

**BURNOUT, JOB STRESS AND COPING IN THE
SOUTH AFRICAN POLICE SERVICE IN THE
LIMPOPO PROVINCE**

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

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Potchefstroom
May 2003

CHAPTER 1

INTRODUCTION

This mini-dissertation is about burnout, job stress and coping in the South African Police Service in the Limpopo Province.

In this chapter the problem statement is discussed. This is followed by the research objective, which includes the general objective and specific objectives. The research method is explained and the division of chapters given.

1.1. PROBLEM STATEMENT

Job burnout can be conceptualised "as a psychological syndrome in response to chronic interpersonal stressors on the job" (Maslach, Schaufeli & Leiter, 2001, p. 399). Burnout consists of three key dimensions, namely exhaustion, cynicism and lack of professional efficacy. Exhaustion represents the basic individual stress dimension of burnout. Cynicism refers to detachment from the job. Lack of professional efficacy refers to a sense of ineffectiveness and lack of accomplishment and represents the self-evaluation dimension of burnout (Maslach et al., 2001).

Burnout can be seen as an individual experience that is specific to the work context. Research over the past twenty-five years has maintained a consistent focus on the situational factors that are the prime correlates of this phenomenon. The results prove the definite impact of the work situation on individual burnout (Maslach et al., 2001).

Research over the past two decades has shown that burnout is not only related to negative outcomes for the individual – including depression, a sense of failure, fatigue and loss of motivation – but also to negative outcomes for the organisation, including absenteeism, turnover rates and lowered productivity (Schaufeli & Enzmann, 1998). According to Levert, Lucas and Ortlepp (2000), burned-out workers show a lack of commitment and are less capable of providing adequate services, especially along dimensions of decision-making and initiating involvement with clients (Fryer, Poland, Bross, & Krugman, 1988; Maslach, 1982). According to Sammut (1997), burned-out workers are also too depleted to give of themselves in a creative, co-operative fashion.

According to Venter (1993), questions may arise about the relevance of burnout within the South African Police Service (SAPS). She continues by saying that the relevance can be found in the fact that between April 1992 and April 1993 a great number of police members were declared medically unfit to perform their everyday duties due to burnout. Alexander, Walker, Innes and Irving (1993) found in their study that overworked police members suffer adverse effects such as tiredness, irritability, impaired work performance and impaired family relationships. Evidently most of these are also symptoms of burnout. After analysing the results of various studies, Kop, Euwema and Schaufeli (1999) concluded that emotional exhaustion and depersonalisation are strongly related to stressors and work attitudes of police officers.

Hans Selye (as cited in Violanti, 1996), a pioneer researcher in the field of stress, first noted in 1978 that police work was one of the most stressful occupations in the world. Today still police work is generally regarded as highly stressful (Burke, 1994; Gulle, Tredoux & Foster, 1998; Peltzer, 2001).

Anderson, Litzenberger and Plecas (2002), citing others, remind us that stress, particularly when it becomes chronic, can lead to a multiplicity of problems for police officers as well as for the organisation they work for. They continue by saying that the literature on police officer stress indicates that stress can lead to a greater likelihood of absenteeism, burnout, job dissatisfaction, early retirement or attrition, a weakened immune system with increased short- and long-term disability, poor work performance and, potentially, premature death. Gulle et al. (1998) found that police members in South Africa show a greater degree of stress than a sample of police members from the USA. The results also indicated that the way in which the police organisation operates in South Africa creates stress additional to the inherent pressure already existing as a result of the nature of police work (Gulle et al., 1998).

In the literature a distinction is made between "inherent stress" caused by the nature of police work itself (danger work) and "organisational stress" caused by the bureaucratic nature of police organisations (administrative demands) (Alexander et al., 1993; Biggam, Power, MacDonald, Carcary & Moodie, 1997; Brown & Campbell, 1990, 1994; Peltzer, 2001; Van Rooyen, 1987; Violanti & Aron, 1994). Koortzen (1996) found that external stressors, determined largely by the environment and the community, had a greater effect on the members of the police in South Africa. According to Nel (1999), these factors would include

the following: the socio-political changes in the country, negative public attitudes, the lack of trust from the community, subsequent criticism of the police and limited support for the efforts of the police, poor gun control in South Africa in terms of the society as a whole, but also the easy access to weapons which the police enjoy, long working hours, often being away from home, poor salaries and associated financial constraints, and often inadequate housing and living circumstances.

Some researchers (Alsoofi, Al-Heeti, & Alwashli, 2000; Anshel, 2000; Golembiewski & Munzenrider, 1988) have suggested that individual coping initiatives may be important in ameliorating or exacerbating psychological burnout.

In a study done by Hart, Wearing and Headey (1995) it was found that emotion-focused coping strategies were maladaptive, whereas problem-focused coping strategies were adaptive. The important issue is the extent to which police officers emphasise the use of one strategy over the other, as the results of this study suggest police officers use both strategies to varying degrees (Hart et al., 1995).

From the above discussion it is clear that burnout is a potentially serious problem in the police service. This research will investigate the relationship between burnout, job stress and coping in the SAPS in the Limpopo Province. Once the relationship between burnout, job stress and coping in police officers has been determined, it may have implications for recruitment, induction, selection, training, development and performance management.

This research will make the following contributions to the subject of Industrial Psychology and the practice thereof in organisations:

- It will add to the existing information on burnout in the police, specifically in the South African context.
- A causal model of burnout will have been established in order to predict this phenomenon in the police.

Through this investigation a better understanding of the well-being of the SAPS will be gained, which could lead to the South African community showing more empathy with and

putting less pressure on police officers. The organisation will benefit from this through the reduced costs spent on the health and well-being of police officers. The community, as the clients receiving the protection service, will benefit through the greater effectiveness of the SAPS.

1.2. RESEARCH OBJECTIVES

The research objectives consist of a general aim and specific objectives.

1.2.1. General aim

With reference to the above formulation of the problem, the general aim of this study was to investigate the relationship between burnout, job stress and coping within the South African Police Services in the Limpopo Province.

1.2.2. Specific objectives

- To conceptualise the relationship between job stress, coping and burnout from the literature.
- To determine the relationship between burnout, job stress and coping in the SAPS in the Limpopo Province.
- To test a causal model of burnout, job stress and coping in the SAPS in the Limpopo Province.

1.3 RESEARCH METHOD

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

1.3.1 Literature review

The literature review focuses on previous research on burnout, job stress and coping. An overview is given of how these variables are conceptualised in the literature and of the possible relationships between them.

1.3.2 Empirical study

1.3.2.1 Research design

A survey design is used to reach the research objectives. The specific design is a cross-sectional design, whereby a sample was drawn from a population at one time (Shaughnessy & Zechmeister, 1997). Information collected is used to describe the population at that time. This design can be used also to assess interrelationships among variables within a population. According to Shaughnessy and Zechmeister (1997) this design is ideally suited when the aim of the study is descriptive and predictive by nature.

1.3.2.2 Study population

A stratified, random sample ($N = 192$) is taken from police personnel in the Limpopo Province. The police stations are divided into small (fewer than 25 staff members), medium (25–100 staff members) and large (more than 100 staff members) stations. All police members at randomly identified small and medium stations in each of the areas are asked to complete the questionnaires. In the large stations stratified random samples are taken according to sex and race.

1.3.2.3 Measuring instruments

Three questionnaires are utilised in the empirical study, namely the Maslach Burnout Inventory – General Survey (MBI-GS) (Schaufeli, Leiter, Maslach & Jackson, 1996), the Police Stress Inventory (PSI) (Pienaar & Rothmann, in press) and the COPE Questionnaire (COPE) (Carver, Scheier & Wientraub, 1989).

The *Maslach Burnout Inventory – General Survey* (MBI-GS) (Schaufeli et al., 1996) is used to measure burnout. The MBI-GS has three subscales: Exhaustion (Ex) (five items, e.g. "I feel used up at the end of the workday"), Cynicism (Cy) (five items, e.g. "I have become less enthusiastic about my work") and Professional Efficacy (PE) (six items, e.g. "In my opinion, I am good at my job"). Together the subscales of the MBI-GS provide a three-dimensional perspective on burnout. Internal consistencies (Cronbach alpha coefficients) reported by Schaufeli et al. (1996) varied from 0.87 to 0.89 for Exhaustion, 0.73 to 0.84 for Cynicism and

0.76 to 0.84 for Professional Efficacy. Test-retest reliabilities after one year were 0.65 (Exhaustion), 0.60 (Cynicism) and 0.67 (Professional Efficacy) (Schaufeli et al., 1996). All items are scored on a 7-point frequency rating scale ranging from "0" (never) to "6" (daily). High scores on Ex and Cy, and low scores on PE, are indicative of burnout. Storm (2002) confirmed the 3-factor structure of the MBI-GS in a sample of 2 396 SAPS members, but recommended that Item 13 be dropped from the questionnaire. She confirmed the structural equivalence of the MBI-GS for different race groups within the SAPS. The following Cronbach alpha coefficients were obtained for the MBI-GS: Exhaustion: 0.88; Cynicism: 0.79; Professional Efficacy: 0.78 (Storm, 2002).

The *Police Stress Inventory* (PSI) 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 of 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" the participant had experienced the particular 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 *COPE Questionnaire* (COPE) is used to measure participants' coping strategies. The COPE is a multidimensional 53-item coping questionnaire that indicates the different ways that people cope in different circumstances (Carver et al., 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 PSI. Test-retest reliability vary from 0.46 to 0.86 and from 0.42 to 0.89 (applied after two weeks).

1.3.2.4 Statistical analysis

The statistical analysis is carried out with the help of the SAS program (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) are used to analyse the data.

Effect sizes are computed to determine the significance of the findings. Pearson product-moment correlation coefficients are used to specify the relationships between the variables. A cut-off point of 0.30 (medium effect, Cohen, 1988) is set for the practical significance of correlation coefficients.

Analysis of variance and t-tests are used to determine the differences between the levels of burnout, stress, coping and engagement of different demographic groups. The following formula is used to compute the effect sizes (d) of these differences (Steyn, 1999):

$$\frac{M_A - M_B}{\sqrt{MSE}}$$

where

M_A = Mean of the construct in one demographic group

M_B = Mean of the construct in the other demographic group

MSE = Mean square error

The following formula is used to determine the practical significance of differences (d) when t-tests are used:

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

where

$Mean_A$ = Mean of the first group

$Mean_B$ = Mean of the second group

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

A cut-off point of 0.80 (large effect, Cohen, 1988) is set for the practical significance of differences.

Structural equation modelling is used to construct a causal model of burnout. Structural equation modelling is a statistical methodology that takes a confirmatory (i.e. hypothesis-testing) approach to the analysis of a structural theory bearing on some phenomenon (Byrne, 2001). The term "structural equation modelling" (SEM) conveys two important aspects of the procedure:

- That the causal processes being studied are represented by a series of structural (i.e. regression) equations, and
- that these structural relations can be modelled pictorially to enable a clear conceptualisation of the theory being studied.

Several aspects of SEM differentiate it from the previous generation of multivariate procedures (Byrne, 2001). Firstly, it adopts a confirmatory rather than an exploratory approach to data analysis. Furthermore, by demanding that the pattern of inter-variable relations be specified a priori, SEM lends itself well to the analysis of data for inferential purposes. Secondly, although traditional multivariate procedures are incapable of either assessing or correcting for error in measurement, SEM provides explicit estimates of these error variance parameters. Thirdly, SEM procedures can both unobserved (latent) and observed variables.

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

This chapter discussed the problem statement and research objectives. The measuring instruments and research method used in this research were explained, and the division of chapters was given.

CHAPTER 2

RESEARCH ARTICLE

BURNOUT, JOB STRESS, AND COPING IN THE SOUTH AFRICAN POLICE SERVICE IN THE LIMPOPO PROVINCE

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ABSTRACT

The objective of this research was to determine the relationship between burnout, job stress, and coping in the South African Police Service. A survey design was used. The study population ($N = 192$) consisted of police personnel in Limpopo. The Maslach Burnout Inventory – General Survey (MBI-GS), Police Stress Inventory (PSI), and COPE were used as measuring instruments. Structural equation analysis showed that job demands (as stressors) are associated with exhaustion. Passive coping strategies contributed to exhaustion and lower levels of professional efficacy, while seeking emotional support led to lower exhaustion. Job demands did not contribute directly to cynicism, but it seems to have had an impact on cynicism through exhaustion. A lack of resources (inverse), active coping strategies and passive coping strategies (inverse) were associated with professional efficacy. A lack of resources was also associated with feelings of cynicism.

OPSOMMING

Die doelstelling van hierdie navorsing was om die verband tussen uitbranding, stres en coping binne die Suid-Afrikaanse Polisie diens te ondersoek. 'n Opname-ontwerp is gebruik. Die studiepopulasie ($N = 192$) het bestaan uit polisiepersoneel in die Limpopoprovinsie. Die Maslach-uitbrandingsvraelys - Algemene Opname, die Poliestres-Opname en die COPE is as meetinstrumente gebruik. Strukturele vergelykingsmodellering het aangetoon dat werkseise (as stressors) geassosieer word met uitputting. Passiewe coping-strategieë het bygedra tot uitputting en laer vlakke van professionele doeltreffendheid, terwyl die soeke na emosionele ondersteuning tot laer uitputting gelei het. Werkseise het nie tot sinisme bygedra nie, maar dit blyk dat dit op sinisme inwerk via uitputting. 'n Tekort aan hulpbronne (invers), aktiewe coping-strategieë en passiewe coping-strategieë (invers) is geassosieer met professionele doeltreffendheid. 'n Tekort aan hulpbronne is ook geassosieer met gevoelens van sinisme.

Burnout, the exhaustion of workers in service jobs, has been the subject of many studies over the past 25 years (Kop, Euwema & Schaufeli, 1999). According to Maslach (1982), the first articles about burnout appeared in the mid 1970s, and generated an enthusiastic response. Interest in this topic has led to much research, which can be interpreted as a sign of how important the issue of burnout is (Maslach, 1982).

Most of the studies about burnout focused on occupational groups such as teachers, nurses, physicians and social workers, whereas police officers have rarely been investigated, despite the extensive literature on job stress in policing (Kop et al., 1999). South African statistics regarding continuous exposure to violence, retirement as a result of stress-related psychological disorders as well as the high suicide rate in the South African Police Service (SAPS) are indicators that many police officers experience their circumstances as stressful and traumatic (Kopel & Friedman, 1999). The productiveness, motivation and health of a police service serve as an important contributor to the stability and economic growth of South Africa (Storm & Rothmann, in press). Therefore, it seems necessary to research areas that could possibly impact on the standard of police officers' services. One of these areas is burnout.

Burnout can be seen as an individual experience that is specific to the work context. Research over the past twenty-five years has maintained a consistent focus on the situational factors that are the prime correlates of this phenomenon. The results prove the definite impact of the work situation on individual burnout (Maslach, Schaufeli & Leiter, 2001).

Burnout is not only related to negative outcomes for the individual – including depression, a sense of failure, fatigue and loss of motivation – but also to negative outcomes for the organisation, including absenteeism, turnover rates and lowered productivity (Maslach et al., 2001; Schaufeli & Enzmann, 1998). According to Levert, Lucas and Ortlepp (2000), burned-out workers show a lack of commitment and are less capable of providing adequate services, especially along the dimensions of decision-making and initiating involvement with clients (Fryer, Poland, Bross, & Krugman, 1988; Maslach, 1982). According to Sammut (1997), burned-out workers are also too depleted to give of themselves in a creative, co-operative fashion. Maslach et al. (2001) mention that burnout can also be "contagious" and perpetuate itself through informal interactions on the job.

In the literature a distinction is made between "inherent stress" caused by the nature of police work itself (dangerous work) and "organisational stress" caused by the bureaucratic nature of police organisations (administrative demands) (Alexander, Walker, Innes & Irving, 1993; Biggam, Power, MacDonald, Carcary & Moodie, 1997; Brown & Campbell, 1990, 1994; Peltzer, 2001; Van Rooyen, 1987; Violanti & Aron, 1994). Loo (1984) grouped police stressors into four categories: organisational practices and characteristics; police work itself; the criminal justice system and its characteristics; and the public.

Ways in which an individual can attempt to deal with job stressors (i.e. coping) is one of the basic issues in the burnout domain (Beehr, Johnson & Nieva, 1995). From the literature it is evident that certain coping styles showed a positive correlation with burnout (Maslach et al., 2001). Those who are burned out cope with stressful events in a rather passive, defensive way, whereas active coping is associated with less burnout. In particular, active coping is associated with the dimension of efficacy (Maslach et al., 2001).

Based on the above discussion, it is clear that job stressors and coping might be related to burnout of police officers. However, no studies including these factors in a causal model of burnout in South Africa, and more specifically in the Limpopo Province, were found in the literature. Therefore, the objective of this study was to determine the relationship between burnout, job stress and coping of police officers in the Limpopo Province.

Burnout in the police profession

Job burnout can be conceptualised "as a psychological syndrome in response to chronic interpersonal stressors on the job" (Maslach et al., 2001, p. 399). This response consists of three key dimensions, namely an overwhelming exhaustion (which represents the basic individual stress dimension of burnout); feelings of cynicism (or depersonalisation) and detachment from the job, representing the interpersonal context dimension of burnout; and a sense of ineffectiveness and lack of professional efficacy, which represents the self-evaluation dimension of burnout (Maslach et al., 2001). The central issue is that these three dimensions are linked (Maslach & Jackson, 1981).

There appears to be sufficient theoretical rationale to expand burnout beyond the human service professions. Demerouti, Bakker, Nachreiner and Schaufeli (2001) explain this

rationale as follows: "It is likely that the core dimensions of burnout as found in the human services – emotional exhaustion and depersonalisation – are particular manifestations of more generic phenomena – exhaustion and disengagement – that may be found in other occupational fields as well" (p. 500). Referring to the above conceptualisation of burnout the Maslach Burnout Inventory was developed to measure burnout among human services professionals (the MBI-HSS, for Human Service Survey). This inventory includes three subscales that measure the three dimensions incorporated in Maslach's definition of burnout (i.e., emotional exhaustion, depersonalisation and personal accomplishment).

Many items of the MBI-HSS refer to contacts with clients, rendering it inappropriate for use in non-contact professional contexts. Consequently the Maslach Burnout Inventory – General Survey (MBI-GS) was developed for the measurement of burnout in non-contact professions used outside the human services (Taris, Schreurs & Schaufeli, 1999). This inventory, apart from the subscales from the MBI-HSS, includes three more generic burnout dimensions labelled exhaustion, cynicism and professional efficacy. These MBI-GS subscales clearly parallel those of the original MBI. However, the MBI-GS includes different items that refer to more general, non-social aspects of the job (Demerouti et al., 2001).

Results from research done on members of the SAPS showed a greater degree of stress than a sample of police members from the USA. The results also indicated that the way in which the police organisation operates in South Africa creates stress additional to the inherent pressure already existing as a result of the nature of police work (Gulle, Tredoux & Foster, 1998). Furthermore, Koortzen (1996) found that external stressors, determined largely by the environment and the community, had a greater effect on members of the police in South Africa. According to Nel (1999), these factors would include the following: the socio-political changes in the country, negative public attitudes, a lack of trust from the community, subsequent criticism of the police and limited support for the efforts of the police, poor gun control in terms of the society as a whole, but also the easy access to weapons that the police enjoy, long working hours, often being away from home, poor salaries and associated financial constraints, and often inadequate housing and living circumstances.

From a study conducted by Wiese, Rothmann and Storm (in press) on a sample of police members from KwaZulu-Natal, a lack of resources was the stressor with the highest intensity and frequency. Staff shortages, inadequate salaries and other officers not doing their job

(Wiese et al., in press) as well as inadequate or poor quality equipment, inadequate salary and seeing criminals go free (Pienaar & Rothmann, in press) were seen as stressors with a high intensity and average frequency. Regarding stressors associated with the job demands of a police officer, having to deal with crisis situations, excessive paper work, having to perform tasks not in their job descriptions and having to do someone else's work were found to be the stressors with the highest intensity and frequency (Wiese et al., in press).

Alexander et al. (1993) found in their study that police members being overworked has adverse effects such as tiredness, irritability, impaired work performance and impaired family relationships. Evidently most of these are also symptoms of burnout. By looking at several studies, Kop et al. (1999) came to the conclusion that emotional exhaustion and depersonalisation are strongly related to stressors and work attitudes of police officers.

According to Venter (1993), questions may arise about the relevance of burnout within the South African Police Service (SAPS). The relevance can be found in the fact that between April 1992 and April 1993 a great number of police members were declared medically unfit to perform their everyday duties due to burnout. Wiese et al. (in press) also found a positive correlation between burnout and stress among police members in KwaZulu-Natal. This was confirmed by previous research done by Burke (1994).

The relationship between burnout, job stress and coping

Hans Selye (as cited in Violanti, 1996), a pioneer researcher in the field of stress, first noted in 1978 that police work was one of the most stressful occupations in the world. Police work is still today generally regarded as highly stressful. Loo (1984, p. 13) confirms this by saying: "Police officers are subjected to many occupational stressors, and policing is among the most stressful occupations".

Anderson, Litzenberger and Plecas (2002), as well as Anshel (2000), remind us that stress, particularly when it becomes chronic, can lead to a multiplicity of problems for police officers as well as for the organisation they work for. They continue by saying that the literature on police officer stress indicates that stress can lead to a greater likelihood of absenteeism, burnout, job dissatisfaction, early retirement or attrition, a weakened immune

system with increased short- and long-term disability, poor work performance and, potentially, premature death.

Brill (1984) is of the opinion that stress could be seen as a temporary adaptation process that is accompanied by mental and physical symptoms. Schaufeli and Enzmann (1998), as well as Loo (1984), consider burnout as a particular kind of prolonged job stress. Therefore, an individual who experiences stress must be able to return to his/her normal level of functioning (adaptation has been successfully performed), while burnout refers to a breakdown in adaptation, accompanied by chronic malfunctioning at work (Schaufeli & Enzmann, 1998). Loo (1984) continues by saying that individuals are typically drawn to the law enforcement profession by strong value systems and the desire to serve. However, once the novelty of the job has worn off, they start to experience the frustrations that will gnaw at them over the course of their career. Some police officers who are highly committed to the law enforcement profession try to cope with these long-term stressors by dampening their emotional commitment and reactions, thereby becoming apathetic over time, detached from their work, physically exhausted, depressed, cynical, etc. (Loo, 1984).

Considerable evidence exists in the literature that work setting characteristics, particularly chronic work stressors, influence levels of psychological burnout (Burke & Richardsen, 1993; Golembiewski & Munzenrider, 1988; Jackson, Schwab & Schuler, 1986; Maslach, 1982b). Such characteristics have included features of the job itself, unmet expectations, quality of supervision and constraints in one's organisational environment. Work-family conflict has also been identified as a factor related to psychological burnout (Burke, 1997).

From a study conducted by Storm and Rothman (in press) on members of the SAPS, it was evident that police officers who experienced high job demands (i.e. meeting deadlines, making critical on-the-spot decisions and dealing with crisis situations) and a lack of resources (i.e. insufficient personnel to help them handle an assignment, inadequate or poor quality equipment and lack of recognition for good work) experienced high levels of exhaustion. In contrast to other research findings, such as those of Lee and Ashforth (1996), Leiter (1991) and Taris et al. (1999) job demands and/or a lack of resources were not directly related to cynicism (Storm & Rothman, in press). According to Lee and Ashforth (1996) emotional exhaustion as a form of strain in the "stress-strain-coping-self-evaluation process" (Lee & Ashforth, 1996, p. 123) is directly affected by work demands and resources, whereas

depersonalisation as a form of defensive coping and personal accomplishment as a form of self-evaluation are indirectly affected through emotional exhaustion (Lee & Ashforth, 1996). From the eight demand correlates used in Lee and Ashforth's (1996) study, five were strongly associated with emotional exhaustion, whereas only unmet expectations as a resource correlate had the same magnitude of association with emotional exhaustion. Similar findings were reported by Taris et al. (1999) where job demands were more strongly related to exhaustion than to cynicism or professional efficacy.

According to Lee and Ashforth (1996) many service providers adopt the defence strategy of withdrawal through depersonalisation as soon as strain occurs when they feel they no longer have sufficient emotional resources to handle the interpersonal stressors demanded by their jobs. It is therefore not surprising that depersonalisation was also strongly associated with role stress and stressful events (Lee & Ashforth, 1996).

Lee and Ashforth (1996) also reported weak associations between personal accomplishments and most of the resource correlates. The only two exceptions were work friends and participation (Lee & Ashforth, 1996). It seems from this study by Lee and Ashforth (1996) that emotional exhaustion and depersonalisation are much more strongly correlated with each other than with personal accomplishment.

In the study conducted by Taris et al. (1999) both cynicism and professional efficacy were related to the resource variables they used, but only cynicism was affected by experience, whereas only professional efficacy was linked to gender.

From a study conducted by White, Lawrence, Biggerstaff and Grubb (1985) regarding three major areas of stress (physical/psychological threat, evaluation systems and lack of support) in police officers, a positive correlation was found between "lack of support", and emotional exhaustion and feelings of depersonalisation. It was also these officers who reported less exercise and less involvement in hobbies, as well as more frequent appropriate and inappropriate coping behaviours (White et al., 1985).

Lazarus and Folkman (1984) define coping patterns in terms of the functions coping strategies serve, for example, to avoid, confront or analyse. By defining coping in this way, it

would allow one to examine the problem-solving aspects of coping as well as its emotion-regulating function (Lazarus & Folkman, 1984).

Some researchers (Alsoofi, Al-Heeti & Alwashli, 2000; Anshel, 2000; Golembiewski & Manzenrider, 1988) have suggested that individual coping initiatives may be important in ameliorating or exacerbating psychological burnout. According to Folkman, Lazarus, Gruen and DeLongis (1986) coping refers to the cognitive and behavioural strategies that individuals use to manage a stressful situation, as well as the negative emotional reactions elicited by that event.

According to the model of stress developed by Lazarus and associates, differences in stress levels to some extent reflect differences in the appraisal process used by individuals when confronted with a situation which could be construed as a threat or a challenge (Leiter, 1991). Leiter (1991) continues by saying that information regarding an individual's coping patterns would supplement information regarding demands and resources to provide a stronger prediction of experience burnout. Burnout, according to Leiter (1991) is consistent with relatively stable coping patterns, both in terms of actions and cognitive appraisals.

In a study done by Hart, Wearing and Headey (1995) it was found that emotion-focused coping strategies were maladaptive, whereas problem-focused coping strategies were adaptive. The important issue is the extent to which police officers emphasise the use of one strategy over the other, as the results of this study suggest police officers use both strategies to varying degrees (Hart et al., 1995).

Results from a study conducted by Leiter (1991) indicated that information regarding individuals' coping patterns contributes to the prediction of burnout, particularly the emotional exhaustion and diminished personal accomplishment aspects of the syndrome.

From the above discussion it is clear that burnout is a potentially serious problem in the police service. This research will investigate the relationship between burnout, job stress and coping in a sample of police officers. If a relationship between job stress, coping and burnout is found, it may have implications for recruitment, induction, selection, training, development and performance management.

This research will make the following contributions to the subject of Industrial Psychology and the practice thereof in organisations:

- It will add to the existing information on burnout in the police, specifically in the South African context.
- A causal model of burnout will be established in order to predict this phenomenon in the police.

Through this investigation a better understanding of the well-being of the SAPS will be gained, which could lead to the South African community showing more empathy and putting less pressure on police officers. The organisation will benefit from this through the reduced costs on the health and well-being of police officers. The community, as the clients receiving the protection service, will benefit through the greater effectiveness of the SAPS.

RESEACH METHOD

Research design

A survey design was used to achieve the research objectives. The specific design was the cross-sectional design, whereby a sample is drawn from a population at one time (Shaughnessy & Zechmeister, 1997). Information collected is used to describe the population at that time. This design can be used also to assess interrelationships among variables within a population. According to Shaughnessy and Zechmeister (1997), this design is ideally suited to a study where the aim is descriptive and predictive by nature.

Sample

A stratified, random sample ($N = 192$) was taken from police personnel in the Limpopo Province. 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

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

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 for z , SD and d have been determined based on previous studies of burnout in South Africa (Storm & Rothmann, in press).

The police stations were divided into small stations (fewer than 25 staff members), medium (25–100 staff members) and large stations (more than 100 staff members). All police members at randomly identified small and medium stations in each of the areas were asked to complete the questionnaires. In the large stations, stratified random samples were taken according to gender and race. Table 1 provides a summary of the characteristics of the sample used in this study.

Table 1

Characteristics of the Participants

Item	Category	Percentage
Race	White	15.22
	Black	82.07
	Coloured	0.54
	Indian	0.54
	Other	1.63
Rank	Constable	6.08
	Sergeant	17.13
	Inspector	15.47
	Captain	59.12
	Superintendent	0
	Senior Superintendent	2.21
Area	Bushveld	67.57
	Giyani	12.43
	Far North	20.00
Size of station	Small	37.50
	Medium	52.60
	Large	9.90
Education	Grade 10	8.90
	Grade 11	6.28
	Grade 12	60.73
	Technical college diploma	3.14
	Technikon diploma	15.18
	University degree	3.14
	Postgraduate degree	2.62
Gender	Male	84.38
	Female	15.63
Marital status	Single	16.15
	Married	50.00
	Divorced	31.77
	Separated	1.04
	Remarried	1.04
Language	Afrikaans	16.38
	English	3.95
	Sepedi	36.72
	Sesotho	5.65
	Setswana	11.30
	IsiSwati	0.56
	Tshivenda	16.95
	IsiNdebele	1.69
	IsiXhosa	1.13
	Other	5.65
Charge	Yes	23.04
	No	76.96

According to Table 1, the majority of participants were black (82.07 %) and have the educational level of Grade 12 (60.73%). Male participants constituted 84.38% of participants and the majority of participants were married (50%). A total of 36.72% of respondents were Sepedi-speaking, 16.95% were Tshivenda-speaking and 16.38 % were Afrikaans-speaking.

Measuring instruments

Three questionnaires were used in the empirical study, namely the Maslach Burnout Inventory – General Survey (MBI-GS) (Schaufeli, Leiter, Maslach & Jackson, 1996), the Police Stress Inventory (PSI) (Pienaar & Rothmann, in press) and the COPE Questionnaire (COPE) (Carver, Scheier & Weintraub, 1989).

The *Maslach Burnout Inventory – General Survey* (MBI-GS) (Schaufeli et al., 1996) was used to measure burnout. The MBI-GS has three subscales: Exhaustion (Ex) (five items, e.g. "I feel used up at the end of the workday"), Cynicism (Cy) (five items, e.g. "I have become less enthusiastic about my work") and Professional Efficacy (PE) (six items, e.g. "In my opinion, I am good at my job"). Together the subscales of the MBI-GS provide a three-dimensional perspective on burnout. Internal consistencies (Cronbach alpha coefficients) reported by Schaufeli et al. (1996) varied from 0.87 to 0.89 for Exhaustion, 0.73 to 0.84 for Cynicism and 0.76 to 0.84 for Professional Efficacy. Test-retest reliabilities after one year were 0.65 (Exhaustion), 0.60 (Cynicism) and 0.67 (Professional Efficacy) (Schaufeli et al., 1996). All items are scored on a 7-point frequency rating scale ranging from "0" (never) to "6" (daily). High scores on Ex and Cy, and low scores on PE are indicative of burnout. Storm (2002) confirmed the 3-factor structure of the MBI-GS in a sample of 2 396 SAPS members, but recommended that Item 13 be dropped from the questionnaire. She confirmed the structural equivalence of the MBI-GS for different race groups within the SAPS. The following Cronbach alpha coefficients were obtained for the MBI-GS: Exhaustion: 0.88; Cynicism: 0.79; Professional Efficacy: 0.78 (Storm, 2002).

The *Police Stress Inventory* (PSI) was 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" the participant had experienced the particular 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 *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 cope in different circumstances (Carver et al., 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 PSI. Test-retest reliability varies from 0.46 to 0.86 and from 0.42 to 0.89 (applied after two weeks).

Statistical analysis

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

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.

Canonical correlation was used to determine the relationships between the dimensions of burnout, coping and stress. The goal of canonical correlation is to analyse the relationship between two sets of variables (Tabachnick & Fidell, 2001). Canonical correlation is considered a descriptive technique rather than a hypothesis-testing procedure.

Structural equation modelling (SEM) methods as implemented by AMOS (Arbuckle, 1997) were used to construct a causal model of burnout. The following goodness-of-fit indices were used to summarise the degree of correspondence between the implied and observed covariance matrices:

- (1) The χ^2 goodness-of-fit statistic. A large χ^2 relative to the degrees of freedom indicates a need to modify the model to fit the data better;
- (2) The χ^2 /degrees of freedom ratio (CMIN/DF) (Wheaton, Muthén, Alwin & Summers, 1977).
- (3) The Goodness of Fit Index (GFI) indicates the relative amount of the variances/covariances in the sample predicted by the estimates of the population. It usually varies between 0 and 1 and a result of 0.90 or above indicates a good model fit;
- (4) The Adjusted Goodness-of-Fit Index (AGFI) is a measure of the relative amount of variance accounted for by the model, corrected for the degrees of freedom in the model relative to the number of variables;
- (5) The parsimony goodness-of-fit index (PGFI) takes into account the complexity of the hypothesised model in the assessment of overall model fit and provides a more realistic evaluation of the hypothesised model. Byrne (2001) suggested that values > 0.80 are considered to be appropriate;
- (6) The Normed Fit Index (NFI) represents the point at which the model being evaluated falls on a scale running from a null model to perfect fit. This index is normed to fall on a 0 to 1 continuum;
- (7) The Comparative Fit Index (CFI) represents the class of incremental fit indices in that it is derived from the comparison of a restricted model with that of an independence (or null) model in the determination of goodness-of-fit;
- (8) The Tucker-Lewis Index (TLI) (Tucker & Lewis, 1973) is a relative measure of covariation explained by the model that is specifically developed to assess factor models. For NFI, CFI and TLI, it is more or less generally accepted that a value less than 0.90 indicates

that the fit of the model can be improved (Hoyle, 1995), although a revised cut-off value close to 0.95 has recently been advised (Hu & Benler, 1999);

(9) The Root Mean Square Error of Approximation (RMSEA) estimates the overall amount of error; it is a function of the fitting function value relative to the degrees of freedom. Hu and Bentler (1999) suggested a value of 0.06 to be indicative of good fit between the hypothesised model and the observed data.

RESULTS

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

Table 2

Descriptive Statistics, Cronbach Alpha Coefficients and Inter-Item Correlation Coefficients of the Measuring Instruments (N = 192)

Item	Mean	SD	Skewness	Kurtosis	Inter-item <i>r</i>	α
MBI-GS						
Exhaustion	10.21	8.00	0.64	-0.37	0.45	0.80
Cynicism	7.21	5.98	0.89	0.29	0.39	0.71
Professional Efficacy	27.66	7.08	-1.01*	0.81	0.25	0.66
PSI						
Job Demands	59.89	17.61	-0.29	-0.19	0.30	0.84
Job Resources	62.07	18.89	-0.24	-0.38	0.40	0.88
Police Stressors	31.47	13.72	-0.18	-1.06*	0.50	0.86
COPE						
Active Coping	21.60	4.69	-1.13*	1.35*	0.38	0.81
Avoidance	15.29	4.54	0.31	-0.34	0.22	0.68
Emotional Support	12.31	3.33	-0.81	-0.14	0.49	0.79
Turning to Religion	9.59	2.53	-1.07*	0.41	0.57	0.79

* High skewness and kurtosis

The Cronbach alpha coefficients of all the instruments are considered to be acceptable varying from 0.66 to 0.88 (see Nunnally & Bernstein, 1994). With two exceptions, namely Police stressors and Turning to Religion, the inter-item correlation are considered acceptable compared to the guideline of $0.15 < r < 0.50$ (Clark & Watson, 1995).

It is evident from Table 2 that most of the scales of the measuring instruments have relatively normal distributions, with low skewness and kurtosis. It is only Professional Efficacy, Active Coping and Turning to religion that show a slight skewness, and Police stressors and Active coping showing a high but still acceptable kurtosis. Compared to the norms developed by Storm (2002), the levels of exhaustion and cynicism in this study are in the range of average (middle third of the normative distribution), while the professional efficacy are average to high.

The product-moment correlation coefficients between burnout, job stress and coping are shown in Table 3.

Table 3

Product-Moment Correlation Coefficients between Burnout, Job Stress, and Coping

Item	1	2	3	4	5	6	7	8	9
1. Exhaustion	-	-	-	-	-	-	-	-	-
2. Cynicism	0.60**	-	-	-	-	-	-	-	-
3. Professional Efficacy	0.13	-0.00	-	-	-	-	-	-	-
4. Job Demands	0.42*	0.31*	0.05	-	-	-	-	-	-
5. Lack of resources	0.33*	0.11	0.22	0.64**	-	-	-	-	-
6. Police Stressors	0.11	-0.04	0.20	0.31*	0.54**	-	-	-	-
7. Active Coping	-0.06	-0.16	0.02	0.11	0.13	0.32*	-	-	-
8. Avoidance	0.26	0.32*	-0.21	0.33*	0.19	0.13	0.41*	-	-
9. Emotional Support	-0.13	-0.15	0.13	0.10	0.08	0.18	0.62**	0.25	-
10. Turning to religion	0.03	-0.03	0.11	0.14	0.17	0.18	0.55**	0.29	0.50*

* Correlation is practically significant $r > 0.30$ (medium effect)

** Correlation is practically significant $r > 0.50$ (large effect)

As can be seen in Table 3, Exhaustion correlates practically significantly with Job Demands and Lack of Resources. Cynicism is significantly related to Job Demands (practically significant, medium effect), Avoidance (medium effect) and Exhaustion (large effect). Table 3 also shows that Job Demands correlates significantly with Lack of Resources (practically significant, large effect) and with a medium effect with Police Stressors and Avoidance. Lack of resources is practically related to Police Stressors (large effect). Police Stressors has a practically significant correlation with Active Coping (medium effect). Active Coping correlates practically significantly with Avoidance (medium effect), Emotional Support (large

effect) and Turning to Religion (large effect). There is a practically significant correlation between Turning to Religion and Emotional Support (medium effect).

The intensity and frequency of Job Demands, Lack of Resources and Police Stressors are shown in Table 4.

Table 4

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

Factor and Items	Intensity	Frequency	Severity
Job Demands			
24. Changing frequently from boring to demanding activities	4.60	4.08	18.77
11. Being assigned more responsibility	5.35	5.05	27.02
26. Meeting deadlines	5.11	4.69	23.97
16. Having to make critical on-the-spot decisions	4.95	3.74	18.51
7. Having to deal with crisis situations	5.43	4.27	23.19
4. Being assigned new or unfamiliar duties	4.90	4.32	21.17
27. Not having sufficient personal time	4.82	4.32	20.82
31. Having to work shift-work	4.54	4.13	18.75
42. Having to go to court	4.29	3.63	15.57
34. Having to attend domestic violence incidences	5.45	4.51	24.58
2. Having to work overtime	5.32	4.58	24.37
25. More paper-work you can handle	5.10	5.05	25.76
Lack of Resources			
15. Lack of officers to handle specific tasks	5.66	4.77	27.00
10. Inadequate or poor quality equipment	5.88	5.03	29.58
8. Lack of recognition for work well done	5.99	4.42	26.48
5. Other officers not doing their job	5.96	5.07	30.22
19. Inadequate salary	6.52	5.34	34.82
21. Supervision is poor or inadequate	5.34	3.88	20.72
29. Other officers poorly motivated	5.80	4.87	28.25
14. Experiencing negative attitudes towards the organisation	5.03	3.98	20.02
6. Inadequate support by supervisor	5.51	4.31	23.75
3. Lack of opportunity for advancement	5.33	4.03	21.48
18. Lack of participation in policy-making decisions	5.12	3.86	19.76
Police Stressors			
38. Fellow officer killed in the line of duty	5.30	2.34	12.40
37. Killing someone in the line of duty	4.73	1.84	8.70
41. A forced arrest or being physically attacked	5.06	2.91	14.72
40. Having to handle a large crowd/mass demonstration	4.50	2.89	13.01
39. Racial conflict	5.58	3.52	19.64
44. Seeing criminals go free	6.38	4.58	29.22

Table 4 shows that Lack of Resources can be identified as the stressor with the highest intensity and frequency. Inadequate salary, other officers not doing their job and inadequate or poor quality equipment can be seen as stressors with a high intensity and a relatively high

frequency. Lack of recognition for work well done, other officers being poorly motivated, lack of officers to handle specific tasks as well as inadequate support by supervisors are some of the stressors showing a high intensity and an average frequency.

Seeing criminals go free is one of the Police Stressors with the highest intensity and frequency. Racial conflict is a stressor with a high intensity and a low frequency while the stressor "Fellow officer killed in the line of duty" showed an average intensity with a low frequency.

Regarding stressors associated with Job Demands, having to attend domestic violence incidences, having to deal with crisis situations, being assigned more responsibility, and having to work overtime were found to be the stressors with the highest intensity and frequency. Excessive paper work had a relatively average intensity with a high frequency.

Table 5
Results of the Canonical Analysis: Stress, Coping and Burnout

Variable	First Canonical Variate		Second Canonical Variate	
	Correlation	Coefficient	Correlation	Coefficient
Set 1: Stress and Coping				
Job Demands	0.54	0.52	0.67	0.26
Lack of Resources	0.15	-0.19	0.92	0.71
Police Stressors	-0.14	-0.14	0.58	0.14
Active Coping	-0.22	-0.28	0.06	-0.10
Avoidance Coping	0.68	0.78	-0.06	-0.32
Seeking Emotional Support	-0.35	-0.36	0.06	-0.04
Turning to Religion	-0.14	-0.05	0.28	0.27
Percent of Variance	0.14		0.25	Total = 0.39
Redundancy	0.05		0.04	Total = 0.09
Set 2: Burnout				
Exhaustion	0.68	0.39	0.72	0.88
Cynicism	0.84	0.61	0.12	-0.40
Professional Efficacy	0.45	-0.50	0.71	0.59
Percent of Variance	0.46		0.34	Total = 0.80
Redundancy	0.16		0.06	Total = 0.22
Canonical Correlation	0.60		0.40	

The first canonical correlation was 0.60 (36% overlapping variance) and the second was 0.40 (16% overlapping variance). The other canonical correlation was 0.17. With all three canonical correlations included, $F(21, 523.16) = 6.32$ and $F(12, 366) = 3.33$ and $p < 0.0001$. Subsequent F-tests were not statistically significant. Therefore, the first two pairs of canonical variates accounted for the significant relationships between the two sets of variables. Total percentage of variance and total redundancy indicate that the first set of canonical variates was only somewhat related, while the second set was moderately related.

With a cut-off correlation of 0.30, the variables in the first variable set that correlated with the first canonical variate were Job Demands, Avoidance Coping and Seeking Emotional Support. Among the second variable set, Exhaustion, Cynicism and Professional Efficacy correlated with the first canonical variate. For the first canonical variate it is indicated that Job Demands (0.54), Avoidance Coping (0.68) and Seeking Emotional Support (-0.35) are associated with high levels of Exhaustion (0.68), Cynicism (0.84) and Professional Efficacy (0.45).

The variables in the first variable set that correlated with the second canonical variate were Job Demands, Lack of Resources and Police Stressors. Among the second variable set, Exhaustion and Professional Efficacy correlated with the second canonical variable. For the second canonical variate it is indicated that Job Demands (0.67), Lack of Resources (0.92) and Police Stressors (0.58) are associated with Exhaustion (0.72) and Professional Efficacy (0.71).

In order to test more comprehensive hypothesised relationships, structural equation modelling, as implemented by AMOS (Arbuckle, 1997), was used. Variables which showed low correlations with exhaustion, cynicism and professional efficacy were not included in the SEM analysis. Based upon the consensus of findings from a review of the burnout literature and the results of the canonical correlations a model was constructed. The manner in which each of the constructs in the model is to be measured was established by the combination of particular items for each variable in the model. To ensure that each variable is psychometrically sound, alpha coefficients were computed for the items representing each construct.

The fit of the hypothetical model was assessed by a quick overview of the overall χ^2 value (together with its degrees of freedom and probability value) and global assessments of model fit based on several goodness-of-fit statistics (GFI, AGFI, PGFI, NFI, TLI, CFI and RMSEA). Given findings that did not fit the initially hypothesised model well, possible misspecifications as suggested by the so-called modification indexes were looked for and eventually a revised, re-specified model was fitted to the data.

The hypothesised model

The formulation of the hypothesised model is shown in Figure 1. As can be seen, burnout is represented as a multidimensional construct with Exhaustion, Cynicism and Professional Efficacy operating as conceptually distinct factors.

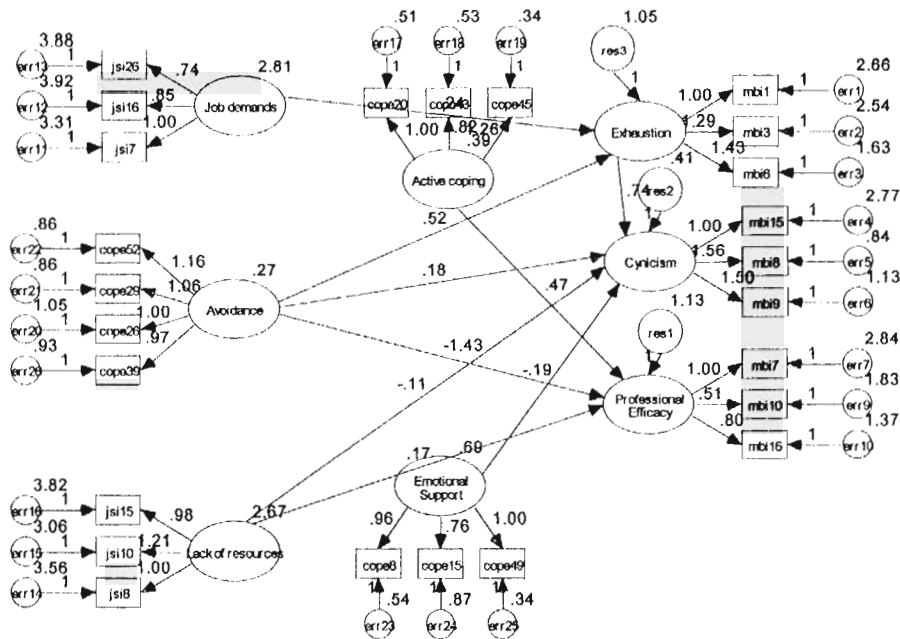


Figure 1. The hypothesised model

The manner in which each of the constructs in this model is to be measured is by multiple indicators of each construct through the judicious combinations of particular items. Items were carefully grouped according to content and factor loadings in order to equalise the measurement weighting across indicators. Alpha coefficients for the particular items representing each construct were as follows: Exhaustion (0.81), Cynicism (0.78), Professional Efficacy (0.68), Job Demands (0.75), Lack of Resources (0.78), Active Coping (0.71), Passive Coping (0.71) and Seeking Emotional Support (0.75). Selected goodness-of-fit statistics related to the hypothesised model (Model 1) are presented in Table 6.

Table 6
Goodness-of-fit Statistics for the Hypothesised Model

Model	χ^2	χ^2/df	GFI	AGFI	PGFI	NFI	TLI	CFI	RMSEA
Default model	512.47	1.93	0.83	0.79	0.68	0.67	0.77	0.80	0.07

Table 6 shows that the overall statistically significant χ^2 value ($df = 266; p = 0.00$) is 512.47. Given the sensitivity of this statistic to sample size (Jöreskog & Sörbom, 1993), use of the χ^2 index does not provide much guidance in determining the extent to which the model does not fit. Therefore, it is more beneficial according to Byrne (2001) to rely on the other indexes of fit. However, the hypothesised model (Model 1) was also not that good from this practical perspective. The PGFI value lower than 0.80, NFI, TLI and CFI values lower than 0.95 and an RMSEA value higher than 0.05 are indicative of failure to confirm the hypothesised model. In order to determine a model that better represents the sample data it is apparent that some modification in specification is needed.

Post hoc analyses

Some evidence of misfit in the model is revealed by a review of the modification indices (MIs). Parameters that represent the structural paths in the model as well as covariances between factors are the only MIs of interest. Based on the regression weights and the meaningfulness, Model 1 was re-estimated, with one additional path from Seeking Emotional Support to Exhaustion. Covariances were allowed between Avoidance and Active Coping, Active Coping and Seeking Emotional Support and Job Demands and Lack of Resources. The χ^2 value ($df = 262; p = 0.00$) of this re-specified model (model 2) was 326.09. The χ^2 difference between Models 1 and 2 was statistically significant ($\Delta\chi^2_{(1)} = 186.38$). Furthermore, no MIs associated with structural paths were present in the output. Only MIs related to covariances were present, but no values suggestive of model misfit. Taking these factors into account, no further consideration was given to the inclusion of additional parameters. Results related to this re-specified model (Model 2) are presented in Table 7.

Table 7

Goodness-of-fit Statistics for Model 2

Model	χ^2	χ^2/df	GFI	AGFI	PGFI	NFI	TLI	CFI	RMSEA
Default model	326.09	1.25	0.88	0.85	0.71	0.79	0.94	0.95	0.04

Model parsimony

Also important regarding model fit is the extent to which certain initially hypothesised paths may be irrelevant to the model (Byrne, 2001). In reviewing the structural parameter estimates for Model 2, two parameters were non-significant. These parameters represent the paths from Seeking Emotional Support to Cynicism (C.R. = -0.89) and from Avoidance to Cynicism (C.R. = 0.21). In the interest of parsimony, a final model of burnout was estimated with these two structural paths deleted from the model. The results of the final model (Model 3) are presented in Table 8.

Table 8

Goodness-of-fit Statistics for Model 3

Model	χ^2	χ^2/df	GFI	AGFI	PGFI	NFI	TLI	CFI	RMSEA
Default model	326.83	1.24	0.88	0.85	0.72	0.79	0.94	0.95	0.04

Estimation of the final model (Model 3) resulted in an overall χ^2 value (df = 264; $p = 0.00$) of 326.83. As can be seen in Table 8, there is a slight erosion in model fit from $\chi^2_{(262)} = 326.09$ for Model 2, to $\chi^2_{(264)} = 326.83$ for Model 3. However, with the deletion of any parameters from a model, such a change is to be expected (Byrne, 2001). The important aspect of this change in model fit is that the χ^2 difference between the two models is not significant ($\Delta\chi^2_{(3)} = 0.74$). Regarding the goodness-of-fit indexes the GFI value of 0.88 is indicative of good model fit. Although the PGFI value is not above 0.80, Mulaik, James, Van Alstine, Bennett, Lind, and Stillwell (1989) suggested that indices in the 0.90s accompanied by PGFIs in the 0.50s are not unexpected. The remaining indexes (TLI, CFI and RMSEA) are indicative of good fit, although the NFI value is rather low. A schematic representation of the final burnout model for police officers in the SAPS in Limpopo is displayed in Figure 2.

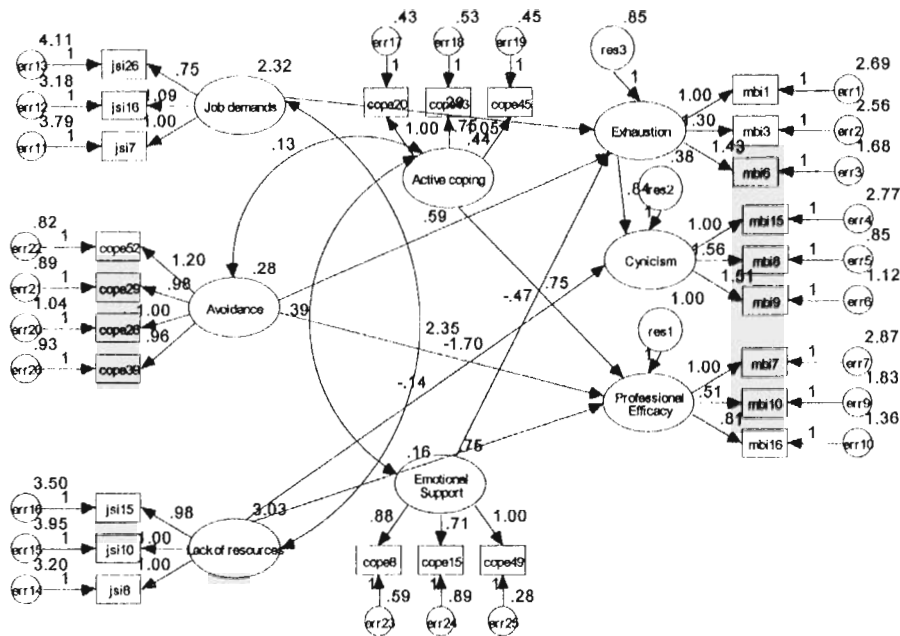


Figure 2. Final model of burnout

According to the SMCs, their predictors account for 35% of the variance associated with Exhaustion: Job Demands, Avoidance and Emotional Support. Regarding Cynicism, 69% of the variance associated with this factor is accounted for by Lack of Resources and Exhaustion. Lastly, Active Coping, Avoidance and Lack of Resources account for 44% of the variance associated with Professional Efficacy.

DISCUSSION

The results show that exhaustion is related to a lack of resources and job demands in the SAPS. It seems that fewer resources and higher cope job demands require greater effort from police officers, resulting in more exhaustion. A lack of resources and high job demands are also related to poor coping strategies. This is consistent with evidence in the literature that work setting characteristics influence levels of psychological burnout (Burke & Richardsen, 1993; Golembiewski & Munzenrider, 1988; Jackson, Schwab & Schuler, 1986; Maslach, 1982b). It could be that high job demands and a lack of resources cause members to become de-motivated, resulting in the utilisation of passive coping strategies.

Police stressors are related to a lack of resources. As seen in previous research by Anshel (2000) and Violanti (1992), high levels of stress are related to passive coping strategies. With regard to a lack of resources the results showed that inadequate salary has the highest level of severity (i.e. a high intensity as well as frequency).

The police stressor with the highest severity is seeing criminals go free. Despite the high levels of job demands, the lack of resources and the effort put into bringing criminals to court, police officers have the perception that the judicial system fails them. This might lead to more frustration and de-motivation, passive coping strategies, low levels of professional efficacy, more stress, exhaustion and cynicism. Another police stressor with a high intensity level is racial conflict. Although it does not occur very frequently it seems to have quite an impact on the members.

The results of the canonical correlations indicated that job demands, avoidance coping and low levels of emotional support are associated with high levels of exhaustion, cynicism and lower levels of professional efficacy. The canonical analysis also showed that lack of resources, job demands and police stressors are associated with exhaustion and professional efficacy.

The structural equation analysis showed that police officers experiencing high job demands such as having to attend domestic violence scenes, having to deal with crisis situations, being assigned more responsibility, and having to work overtime are associated with high levels of exhaustion. Furthermore, when police officers used avoidance coping strategies, they showed an increase in exhaustion, but when they used emotional support their level of exhaustion decreased. This does not mean that by using an active coping strategy (such as to concentrate their efforts on doing something about the problem) they did not experience feelings of exhaustion. The same argument can probably be used when referring to active coping being related to professional efficacy. However, it is possible that active coping strategies may lead to higher feelings of professional efficacy in police officers' work. Apart from exhaustion, avoidance coping is also related to lower feelings of accomplishment. A lack of resources (i.e. inadequate salaries, other officers not doing their job and inadequate or poor quality equipment) leads to lower feelings of professional efficacy. This supports the findings of Leiter (1991, 1993), Schaufeli and Enzman (1998), and Taris et al., (1999).

The only direct paths to cynicism are lack of resources and exhaustion. Although job demands are not directly related to cynicism it could be argued that high job demands and lack of resources lead to higher feelings of exhaustion, which in turn leads to higher levels of cynicism. This correlation between exhaustion and cynicism was also found in the analysis of the Pearson correlations. This is consistent with the model of developmental sequence of the three dimensions as proposed by Leiter and Maslach (1988). They suggest that exhaustion should appear first as chronic excessive work demands drain individuals' emotional resources. As a coping strategy, cynicism develops because individuals limit their involvement with others and their work. This is also in line with Lee and Ashforth's (1996) interpretation of withdrawal through depersonalisation when service providers feel they no longer have sufficient emotional resources to handle the interpersonal stressors demanded by their jobs.

The direct path between lack of resources and cynicism is in contrast with findings by Storm and Rothmann (in press). However, White et al. (1985) in their study did find a positive correlation between lack of support (which can be categorised as lack of resources) and feelings of depersonalisation.

No path was allowed between cynicism and professional efficacy. This is also consistent with Leiter (1993), who believes that professional efficacy develops largely independently of exhaustion and cynicism. Therefore, it could be argued that high job demands (and resources) lead to higher feelings of exhaustion, which in turn lead to higher levels of cynicism (i.e. a detachment from work). It is possible that exhaustion leads to cynicism, which in turn affects coping strategies (i.e. non-active coping and avoidance). However, it is not possible to determine the exact direction of the relationships obtained because of the shortcomings in the research design (i.e. its cross-sectional nature).

This study also has some limitations that should be considered. 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 the findings cannot be generalised to apply to other settings due to the non-probability sample used.

RECOMMENDATIONS

As burnout is primarily caused by organisational circumstances (i.e. job demands and lack of resources) and stressors directly linked to the nature of the job, these issues should be addressed. Interventions should be implemented in order to create awareness among police officers about burnout, its warning signs and how to prevent this syndrome.

During personnel selection procedures the assessment of candidates' coping strategies should be incorporated. Together with this, training programmes where effective coping strategies and stress management mechanisms are taught and reinforced should be part of the curriculum during their initial training. Workshops focussing on diversity should be presented to sensitise police members towards cultural and ethnical differences amongst themselves.

Management ought to revisit regulations and procedures pertaining to certain tasks of police officers that cause a lot of stress. They should also encourage, and provide members with time and opportunities, to pursue effective coping strategies such as outdoor activities and sport.

Changes in managerial practices should be combined with educational interventions.

More research about burnout in the SAPS is needed. It is necessary to include personality variables in future in order to explore the underlying mechanisms of personality that produce different coping patterns and preferences.

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CHAPTER 3

CONCLUSION, LIMITATIONS AND RECOMMENDATIONS

The purpose of this chapter is to make conclusions based on the objectives of this study. Limitations of the research are also discussed, and recommendations are made on how burnout could be addressed within the SAPS. Lastly recommendations for future research are made.

3.1 CONCLUSIONS

The first specific objective of this research is to determine the relationship between burnout, job stress and coping in the SAPS in the Limpopo Province. The sub-scales of burnout, job stress and coping, derived from the measuring instruments, are clearly depicted in the statistical analysis of the results. The dimensions falling under burnout are exhaustion, cynicism (depersonalisation) and professional efficacy (Schaufeli et al., 1996). Job stress is divided into job demands, lack of resources and police stressors, while coping's four dimensions are active coping, avoidance, seeking emotional support and turning to religion (Carver et al., 1989).

The results of this research showed definite relationships between burnout, job stress and coping in the study population. By looking at the relationships between the variables definite correlations were found between exhaustion and two of the components of job stress, namely job demands and lack of resources. Cynicism was correlated to exhaustion, job demands and an avoidance coping style. It could be argued that high job demands (and a lack of resources) lead to increased feelings of exhaustion, which in turn lead to higher levels of cynicism. It is also possible that exhaustion leads to cynicism, which in turn affects coping strategies (i.e. avoidance coping). However, professional efficacy was not correlated to any of the other dimensions. This is consistent with findings by Leiter (1993), who believes that professional efficacy develops largely independently of exhaustion and cynicism.

The results of the canonical correlations indicated that job demands, avoidance coping and low levels of emotional support are associated with high levels of exhaustion, cynicism and lower levels of professional efficacy. The canonical analysis also showed that a high level of

lack of resources and lower levels of job demands and police stressors are associated with exhaustion and professional efficacy.

The second specific objective of this research was to test a causal model of burnout, job stress, and coping. Structural equation modelling (SEM) methods as implemented by AMOS (Arbuckle, 1997) were used to construct a causal model of burnout.

The structural equation analysis showed that police officers experiencing high job demands such as having to attend domestic violence scenes, having to deal with crisis situations, being assigned more responsibility and having to work overtime are associated with high levels of exhaustion. Furthermore, when police officers used avoidance coping strategies, they showed an increase in exhaustion, but when they used their emotional support their level of exhaustion decreased. This does not mean that by using an active coping strategy (such as concentrating their efforts on doing something about the problem) they did not experience feelings of exhaustion. The same argument can probably be used when referring to active coping being related to professional efficacy. However, it is possible that active coping strategies may lead to higher feelings of professional efficacy in police officers' work. Avoidance coping, apart from exhaustion, is also related to decreased feelings of accomplishment. A lack of resources (i.e. inadequate salaries, other officers not doing their job and inadequate or poor quality equipment) leads to decreased feelings of professional efficacy. This supports the findings of Leiter (1991, 1993), Schaufeli and Enzman (1998) and Taris et al., (1999).

The only direct paths to cynicism are from lack of resources and exhaustion. Although job demands are not directly related to cynicism, it could be argued that high job demands and lack of resources (as there exists a covariance between them) leads to increased feelings of exhaustion, which, in turn, leads to higher levels of cynicism. This is consistent with the model of the developmental sequence of the three dimensions as proposed by Leiter and Maslach (1988). They suggest that exhaustion should appear first, as chronic excessive work demands drain individuals' emotional resources. As a coping strategy, cynicism develops because individuals limit their involvement with others and their work. This is also in line with Lee and Ashforth's (1996) interpretation of withdrawal through depersonalisation when service providers feel they no longer have sufficient emotional resources to handle the interpersonal stressors demanded by their jobs.

The direct path between lack of resources and cynicism is in contrast with findings by Storm and Rothmann (in press). However, White et al. (1985) in their study did find a positive correlation between lack of support (which can be categorised as lack of resources) and feelings of depersonalisation.

No path was allowed between cynicism and professional efficacy. This is also consistent with Leiter (1993), who believes that professional efficacy develops largely independently of exhaustion and cynicism. Therefore, it could be argued that high job demands (and resources) lead to increased feelings of exhaustion, which in turn lead to higher levels of cynicism. It is possible that exhaustion leads to cynicism, which in turn affects coping strategies (i.e. non-active coping and avoidance). However, it is not possible to determine the exact direction of the relationships obtained because of the shortcomings in the research design (i.e. its cross-sectional nature).

3.2 LIMITATIONS

The findings of this study cannot be generalised to apply to other settings due to the non-probability sample used.

The research design does not allow one to determine the direction of the relationship between the variables (see Kerlinger & Lee, 2000).

English was the only language used for questionnaires and the possibility exists that the level of English language skills of respondents speaking English as their second language could have influenced the results.

3.3 RECOMMENDATIONS

During personnel selection procedures the assessment of the candidates' coping strategies should be incorporated. It is also suggested that realistic job expectations should be presented to the candidates during an early stage of the recruiting phases in order for them to be able to make a more informed decision about accepting or rejecting the job.

Training programmes regarding effective coping strategies and effective stress management mechanisms should be part of the curriculum during members' initial training in the SAPS.

Police officers who have been in the organisation for a number of years should be made aware of burnout and all its dimensions by means of information sessions and workshops. This would probably lead to individuals' identifying the symptoms and warning signs of burnout, consequently seeking help. The ultimate intervention will most definitely be of a therapeutic nature conducted by members of the Psychological Services within the SAPS. This intervention can be combined with other disciplines, such as the Social Worker Services as well as the Chaplain Services.

Workshops should focus on topics such as sense of coherence and locus of control in relation to burnout, and on how to handle them. These topics could well be incorporated in existing "adventure-based experiential learning" interventions (for lack of a better term). The aim would be to develop more resilient police members who are better able to cope with their everyday circumstances. As most of the police members do function in groups or teams, it may be valuable to cultivate not only physical support for one another, but also emotional support with regard to effective coping strategies for burnout. This can be linked to the establishment of support groups and trained counsellors who can provide social support for members who are stressed. One of the problems that may stand in the way of this particular intervention is police culture. This culture, which is often described as "macho", might suppress the admission of emotional problems. Thus, on secondary level interventions must focus on changing the dominant culture in order to allow space for emotional venting in this male-dominated profession.

Interventions that will enhance the capacity of individuals to cope within the workplace should focus on the development of problem-focussed coping, social support and turning to religion strategies. Negative coping mechanisms, one of which is excessive alcohol use, should be discouraged. The dangers of such coping mechanisms should be explained to members, as it will only add to financial constraints and stress, with the consequent results.

Workshops addressing cultural and ethnical diversity amongst police members should be presented on a more frequent base. This will enhance relationships across cultural and

ethnic boundaries establishing a higher level of tolerance and mutual understanding for one another.

Seeing that it is no easy task to re-evaluate the criminal law procedure in order to assure more convictions for work well done by police members, these members should find ways whereby they can motivate and commit themselves to their jobs irrespective of low conviction rates by the courts. The psychologist may assist members in facilitating such paradigm shifts.

In the light of inadequate salaries showing the highest intensity and frequency among the lack of resources experienced by police members, management, but more importantly, the relevant ministry should be made aware of the emotional impact of inadequate remuneration on police members. As salary issues are not easily solved, top management should at least put systems in place for remunerating members for having to work overtime. By reducing the stress caused by financial constraints, a great burden will already be lifted.

Since job demands play a central role in burnout, it is recommended that certain aspects of the tasks of police officers be reconsidered, such as being assigned more responsibility, having to work overtime, excessive paper work and being assigned new or unfamiliar duties.

The police service can also prevent the negative effects of burnout by providing police members the opportunities to pursue outside activities. Since shift work sometimes interferes with such activities, the organisation might consider implementing policies addressing flexible shift schedules. As a number of areas do have access to sport facilities such as gyms, fitness programmes might be another preventative measure that could be implemented.

As job demands and a lack of resources are closely related, management should reconsider the policies regarding the distribution, management and utilisation of resources. Once resources can be managed in a more responsible and effective way, these resources would be more readily available to do the job. Members should also be trained on how to take better care of such resources in order to prolong their lifespan.

The most effective way to address burnout is to combine changes in managerial practice with educational interventions. Neither changing the work setting nor changing the individuals is

enough; effective change takes place where both these areas develop in an integrated way (Maslach et al., 2001).

More research about burnout in the SAPS is needed. It is necessary to include personality variables in future in order to explore the underlying mechanisms of personality that produce different coping patterns and preferences. Interventions such as "adventure based experiential learning" tailor-made for addressing issues pertaining to burnout and the relation to sense of coherence and locus of control should be researched. Knowing what the long-term effects are of burnout on police members can be valuable in the prediction of future behaviour and the course of treatment to be followed once burnout is identified.

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ACKNOWLEDGEMENTS

This mini-dissertation has been made possible by the support, consideration and encouragement of many people. In particular I would like to express my gratitude to:

- My Creator
- Ms. K. Storm, my supervisor, for her time, well-informed inputs, processing of the empirical results and availability.
- Prof. S. Rothmann, my co-supervisor, for his time, valuable inputs and timely feedback.
- Mr. Johan Blaauw for the professional language editing.
- Supt. A.H. Potgieter, my Area Head, for his support.
- All the police members in the Limpopo Province who completed the questionnaires, for their precious time and co-operation.
- My wife, Juanita, for her love, understanding and unconditional support during my studies.

NOTES

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) are 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.

SUMMARY

BURNOUT, JOB STRESS AND COPING IN THE SOUTH AFRICAN POLICE SERVICE IN THE LIMPOPO PROVINCE

Key words: Burnout, job stress, coping, police

The objectives of this study were to investigate the relationship between burnout, job stress and coping in a sample of police officers. A further objective was to test a causal model of burnout, job stress and coping.

A survey design was used to reach these objectives. The study population ($N = 192$) consisted of police personnel in the Limpopo Province. All police members at randomly identified small stations (fewer than 25 staff members) and medium stations (25-100 staff members) in each of the policing areas were asked to complete the questionnaires. In the large stations (more than 100 staff members) stratified random samples were taken according to race and sex. Three questionnaires were used in the empirical study, namely the Maslach Burnout Inventory – General Survey (MBI-GS), the Police Stress Inventory (PSI) and the COPE Questionnaire (COPE).

From the Pearson product-moment correlation coefficients, definite correlations were found between exhaustion, job demands and lack of resources. Cynicism correlated with exhaustion, job demands and an avoidance coping style. However, professional efficacy did not correlate with any of the other dimensions.

The results of the canonical correlations indicated that job demands, avoidance coping and low levels of emotional support are associated with high levels of exhaustion and cynicism, and lower levels of professional efficacy. The canonical analysis also showed that a high level of lack of resources and lower levels of job demands and police stressors are associated with exhaustion and professional efficacy.

Structural equation modelling (SEM) methods as implemented by AMOS were used to construct a causal model of burnout. The results showed that job demands (as stressors) are associated with exhaustion. Passive coping strategies contributed to exhaustion and lower levels of professional efficacy, while seeking emotional support led to lower exhaustion. Job

demands did not directly contribute to cynicism, but it seems to have an impact on cynicism through exhaustion. A lack of resources, active coping strategies and not coping passively seem to impact on professional efficacy. A lack of resources is also associated with feelings of cynicism.

Recommendations for future research were made.

OPSOMMING

UITBRANDING, WERKSTRES EN COPING IN DIE SUID-AFRIKAANSE POLISIEDIENS IN DIE LIMPOPO-PROVINSIE

Sleuteltermes: Uitbranding, werkstres, coping, polisie

Die doelstellings van hierdie navorsing was om die verband tussen uitbranding, werkstres en coping in 'n steekproef van polisie-offisiere te ondersoek. 'n Verdere doelstelling was om 'n oorsaaklikheidsmodel van uitbranding, werkstres en coping te toets.

'n Opname-ontwerp is gebruik om hierdie doelstellings te bereik. Die studiepopulasie ($N = 192$) het bestaan uit polisielede in die Limpopoprovinsie. Al die polisielede van ewekansig geïdentifiseerde klein polisiestadies (minder as 25 personeellede) en medium polisiestadies (25–100 personeellede) uit elk van die polisiëringsareas is gevra om vraelyste te voltooi. By die groot stadies (meer as 100 personeellede) is ewekansig gestratifiseerde steekproewe volgens ras en geslag geneem. Drie vraelyste is in die empiriese studie gebruik, naamlik die Maslach-uitbrandingsvraelys – Algemene Opname, die Polisiestres-opname en die COPE.

Betekenisvolle verbande is tussen uitputting enersyds en werkseise en 'n tekort aan hulpbronne andersyds gevind. Sinisme het met uitputting, werkseise en 'n vermydende coping-strategie gekorreleer. Daar was egter geen korrelasie tussen professionele doeltreffendheid en enige van die ander dimensies nie. Die resultate van die kanoniese analise het aangedui dat werkseise, vermydings-coping en lae vlakke van emosionele ondersteuning met hoë vlakke van uitputting, sinisme en lae vlakke van professionele doeltreffendheid geassosieer kan word. Die kanoniese analise het ook getoon dat hoë vlakke van 'n tekort aan hulpbronne en laer vlakke van werkseise en polisiestressors met uitputting en professionele doeltreffendheid geassosieer word.

Strukturele vergelykingsmodelleringsmetodes soos toegepas deur AMOS was gebruik om 'n oorsaaklikheidsmodel van uitbranding saam te stel. Die resultate het aangetoon dat werkseise (as stressore) geassosieer word met uitputting. Passiewe coping-strategieë het bygedra tot uitputting en laer vlakke van professionele doeltreffendheid, terwyl die soeke na emosionele ondersteuning tot laer uitputting gelei het. Werkseise het nie tot sinisme bygedra nie, maar dit

blyk dat dit via uitputting op sinisme inwerk. 'n Tekort aan hulpbronne (invers), aktiewe coping-strategieë en passiewe coping-strategieë (invers) gee aanleiding tot professionele doeltreffendheid. 'n Tekort aan hulpbronne is ook met gevoelens van sinisme geassosieer .

Aanbevelings vir toekomstige navorsing is gedoen.

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