,82 ⁺	4,14 ⁺
Having to deal with crisis situations	5,19 ⁺	4,32 ⁺
Having to work shift-work	3,85 ⁺	3,17 ⁺
Having to do someone else's work	4,85 ⁺	4,47 ⁺
Having to work overtime	4,34 ⁺	4,38 ⁺
Being frequently interrupted	4,91 ⁺	4,19 ⁺
More paper-work you can handle	4,99 ⁺	4,87 ⁺
Having to perform tasks that are not part of your job description	4,91 ⁺	4,87 ⁺
Lack of Resources		
Lack of officers to handle specific tasks	5,50 ⁺	4,60 ⁺
Inadequate or poor quality equipment	5,81 ⁺	4,74 ⁺
Lack of recognition for work well done	5,78 ⁺	4,48 ⁺
Other officers not doing their job	6,18 ⁺⁺	5,24 ⁺
Negative attitudes experienced towards the organisation	5,05 ⁺	4,07 ⁺
Other officers poorly motivated	5,59 ⁺	4,78 ⁺
Inadequate salary	6,18 ⁺⁺	5,28 ⁺
Supervision is poor or inadequate	5,10 ⁺	3,14 ⁺
Staff shortages	6,47 ⁺⁺	5,89 ⁺
Police Stressors		
Seeing criminals go free	6,43 ⁺⁺	4,28 ⁺
Having to deal with the media	3,87 ⁺	1,81 ⁺
Fellow officer killed in the line of duty	6,47 ⁺⁺	1,89 ⁺
Killing someone in the line of duty	5,41 ⁺	1,19 ⁺
Racial conflict	5,41 ⁺	2,72 ⁺

- ^{*} < 4, low
⁺ 4-6, average
⁺⁺ > 6, high

Table 7 shows that Lack of Resources can be identified as the stressor with the highest intensity and frequency. Staff shortages, inadequate salaries and other officers not doing their job can be seen as stressors with a high intensity and average frequency. Other stressors, like a lack of officers to handle specific tasks, inadequate or poor quality equipment, a lack of recognition for work well done, negative attitudes towards the organisation, and poorly motivated co-workers, can be seen as stressors with an average intensity and that occur on an average basis. Inadequate supervision is a stressor with an average intensity, but it does not occur on a regular basis.

Regarding stressors associated with Job Demands, having to deal with crisis situations, excessive paper-work, having to perform tasks not in job description and having to do someone else's work, were found to be the stressors with the highest intensity and frequency (between 4 and 6, average). Shift-work also showed an average intensity, but a low frequency.

Seeing criminals go free is one of the police stressors with the highest intensity and frequency. A fellow officer killed in the line of duty is also very stressful, but this stressor is very low in frequency. Having to deal with the media is the stressor with the lowest intensity and frequency. The other stressors (racial conflict and killing someone in the line of duty) are also very intense, but they do not occur on a regular basis.

Subsequently 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 8.

Table 8

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

Variable	High Suicide Ideation	Low Suicide Ideation
Constant	-143,32	-160,68
Race	3,15	2,67
Rank	1,62	1,19
Size	1,80	1,98
YSAPS	0,39	0,47
YPOS	0,54	0,44
Sex	14,85	15,77
Status	5,08	5,18
Charge	6,50	5,65
Satisf_P	3,48	3,74
Medical	14,26	15,92
Alcohol	5,34	4,85
Attempt	80,48	89,61
Job Demands	0,01	0,02
Lack Resources	0,20	0,21
Police stressors	-0,01	-0,06
Coping problem	0,02	0,07
Coping passive	0,35	0,23
Social support	0,39	0,34

By applying the stepwise discriminant analysis, it was found that all the variables listed above should be retained for the discriminant analysis. Table 9 summarises the frequencies and percentages of police members that can be classified as belonging to the high or low suicide ideation groups (based on these variables).

Table 9

Classification of Membership of High/Low Suicide Ideation Groups

Group	High Suicide Ideation	Low Suicide Ideation	Total
High Suicide Ideation	9 (64,29%)	5 (35,71%)	14 (100%)
Low Suicide Ideation	29 (10,82%)	239 (89,18%)	268 (100%)

Table 9 shows that the combination of variables of police members classifies 64,29% of the high suicide ideation cases and 89,18% of the low suicide ideation cases correctly. A total of 35,71% of the high and 10,82% of the low suicide ideation cases are classified incorrectly.

Finally a stepwise discriminant analysis was conducted. The variables that best predict suicide ideation of police members are given in Table 10.

Table 10

Variables that Predict Suicide Ideation in Police Members

Variables	Partial R-Square	F-Value
Attempt	0,08	23,51
Coping passive	0,03	7,48
Medical	0,01	3,57
Alcohol	0,01	3,23
Coping problem	0,01	5,46
Police stressors	0,01	2,37

Table 10 shows that the following variables can be used to predict suicide ideation of police members, namely previous suicide attempts, passive coping strategies and a lack of problem-focused coping strategies, medical conditions, use of alcohol and police stressors. Suicide attempt explains 8% of the variance in suicide ideation, Passive Coping 3%, and medical conditions, use of alcohol, Problem-focused Coping and police stressors respectively 1%.

DISCUSSION

Compared with a cut-off raw score of 31 (the 97th percentile on a norm table for community adults in the United States of America) (Reynolds, 1991a), 14 (4,96%) of the uniformed police members have significant suicide ideation levels. Reynolds (1991a) states that the ASIQ cut-off score is not meant to predict future suicidal behaviour or to suggest that an individual is at definite risk of suicide. According to Rothmann and Van Rensburg (2001), the cut-off score points to the need for further evaluation of suicidal thoughts, intentions and behaviour. Although this cut-off score may result in an over-identification of cases, it is more desirable to make a false positive decision than propose a false negative decision when evaluating suicidal behaviour (Rothmann & Van Rensburg, 2001). Beetge (1993) and Hirsh and Ellis (1995) state that although women think about participating in suicide more often than men, the suicide rate among men is approximately four times higher than in the case of women. However, the results show that suicide attempts are higher in the case of male police officers than in the case of female police officers. This could possibly be due to the fact that more male police officers were included in the study population than female police officers,

but whatever the reason, and in view of these results, suicide ideation may be seen as a problem in the SAPS.

Patterson (1999) states that individuals are likely to report both problem-focused and emotion-focused coping in responses following exposure to stressful events. Furthermore, Evens and Coman (1992) state that it could be expected that police members will refuse to share their emotional reactions to job stressors with others, which may isolate them from social support at work as well as home. However, the results of this study could not confirm these findings because the weighted averages of the three coping strategies were not determined. Hirsh and Ellis (1995) found that an important factor in the relationship between stress and depression is the amount of social support an individual has available when confronted with stressful events. Therefore, a lack of social support will result in depression that leads to suicidal behaviour (Yang & Clum, 1994).

Anshel (2000) states that male and female police officers experience different sources of stress and use different coping strategies. Consistent with this finding, female police officers obtained higher scores on social support and problem-focused coping. However, these results show inconsistency with the finding of Anshel (2000), namely that female police officers tend to make more use of passive coping strategies. It could be derived from the results that coping responses are dependent on a police officer's gender. These results also confirm the findings of Fain and McCormick (1988) that coping responses are independent of a police officer's marital status and rank. No practically significant correlations were found between coping responses and marital status or rank.

The literature shows that police members make use of maladaptive coping strategies (i.e. high use of alcohol, drugs, cigarettes, as well as physical and psychological isolation) to manage occupational and personal stress (Burke, 1993; Rothmann & Van Rensburg, 2001). Anshel (2000) and Burke (1993) also state that police members who suffer from medical conditions and who tend to abuse alcohol have more dysfunctional coping strategies and higher suicide ideation. This could be linked to the results of this study, namely that passive coping shows a practically significant correlation with suicide ideation and that medical conditions and alcohol abuse can be used to predict suicide ideation in police officers.

A lack of resources and job demands were found to be the biggest contributors to the stress police officers are experiencing. These results confirm the findings of Biggam et al. (1997), namely that regardless of the fact that police work offers potential for the introduction of traumatic stress, the most salient stressors will rest within the organisation itself. Furthermore, passive coping shows a practically significant correlation with job demands. This implies that the higher the job demands a police officer experiences, the more likely that he/she will make use of passive coping strategies. Hageman (1978) states that non-coping (passive-coping) with stressors in the work environment may be related to suicide ideation.

According to Anshel (2000) poor coping skills appear to be a significant factor in determining the intensity and frequency with which stress is experienced in police work. The results show that lack of resources can be identified as the stressor with the highest intensity and frequency. Staff shortages, inadequate salary, officers not doing their job, inadequate or poor quality equipment, lack of recognition for work well done, seeing criminals go free, and more paper-work you can handle can be seen as stressors with the highest intensity. These findings confirm the findings of Gulle et al. (1998) who found that excessive paper-work, insufficient manpower, fellow officers not doing their job, inadequate or poor quality equipment, inadequate salary and court leniency with criminals were among the stressors which occurred most frequently with the police. Inadequate supervision and shift-work also show a high intensity but it does not occur on a regular basis. Rothmann and Strijdom (2000) and Kruger (1996) found that poor interpersonal relationships with supervisors and shift-work seem to be related to stress and suicidal tendencies. These findings correlate with the results of this study.

Furthermore, practically significant negative relationships were found between job demands, lack of resources and police stressors on the one hand, and job satisfaction on the other hand. These results confirm the findings of Cooper, Kirkcaldy and Brown (1994) that job stress is related to lower job satisfaction. Rothmann and Strijdom (2000) state that police members who are satisfied with their work are less inclined to suicide ideation. Thus, police officers who experience less stress will show higher levels of job satisfaction and lower levels of suicide ideation.

Additionally, statistically and practically significant negative relationships were found between job demands, lack of resources and police stressors on the one hand, and the amount

and adequacy of support from the SAPS in general, top management, direct commander and colleagues on the other hand. This confirms the findings of Anshel (2000), Hirsh and Ellis (1995) and Yang and Clum (1994), namely that social support moderates the effects of stress, and that a lack of social support is also indicated in suicide ideation.

Horesh et al. (1996) found that suicide risk can be predicted by coping styles. Accordingly, this study shows that suicide ideation of police members is positively related to the use of passive coping strategies. However, this finding is inconsistent with the findings of Rothmann and Van Rensburg (2001) who found no practically significant relationship between suicide ideation and coping strategies in police members. Furthermore, practically significant negative relationships were found between suicide ideation on the one hand, and relationship satisfaction and religion on the other hand. This implies that police members who are dissatisfied with their relationships (work, marital, family and friends) are more likely to have higher suicide ideation. Janik and Kravitz (1994) found that marital or relationship problems operate as precursor behaviour for depression, and would be an important focus in predicting suicide attempts among police. It can also be deduced that police members who turn to religion for support will have lower levels of suicide ideation.

The results show that suicide attempt, passive coping, medical conditions, alcohol use, low problem-focused coping and police stressors could be used to predict suicide in police members. This confirms the findings of Beetge (1993), namely that previous suicide attempts, alcohol and drug abuse, poor health, family and work stress, and social isolation could be seen as individual risk factors which contributes to suicide ideation. Research also shows that a clear majority of suicide attempters (over 60%) have tried to kill themselves at least once before (Vilhjalmsson et al., 1998). Thus, suicide attempt could be seen as a significant predictor of suicide ideation and this confirms the findings of this study, namely that 8% of the variance in suicide ideation can be explained by suicide attempt. Passive coping strategies explain 3% of the variance in suicide ideation and this finding confirms that these strategies plays an important role in the prediction of suicide ideation. These variables (suicide attempt, passive coping, medical conditions, alcohol use, low problem-focused coping and police stressors), classified almost 65% of police members who measured high on suicide ideation correctly, while they classified almost 90% of the police members who measured low on suicide ideation correctly.

A limitation of this research is that the research design does not allow one to determine the direction of the relationship between the variables (see Kerlinger & Lee, 2000). Another limitation is that few female police officers were included in this study.

RECOMMENDATIONS

The SAPS needs to attend to the suicide ideation of police members and possible correlates thereof. Senior police personnel, and especially the direct commanders, should be trained in identifying individuals who tend towards suicide ideation. It seems that coping strategies, suicide attempt, medical conditions, alcohol abuse and police stressors should be considered when predicting suicidal behaviour. The amount of social support police officers receive and the impact of other stressors should also be attended to.

Suicidal thoughts and intentions must be prevented by the SAPS by helping police officers to cope with work-related problems and relationship difficulties. These efforts should emphasise the offering of support and treatment if alcohol abuse or serious distress are present and could lead to increase in psychological health. The SAPS can contribute to the mental health of police officers by gaining support from the direct commanders, the helping professions and the organisation self. Police officers must also be encouraged to make use of more adaptive coping strategies to manage occupational stress. Appropriate coping strategies can be learned and perhaps unlearned as methods for managing stressful occupational events.

Maladaptive coping mechanisms should be examined and methods found to neutralise the negative effects that follow the use of these behaviours. The teaching and monitoring of officers' adaptive and maladaptive coping skills remain a limitation in police training and job supervision. An organisational structure is needed in the SAPS to monitor officers' use of maladaptive coping and the lack of adaptive coping. This would encourage continued access to stress management training.

Furthermore, the SAPS needs to prevent police officers from becoming stressed. If dealt with effectively, it can prevent serious conditions such as depression, suicidal behaviour, aggression and irrational acts. One approach could be to alter the job or aspects of the organisation as a means of reducing police officers' stress. Such interventions would include the reduction of excessive work-load, increasing participation in decision-making and

instituting flexible work schedules. Another approach is to enhance the amount of support police officers receive. The helping professions should train counsellors to provide social support to stressed individuals. Interventions in the form of counselling sessions in which police officers could vent emotional frustrations concerning the organisation could also be implemented. Organisational and supervisory support should also be encouraged. Other suggestions for coping with stress include the provision of outlets for physical aggression needs through exercise and sporting activities, in-service training to combat and prevent stress and negative behaviour and a strong and supportive leadership within the force. Police officers who receive enough social support and implement effective coping strategies, would experience less stress and suicide ideation.

Research should be undertaken into individual factors, such as personality dimensions, that could be related to suicide ideation. Future research is needed regarding the relationship between personality dimensions, coping strategies and suicide ideation in the SAPS. Regarding coping, longitudinal studies are required to learn more about the factors that influence coping responses among police officers. Future research should also be directed more towards the specific coping mechanisms used by police officers.

REFERENCES

- Anshel, M.H. (2000). A conceptual model and implications for coping with stressful events in police work. *Criminal Justice and Behaviour*, 27, 375-400.
- Beehr, T.A., Johnson, L.B. & Nieva, R. (1995). Occupational stress: Coping of police and their spouses. *Journal of Organizational Behavior*, 16, 3-25.
- Beetge, B. (1993). Selfmoord in die SA Polisie – Wat word tans daaraan gedoen? *Servamus*, 17-20.
- Biggam, F.H., Power, K.G., MacDonald, R.R., Carcary, W.B. & Moodie, E. (1997). Self-perceived occupational stress and distress in a Scottish police force. *Work & Stress*, 11, 118-133.
- Bishop, G.D., Tong, E.M.W., Diong, S.M., Enkelmann, H.C., Why, Y.P., Khader, M. (1996). The relationship between coping and personality among police officers in Singapore. *Journal of Research in Personality*, 35, 353-374.
- 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. (1993). Work-family stress, conflict, coping and burnout in police officers. *Stress Medicine*, 9, 181-180.
- Burke, R.J. (1994). Stressful events, work-family conflict, coping, psychological burnout, and well-being among police officers. *Psychological Reports*, 75, 787-800.
- Callan, V.J. (1993). Individual and organizational strategies for coping with organizational change. *Work and Stress*, 7, 63-75.
- Carver, C.S., Scheier, M.F. & Wientraub, J.K. (1989). Assessing coping strategies: A theoretical based approach. *Journal of Personality and Social Psychology*, 56, 267-283.
- Clark, L.A. & Watson, D. (1995). Constructing Validity: Basic issues in objective scale development. *Psychological Assessment*, 7, 309-319.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Revised ed. Orlando, FL: Academic Press.
- Cooper, C.L., Kirkcaldy, B.D. & Brown, J. (1994). A model of job stress and physical health: the role of individual differences. *Personality Individual Difference*, 16, 653-655.
- 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.

- Evens, B.J. & Coman, G.J. (1992). General versus specific measures of occupational stress: An Australian police survey. *Stress Medicine*, 9, 11-20.
- Fain, D.B. & McCormick, G.M. (1988). Use of coping mechanisms as a means of stress reduction in North Louisiana. *Journal of Police Science and Administration*, 16, 21-28.
- Folkman, S. & Lazarus, R.S. (1984). *Stress, appraisal and coping*. New York: Springer.
- Gulle, G., Tredoux, C. & Foster, D. (1998). Inherent and organisational stress in SAPS: an empirical survey in the Western Cape. *South African Journal of Psychology*, 28, 129-134.
- Hageman, M.J.C. (1978). Occupational stress and marital relationships. *Journal of Police Science and Administration*, 6, 402-411.
- Hirsh, J. & Ellis, J.B. (1995). Family support and other social factors predicting 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 Psychiatrica Scandinavica*, 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* (4th ed.). Orlando, FL: Harcourt.
- Kop, N., Euwema, M. & Schaufeli, W. (1999). Burnout, job stress and violent behaviour among Dutch police officers. *Work and Stress*, 13, 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, November). Deadly secrets: Violence in the police family. *FBI Law Enforcement Bulletin*, 64, 12-16.
- Lowenstein, L.F. (1999). Treating stress in the police force. *The Police Journal*, 72, 65-74.
- Means, J. & Mauch, T.G. (1998). Negative mood regulation expectancies predict anger among police officers and buffer the effects of job stress. *The Journal of Nervous and Mental Disease*, 186, 120-125.
- Nel, J. (1994). *A contextual approach to post-shooting trauma in the South African Police Service*. Unpublished master's dissertation, Rand Afrikaans University, Johannesburg.

- Nel, J. & Burgers, T. (1998). Stress and trauma in the work environment. *Unisa Psychologia*, 25, 17-24.
- Nunnally, J.C. & Bernstein, I.H. (1994). *Psychometric theory* (3rd ed.). New York: McGraw-Hill.
- Osman, A., Kopper, B.A., Linehan, M.M., Barrios, F.X., Gutierrez, P.M. & Bagge, C.L. (1999). Validation of the Suicide Ideation Questionnaire and the Response for Living Inventory in an adult psychiatric inpatient sample. *Psychological Assessment*, 11, 115-123.
- Parkes, K.R. (1986). Coping in stressful episodes: The role of individual differences, environmental factors, and situational characteristics. *Journal of Personality and Social Psychology*, 51, 1277-1292.
- Patterson, G.T. (1999). Coping effectiveness and occupational stress in police officers. *Police Trauma*.
- Patterson, G.T. (2000). Demographic factors as predictors of coping strategies among police officers. *Psychological Reports*, 87, 275-283.
- Pienaar, J. (2002). *Coping, stress and suicide ideation in the South African Police Services*. Unpublished doctoral thesis, PU for CHE, Potchefstroom.
- Pieterse, J.J. (1992). Selfmoord: 'n Biopsigososiale verskynsel. *Servamus*, Feb.
- Reynolds, W. M. (1991a). *Suicide Ideation Questionnaire: Professional Manual*. Odessa, FL: Psychological Assessment Resources.
- Reynolds, W.M. (1991b). Psychometric characteristics of the Adult Suicide ideation Questionnaire with college students. *Journal of Personality Assessment*, 56, 289-307.
- Rossouw, L. (1997). *Police suicide: Research findings – 1994 to 1997*. Pretoria: South African Police Services.
- Rossouw, L. (1998). *Police suicide: Annual report - 1998*. Pretoria: South African Police Services.
- Rossouw, L. (1999). *Police suicide: Annual report - 1999*. Pretoria: South African Police Services.
- Rothmann, S. & Agathagelou, A.M. (2000). Die verband tussen lokus van beheer en werks-tevredenheid by senior polisiepersoneel. *Tydskrif vir Bedryfsielkunde*, 26(2), 20-26.
- Rothmann, S. & Strijdom, G. (2002). Suicide ideation in the South African Police Services in the North West Province. *Journal of Industrial Psychology*.
- Rothmann, S. & Van Rensburg, P. (2001, September). *Correlates of suicide ideation in the South African Police Services in the North West Province*. Poster session presented at the 13th conference of the South African Institute for Management Sciences, Stellenbosch.

- SAS Institute. (2000). *The SAS System for Windows: Release 8.01*. Cary, NC: SAS Institute Inc.
- Schmidtke, A., Fricke, S. & Lester, D. (1999). Suicide among German federal and state police officers. *Psychological Reports*, 84, 167-177.
- 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.
- Steyn, H.S. (1999). *Praktiese betekenisvolheid: Die gebruik van effekgroottes*. Wetenskaplike bydraes – Reeks B: Natuurwetenskappe Nr. 117. Potchefstroom: PU vir CHO.
- Vilhjalmsson, R., Kristjansdottir, G. & Sveinbjardottir, E. (1998). Factors associated with suicide ideation in adults. *Social Psychiatry and Psychiatric Epidemiology*, 33, 97-103.
- Violanti, J.M. (1995). Trends in police suicide. *Psychological Reports*, 77, 688-690.
- Violanti, J.M., Marshall, J.R. & Howe, B.H. (1985). Stress, coping and alcohol use: The police connection. *Journal of Police Science and Administration*, 13, 106-110.
- Yang, B. & Clum, M.A. (1994). Life stress, social support, and problem-solving skills predictive of depressive symptoms, hopelessness and suicide ideation in an Asian student population: A test of a model. *Suicide and Life-Threatening Behavior*, 24, 127-139.
- 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

In this chapter, conclusions about the literature findings and the results of the empirical study are made. Furthermore, the limitations of the present study are discussed and recommendations for the organisation and future research made.

3.1 CONCLUSIONS

Conclusions are made in the following sections in respect of the specific literature objectives and the empirical findings obtained in the present study.

3.1.1 Conclusions in terms of the specific literature review objectives

As derived from the literature, suicide can be conceptualised as a fatal act which the deceased deliberately initiates and performs himself with the knowledge and expectation that it would bring changes about in his consciousness and social conditions. Suicidal behaviour may be categorised to include suicide completion, overt intention, suicide attempts and suicidal ideation. Suicide ideation is conceptualised as thoughts and ideas about suicidal behaviour and intent and may be an early marker for more serious suicidal behaviour. Thus, it can be said that suicide ideation should be considered an indication of possible suicide.

Stress is conceptualised as any condition that has an adverse impact on a police officer's well-being and can be linked to negative emotional outcomes such as suicidal behaviour. Various situational factors contribute to the stress police officers experience, including poor interpersonal relationships, lack of social support, the nature of police work, irregular working hours and shift-work, inadequate salaries and poor working conditions. Certain physical disorders such as hypertension, ulcers, and cardiovascular diseases have also been attributed to stress among police members. These factors and medical conditions also seem to be related to suicidal behaviour.

Coping is conceptualised as cognitive and behavioural efforts used to manage, avoid or control situations that seem to be difficult and stressful. Effective coping can be seen as the efficacy with which individuals deal with their emotional responses to stressors and act to resolve them. Individuals use different coping strategies and derived from the literature it seems that police officers make use of ineffective coping strategies (e.g. alcohol abuse, withdrawal) to create a buffer against stress. It can be stated that effective coping will reduce and eliminate stress and suicidal behaviour.

3.1.2 Conclusions in terms of the specific empirical objectives

The results show that nearly 5% of the uniformed police members have significant suicide ideation levels. Although it is not very high, it is still a matter of concern because of the high levels of suicide in the SAPS. Suicide attempts seem to be higher among male police officers than among female police officers. This could possibly be due to the fact that more male police officers were included in the study population than female police officers, but whatever the reason, and in view of these results, suicide ideation may be seen as a problem in the SAPS.

The results showed that female police members tend to make more use of social support and problem-focused strategies than do male police officers. However, the different levels obtained on each coping strategy have not been determined in this study. Thus, no further conclusions can be drawn in terms of the levels of coping strategies police officers rely on.

The total stress levels of the police members were relatively high. A lack of resources was found to be the biggest contributor to the stress police officers are experiencing with specific reference to staff shortages, inadequate salaries, officers not doing their job and inadequate or poor-quality equipment. Police officers are also faced with job demands (i.e. excessive paper-work) and police stressors (i.e. seeing criminals go free) that contribute to their stress levels. Inadequate supervision and shift-work also show a high intensity but this does not occur on a regular basis. It is shown that poor relationships with supervisors and shift-work seem to be related to stress and suicidal behaviour.

Regarding the relationship between coping and suicide ideation, it was found that suicide ideation of police members was positively related to the use of passive coping strategies. Passive coping strategies could be used to predict suicide ideation in police members. No significant relationship was found between stress and suicide ideation, but results showed that passive coping was related to the job demand stressor. This implicates that the higher the job demands a police officer experience, the more likely that he/she will make use of passive coping strategies, which in turn may lead to higher incidence of suicide ideation.

Practically significant negative relationships were found between job demands, lack of resources and police stressors on the one hand, and job satisfaction on the other hand. It can be deduced from the results and literature that high levels of stress will lead to lower job satisfaction and higher levels of suicide ideation. Additionally, statistically and practically significant relationships were found between job demands, lack of resources and police stressors on the one hand, and amount and adequacy of support from the SAPS in general, top management, direct commander and colleagues on the other hand. Social support moderates the effects of stress and a lack a social support leads to higher suicide ideation.

The findings indicate that suicide attempts, passive coping, medical conditions, alcohol abuse, problem-focused coping and police stressors can be used to predict suicide ideation in police officers. Suicide attempts explained 8% of the variance in suicide ideation, while passive coping explained 3% of the variance in suicide ideation. Thus, suicide attempts and passive coping strategies play an important role in the prediction of suicide ideation. Alcohol and drug abuse can be seen as maladaptive coping strategies and contribute to higher levels of suicide ideation. The variables identified to predict suicide ideation classified almost 65% of police members who measured high on suicide ideation correctly while they classified almost 90% of the police members who measured low on suicide ideation correctly. Therefore, it can be concluded that certain coping strategies, police stressors, medical conditions and alcohol abuse could be used as a model to predict suicide ideation in police officers.

3.2 LIMITATIONS OF THE STUDY

The following limitations have emerged during the study:

- Because the study was conducted in the Eastern Cape only, the possibility exists that the results could have been influenced by demographic and other situational factors. This implies that the results can not be generalised for the entire country.
- Few female police officers were included in the study population.
- The influence of personality dimensions and the relationship of these with coping, stress and suicide ideation have not been included in this study. This could have played an important role in the prediction of suicide ideation.
- Only uniformed police members were included in the study population, while statistics show that a significant number of administrative personnel in the SAPS commit suicide.
- A cross-sectional design was used in this research, which implies that the direction of the relationships could not be determined.

3.3 RECOMMENDATIONS

Recommendations pertaining to the specific organisation used in this study, as well as recommendations for future research are made in this section.

3.3.1 Recommendations for the organisation

The following recommendations can be made on the basis of the results of this research.

- The SAPS needs to prevent suicidal thoughts and intentions by helping police officers cope with work-related problems and relationship difficulties. These efforts should include support from the direct commanders, the helping professions and the organisation, and the offering of treatment if alcohol abuse or serious distress is present. Police officers must also be encouraged to make use of more adaptive coping strategies to manage occupational stress.
- The SAPS should examine maladaptive coping mechanisms and find methods to neutralise the negative effects that follow the use of these behaviours. The teaching and monitoring of officers' adaptive and maladaptive coping skills remain a limitation in police training and job supervision. An organisational structure is needed in the

SAPS to monitor the officers' use of maladaptive coping and the lack of adaptive coping. This would encourage continued access to stress management training.

- Regarding stress, the SAPS should attend to the levels of stress police officers are experiencing. The SAPS needs to prevent police officers from becoming stressed as this can contribute to the prevention of serious conditions such as depression, suicidal behaviour, aggression and irrational acts. The reduction of excessive workloads, increasing participation in decision-making and the institution of flexible work schedules are some aspects of the organisation that could be changed to reduce the stress levels of police members.
- The SAPS also needs to enhance the amount of support police officers receive. Police officers need social support from the helping professions, their supervisors and the organisation at large. The helping professions should train counsellors to provide social support to stressed individuals. Interventions in the form of counselling sessions in which police officers could vent emotional frustrations concerning the organisation could also be implemented. Organisational and supervisory support should also be encouraged. Other suggestions for coping with stress include the provision of outlets for physical aggression needs through exercise and sporting that will reduce the stress police officers are experiencing, in-service training to combat and prevent stress and negative behaviour and a strong and supportive leadership within the force. Effective coping and adequate social support are crucial dimensions.

3.3.2 Recommendations for future research

The following recommendations can be made for future research.

- The relationship between personality dimensions and suicide ideation in the SAPS should be investigated.
- Future research must be done to investigate the influence of personality dimensions on coping, stress and suicide ideation in the SAPS.
- Stress, coping and suicide ideation in police officers could also be investigated in relation to other variables such as situational factors, job performance and job satisfaction.

- Regarding coping, longitudinal studies are required to learn more about the factors that influence coping responses among police officers.
- Future research should also be directed more towards the specific coping mechanisms used by police officers.

REFERENCES

- Amirkhan, J.H. (1994). Criterion validity of coping measures. *Journal of Personality Assessment*, 62, 242-261.
- Anshel, M.H. (2000). A conceptual model and implications for coping with stressful events in police work. *Criminal Justice and Behaviour*, 27, 375-400.
- Beehr, T.A., Johnson, L.B. & Nieva, R. (1995). Occupational stress: Coping of police and their spouses. *Journal of Organizational Behavior*, 16, 3-25.
- Beetge, B. (1993). Selfmoord in die SA Polisie – Wat word tans daaraan gedoen? *Servamus*, 17-20.
- Biggam, F.H., Power, K.G., MacDonald, R.R., Carcary, W.B. & Moodie, E. (1997). Self-perceived occupational stress and distress in a Scottish police force. *Work & Stress*, 11, 118-133.
- Bishop, G.D., Tong, E.M.W., Diong, S.M., Enkelmann, H.C., Why, Y.P., Khader, M. (1996). The relationship between coping and personality among police officers in Singapore. *Journal of Research in Personality*, 35, 353-374.
- 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. (1993). Work-family stress, conflict, coping and burnout in police officers. *Stress Medicine*, 9, 181-180.
- Burke, R.J. (1994). Stressful events, work-family conflict, coping, psychological burnout, and well-being among police officers. *Psychological Reports*, 75, 787-800.
- Callan, V.J. (1993). Individual and organizational strategies for coping with organizational change. *Work and Stress*, 7, 63-75.
- Carver, C.S., Scheier, M.F. & Wientraub, J.K. (1989). Assessing coping strategies: A theoretical based approach. *Journal of Personality and Social Psychology*, 56, 267-283.
- Clark, L.A. & Watson, D. (1995). Constructing Validity: Basic issues in objective scale development. *Psychological Assessment*, 7, 309-319.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Revised ed. Orlando, FL: Academic Press.
- Cooper, C.L., Kirkcaldy, B.D. & Brown, J. (1994). A model of job stress and physical health: the role of individual differences. *Personality Individual Difference*, 16, 653-655.

- 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.
- Evens, B.J. & Coman, G.J. (1992). General versus specific measures of occupational stress: An Australian police survey. *Stress Medicine*, 9, 11-20.
- Fain, D.B. & McCormick, G.M. (1988). Use of Coping Mechanisms as a Means of Stress Reduction in North Louisiana. *Journal of Police Science and Administration*, 16, 21-28.
- Folkman, S. & Lazarus, R.S. (1984). *Stress, appraisal and coping*. New York: Springer.
- Graf, F. (1986). The relationship between social support and occupational stress among police officers. *Journal of Police Science and Administration*, 14, 178-184.
- Gulle, G., Tredoux, C. & Foster, D. (1998). Inherent and organisational stress in SAPS: an empirical survey in the Western Cape. *South African Journal of Psychology*, 28, 129-134.
- Hageman, M.J.C. (1978). Occupational stress and marital problems. *Journal of Police Science and Administration*, 6, 402-411.
- Hirsh, J. & Ellis, J.B. (1995). Family support and other social factors predicting 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 Psychiatrica Scandinavica*, 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* (4th ed.). Orlando, FL: Harcourt.
- Kohn, P.M. (1996). On Coping adaptively with daily hassles. In M. Zeider & N.S. Endler (Eds.), *Handbook of Coping* (pp. 181-201), New York: John Wiley.
- Kop, N., Euwema, M. & Schaufeli, W. (1999). Burnout, job stress and violent behaviour among Dutch police officers. *Work and Stress*, 13, 326-340.
- Kruger, G. (1996, January 30). SAPD-stres: 'n Kultuur teen sielkunde kwel: Geestes- gesondheid moet prioriteit wees. *Beeld*, p. 11.
- Lott, L.D. (1995, November). Deadly secrets: Violence in the police family. *FBI Law Enforcement Bulletin*, 64, 12-16.

- Lowenstein, L.F. (1999). Treating stress in the police force. *The Police Journal*, 72, 65-74.
- 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.
- McCrae, R.R. & Costa, P.T. (1986). Personality coping and coping effectiveness in an adult sample. *Journal of Personality*, 54, 385-405.
- Means, J. & Mauch, T.G. (1998). Negative Mood Regulation Expectancies Predict Anger among Police Officers and Buffer the Effects of Job Stress. *The Journal of Nervous and Mental Disease*, 186, 120-125.
- Moore, D.S. (1995). *The basic practice of statistics*. New York: W.H. Freeman.
- Moos, R.H. (1994, July). *Conceptual and empirical advances in stress and coping theory*. Paper presented at the 23rd 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.
- Nel, J. & Burgers, T. (1998). Stress and Trauma in the Work Environment. *Unisa Psychologia*, 25, 17-24.
- Nunnally, J.C. & Bernstein, I.H. (1994). *Psychometric theory* (3rd ed.). New York: McGraw-Hill.
- Osman, A., Kopper, B.A., Linehan, M.M., Barrios, F.X., Gutierrez, P.M. & Bagge, C.L. (1999). Validation of the Suicide ideation Questionnaire and the Response for Living Inventory in an adult psychiatric inpatient sample. *Psychological Assessment*, 11, 115-123.
- Parkes, K.R. (1986). Coping in stressful episodes: The role of individual differences, Environmental Factors, and Situational Characteristics. *Journal of Personality and Social Psychology*, 51, 1277-1292.
- Patterson, G.T. (1999). Coping effectiveness and occupational stress in police officers. *Police Trauma*.
- Patterson, G.T. (2000). Demographic factors as predictors of coping strategies among police officers. *Psychological Reports*, 87, 275-283.
- Pienaar, J. (2002). *Coping, stress and suicide ideation in the South African Police Services*. Unpublished doctoral thesis, PU for CHE, Potchefstroom.
- Pieterse, J.J. (1992). Selfmoord: 'n Biopsigososiale verskynsel. *Servamus*, Feb.

- Reynolds, W. M. (1991a). *Suicide Ideation Questionnaire: Professional Manual*. Odessa, FL: Psychological Assessment Resources.
- Reynolds, W.M. (1991b). Psychometric characteristics of the Adult Suicide ideation Questionnaire with college students. *Journal of Personality Assessment*, 56, 289-307.
- Rossouw, L. (1997). *Police suicide: Research findings – 1994 to 1997*. Pretoria: South African Police Services.
- Rossouw, L. (1998). *Police suicide: Annual report - 1998*. Pretoria: South African Police Services.
- Rossouw, L. (1999). *Police suicide: Annual report - 1999*. Pretoria: South African Police Services.
- 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. (in press). Suicide ideation in the South African Police Services in the North West Province. *Journal of Industrial Psychology*.
- Rothmann, S. & Van Rensburg, P. (2001, September). *Correlates of suicide ideation in the South African Police Services in the North West Province*. Poster session presented at the 13th conference of the South African Institute for Management Sciences, Stellenbosch.
- SAS Institute. (2000). *The SAS System for Windows: Release 8.01*. Cary, NC: SAS Institute Inc.
- Schmidtke, A., Fricke, S. & Lester, D. (1999). Suicide among German federal and state police officers. *Psychological Reports*, 84, 167-177.
- 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.
- Steyn, H.S. (1999). *Praktiese betekenisvolheid: Die gebruik van effekgroottes*. Wetenskaplike bydraes – Reeks B: Natuurwetenskappe Nr. 117. Potchefstroom: PU vir CHO.
- 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.
- Vilhjalmsson, R., Kristjansdottir, G. & Sveinbjardottir, E. (1998). Factors associated with suicide ideation in adults. *Social Psychiatry and Psychiatric Epidemiology*, 33, 97-103.
- Violanti, J.M. (1995). Trends in police suicide. *Psychological Reports*, 77, 688-690.

- Violanti, J.M., Marshall, J.R. & Howe, B.H. (1985). Stress, coping and alcohol use: The police connection. *Journal of Police Science and Administration*, 13, 106-110.
- Yang, B. & Clum, M.A. (1994). Life stress, social support, and problem-solving skills predictive of depressive symptoms, hopelessness and suicide ideation in an Asian student population: A test of a model. *Suicide and Life-Threatening Behavior*, 24, 127-139.
- Zhang, J. & Jin, S. (1998). Interpersonal relations and suicide ideation in China. *Genetic, Social and General Psychology Monographs*, 124, 79-94.