WORK-RELATED WELL-BEING AMONG POLICE MEMBERS IN THE NORTH WEST PROVINCE

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REMARKS

The reader is reminded of the following:

- The referencing, as well as the editorial style as prescribed by the *Publication Manual* (5th edition) of the American Psychological Association (APA) was followed in this thesis. This practice is in line with the policy of the Programme in Industrial Psychology of the North-West University (Potchefstroom Campus) to use APA style in all scientific documents.

- The thesis is submitted in the form of three research articles.

This PhD is dedicated to my dad, Ollie and mom, Francie. Your resilience through life has made a lasting impression on me.

The process of the good life is not, I am convinced, a life for the faint-hearted. It involves the stretching and growing of becoming more and more of one's potentialities. It involves the courage to be – Carl Rogers, 1961.

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SUMMARY

Topic: Work-related well-being among police members in the North West Province

Key terms: Work wellness, burnout, engagement, organisational commitment, stress, strain, job demands, job resources, police service, intervention, employee assistance.

Harsh realities exist in the South African Police Service (SAPS) that require concepts such as burnout and work engagement to be studied in the context of work-related well-being. Although these difficulties relate to police officials experiencing work-related trauma, more stressors seem to manifest on an organisational level, which in turn affects the psychological well-being of police officials. This study seeks to focus on the burnout and engagement of members of the Local Criminal and Record Centre (LCRC) in the SAPS. The members of the LCRC are exposed to severe occupational stressors relating to their job content, which necessitates research in occupational stress relating to the health of SAPS members. For the purposes of this study, the model of occupational stress, commitment and ill health of Cartwright and Cooper (2002) will be utilised to explain strain and organisational commitment. Work-related well-being, on the other hand, can best be explained by referring to the model of well-being developed by Schaufeli and Bakker (2001).

Since job demands play a central role in burnout, it is necessary to implement preventive organisationally-based strategies to address high job demands. Upon reviewing stress research, it became clear that a serious lack of intervention research exists. Little information is available about the work-related well-being of SAPS members, whilst no documented research could be found regarding the effects of an intervention programme on the work-related well-being of LCRC members.

The study aimed at utilising three levels of intervention (primary, secondary and tertiary) on organisational and individual level. An integrated classification scheme of both the positive and negative aspects of work-related well-being on the organisational and individual level was developed and presented to members from the LCRC over a one-year period.

The research method for each of the three articles of this study consisted of a brief literature review and an empirical study. An availability non-randomised sample was selected because the

entire in-tact group of the LCRC of the SAPS (N=111) in the North West Province was included in the study. A survey design was used to achieve the research objectives of both Articles 1 and 2, whilst a longitudinal survey design was utilised in Article 3, where the same instruments were administered at two different times (over a one-year period) to the same group of participants. The measuring instruments used in this study are the Maslach Burnout Inventory-General Survey (MBI-GS), Utrecht Work Engagement Scale (UWES), Job Demands-Resources Scale (JDRS), Health subscales, Organisational Commitment subscales, the *ASSET* questionnaire and a biographical questionnaire.

Structural equation modelling was implemented to test a structural model of work-related well-being. A good fit was found for the model in which perceived job demands contributed to burnout which, in turn, impacted on ill health. Work wellness was determined by the relationship between two opposite constructs, namely burnout and engagement. The work-related well-being of members of the LCRC was affected by an environment of high job demands and inadequate resources.

In Article 2, multiple regression analyses showed that occupational stress explained 19% of the variance in psychological ill health and 17% of the variance in physical ill health. A two-step multiple regression analysis conducted with the variables in their continuous form revealed that control was a statistically significant predictor of both physical and psychological ill health, while job overload statistically significantly predicted psychological ill health. Occupational stress also explained 17% of the variance in individual commitment and 16% of the variance in organisational commitment. It was concluded that individual commitment moderated the effects of stressful work relations on ill health.

LCRC members portrayed a high risk to fall ill due to exhaustion; they were less enthusiastic about their job and tended to derive a lower sense of significance from their work. In addition, members showed a major risk for developing low affective commitment due to low work engagement. Exhaustion influenced the way members view their job demands, organisational and social support, as well as growth opportunities available to them. A lack of advancement opportunities and job insecurity contributed to feelings of exhaustion and cynicism.

Another objective of this study was to evaluate interventions used to promote work-related well-being of LCRC members. Although no significant differences were found between the pre- and

post-measurements, some positive aspects did flow from the interventions. For instance an active effort by management to address resource needs.

Recommendations for future research were made.

OPSOMMING

Onderwerp: Werksverwante welstand van polisielede in die Noordwes-Provinsie

Sleutelwoorde: Werksverwante welwees, uitbranding, begeestering, organisasieverbondenheid, stres, inspanning, werkseise, werkshulpbronne, polisiediens, intervensie, werknemerbystand.

Lede van die Suid-Afrikaanse Polisiediens (SAPD) kom daagliks voor harde realiteite te staan wat navorsing oor konsepte soos uitbranding en werksbegeestering binne die konteks van werksverwante welstand regverdig. Alhoewel die probleme wat polisielede ervaar met werksverwante trauma verband hou, manifesteer meer stressors op organisatoriese vlak wat dan 'n invloed op die psigologiese welstand van lede het. Die fokus van hierdie studie sal op die uitbranding en werksbegeestering van lede van die Provinsiale Kriminele Rekordsentrum (PKRS) in die SAPD val. Die lede van die PKRS word daagliks aan erge beroepstressors blootgestel wat met hulle werksinhoud verband hou. Navorsing oor die verband tussen beroepstres en gesondheid is derhalwe noodsaaklik. Vir die doeleindes van hierdie studie is die model van beroepstressors, verbondenheid en ongesteldheid van Cartwright en Cooper (2002) gebruik. Die model van welstand wat deur Schaufeli en Bakker (2001) ontwikkel is word gebruik om werksverwante welstand te bestudeer.

Aangesien werkseise 'n belangrike rol in uitbranding speel, is dit noodsaaklik om voorkomende organisatoriese strategieë te implementeer. Uit 'n oorsig van bestaande stresliteratuur blyk dit dat daar 'n ernstige tekort aan intervensienavorsing bestaan. Min inligting is tans oor die werksverwante welstand van SAPD lede beskikbaar terwyl geen vorige navorsing oor 'n intervensieprogram van werksverwante welstand vir PKRS lede gevind kon word nie.

Die oogmerk van die onderhawige studie was om drie intervensievlakke (primêr, sekondêr en tersiêr) op organisatoriese en individuele vlak toe te pas. 'n Geïntegreerde klassifikasiesisteem wat op beide die positiewe en negatiewe aspekte van werksverwante welstand binne organisatoriese en individuele konteks fokus, is ontwikkel en oor die loop van 'n jaar vir lede van die PKRS aangebied.

Die navorsingsmetode wat in elkeen van die drie artikels gevolg is, sluit 'n bondige literatuuroorsig en 'n empiriese studie in. 'n Beskikbaarheidsteekproef (N=111) is geneem

aangesien die hele groep PKRS-lede binne die Noordwes-Provinsie gebruik is. 'n Dwarssnee opname-ontwerp is vir Artikels 1 en 2 gebruik om die navorsingsdoelstellings te ondersoek terwyl 'n longitudinale opname-ontwerp vir Artikel 3 gebruik is. Volgens hierdie ontwerp word dieselfde meetinstrumente oor 'n tydperk van een jaar op twee verskillende tye op dieselfde groep deelnemers afgeneem. Die Maslach Uitbrandingsvraelys - Algemene Opname, Utrecht Werksbegeesteringskaal, die Poseise-Hulpbronneskaal en Gesondheid- en Organisasieverbondenheidskale, die *ASSET* vraelys en 'n biografiese vraelys is as meet-instrumente gebruik.

Strukturele vergelykingmodellering is gebruik om die strukturele model ten opsigte van werksverwante welstand te toets. 'n Goeie passing is vir die model gevind waar waargenome werkseise tot uitbranding bygedra het wat weer 'n invloed op lede se ongesteldheid gehad het. Werkswelstand is deur die verhouding tussen twee teenoorgestelde konstrukte, naamlik uitbranding en werksbegeestering bepaal. Die werksverwante welstand van PKRS-lede is deur hoë werkseise en 'n tekort aan hulpbronne beïnvloed.

In Artikel 2 is met behulp van meervoudige regressie-analise gevind dat beroepstres 19% van die variansie in psigologiese ongesondheid en 17% van die variansie in fisieke ongesondheid verklaar het. Kontrole as stressor was 'n statisties beduidende voorspeller van beide fisieke en psigologiese ongesondheid, terwyl werkoorlading 'n verdere statisties beduidende voorspeller van psigologiese ongesondheid was. Beroepstres het 17% van die variansie in verbondenheid van die individu en 16% van die variansie in organisasieverbondenheid aan die individu verklaar. Laastens is daar bevind dat die vlak van die individu se verbondenheid aan die organisasie 'n belangrike rol in die voorkoming of instandhouding van psigologiese ongesondheid speel.

PKRS-lede het 'n hoë risiko tot ongesteldheid weens uitputting getoon terwyl hulle minder entoesiasties oor hulle werk was en geneig was om minder betekenis in hulle werk te vind. Die lede het verder 'n hoë risiko getoon om lae affektiewe verbondenheid weens lae werksbegeestering te ontwikkel. Die lede se uitputtingsvlakke het hulle siening van hulle werksdruk, organisasie- en sosiale ondersteuning asook groeigeleenthede binne die SAPD negatief beïnvloed. 'n Tekort aan vorderingsgeleenthede tesame met werksonsekerheid het tot gevoelens van uitputting en negatiwiteit bygedra.

'n Verdere oogmerk van die onderhawige studie was om die intervensies wat daarop gemik was om werksverwante welstand van PKRS-lede te bevorder, te evalueer. Positiewe resultate soos die toewysing van hulpbronne het uit die intervensies gespruit alhoewel geen betekenisvolle verskille tussen die voor- en nameting gevind is nie.

Aanbevelings vir toekomstige navorsing is hierna aan die hand gedoen.

CHAPTER 1

INTRODUCTION

This thesis deals with the work-related well-being of South African Police Service members from the Local Criminal and Record Centre (LCRC) in the North West Province in South Africa.

In this chapter, the background to the study and the problem statement are discussed. The research objectives and the significance of the study are also presented. Lastly, the research method is explained and the proposed division of chapters is given.

1.1 BACKGROUND TO THE STUDY

Stress has become an important workplace factor with regular reports in the media concerning ill health caused by stress. The policing environment, in particular, has been acknowledged worldwide as a highly stressful occupation (Anshel, 2000). A greater likelihood of absenteeism, burnout, job dissatisfaction, early retirement, and a weakened immune system has been reported among police members due to stress (Anderson, Litzenberger, & Plecas, 2002). The South African Police Service (SAPS), in particular, seems to be one of the most stressed police organisations in the world (Cornelius, 2006). Members of the SAPS are often called upon to make sacrifices in order to ensure the safety of the community. Sacrifices might include working extremely long hours, often away from home and under difficult conditions (Pruis, 2006).

Recent media reports have revealed that South African police members are experiencing extremely high levels of stress and trauma (Otto, 2002; Van Staaden, 2005). Police officials are usually the first at scenes of murder, suicides or accidents and the last to leave, and the reality of death or injury is often witnessed. Within the SAPS, an estimated 3 000 members suffer from ill health due to severe post-traumatic stress, as well as other conditions such as obsessive-compulsive disorder, major depression, panic attacks, suicide ideation and ill health (Cornelius, 2006; Otto, 2002). Recent studies among police members in the North West Province confirm decreased levels of job satisfaction of police members (Rothmann &

Van Rensburg, 2002). Furthermore, Rothmann, Kleyn, Louw, and Makgala (2003) reported that stressors, such as excessive paperwork, staff shortages, inadequate remuneration, an insufficient justice system, fellow officers not doing their job and inadequate or poor quality equipment were evident in the SAPS. These stressors are strongly related to exhaustion and depersonalisation, which form distinct components of burnout (Rothmann et al., 2003).

Schaufeli and Enzmann (1998) define burnout as "a persistent, negative, work-related state of mind in 'normal' individuals that is primarily characterized by exhaustion, which is accompanied by distress, a sense of reduced effectiveness, decreased motivation, and the development of dysfunctional attitudes and behaviours at work" (p. 36). Schaufeli and Enzmann identified three general symptoms of burnout, namely distress symptoms (affective, cognitive, physical and behavioural), decreased motivation, and dysfunctional attitudes and behaviours at work. Le Fevre, Matheny, and Kolt (2006) indicate that distress occurs when demands placed on the body (both physical and psychological) exceed its capacity to expend energy in maintaining homeostasis. While the primary result of negative perception of stressors can be regarded as distress, the positive perception of stressors can be regarded as eustress (Le Fevre et al., 2006). Eustressed workers can be regarded as engaged employees (Nelson & Simmons, 2003) who display behaviour that is the opposite of burnout, even though they are exposed to difficult job factors (Schaufeli & Bakker, 2001).

Engagement can be defined as an energetic state in which the employee is dedicated to excellent performance at work and is confident of his or her effectiveness (Schutte, Toppinen, Kalimo, & Schaufeli, 2000). It is described as a positive, fulfilling, work-related state of mind that is characterised by vigour, dedication, and absorption (Schaufeli, Bakker, Hoogduin, Schaap, & Kladler, 2001). Vigour is characterised by high levels of energy and mental resilience during work, putting effort into one's work, not being easily fatigued, and persistence in work. Dedication can be seen as obtaining a sense of significance from work, feeling enthusiastic and being proud of one's work, whilst absorption is characterised by being totally and happily absorbed in work.

On reviewing stress literature, it is clear that several theories relating to occupational stress in particular can be identified. The person-environment fit approach focuses on the stressful nature of differing job demands where a match is sought between an individual's skills,

abilities and the demands of the job. Should a lack of person-environment fit exist, this could lead to distress in the individual (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964). The Job Demands-Control model assumes that high strain jobs lead to symptoms such as job dissatisfaction, absenteeism and depression. The contrary is also relevant: should high job demands occur in conjunction with high job control, employees should be able to deal adequately with these demands, thereby protecting them from excessive strain (Karasek & Theorell, 1990). Lazarus and Folkman (1984) developed the cognitive appraisal approach that emphasises the individual's role in identifying situations as threatening or non-threatening, whereas the preventative stress management approach of Quick and Quick (1984) focuses on the shared responsibility between the individual and the organisation to manage stress.

For the purposes of this study, the model of occupational stress, commitment and ill health of Cartwright and Cooper (2002) will be utilised to explain strain and organisational commitment. It has been found that organisational commitment can moderate the effects of occupational stress on ill health (Lee & Olshfski, 2002; Siu, 2002). Organisational commitment may provide workers with stability and a feeling of belonging while organisational commitment could also play an important role in moderating the effect of occupational stress on employee health (Siu, 2002).

Work wellness can best be explained by referring to the model of well-being developed by Schaufeli and Bakker (2001). Demerouti, Nachreiner, Bakker, and Schaufeli (2001) developed the Job-Demand Resources (JD-R) model indicating that job demands are related to exhaustion, and that a lack of job resources is associated with disengagement. Schaufeli and Bakker (2004) extended the JD-R model by including engagement and by adding indicators for health impairment and organisational withdrawal to the Comprehensive Burnout and Engagement (COBE) model. Two job-related psychological processes, namely an energetic and a motivational process, are described in this model. With the energetic process, job demands are linked with health problems through burnout, while the motivational process links job resources with organisational outcomes through work engagement. Job resources play either an intrinsic motivational role (by promoting the employee's growth, learning and development), or an extrinsic role (by assisting in achieving work goals).

Harsh realities exist in the SAPS that require concepts such as burnout and work engagement to be studied in the context of work-related well-being. Rothmann and Van Rensburg (2002) argued that stress in the SAPS contributes to the decline in psychological strengths and that the existing psychological strengths are probably insufficient to resist the detrimental effects of the harsh environment. The environment police officials are exposed to warrant that they have to cope with many demands, often with limited resources and a lack of control. Although these difficulties relate to police officials experiencing work-related trauma, more stressors seem to manifest on an organisational level, which, in turn, affects the psychological well-being of police officials (Storm & Rothmann, 2002). Although counselling is important following a critical incident, it is emerging that an appropriate supportive response from significant people close to the trauma victim, including management, may be even more important as a determinant of the recovery of staff (Van Wyk, 2003). It is therefore crucial to study their level of wellness and the outcomes thereof.

Since job demands play a central role in burnout, it is necessary to implement preventive organisationally based strategies to address high job demands. It is vital that the organisation should facilitate healthy employees and working conditions. The SAPS should design and implement planned interventions to follow a strategy with the ultimate aim of making the organisation inherently less stressful (Storm & Rothmann, 2002).

Upon reviewing stress research, it became clear that a serious lack of intervention research exists. Dewe and O'Driscoll (2001) indicate that little is known about what actions organisations should take to address stress-related problems. Furthermore, not much information is available regarding how effective these actions are and what managers would do if they were responsible for stress management interventions in their organisation (Dewe & O'Driscoll, 2001; Kompier, 2003). Grobler (2006) states that the SAPS should look at the training of commanders to sensitise them regarding issues like suicide, members with personal problems, financial problems and marital problems.

Both individual and organisational participation is important for interventions to make a real contribution, (De Frank & Cooper, 1987; Dewe & O'Driscoll, 2001). Interventions can aim at three different levels, organisational, individual/organisational and individual level (Giga, Cooper, & Faragher, 2003). Stress management interventions will not be successful if

organisational policies to sustain and develop employee health and well-being are not in place (Giga et al., 2003). Kompier and Cooper (1999) identified three levels of interventions strategies to address workplace stressors, namely primary, secondary and tertiary interventions.

Primary level interventions are concerned with modifying or limiting the stressors in the workplace in order for the environment to better fit the individual (Kompier & Cooper, 1999). The limitation of job demands could play an important role in preventing health problems, while organisational-based strategies could address high job demands, for example. flexible work schedules and goal setting. Secondary level interventions focus on an individual level and are concerned with enabling employees to manage stress more effectively. Stress-management programmes that use a cognitive behavioural approach are effective in reducing stress reactions, including burnout (Schaufeli & Enzmann, 1998). Tertiary level interventions aim to address individuals' recuperation and operate more on a reactive level rather than a preventative level. Furthermore, research suggests that counselling is effective in improving the psychological well-being of employees and has considerable cost benefits in terms of reduced sickness absence (Kompier & Cooper, 1999).

This study seeks to focus on the burnout and engagement of members of the Local Criminal and Record Centre (LCRC) in the SAPS. The police members of the LCRC are exposed to severe occupational stressors relating to their job content. These stressors include managing and processing traumatic crime scenes, compilation and provisioning of related documents and exhibits and the submission of evidence. Stressors unique to this component include targets that are difficult to meet, working unsociable hours and being exposed to violent situations. Members are expected to reach a certain number of targets each month, for example. processing a certain number of murder scenes, identifying a specified number of fingerprints and making positive matches on the database. However, often targets are not met due to a decrease in the number of reported cases and members have to spend valuable time compiling extensive reports explaining this. Members often drive long distances within a short space of time to reach crime scenes, as required by their emergency services duties. Officials are required to be available for emergency services more often in a six-week period due to a staff shortage. Therefore, staff members often do not have sufficient time to recover from exposure to traumatic crime scenes.

Currently no documented research is available concerning the work-related well-being of LCRC members in the SAPS. This study will, therefore, aim at identifying the occupational stressors experienced by these members and the causes thereof. In addition, the effects of an intervention programme on the work-related well-being of the members will be evaluated.

The following research questions emerge from the problem statement:

- Are the constructs in a measurement model of work-related well-being of LCRC members reliable and valid?
- Is it possible to develop a structural model of work-related well-being for LCRC members?
- What are the occupational stressors of LCRC members?
- Does occupational stress predict ill health and lack of organisational commitment of LCRC members?
- Will organisational commitment moderate the effects of occupational stress on the ill health of LCRC members?
- Which aspects should be included in an intervention programme directed at work-related well-being?
- What are the effects of an intervention programme on the work-related well-being of LCRC members?

This study will make the following contributions to Industrial Psychology as a science: First, a structural model, which explains positive and negative aspects of work-related well-being, will be available to SAPS members. Second, scientific information regarding occupational stress, organisational commitment and ill health of LCRC members in the SAPS will be made available. Third, interventions aimed at addressing work-related well-being of SAPS members will be developed and evaluated. Information made available by this study will contribute to the facilitation of a benchmark for future studies on the work-related well-being of SAPS members and may be beneficial for both the SAPS members and the organisation.

1.2 RESEARCH OBJECTIVES

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

1.2.1 General objective

The general objective of this study is to investigate the work-related well-being (burnout and engagement, job demands, job resources, ill health and commitment) of LCRC members and to evaluate the effectiveness of interventions aimed at addressing the work-related well-being of LCRC members.

1.2.2 Specific objectives

The specific objectives of this study are:

- To assess the reliability and validity of the constructs in a structural model of work-related well-being for LCRC members.
- To test a structural model of work-related well-being of LCRC members.
- To investigate the stressors, moderators and their outcomes, and the levels of stress among LCRC members.
- To determine whether organisational commitment moderates the effect of occupational stress on the ill health of LCRC members.
- To investigate the aspects that should be included in an intervention programme directed at work-related well-being.
- To evaluate interventions used to promote work-related well-being of LCRC members.

1.3 RESEARCH METHOD

1.3.1 Literature review

The literature review centres on prior research on burnout, work engagement, occupational stress and ill health, and the measurement of these constructs. The literature review provides the conceptualisation of these constructs as well as some findings in respect of the measuring of burnout, work engagement, occupational stress and ill health.

1.3.2 Research design

A survey design is used to achieve the research objectives of both Articles 1 and 2 (Kepple, Saufley, & Tokunaga, 1992). The survey design has the advantages of obtaining a large amount of information from a large population of existing facilities and personnel (as it is the case with the LCRC members), it is economical and the research information can be regarded as accurate (within sampling error). Disadvantages of this design include that it is time and energy consuming (Kerlinger & Lee, 2000).

A longitudinal design is used in Article 3. The same instrument is administered at two different times to the same group of participants. Advantages of this research method are that actual changes and impacts experienced by participants can be assessed. The attrition rate of a longitudinal study can be high, depending on the period over which the study is conducted and the availability of participants for each measurement (Kerlinger & Lee, 2000). In this study, only one group, namely the experimental group, was used over a period of one year with two measurements (one measurement prior to the interventions and a post measurement after the interventions), thereby limiting the attrition rate.

1.3.3 Participants

The entire in-tact group of the Local Criminal Record Centre (LCRC) of the SAPS in the North West Province was included in the study. In total, 111 members participated in the study. An availability non-randomised sample was selected because the entire group of LCRC employees formed part of the study. The following units participated in the research: Potchefstroom (n=11), Klerksdorp (n=22), Lichtenburg (n=10), Rustenburg (n=16), Vryburg (n=9), Ga-Rankuwa (n=12), Mmabatho (n =15), Brits (n= 11) and Pudimoe (n=5).

The size of the sample used in this study is smaller than the ideal. It should be kept in mind that the sample reflects a complete in-tact working group within the province. Few studies have been conducted on causal models of burnout as well as interventions to prevent and/or manage burnout in a multicultural context. Furthermore, little is known about the causes of work engagement and interventions aimed at increasing it.

1.3.4 Measuring battery

The importance of reliable and valid instruments for the measurement of burnout and work engagement, thus the evaluation of the efficiency of the presented interventions, is evident not only for the purpose of empirical research, but also ultimately for individual assessment.

The questionnaire used in the empirical study consisted of five measuring instruments and a biographical questionnaire. The instruments are the Maslach Burnout Inventory – General Survey (MBI-GS)(Maslach, Jackson, & Leiter, 1996); the Utrecht Work Engagement Scale (UWES)(Schaufeli, Martinez, Pinto, Salanova, & Bakker, 2002); the Job Demands-Resources Scale (JDRS)(Rothmann, Strydom & Mostert, 2006); the Health subscales of ASSET (An Organizational Stress Screening Tool)(Cartwright & Cooper, 2002) and the Organisational Commitment subscales of ASSET.

A *biographical questionnaire* is used to gather information about the demographic characteristics of the population, including age, gender, years of service, years in current position, educational qualifications, marital status, language, number of alcoholic drinks per week, smoking behaviour, other drug use and physical exercise.

The *Maslach Burnout Inventory – General Survey* (MBI-GS) (Maslach, et al., 1996) is used to measure burnout. The MBI-GS consists of 16 items that produce three scores: Exhaustion (five items, e.g. "I feel used up at the end of the workday"); Cynicism (five items, e.g. "I have become less enthusiastic about my work"); and Professional Efficacy (six items, e.g. "In my opinion, I am good at my job"). These three components of the burnout construct are conceptualised in broader terms relating to the job and not just to the personal relationships that may be part of the job (Maslach, Schaufeli, & Leiter, 2001). All items are scored on a seven-point frequency rating scale ranging from 0 (*never*) to 6 (*always/daily*). Schaufeli, Van Diederendonck, and Van Gorp (1996) reported that internal consistencies (Cronbach coefficient alphas) 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 (Exaustion), 0,60 (Cynicism) and 0,67 (Professional Efficacy).

The *Utrecht Work Engagement Scale* (UWES)(Schaufeli et al., 2002) measures the levels of engagement of participants. The UWES includes three dimensions, namely Vigour, Dedication and Absorption, which are conceptually regarded as the opposite of burnout. The UWES is scored on a seven-point frequency rating scale ranging from 0 (*never*) to 6 (*always*) and include items such as "I am bursting with energy every day in my work", "Time flies when I am at work" and "My job inspires me". The alpha coefficients for the three subscales varied between 0,68 and 0,91. The alpha coefficient could be improved (α varies between 0,78 and 0,89 for the three subscales) by eliminating a few items without substantially decreasing the scale's internal consistency.

The *Job Demands-Resources Scale* (JDRS) measures job demands and job resources of employees. The JDRS consists of 48 items. The questions are rated on a four-point scale ranging from 1 (*never*) to 4 (*always*). The dimensions of the JDRS include pace and amount of work, mental load, emotional load, work variety, opportunities to learn, work independence, relationships with colleagues, relationship with immediate supervisor, ambiguities of work, information, communications, participation, contact possibilities, uncertainty about the future, remuneration and career possibilities. Jackson, Rothmann, and Van de Vijver (2006) found alpha coefficients of 0,73, 0,88, 0,81 and 0,75 for overload, organisational support, growth opportunities and advancement, respectively.

The *Health subscales of ASSET* (An Organizational Stress Screening Evaluation Tool) were developed by Cartwright and Cooper (2002) to assess respondents' level of health. The Health subscales consist of 19 items arranged on two subscales, namely Physical health and Psychological well-being. The subscales scored on a scale ranging from 1 *(never)* to 4 *(often)*. All items on the Physical health subscale relate to physical symptoms of stress. The items listed on the Psychological well-being subscale are symptoms of stress-induced mental ill health. This subscale provides insight into psychological well-being, not an in-depth clinical diagnosis. Johnson and Cooper (2003) found that the Psychological well-being subscale has good convergent validity with an existing measure of psychiatric disorders, namely the General Health Questionnaire (GHQ-12; Goldberg & Williams, 1988).

The *Organizational Commitment subscales of ASSET* consist of nine items and are scored on a scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). The items include items such

as "I feel valued and trusted by the organisation" and "I am proud of this organisation". These items are aimed at measuring a respondent's commitment both to his or her organisation and perceived from his or her organisation. Jackson et al. (2006) registered an alpha score of 0,88 on organisational commitment, Jackson and Rothmann (2005) recorded 0,83, while Buitendach and Moeletsi (2004) obtained 0,84. Barkhuizen, Rothmann, and Van de Vijver (in press) carried out a principal component analysis on the nine items of the organisational commitment subscale of the *ASSET* and found a one-factor solution that explained 55,55% of the variance. The item loadings of the factor varied from 0,55 to 0,87. The ASSET will also be utilised to measure the potential exposure to stress in respect of a range of common workplace stressors. Seeing that commitment can be viewed as both a source and outcome of stress, the ASSET can provide important information on the current levels of commitment in the organisation and provide data to which the organisation can be compared.

1.3.5 Statistical analysis

The statistical analysis is carried out with the help of the SPSS program (SPSS Inc., 2005). Cronbach alpha coefficients are used to assess the internal consistency of the measuring instruments (Clark & Watson, 1995). Descriptive statistics (e.g. means, standard deviations, skewness and kurtosis) are used to analyse the data.

Pearson product-moment correlations are used to specify the relationships between the variables. A cut-off point of 0,30 (medium effect, Cohen, 1988) for the practical significance of correlation coefficients is utilised. Paired-samples *t*-tests were used to determine the difference in results for year 1 and year 2. Structural equation modelling is used to test a causal model of health as implemented in AMOS (Arbuckle, 2003), using the maximum likelihood method. Among the fit indices produced by the AMOS program is the Chi-square statistic (χ^2), which is the test of absolute fit of the model. However, the χ^2 value is sensitive to sample size; therefore, additional goodness-of-fit indices, such as Goodness of Fit Index (GFI), the Adjusted Goodness of Fit Index (AGFI), the Normed Fit Index (NFI), the Comparative Fit Index (CFI), the Tucker-Lewis Index (TLI) and the Root Means Square Error of Approximation (RMSEA), are used in this study.

Two types of regression analyses are used in this study. Firstly, standard multiple regression analyses are used to investigate the main effects of occupational stress, organisational commitment, ill health, job resources and job demands on work engagement. Secondly, a two-step hierarchical multiple regression analysis is conducted with the variables in their continuous form. In the first step, the predictor and moderator are entered into the regression equation, followed by their interaction in the second step. The interaction term is represented by the product of the two main effects (Aiken & West, 1991). In addition, in line with the procedure suggested by these authors, the independent variable and the moderator are centred before testing for the significance of the interaction term. To centre a variable, scores are put into deviation score form by subtracting the sample mean from all individuals' scores on the variable, thus producing a revised sample mean of zero.

Where factors were significantly related, a principal component analysis with a direct oblimin method was used, thereby correlating factors with each other (Berenson & Levine, 1996; Nacmias & Nacmias, 1997). This method was used to extract factor structures with correlations above 0,30 (Storm & Rothmann, 2005).

1.3.6 Interventions

A review of stress literature revealed that scientific research is required to determine the effects of interventions on stress, burnout and work engagement in South Africa. Luthans (2002a, 2002b) noted the need for a more relevant, proactive approach to organisational research, which he termed positive organisational behaviour. The three levels of intervention strategies of Kompier and Cooper (1999) were used as a basis to develop intervention programmes to address the occupational stress of LCRC members.

Primary level interventions were used to address job redesign and flexible work schedules by means of reviewing job descriptions and performance appraisal documents. Goal setting was introduced to address the high job demand and a team development session was conducted to increase support and team cohesion. An information session was conducted with the management of the unit to discuss the research results in order to address job demands and lack of resources in the unit on a managerial level.

Secondary level interventions involved providing an organisation-based stress management programme to temporarily reduce experienced stress. Police-specific stress and trauma management skills were presented to the management of each unit to equip them to support subordinates.

Tertiary level interventions allowed identified individuals to recuperate. Counselling by psychologists was provided to improve the psychological well-being of employees and to address the ill health of some members.

The methodology that was followed in the intervention programmes included the self-read-and-do method, lectures, growth groups, behaviour modification and role-play. The programme and activities of the wellness programme were arranged according to the time schedules of the different LCRC units and members of management. The interventions were presented during the course of one year.

1.4 OVERVIEW OF CHAPTERS

Chapter 2 deals with burnout and work engagement among LCRC members and a structural model of work-related well-being. Chapter 3 focuses on occupational stress, organisational commitment and ill health of the LCRC members of the North West Province of South Africa. Chapter 4 evaluates the interventions presented to the LCRC members. Discussions and recommendations follow in Chapter 5.

1.5 CHAPTER SUMMARY

This chapter introduced the background to the problem underlying the study, outlined the research objectives and the significance of the study, defined the relevant concepts and discussed the research methodology. This will serve as the background for the presentation of the material and evidence presented in the remainder of this study.

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CHAPTER 2

RESEARCH ARTICLE 1

A MODEL OF WORK-RELATED WELL-BEING FOR POLICE MEMBERS IN THE NORTH WEST PROVINCE

ABSTRACT

The aims of this study were to assess the validity and reliability of the constructs in a measurement model of work-related well-being and to test a structural model of work-related well-being for members of the Local Criminal Record Centre in the South African Police Service. A survey design was used to achieve the research objectives utilising an availability non-randomised sample (N=111). The Maslach Burnout Inventory – General Survey, Utrecht Work Engagement Scale, a Job Demands-Resources Scale and Health and Organisational Commitment Scales were used as measuring instruments. The results indicated that job demands (overload) and a lack of job resources (organisational support and growth opportunities) contributed to burnout. Burnout mediated the relationship between job demands and job resources on the one hand, and physical and psychological ill health on the other hand. Work wellness mediated the relationship between job resources and organisational commitment.

OPSOMMING

Die doelstellings van die hierdie studie was om die geldigheid en betroubaarheid van die konstrukte binne 'n metingsmodel van werksverwante welstand te meet en om 'n strukturele welstandsmodel vir lede van die Provinsiale Kriminele Rekordsentrum (PKRS) van die Suid-Afrikaanse Polisiediens te toets. 'n Beskikbaarheidsteekproef (N=111) is geneem en 'n dwarssneeopname-ontwerp om die navorsingsdoelstellings te ondersoek. Die Maslach Uitbrandingsvraelys - Algemene Opname, Utrecht Werks-begeesteringskaal, die Poseise-Hulpbronneskaal en Gesondheid- en Organisasie-verbondenheidskale is afgeneem. Die resultate het getoon dat werkseise (oorlading) en 'n gebrek aan werkshulpbronne (organisasie-ondersteuning en groeigeleenthede) tot uitbranding aanleiding gegee het. Uitbranding het die verwantskap tussen werkseise en werkshulpbronne aan die een kant en fisieke en psigologiese ongesondheid aan die ander kant gemedieer. Werkwelstand het die verwantskap tussen werkshulpbronne en organisasieverbondenheid gemedieer.

Members of one of South Africa's essential services, namely the South African Police Service (SAPS), are often called upon to make sacrifices in order to ensure the safety of the community. These sacrifices include working long hours, working away from home and under difficult conditions (Pruis, 2006). Police members have a responsibility towards the community to maintain safety and security and have to cope with numerous changes in the workplace (Ncokazi, 2002). Openness to public opinion regarding work performance also creates pressure (Nel & Burgers, 1998). Apart from historic changes that have taken place in the SAPS since 1994, the service is currently undergoing major changes, namely restructuring the personnel from area level to station level. The restructuring will lead to better service delivery seeing that more police members will be made available to stations (Ntshingila, 2006). Based on the holistic model of well-being (Nelson & Simmons, 2003), it could be expected that these experiences could influence the distress and eustress of police members.

Studies indicate that police members experience high levels of stress and trauma and that exposure to crime takes a heavy toll on officers (Otto, 2002; Van Staaden, 2005). Otto (2002) reported that South African police officials suffer from severe post-traumatic stress, obsessive-compulsive disorder, major depression, panic attacks and suicide ideation. Police members are placed on stress leave and several members file ill health retirement applications because of these stressors. However, only a few members' ill health retirement applications are approved and officials are forced to return to the same working environment that caused the stress in the first place (Venter, 2003).

Some officials have difficulty coping with these conditions which, in turn, result in violent incidents (Brits, 2004; Van Staaden, 2005; Zuzile, 2004). Feni (2003) reported that no less than 100 members from one police station in the Eastern Cape took leave on the same day due to the stress they were experiencing in their environment. According to De Beer (2005), seven police members from one town in the North West Province had been admitted to a hospital on the same day due to stress-related diseases. Several reports have appeared in the media concerning the suicide rate among police members during 2005 in the North West Province. Reported reasons for these suicides range from job stress, work-related causes, constant exposure to violent and traumatic scenes, and a lack of social support (Cornelius, 2006; Jordaan, 2005; Sa Joe, 2003).

The abovementioned reports are in line with recent studies conducted on police members in the North West Province. These studies indicated decreased levels of job satisfaction (Rothmann & Van Rensburg, 2002) and high levels of occupational stress (Pienaar & Rothmann, 2003) among SAPS members. Research by Rothmann, Kleyn, Louw, and Makgala (2003) found that excessive paperwork, staff shortages, inadequate remuneration, an insufficient justice system, other officers not doing their job and inadequate or poor quality equipment were perceived as severe stressors. These stressors and the lack of organisational support are strongly related to exhaustion and depersonalisation, which form distinct components of burnout (Rothmann et al., 2003).

Police members of the Local Criminal and Record Centre (LCRC) are not only exposed to these stressors, but also to unique stressors relating to their job content. This includes managing and processing traumatic crime scenes, compilation and provisioning of related documents and exhibits and the submission of evidence. Stressors unique to this component include working unsociable hours and exposure to violent situations. Members often drive long distances within a short time period to reach crime scenes as required by their emergency support duties. The emergency support duties require members to be available for duties on a 24-hour basis for a seven-day period within a specific duty cycle. Officials are required to be on emergency support duty more often in a six-week period due to a staff shortage. Therefore, staff members often do not have sufficient time to recover from exposure to demanding crime scenes.

Although police officials operate in a demanding work environment that might contribute to stress and burnout, some employees find their work environment to be inspiring and productive. In line with this observation, the research focus in the Psychology in recent years has moved from identifying the outcomes of burnout towards paying more attention to the opposite side of burnout, namely engagement (Lee & Ashforth, 1996; Maslach, Schaufeli, & Leiter, 2001; Schaufeli, Salanova, Gonzales-Roma, & Bakker, 2002). Research indicates that some employees do not show signs of burnout even though they are exposed to high job demands and long working hours (Schaufeli & Bakker, 2001). These employees, who can be described as engaged workers, even found pleasure in working hard and being confronted with job demands.

It is therefore necessary to study the work-related well-being of police officers in a holistic way (by focusing on both positive and negative aspects thereof). Nelson and Simmons (2003) developed a holistic model of wellness, which consists of distress and eustress. Distress is described as a negative outcome in the work situation, e.g. exhaustion and cynicism. Eustress can be regarded as a positive psychological response to a stressor, as indicated by the presence of positive psychological states (e.g. work engagement). Employees who experience eustress can therefore be regarded as engaged employees. This theoretical model makes it possible to study both positive and negative aspects of work-related well-being.

An important aspect of research into work-related well-being is organisational commitment. Siu (2002) observed that organisational commitment was related to most of the physical and psychological outcomes among workers, and to the moderating effects on the stressor-health relationship. The moderating effect of commitment serves as a protection mechanism for individuals against the negative effect of stress due to the attachment of direction and meaning to their work (Siu, 2002). Savicki and Cooley (1987) found that employees who enjoy autonomy in their work, have the opportunity to use their professional skills, and have an environment free from ambiguities will experience lower levels of burnout.

Researchers have found stress to be related to high incidences of illness in police members (Bergen & Bartol, 1983; Kreitner, Sova, Wood, Friedman, & Reif, 1985), as well as ill health symptoms relating to both the individual's physical and psychological condition. These symptoms include ulcers, heart palpitations, headaches, colds and flu, depression, emotional reactions and anxiety (Anderson, Litzenberger, & Plecas, 2002). Furthermore, studies by Jackson, Rothmann, and Van de Vijver (2006) and Jackson and Rothmann (2005) also indicate that burnout mediates the relationship between job demands (and job resources) and ill health.

Schaufeli and Bakker (2004) define job demands as those physical, psychological, social or organisational aspects of the job that require sustained physical and/or psychological (i.e. cognitive or emotional) effort and are, therefore, associated with certain physiological and/or psychological costs. According to Schaufeli and Bakker (2004), job demands are not necessarily negative - they turn into job stressors when meeting those demands requires high effort and high costs which, in turn, leads to negative responses such as depression, anxiety or

burnout. Resources are defined as those objects (home), conditions (marriage, seniority), personal characteristics (personal orientation towards the world) or energies (time, money and knowledge) that are valued by the individual or that serve as a means for attainment of these objects (Hobfoll, 1989).

In light of the above discussion, it becomes seemingly important to investigate burnout and work engagement among SAPS members, and the effect of job resources and job demands on their health. This is especially relevant due to the lack of a causal model of work wellness for the SAPS.

This study focuses on forensic specialists in the SAPS in the Northwest Province as well as administrative personnel concerned with administering all documents concerning evidence and photographic material of crime scenes. These officials take fingerprints, photographs and collect forensic and physical evidence of the crime scene. Other tasks include the compilation of sketches and drafting crime scene plans. They match the gathered evidence with the archived evidence. Officials have to take care that the correct procedures are followed with regard to physical evidence and exhibits. In addition, they have to see to it that all activities are correctly recorded before submitting it to the detectives to use as part of their preparation for the court cases. The duties of these officials are guided by the Occupational Health and Safety Act (85 of 1993), Police Service Act 68 of 1995, the Criminal Procedure Act and the SAPS policy on Crime Scene Management (Policy 2 of 2005) (SAPS Policy 551, 2005).

Since 1999, members of the LCRC have taken part in monthly debriefing sessions with the researcher. During these sessions, it became apparent that the members experience stress symptoms and difficulty to cope with job demands. Consequently, over a period of two years, it became apparent that members are booked off more often due to stress-related symptoms or increasingly applying for ill health retirement. It was clear that an intervention approach should be developed to address stress symptoms in order to assist these members with job demands. Upon closer inspection, it was noted that currently no documented research is available concerning the causes and effects of work wellness at the Local Criminal Record Centres in the SAPS. Research regarding these causes will therefore facilitate the development of more effective and focused intervention strategies for LCRC members. The objective of this study was therefore to develop and test a structural model of work-related

well-being in the SAPS Local Criminal Record Centre by including burnout and work engagement.

Work-related well-being

A study of work-related well-being should include the entire continuum of work-related experiences ranging from negative to positive. This is included in the holistic model of wellness of Nelson and Simmons (2003), whereby a broad range of demands, individual differences and the various outcomes that represent aspects important to the individual, are incorporated. Whilst coping is the positive response, a parallel for the negative response is named savouring. The positive and negative stress responses both have their indicators and can be expected to produce outcomes. The indicators of the positive response are positive psychological states (e.g. positive affect and meaningfulness), whilst the indicators of the negative response are negative psychological states (e.g. negative affect)(Nelson & Simmons, 2003).

Work-related well-being can further be explained by referring to the Job-Demand Resources (JD-R) model of Demerouti, Bakker, Nachreiner, and Schaufeli (2001). The JD-R model indicates that job demands are related to exhaustion, and that a lack of job resources is associated with disengagement. Schaufeli and Bakker (2002) extended the JD-R model by including engagement and by adding indicators for health impairment and organisational withdrawal to the Comprehensive Burnout and Engagement (COBE) model. Two job-related psychological processes, namely an energetic and a motivational process, are described in this model. With the energetic process, job demands are linked to health problems through burnout, while the motivational process links job resources to organisational outcomes through work engagement. Job resources play either an intrinsic motivational role (by promoting the employee's growth, learning and development), or an extrinsic role (by assisting in achieving work goals).

Burnout. Schaufeli and Enzmann (1998) define burnout as a work-related state of mind that is characterised by three dimensions, namely exhaustion, cynicism and low professional efficacy. Exhaustion refers to feelings of being overextended and depleted of one's emotional and physical resources. Cynicism is defined as a negative, cold, hard or detached response to

various aspects of the job. Professional efficacy is the self-evaluation dimension of burnout and refers to a feeling of competence, productivity and achievement at work (Langelaan, Bakker, Van Doornen, & Schaufeli, 2006; Maslach et al., 1996).

Chronic exhaustion can cause people to distance themselves emotionally and cognitively from their work, thereby becoming less responsive to the needs of other people or the demands of the task. A strong relationship between exhaustion and cynicism is consistently found in literature relating to burnout (Maslach & Leiter, 1997). Chronic exhaustion will also ultimately lead to a depleted sense of efficacy. Furthermore, Maslach and Leiter (1997) indicate that the lack of efficacy seems to arise more clearly from a lack of relevant resources.

A review of police literature revealed that several South African studies have been conducted to date on burnout in the SAPS. Decreased levels of job satisfaction and job performance, as well as burnout as compared to norms for the general population, are reported (Anshel, 2000; Rothmann & Agathagelou, 2000; Rothmann & Strijdom, 2002). Rothmann et al. (2003) found that high job demands and a lack of resources (organisational support) are strongly related to exhaustion and depersonalisation.

Work engagement. Schaufeli and Bakker (2004) define engagement as a positive, fulfilling, work-related state of mind that is characterised by vigour, dedication, and absorption. Vigour is characterised by high levels of energy and mental resilience while working, the willingness to invest effort in one's work, and persistence even in the face of difficulties. Dedication is characterised by a sense of significance, enthusiasm, inspiration, pride and challenge derived from one's work. Absorption can be described as being contentedly engaged in one's work and having difficulty detaching oneself from it, seeing that time passes quickly and one forgets all external matters (Langelaan et al., 2006). Kahn (1990) defines engagement as the simultaneous employment and expression of a person's preferred self in task behaviour that promotes connections to work and to others, personal presence (physical, cognitive and emotional) and active full performance.

Causes of work-related well-being

Job demands and job resources. In developing the Job Demands-Resources (JD-R) model, Demerouti et al. (2001) proposed that the individual's working conditions consist of two broad elements, namely job demands and job resources. Demerouti et al. (2001) define job resources as the organisational aspects of a job that are functional in achieving work goals and could reduce job demands. This model assumes that burnout develops whenever job demands are high and resources are limited, irrespective of the type of occupation.

The Conservation of Resources theory (Hobfoll, 1989) can be used to understand the role of resources in the well-being of police officers. When an individual is confronted with stress, he strives towards minimising loss of resources. Furthermore, burnout is more likely to occur when resources are lost than when resources are not gained (Schaufeli & Buunk, 2003). On the other hand, when an individual develops a resource surplus, he is likely to experience positive well-being. Resources, therefore, have a motivational influence (Hobfoll, 1989). Kahn (1992) indicates that engagement varies according to people's perception of the resources they have available.

Karasek's (1979) Job Demand-Control model (JDC model) has been a leading work stress model in Occupational Psychology since the 1980s. The JDC model assumes that a psychological work environment can be characterised by a combination of the demands of the work situation and the amount of control employees have to cope with these demands. Four different job types are distinguished in the JDC model (Theorell, 2003). In low control and high demand jobs, high levels of strain and relatively low levels of learning were predicted because the individual cannot respond optimally to situational demands (Karasek & Theorell, 1990). This combination is regarded as the most relevant to illness development (Theorell, 2003). If high job demands occur in conjunction with high job control, employees should be able to deal adequately with these demands, thereby protecting them from excessive strain. The feelings and learning of mastery may help an employee to cope with the inevitable strain resulting in reduced strain and higher levels of productivity. If low job demands occur in conjunction with low job control, employees will experience low levels of strain because the demands of the situation are low, even though they have little opportunity

to influence their work situation. These jobs offer little opportunity for development and growth (Karazek & Theorell, 1990). Jobs that offer low job demands and high job control are expected to lead to a low level of strain because workers have numerous ways to cope with situational demands and is theoretically associated with the smallest illness risks (Theorell, 2003).

Outcomes of work-related well-being

Ill health. Physical and psychological ill health are closely related in research, and researchers have found stress to be related to high incidences of illness in police members (Bergen & Bartol, 1983; Kreitner et al., 1985). Chronic stress can lead to a range of problems for police members as well as for their organisations. These problems include aspects such as absenteeism, burnout and job dissatisfaction, but also physical health symptoms such as a weakened immune system with increased short- and long-term illness (Anshel, 2000; Burke, 1994; Kirkcaldy, Cooper, & Ruffalo, 1995). Other symptoms include ulcers, heart palpitations, hyperventilation, headaches, depression and, even, colds and flu. Psychological ill health includes emotional reactions and anxiety, which in turn lead to ill health (Anderson et al., 2002).

Maslach and Leiter (1997) add that physical problems, such as headaches, gastro-intestinal illness, high blood pressure, muscle tension and chronic fatigue are caused by burnout. Furthermore, Faragher, Cooper, and Cartwright (2004) indicate that a strong correlation exists between ill health and a lack of commitment to one's job. Studies by Jackson et al., 2006 and Jackson and Rothmann (2006) also indicate that burnout mediates the relationship between job demands (and job resources) and ill health. McEwen (1998) found that inadequate recuperation after acts of straining is a mediating mechanism in the relationship between stress and ill health.

Organisational commitment. Organisational commitment is defined as a state in which an employee identifies with an organisation and its goals, is willing to exert effort on behalf of the organisation, and wishes to maintain membership of the organisation (Robbins, 1998). Cartwright and Cooper (2002) identified two aspects of organisational commitment, namely commitment of the individual to the organisation (i.e. the extent to which employees are loyal

and dedicated to the organisation), and commitment of the organisation to the individual (i.e. the extent to which employees feel trusted and respected by the organisation). According to Woodruffe (2006), an organisation whose staff are not fully committed and pulling their weight, cannot possibly be doing justice to itself at any level. People want to feel that their employers are genuinely committed to them and to their careers. Employees who feel trusted are more likely to feel a useful and important part of an organisation and are more likely to be loyal (Woodruffe, 2006). A study by Jackson et al., 2006 found that work engagement mediates the relationship between job resources and organisational commitment and, therefore, it seems that job resources may play an intrinsic motivational role in the employee.

Research aims

The aims of this study were a) to determine the construct validity and internal consistency of the constructs in the measurement model, including burnout and work engagement, job demands and resources, ill health and organisational commitment, and b) to test a structural model of work-related well-being for members of the LCRC in the SAPS.

The following hypotheses are formulated for this study:

Hypothesis 1: High job demands and a lack of resources lead to ill health through burnout.
Hypothesis 2: Job resources lead to organisational commitment through work engagement.

METHOD

Participants

The entire group of LCRC employees formed part of the study, in total, 111 members. The participants were mostly male (59%), married (60,4%) and between 31-35 years of age, with mostly 11-15 years of experience in the SAPS as Fingerprints Investigators (31,5%). The characteristics of the participants are shown in Table 1.

Table 1

Characteristics of the Participants (N=111)

Item	Category	Frequency	Percentage
Gender	Male	59	53,2
	Female	51	45,9
	Unknown	1	0,9
Age	20-30	30	27,0
	31-35	35	31,5
	36-40	25	22,5
	41-45	13	11,7
	46-50	5	4,5
	50+	1	0,9
	Unknown	2	1,8
Years in SAPS	1-5	28	25,2
	6-10	19	17,1
	11-15	41	36,9
	16-20	13	11,7
	20+	10	9,0
Rank	Sergeant	5	4,5
	Inspector	44	40,0
	Captain	10	9,0
	Superintendent	2	1,8
	Administrative personnel	50	45,04
Home Language	Tswana	39	35,1
	Sotho	7	6,3
	Zulu	2	1,8
	Afrikaans	60	54,0
	English	1	0,9
	Other	2	1,8
Job Category	Management	17	15,3
	Data typist	30	27,0
	Administrative	15	13,5
	Facial Composition	1	0,9
	Fingerprints Investigator	35	31,5
	Crime Scene Investigator	9	8,1
	Other: e.g. Cleaner	3	2,7

Measuring instruments

The following measuring instruments were used in this study:

A *biographical questionnaire* was used to gather demographic information on the participants. This questionnaire gave participants the option of supplying their employee number or a unique number in order to compare the pre- and post-test results. Other information included: province, age, gender, years of service, years in current position (to assess advancement), educational qualifications, marital status, language, number of alcoholic drinks per week, smoking behaviour, other drug use and physical exercise.

The *Maslach Burnout Inventory – General Survey* (MBI-GS)(Maslach et al., 1996) was used to measure burnout. The MBI-GS consists of 16 items that produce three scores: Exhaustion (five items, e.g. "I feel tired when I get up in the morning and have to face another day on the job"), Cynicism (five items, e.g. "I have become less enthusiastic about my work") and Professional Efficacy (six items, e.g. "I am proud of the work that I do"). All items were scored on a seven-point frequency rating scale ranging from 0 (*never*) to 6 (*always/daily*). These three components of the burnout construct are conceptualised in broader terms relating to the job and not just to the personal relationships that may be part of the job (Maslach et al., 2001). Schaufeli, Van Diederendonck, and Van Gorp (1996) reported that internal consistencies (Cronbach coefficient alphas) 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. The construct validity was supported by Storm and Rothmann (2003a) in a study conducted on members of the SAPS with alpha coefficients of Exhaustion (0,88) and Cynicism (0,79). González-Romá, Schaufeli, Bakker & Lloret (2006) confirm that Exhaustion and Cynicism are the core dimensions of burnout and that Professional efficacy form part of an enlarged engagement factor (Naudé & Rothmann, 2004; Rothmann, Steyn & Mostert, 2005; Shaufeli & Bakker, 2004), therefore Professional efficacy was not used in this study.

The *Utrecht Work Engagement Scale* (UWES) was used to measure participants' level of engagement. The UWES was developed by Schaufeli, Martinez, Pinto, Salanova, and Bakker (2002) as a measure of engagement. The UWES includes three dimensions, namely, Vigour, Dedication and Absorption, which are conceptually regarded as the opposite of burnout. The

UWES was scored on a seven-point frequency rating scale ranging from 0 (*never*) to 6 (*always*) and included items such as "I am bursting with energy every day in my work", "Time flies when I am at work" and "My job inspires me". The alpha coefficients for the three subscales varied between 0,68 and 0,91 (Schaufeli et al., 2002). Storm and Rothmann (2003b) obtained adequate alpha coefficients for the two subscales Vigour (0,78) and Dedication (0,89). Naudé (2003) found values of 0,70 for Vigour and 0,83 for Dedication in a study conducted among emergency workers in South Africa. The Absorption scale of the UWES was not used in this study based on previous research questioning whether Absorption should be included in the conceptualisation and measurement of work engagement (Gonzáles-Romá et al., 2006; Montgomery, Peeters, Schaufeli, & Den Ouden, 2003; Naudé & Rothmann, 2004). The literature also view Vigour and Dedication as the core dimensions of work engagement (Schaufeli & Bakker, 2004) where absorption seems to be regarded more as a state of optimal experience ('flow') (Csiksezentmihalyi, 1990) and therefore seems to play a less central role in the Engagement concept (Naudé en Rothmann, 2004).

The *Job Demands-Resources Survey* (JDRS) was used to measure job demands and job resources of employees. The JDRS consists of 48 items. The questions were rated on a four-point scale ranging from 1 (*never*) to 4 (*always*). The dimensions of the JDRS included pace and amount of work, mental load, emotional load, work variety, opportunities to learn, work independence, relationships with colleagues, relationship with immediate supervisor, ambiguities of work, information, communication, participation, contact possibilities, uncertainty about the future, remuneration and career possibilities. Examples of the dimensions are amount of work ("Do you have too much work to do?"), mental load ("Do you have to give continuous attention to your work?"), and remuneration ("Can you live comfortably on your pay?").

The *Health Sub-Scale of the ASSET* was used to assess respondents' level of health. The Health scales consisted of 19 items arranged on two subscales namely Physical health and Psychological well-being. All items on the Physical health subscale were related to physical symptoms of stress and were scored on a scale varying from 1 (*never*) to 4 (*often*), where a high score is indicative of poor health. The role of this subscale is to provide insight into physical health, not an in-depth clinical diagnosis. The items listed on the Psychological well-

being subscale are symptoms of stress-induced mental ill health. This subscale provides insight into psychological well-being and not an in-depth clinical diagnosis.

The *Organisational Commitment Sub-Scale of the ASSET* was used to measure the individual's attitude to his/her organisation and included questions relating to perceived levels of commitment to the organisation and perceived commitment from the organisation to the individual. The first mentioned subscale consisted of seven items, for example, "I am proud of this organisation." The second subscale consisted of two items, for example "I feel valued and trusted by the organisation." The items were scored on a six-point scale varying from 1 (*strongly disagree*) to 6 (*strongly agree*) where a high score is indicative of high levels of commitment. The ASSET will also be utilised to measure the potential exposure to stress in respect of a range of common workplace stressors. Seeing that commitment can be viewed as both a source and outcome of stress, the ASSET can provide important information on the current levels of commitment in the organisation and provide data to which the organisation can be compared.

Statistical analysis

The statistical analysis was carried out with SPSS (SPSS Inc., 2005) and the Amos program (Arbuckle, 2003). Descriptive statistics (e.g. means, standard deviations, skewness and kurtosis) were used to analyse the data. Exploratory factor analyses and Cronbach's alpha coefficients were computed to assess the validity and reliability of the constructs that were measured in this study.

Pearson product-moment correlations were used to specify the relationships between the variables. A cut-off point of 0,30 (medium effect, Cohen, 1988) was set for the practical significance of correlation coefficients. Structural equation modelling as implemented by Amos (Arbuckle, 2003) was used to test a structural model of work-related well-being. Among the fit indices produced by the Amos program is the Chi-square statistic (χ^2), which is the test of absolute fit of the model. However, the χ^2 value is sensitive to sample size; therefore, additional goodness-of-fit indices such as Goodness of Fit Index (GFI), the Comparative Fit Index (CFI), the Incremental Fit Index (IFI), the Tucker-Lewis Index (TLI) and the Root Means Square Error of Approximation (RMSEA) were used in this study.

Where factors were significantly related, a principal component analysis with a direct oblimin method was used, thereby correlating factors with each other (Berenson & Levine, 1996; Nacmias & Nacmias, 1997). This method was used to extract factor structures with correlations above 0,30 (Storm & Rothmann, 2005).

RESULTS

The results of the factor analysis on the MBI and UWES are shown in Table 2. Loading of variables on factors and communalties are shown. Variables are ordered and grouped by size of loading to facilitate interpretation. Zeros represent loadings that are below 0,32 (Clark & Watson, 1995). Labels for each factor are suggested in a footnote. The scales included Burnout (including Exhaustion and Cynicism) and Work Engagement (including Vigour and Dedication).

Table 2

Factor Loadings, Communalities (h^2), Percentage Variance and Covariance for Principal Factor Extraction and Varimax Rotation on the MBI-GS and UWES

Item	F_1	F_2	h^2
MBI1	0,77	0,00	0,64
MBI2	0,92	0,00	0,73
MBI3	0,82	0,00	0,62
MBI4	0,62	0,00	0,41
MBI6	0,79	0,00	0,64
MBI8	0,49	0,00	0,49
MBI9	0,71	0,00	0,56
MBI18	0,69	0,00	0,55
UWES2	0,00	0,85	0,61
UWES4	0,00	0,65	0,52
UWES5	0,00	0,83	0,63
UWES7	0,00	0,78	0,60
UWES8	0,00	0,58	0,59
UWES10	0,00	0,76	0,59
UWES13	0,00	0,65	0,44
UWES19	0,00	0,64	0,62

a Factor labels: $Factor_1$ Burnout $Factor_2$ Work Engagement

Note: The description of the scales are omitted due to copyright protection.

The two extracted factors accounted for 57,83% of the total variance in the data. With a cut-off point of 0,32 for inclusion of a variable in interpretation of a factor (Clark & Watson, 1995) , all the variables loaded on the factors. The first factor was labelled *Burnout*. Items loading on this factor relate to emotional weariness in the work environment, physical and emotional exhaustion, and cynicism. The second factor was labelled *Engagement*. Items loading on this factor relate to a sense of purpose, commitment and involvement in the work, and zeal towards the work.

The 48 items of the JDRS were divided into 15 parcels, which consisted of three items each. A principal component analysis that was carried out on these parcels revealed three factors, which explained 58,70% of the total variance. Next, a principal component analysis with an oblimin rotation was conducted on the 15 parcels, the results showed three factors, which were labelled Overload, Growth Opportunities and Organisational Support and Relationships.

The results showed that Pace and Amount of Work (loading = 0,73), Mental Load (0,78), Emotional Load (0,71) and Remuneration (-0,52) formed the first factor (labelled *Overload*). Variety (0,70), Learning (0,48) and Career Possibilities (0,65) formed the second factor (labelled *Growth Opportunities*). Independence (0,59), Relationships with Colleagues (0,64), Relationships with Supervisor (0,70), Participation (0,71), and Contact Possibilities (0,50) formed the third factor (labelled *Organisational Support and Relationships*

Subsequently, the three factors of the JDRS were subjected to a second-order principal component analysis. Two factors that explained 87,49% of the variance were extracted. A principal component analysis with an Oblimin rotation was used. Overload (loading = 0,99) formed the first factor (labelled *Job Demands*), while Growth Opportunities (0,89), and Organisational Support (0,91) formed the second factor (labelled *Job Resources*).

Next, the results of the factor analysis on the JDRS are shown in Table 3. Loading of variables on factors and communalities are shown. Variables are ordered and grouped by size of loading to facilitate interpretation. Zeros represent loadings that are below 0,32. Labels for each factor are suggested in a footnote.

Table 3

Factor Loadings for Principal Factor Extraction and Varimax Rotation on the JDRS

Item	F_1	F_2	h^2
Overload (Job Demands)	0,99	0,00	0,16
Growth Opportunities	0,00	0,89	0,78
Organisational Support	0,00	0,91	0,76

a Factor labels: Factor$_1$ Job Demands Factor $_2$ Job Resources

The extracted factors accounted for 56,48% of the total variance in the data. With a cut-off point of 0,32 for inclusion of a variable in interpretation of a factor (Clark & Watson, 1995), all the variables loaded on two factors. The first factor was labelled Job Demands with Overload loading on this factor. The second factor was labelled Job Resources. Items loading on this factor relate to Growth Opportunities and Organisational Support.

The results of the factor analysis on the Health subscale are presented in Table 4. Loading of variables on factors and communalties are shown. Variables are ordered and grouped by size of loading to facilitate interpretation. Zeros represent loadings that are below 0,32. Labels for each factor are suggested in a footnote.

Table 4

Factor Loadings after Principal Component Analysis on the Health Subscale

Item	F_1	h^2
Health 1	0,74	0,55
Health 2	0,63	0,47
Health 3	0,79	0,66
Health 4	0,77	0,65
Health 5	0,63	0,47
Health 6.	0,84	0,71
Health 7	0,56	0,47
Health 10	0,59	0,61
Health 11	0,65	0,72
Health 12	0,60	0,60
Health 13	0,64	0,62
Health 14	0,65	0,58
Health 15	0,74	0,63
Health 16	0,56	0,61
Health 17	0,54	0,75
Health 18	0,56	0,70
Health 19	0,70	0,64

Note: The description of the scales are omitted due to copyright protection.

The extracted factor accounted for 43,52% of the total variance in the data. With a cut-off point of 0,32 for inclusion of a variable in interpretation of a factor (Clark & Watson, 1995), all the variables loaded on the factor. The factor was labelled Ill Health and included items relating to physical and psychological health.

The results of the factor analysis on the Organisational Commitment subscale are presented in Table 5. Loading of the variables on the factors and commonalities are shown. Variables are ordered and grouped by size of loading to facilitate interpretation. Zeros represent loadings that are below 0,32 (20% of variance). Labels for each factor are suggested in a footnote.

Table 5

Factor Loadings for Principal Components Analysis on the Organisational Commitment Subscale

Item	F_1	F_2	h^2
Organisational Commitment 1	0,62	0,00	0,41
Organisational Commitment 2	0,00	0,82	0,82
Organisational Commitment 3	0,00	0,61	0,71
Organisational Commitment 4	0,78	0,00	0,62
Organisational Commitment 5	0,87	0,00	0,79
Organisational Commitment 6	0,79	0,00	0,62
Organisational Commitment 7	0,86	0,00	0,82
Organisational Commitment 8	0,84	0,00	0,78
Organisational Commitment 9	0,83	0,00	0,69

a Factor labels: $Factor_1$ Organisational Commitment $Factor_2$ Individual Commitment

Note: The description of the scales are omitted due to copyright protection.

The extracted factor accounted for 55,23% of the total variance in the data. With a cut-off point of 0,32 for inclusion of a variable in interpretation of a factor (Clark & Watson, 1995), all but two, variables loaded on the factor. This factor was labelled Organisational Commitment and included items such as "I am proud of this organisation" and "I am committed to this organisation".

Descriptive Statistics

The descriptive statistics and cronbach alpha coefficients of the scales are given in Table 6.

Table 6

Descriptive Statistics, Cronbach Alpha Coefficients and Product-Moment Correlation Coefficients between the MBI-GS, UWES, Health and Organisational Commitment Scales

Item	Mean	*SD*	α	1	2	3	4	5
1 MBI-GS: Burnout	18,77	12,52	0,90	-	-	-	-	-
2 UWES: Engagement	34,44	10,94	0,89	-0,55*++	-	-	-	-
3 JDRS: Overload	32,35	5,54	0,78	0,46*+	-0,19	-	-	-
4 JDRS: Growth Opportunities	20,30	4,75	0,80	-0,39*+	0,58*++	-0,18	-	-
5 JDRS: Organisational Support	72,10	13,30	0,92	-0,30*+	0,54*++	-0,14	0,62*++	-
6 ASSET: Health	42,52	11,56	0,93	0,64*++	-0,38*+	0,44*+	-0,23	-0,27*
7 ASSET: Commitment	36,72	10,48	0,87	-0,31*+	0,36*+	-0,16	0,27*	0,47*+

* $p \leq 0,01$ - statistically significant
\+ $r \geq 0,30$ - practically significant (Medium effect)
++ $r \geq 0,50$ - practically significant (Large effect)

The results in Table 6 indicate that the scores are normally distributed. All dimensions of the MBI-GS, UWES, JDRS and ASSET scales demonstrated acceptable cronbach alpha coefficient values above the 0,70 guideline provided by Nunnally and Bernstein (1994).

According to Table 6, Burnout is statistically and practically significantly positively related to Overload (medium effect) and Ill Health (large effect), while statistically and practically significantly negatively related to Engagement (large effect), Growth Opportunities, Organisational Support and Organisational Commitment (medium effects). Engagement is statistically and practically significantly positively related to Growth Opportunities, Organisational Support (large effect) and Organisational Commitment (medium effect), and statistically and practically significantly negatively related to Ill Health (medium effect). Overload is statistically and practically significantly positively related to Ill Health (medium effect), while statistically significantly negatively related Organisational Commitment. Growth Opportunities is practically significantly positively related to Organisational Support (large effect) and statistically significantly positively related to Organisational Commitment.

It is therefore clear that high job demands lead to ill health through burnout amongst LCRC members, thereby confirming hypothesis 1 of this study. Furthermore, a lack of growth

opportunities, organisational support and organisational commitment seems to contribute to burnout amongst the members.

A model of work-related well-being

The second aim of this study was to test a structural model of work-related well-being for members of the LCRC in the SAPS North West Province.

In the structural model, two of the five dimensions (Job Resources and Work-related Well-being) were covered by at least two scales. For each of these two dimensions, a latent variable was specified on which the corresponding scales loaded, separating random measurement error from true score variance. Three of the five dimensions were measured by only one scale. Generally no distinction is made in these cases between random error variance and true score variance to allow the correlations among these one-indicator latent variables and other latent variables to be biased (Little, Cunningham, Shahar, & Widaman, 2002). Bagozzi and Heatherton (1994) introduced a procedure to overcome this problem. A one-factor model was firstly fitted for all items belonging to the scales. In the next step, separate indicators for each scale were formed by selecting items on the basis of their loadings, alternating items with high and low loadings. Therefore, parcels of two items each were created for Job Demands, Ill health and Organisational Commitment.

A model, including the relationships, was tested in a path model. The latent variables included Job Demands (two observed variables), Job Resources (two observed variables, namely Organisational Support and Growth Opportunities), Ill Health (two observed variables) and Organisational Commitment.

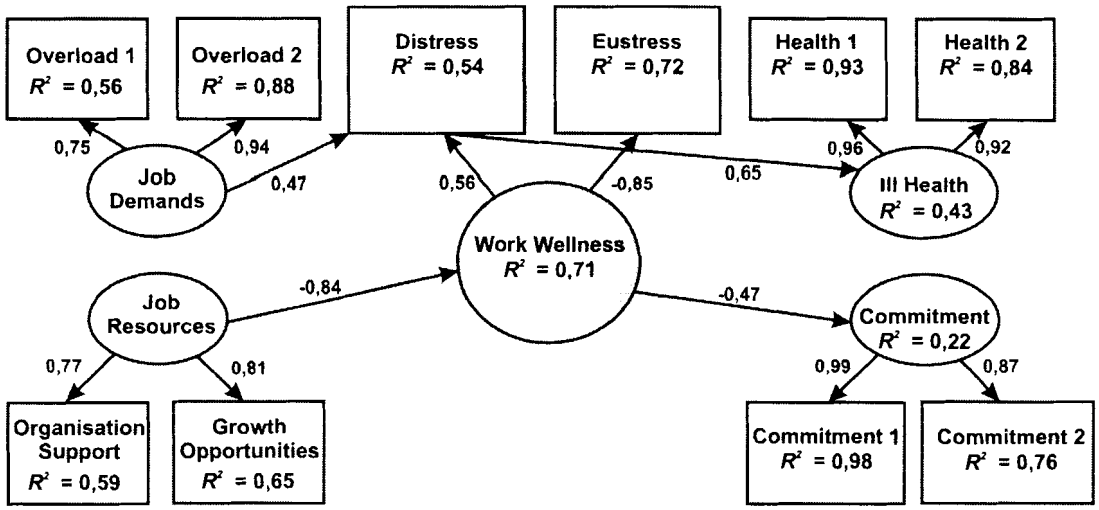

Figure 1. A structural model of work-related well-being

The results indicate an adequate model fit: χ^2 (53,47, N = 111); χ^2/df = 1,73; GFI = 0,91; CFI = 0,97; IFI = 0,97; TLI = 0,95; RMSEA = 0,08. Figure 1 indicates that the path from Job Demands to Distress was statistically significant. Therefore, perceived Job Demands contribute to Distress (Burnout), which mediates the relationship between Job Demands and Ill Health. Members experiencing job overload have higher levels of burnout, which manifest in health-related problems, thereby confirming Hypothesis 1. Members who do not have resources available experience higher levels of distress. Work Wellness further mediates the relationship between Job Resources and Organisational Commitment. Members who have adequate resources available experience autonomy, the support of the organisation and learning of new knowledge, thereby leading to higher levels of commitment. This supports Hypothesis 2.

DISCUSSION

The aims of this study were to assess the validity and internal consistency of the constructs in the measurement model, including burnout and work engagement, job characteristics, ill health and organisational commitment, and to test a structural model of work-related well-being for members of the LCRC in the SAPS. A good fit was found for the model in which perceived job demands contributed to burnout which, in turn, impacted on ill health. Work

wellness is determined by the relationship between two opposite constructs, namely burnout and engagement. The work-related well-being of members of the LCRC is affected by an environment of high job demands and inadequate resources, while some members of the LCRC are performing their jobs in an energetic and effective manner within this environment.

Within the LCRC, members show a higher tendency to experience burnout. The structural model confirmed both Hypotheses 1 and 2 showing that job demands (overload) contribute to burnout, which is influenced by a lack of job resources. Members experienced a lack of support from the organisation and inadequate learning opportunities. These findings are confirmed by Rothmann et al. (2003) who found that high job demands and a lack of resources (organisational support) are strongly related to exhaustion and depersonalisation. LCRC members are often required to perform multiple demanding duties within a short space of time without adequate resources. Human resources, in particular, are limited leading to members often being on emergency services duties with not enough time to recover from their experience before returning to emergency duties. Combined with these work demands, members are also exposed to critical incidents, such as gruesome scenes. These factors often result in members not having sufficient time to recover from exposure to traumatic scenes, which could explain their apparent susceptibility to experiencing burnout. Another possible explanation could be according to Karasek's JDC model whereby long working hours are combined with work outside the office, thereby social support from colleagues is lost and this may jeopardise flexibility and be a threat to the members' health.

The lack of recourses LCRC are experiencing contributing to the members failing to achieve work goals. The lack of resources that some of the LCRC units are experiencing is especially related to staff shortages and a lack of specialists in the field of LCRC. Job resources are functional in achieving work goals and reducing job demands. A lack of these resources often result in members of the LCRC becoming demotivated, as confirmed by the JD-R model, which indicates that lacking job resources are associated with disengagement. According to Hobfoll (2001), basic human motivation is directed at the creation, maintenance and accumulation of resources. Resources, therefore, have a motivational influence and act as predictors of engagement. According to Schaufeli and Buunk (2003), the depletion of

emotional resources can be considered the ultimate price that has to be paid for the individual's active attempts to regain resources or to prevent their loss.

Burnout also impacted on the ill health of LCRC members, which corresponds with Bergen and Bartol (1983) who found that stress is related to high incidences of ill health in police members. Literature indicates that prolonged exposure to stress can lead to long-term health problems (Faragher et al., 2004) and physical problems (Maslach & Leiter, 1997). These findings are also in line with the results of Jackson et al. (2006), who found that burnout mediates the relationship between job demands and ill health.

Regarding the positive aspects of work-related well-being, the structural model indicated that work wellness (low burnout and high work engagement) mediated the relationship between job resources and organisational commitment. Members having adequate resources to their disposal experience support from the organisation and are, therefore, more committed to the SAPS. This also causes members to feel trusted and respected by the organisation and, in return, they are loyal and dedicated to the LCRC. Woodruffe (2006) found that employees who feel that they are trusted are more likely to feel useful and important in the organisation and are, therefore, more likely to be loyal. Jackson et al. (2006) also found similar findings whereby work engagement mediates the relationship between job resources and organisational commitment. In this instance, job resources, therefore, play a motivational role as indicated by Schaufeli and Bakker (2004).

This study had various limitations. The cross-sectional survey design that was used makes it difficult to prove causal relationships even though advanced analytical procedures, such as structural equation modelling, were applied. It should also be mentioned that engagement is measured by positively worded items, whilst burnout is measured by negatively worded items. This similarity could easily lead to an overestimation of the real correlation of items with similar wordings, for example negative statements, and to underestimation of the real correlation of items with a different format. A further limitation involves the use of self-report measures. This could have led to "common method variance" that could lead to an overestimation of the correlations studied. Future studies should make use of a larger and more representative sample size as well as looking at difference by category of employee.

RECOMMENDATIONS

The SAPS should aim at addressing the work-related well-being of their employees, specifically within the high-risk units such as the LCRC. These members experience burnout due to perceived job overload and this should be addressed by increasing job resources (especially human resources) and addressing workload in order to enhance the health of members. Attention should be given to allowing adequate time in between emergency services duties for members to recover sufficiently before embarking on the next duty cycle. Members are not allowed sufficient time to recover and are continuously exposed to traumatic incidents.

Since the results indicated a lack of these resources often result in members of the LCRC becoming demotivated and disengaged, it is recommended that specific attention should be given to supplying the members of LCRC with the needed resources to perform their duties effectively.

Specific areas of intervention that should be introduced include employee relations and job design (organisational support). Team development programmes should be presented to members of the LCRC focusing on time management, team roles and group cohesion since social support seems to get lost with the long working hours outside the office. Managers should also be exposed to supervisor training in terms of managing trauma and stimulating a supportive environment for members within the LCRC.

Longitudinal research regarding the causal relationships between burnout, work engagement, health and organisational commitment in the South African Police Service should be undertaken.

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CHAPTER 3

RESEARCH ARTICLE 2

OCCUPATIONAL STRESS, ILL HEALTH AND ORGANISATIONAL COMMITMENT OF MEMBERS OF THE SAPS IN THE NORTH WEST PROVINCE

ABSTRACT

The objectives of this study were to investigate the occupational stress of members of the Local Criminal and Record Centre (LCRC) of the South African Police Service, and to assess the relationship between occupational stress, ill health and organisational commitment. A survey design was used to achieve the research objectives utilising an availability non-randomised sample (N=111). An Organisational Stress Screening Tool (ASSET) and a biographical questionnaire were used as measuring instruments. Occupational stress explained 19% of the variance in psychological ill health and 17% of the variance in physical ill health. Control as a stressor was a statistically significant predictor of both physical and psychological ill health. Job overload also statistically significantly predicted psychological ill health. Occupational stress explained 17% of the variance in individual commitment and 16% of the variance in organisational commitment. Resources and Work-life Balance also statistically significantly predicted both Individual and Organisational Commitment, whilst Job Characteristics also significantly predicted Individual Commitment. It was concluded that individual commitment moderated the effects of work relations on ill health.

OPSOMMING

Die doelstellings van hierdie studie was eerstens om die beroepstres van lede van die Provinsiale Kriminele Rekordsentrum in die Suid-Afrikaanse Polisiediens in die Noordwes-Provinsie te ondersoek en tweedens om die verband tussen beroepstres, swak gesondheid en organisasieverbondenheid te bepaal. 'n Beskikbaarheidsteekproef (N=111) is geneem en 'n dwarssneeopname-ontwerp om die navorsingsdoelstellings te ondersoek. Die Organisatoriese Stressiftingsinstrument (ASSET) en 'n biografiese vraelys is as meetinstrumente gebruik. Beroepstres het 19% van die variansie in psigologiese ongesondheid en 17% van die variansie in fisieke ongesondheid verklaar. Kontrole as stressor was statisties betekenisvol vir beide faktore terwyl werkoorlading statisties betekenisvol vir psigologiese ongesondheid was. Beroepstres het 17% van die variansie in verbondenheid van die individu en 16% van die variansie in organisasieverbondenheid aan die individu verklaar. Hulpbronne en werk-huis interaksie as stressors was ook statisties betekenisvol vir Individuele en Organisasie verbondenheid, terwyl werkeienskappe statisties betekenisvol was vir Individuele verbondenheid. Laastens is daar bevind dat die vlak van die individu se verbondenheid aan die organisasie 'n belangrike rol in die voorkoming of instandhouding van psigologiese ongesondheid speel.

Over the past two decades, job stress has been internationally recognised as an important occupational health problem. Job stress contributed to a significant part of medical boardings, health care costs and absenteeism. It is generally accepted that prolonged or intense stress can have a negative impact on an individual's mental and physical health (Burke, 1994; Jones & Bright, 2001). Police members, in particular, are exposed to psychological stress and trauma, danger and the availability of firearms (Anshel, 2000; Nel & Burgers, 1998; Violanti, 1997). Anderson, Litzenberger, and Plecas (2002) found that stress could lead to a greater likelihood of absenteeism, burnout, job dissatisfaction, early retirement, a weakened immune system and increased illness in police members.

South Africa has one of the highest rates of crime and violence in the world and the South African Police Service (SAPS) has been reported to be one of the most stressed police organisations in the world (Cornelius, 2006). Recent media reports have revealed that South African police members are experiencing extremely high levels of stress and trauma (Otto, 2002; Van Staaden, 2005). Police officials are usually the first at scenes of murder, suicides or accidents and the last to leave, and the reality of death or injury is often witnessed. It is reported in the media that officials suffer from severe post-traumatic stress, obsessive-compulsive disorder, major depression, panic attacks, suicide ideation and ill health (Otto, 2002; Cornelius, 2006). Police officials also find themselves unable to make decisions and concentrate, experience tiredness, lack of energy and loss of motivation (Lasich, 2006).

Studies involving police members in the North West Province indicated decreased levels of job satisfaction and burnout as compared to norms for the general population. Police officials regard stressors such as staff shortages, poor/inadequate equipment, excessive paperwork, seeing criminals go free and inadequate pay as the most severe (Rothmann & Agathagelou, 2000; Rothmann, Kleyn, Louw, & Makgala, 2003; Rothmann & Strijdom, 2002). Pienaar (2002) found that 8,64% of a sample of 2 396 police officers showed serious levels of suicide ideation, while 15% reported stress-related problems. It is evident from several articles relating to police suicides that the suicide rate in the North West Province has increased during 2005. Possible reasons for these suicides include job stress, exposure to violent and traumatic scenes, and poor or lack of social support systems (Cornelius, 2006; Jordaan, 2005; Sa Joe, 2003).

Police members from the specialist unit, the Local Criminal and Record Centre (LCRC), are exposed to afore-mentioned stressors on a daily basis. The members of this unit are exposed to a range of unique organisational stressors, ranging from critical crime scenes (often it involves children and suicides of colleagues) to personnel shortages. The target group in this study consisted of forensic specialists as well as administrative personnel concerned with administering documents regarding evidence and photographic material of crime scenes. The officials take fingerprints, photographs and collect forensic and physical evidence of a crime scene. Other tasks include the compilation of sketches, drafting crime scene plans and matching the gathered evidence against the archived evidence for a positive identification. Officials have to take care that the correct procedures are followed with regard to physical evidence and exhibits. In addition, they have to see to it that all activities are correctly recorded before submitting it to the detectives to use as part of their preparation for the court cases. Although the previous article tested a structural model of work-related well-being for LCRC members and determined the stressors and levels of stress members are experiencing, very little documented research concerning occupational stress, ill health and organisational commitment at the Local Criminal Record Centres in the SAPS could be found. Research regarding these causes will facilitate the development of more effective and focused stress coping strategies and specific interventions aimed at improving work-related well-being in LCRC members.

Occupational stress and ill health

Work that becomes too challenging demands more knowledge, skills and abilities than the individual can mobilise. Chaos takes over and as the individual loses control over his task performance, having to perform the tasks then becomes a serious stress source (Schabracq, 2003). In an occupational context, the work environment that makes it too hard to keep attention to the work leads to stress (Schabracq, 2003). Occupational stress is defined as situations in which characteristics of, or events related to the workplace can lead to either ill health or welfare of individuals (Beehr, Johnson, & Nieva, 1995). Dewe, Cox, and Ferguson (1993) view stress as a dynamic cognitive state where the individual interacts with the environment as an ongoing transaction. Studies indicate stress to be a non-specific response of the body to any demand it is exposed to, having an effect on the body, mind and emotions (Boshoff & Mels, 1995; Brown & Campbell, 1994; Kirkcaldy, 1993; Storch & Panzarella,

1996). "Stress" is often used to describe either the external stimulus from the environment or the response in the individual. Burnout differs from stress in that burnout is regarded as a particular kind of prolonged exposure to stressors in the workplace (Maslach, 2003; Schaufeli & Enzmann, 1998).

Lazarus and Folkman (1984) consider occupational stress to be the product of an imbalance between environmental demands and individual capabilities. Most stress theories and models conclude that occupational stress is caused by a stressor and ultimately ends with the reaction of a person. According to Nelson and Simmons (2003), four theories relating to occupational stress have received extensive interest in stress research. These theories are the person-environment fit approach, the Job Demand-Control (JDC) model, the cognitive appraisal approach and preventative stress management.

The person-environment fit approach (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964), focuses on the stressful nature of differing job demands. Fit can be defined as a match between an individual's skills, abilities and the demands of the job. Should a lack of person-environment fit exist, it could lead to distress in the individual (Kahn et al., 1964).

The JDC model (Karasek & Theorell, 1990) assumes that a psychological work environment can be characterised by a high strain job and the amount of control employees have to cope with these demands. High strain jobs lead to symptoms such as job dissatisfaction, absenteeism and depression. If high job demands occur in conjunction with high job control, employees should be able to deal adequately with these demands, thereby protecting them from excessive strain (Karasek & Theorell, 1990).

The cognitive appraisal approach (Lazarus & Folkman, 1984), describes the individual's role in identifying situations as threatening or non-threatening (Lazarus & Folkman, 1984). The individual would therefore experience stress according to his or her cognitive appraisal of the events.

The preventative stress management approach developed by Quick and Quick (1984) focuses on the shared responsibility of the individual and the organisation to manage stress with a dual focus of enhancing health and averting distress in the workplace.

The Occupational Stress model as identified by Cartwright and Cooper (2002) is utilised in this study to explain strain and organisational commitment. It comprises the following key elements:

- Work relationships: having poor or unsupportive relationships with colleagues and/or superiors whilst experiencing isolation and unfair treatment.
- Work-life balance whereby work interferes with personal and home life.
- Overload, i.e. unmanageable workloads and time pressures.
- Job security constitutes the fear of losing one's job.
- Control: the extent to which the individual has influence in the way work is organised and performed.
- Resources and communication: having the appropriate training, equipment and resources available.
- Pay and benefits: enjoying the financial rewards that work brings.
- Aspects of the job: The nature of the job could cause stress. Factors such as physical working conditions and type of tasks are included.

Cartwright and Cooper (2002) view commitment as the effect of stress, including the individual's commitment to the organisation and the organisation's commitment to the individual. Ill health is viewed as an outcome of stress, which can be used to determine the effects of the work environment. Ill health is however not always indicative of workplace stress and could be the result of an unhealthy lifestyle (Cartwright & Cooper, 2002).

Ill health is ultimately caused by psychological and physical strain. Individuals exposed to stress over a long period can experience irritability, depressive mood, back and chest pains, high blood pressure, gastrointestinal disturbances and a general increased susceptibility to illness. These individuals also often indulge in adverse lifestyle behaviours such as excessive alcohol abuse, smoking and poor dietary habits. Prolonged exposure to stress can lead to long-term health problems including coronary heart disease and mental illness (Eden, 1990; Faragher, Cooper, & Cartwright, 2004).

Organisational commitment

Cartwright and Cooper (2002) identified two aspects of organisational commitment, namely commitment of the individual to the organisation and perceived commitment of the organisation to the individual. Organisational commitment can be defined as a state in which an employee identifies with an organisation and its goals, is willing to exert effort on behalf of the organisation, wishes to maintain membership of the organisation, and the extent to which employees are loyal and dedicated to the organisation (Cartwright & Cooper, 2002; Robbins, 1998). According to Siu (2002), organisational commitment relates to most of the physical and psychological outcomes of stress and to the moderating effects on the stressor-health relationship. It seems that organisational commitment could provide workers with a feeling of belonging and stability. Furthermore, organisational commitment positively relates to desirable work outcomes, e.g. motivation, performance and job satisfaction, while it negatively relates to absenteeism and turnover (Mathieu & Zajac, 1990). Commitment from the individual to the organisation can be viewed as the extent to which employees feel trusted and respected by the organisation (Cartwright & Cooper, 2002).

Another view on organisational commitment is the model of Meyer and Allen (1990). Three dimensions, namely affective, continuance and normative commitment are identified (Meyer & Allen, 1990; Meyer, Stanley, Herscovitch, & Topolnytsky, 2002; Siu, 2002). Affective commitment is an emotional attachment to the organisation, whilst continuance commitment is the perceived cost associated with leaving the organisation. Normative commitment mirrors a perceived responsibility to remain in the organisation (Meyer et al., 2002).

Research aims

The aims of this study were to analyse the occupational stress of members of the Local Criminal and Record Centre of the SAPS, to assess the relationship between occupational stress and health, and to investigate whether individual or organisational commitment moderates the effects of occupational stress on ill health. The following hypotheses are formulated:

H^1: Occupational stress is a statistically significant predictor of ill health.

H^2: Organisational commitment is a significant moderator of the effect of occupational stress on ill health.

H^3: Individual commitment is a significant moderator of the effect of occupational stress on ill health.

METHOD

Participants

The participants were in-tact working units of the Local Criminal Record Centre (LCRC) of the SAPS North West. In total, 111 members participated in the study. The entire population of LCRC employees formed part of the study. The participants were mostly male (59%), married (60,4%), and between 31-35 years of age with mostly 11-15 years of experience in the SAPS, mostly as Fingerprints Investigator (31,5%). The characteristics of the participants are displayed in Table 1.

Table 1

Characteristics of the Participants (N=111)

Item	Category	Frequency	Percentage
Gender	Male	59	53,2
	Female	51	45,9
	Unknown	1	0,9
Age	20-30	30	27,0
	31-35	35	31,5
	36-40	25	22,5
	41-45	13	11,7
	46-50	5	4,5
	50+	1	0,9
	Unknown	2	1,8
Years in SAPS	1-5	28	25,2
	6-10	19	17,1
	11-15	41	36,9
	16-20	13	11,7
	20+	10	9,0
Rank	Sergeant	5	4,5
	Inspector	44	40,0
	Captain	10	9,0
	Superintendent	2	1,8
	Administrative personnel	50	45,04
Home Language	Tswana	39	35,1
	Sotho	7	6,3
	Zulu	2	1,8
	Afrikaans	60	54,0
	English	1	0,9
	Other	2	1,8
Job Category	Management	17	15,3
	Data typist	30	27,0
	Administrative	15	13,5
	Facial Composition	1	0,9
	Fingerprints Investigator	36	32,5
	Crime Scene Investigator	9	8,1
	Other: e.g. Cleaner	3	2,7

Measuring instruments

The following measuring instruments were used in this study:

A *biographical questionnaire* was used to gather demographic information on the participants. This questionnaire gave participants the option of supplying their employee number. Other information included: province, age, gender, years of service, years in current position (to assess advancement), educational qualifications, marital status, language, number of alcoholic drinks per week, smoking behaviour, other drug use and physical exercise.

The *ASSET* (An Organizational Stress Screening Tool), developed by Cartwright and Cooper (2002) to assist organisations in assessing the risk of occupational stress in their workforce, was utilised. The first questionnaire of the ASSET consists of 37 items and measures the individual's perception of stressors in the job. This questionnaire consists of seven subscales, namely Resources and Communication, Job Security, Work-Life Balance, Control, Overload, Aspects of the job, Job Characteristics and Work Relationships. The second questionnaire consists of nine items and measures the individual's commitment to the organisation. The third questionnaire (19 items) measures the individual's health and psychological well-being. The questionnaires of the ASSET are scored on a six-point scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). The reliability of the scale is based on the Guttman split-half coefficient. All the factors, except for two, returned coefficients in excess of 0,70, ranging from 0,60 to 0,91 (Cartwright & Cooper, 2002). Johnson and Cooper (2003) found that the Psychological Well-being subscale has good convergent validity with an existing measure of psychiatric disorders, namely the General Health Questionnaire (GHQ-12; Goldberg & Williams, 1988).

Statistical analysis

The statistical analysis was carried out with SPSS (SPSS Inc., 2003). Descriptive statistics (e.g. means, standard deviations, skewness and kurtosis) were used to analyse the data. Pearson product-moment correlations were used to specify the relationships between the variables. A cut-off point of 0,30 (medium effect, Cohen, 1988) was set for the practical significance of correlation coefficients. A two-step multiple regression analysis was

conducted with the variables in their continuous form. In the first step, the predictor and moderator were entered into the regression equation, followed by their interaction in the second step. The interaction term is represented by the product of the two main effects (Aiken & West, 1991). In line with these authors, the independent variable and the moderator were centred before testing for the significance of the interaction term.

RESULTS

The descriptive statistics of the ASSET scales are presented in Table 2.

Table 2

Descriptive Statistics, Cronbach Alpha Coefficients and Product-moment Correlation Coefficients of the ASSET

	Dimension/Item	Sten	Mean	*SD*	Skewness	Kurtosis	α	1	2	3	4	5	6	7	8	9	10
1	Job characteristics	5	3,34	1,85	0,18	-1,52	0,75	-	-	-	-	-	-	-	-	-	-
2	Overload	4	11,50	4,67	0,53	-0,34	0,69	0,62**	-	-	-	-	-	-	-	-	-
3	Job Security	3	22,93	6,41	-0,12	-0,22	0,50	0,48*	0,42*	-	-	-	-	-	-	-	-
4	Work Relationships	6	21,86	7,49	0,52	0,11	0,74	0,62**	0,60**	0,37*	-	-	-	-	-	-	-
5	Resources and Communication	1	10,34	3,70	0,38	-0,17	0,50	0,47*	0,49*	0,32*	0,60**	-	-	-	-	-	-
6	Work-Life Balance	5	12,07	6,08	0,24	-1,22	0,86	0,52**	0,59**	0,36*	0,41*	0,24	-	-	-	-	-
7	Control	3	11,87	4,70	0,32	-0,50	0,75	0,57**	0,60**	0,53**	0,64**	0,66**	0,42**	-	-	-	-
8	Physical Ill Health	10	16,18	4,54	-0,25	-0,70	0,84	0,23	0,33*	0,15	0,28*	0,17	0,27*	0,35*	-	-	-
9	Psychological Ill Health	10	26,96	7,65	0,9	-0,46	0,89	0,13	0,33*	0,06	0,24	0,17	0,24	0,33*	0,75**	-	-
10	Individual Commitment	9	19,86	6,53	-0,32	-0,81	0,87	-0,22	-0,27*	-0,19	-0,23	-0,32*	-0,31*	-0,29*	-0,26*	-0,34*	-
11	Organisational Commitment	1	16,86	4,74	-0,92	0,49	0,73	0,05	-0,12	0,00	-0,10	-0,17	-0,27*	-0,08	-0,11	-0,16	0,72**

* $p \leq 0,05$ - statistically significant

\+ $r \geq 0,30$ - practically significant (Medium effect)

++ $r \geq 0,50$ - practically significant (Large effect

Inspection of Table 2 shows low skewness and kurtosis with the scores of the dimensions of the ASSET normally distributed in the sample. Except for Overload (0,69), Job Security (0,49) and Resources and Communication (0,45), most of the Cronbach alpha coefficients varying from 0,50 to 0,89 compare reasonably well with the guideline of 0,70. This demonstrates that a large portion of the variance is explained by the dimensions (internal consistency of the dimensions) (Nunnally & Bernstein, 1994).

Table 2 indicates that in the entire sample, all the stressors are perceived as moderately stressful. The stressor that obtained a higher than average sten score is relationships with colleagues are poor (Work Relations) furthermore spending too much time travelling obtained the highest sten score (sten = 9) compared to the remaining three factors of Work-Life balance (Work longer hours than preferred; Work unsocial hours and Work interferes with home/family life).Job Characteristics (pay and benefits), Overload, Job Security and Control are indicated as moderately stressful while Resources and Communication and Commitment from the Organisation, obtained lower scores compared to the other dimensions. Physical Health (i.e. lack of appetite; headaches; muscular tensions) and Psychological Health (i.e. mood swings, feeling angry; feeling unable to cope) and Commitment from the Individual have high stens (10, 10 and 9 respectively).

It is evident from Table 2 that Physical Ill Health is statistically significantly related to four stressors, namely Overload ($p \leq 0,05$; medium effect), Control ($p \leq 0,05$; medium effect), Work Relationships ($p \leq 0,05$) and Work-Life Balance ($p \leq 0,05$). Psychological Ill Health is statistically significantly related to two stressors, namely Overload ($p \leq 0,05$; medium effect) and Control ($p \leq 0,05$). Individual Commitment to the Organisation is statistically significantly and negatively related to the following stressors: Overload ($p \leq 0,05$), Resources and Communication ($p \leq 0,05$, medium effect), Work-Life Balance ($p \leq 0,05$, medium effect), and Control ($p \leq 0,05$). Organisational Commitment to the Individual is statistically significantly and negatively related to Work-Life Balance ($p \leq 0,05$). Individual Commitment to the Organisation is also statistically significantly and negatively related to Physical Ill Health ($p \leq 0,05$), and Psychological Ill Health ($p \leq 0,05$, medium effect).

Multiple regression analyses

In order to determine which stressors predict physical or psychological ill health of LCRC members, a series of standard multiple regression analyses were carried out with Job Overload, Security, Work Relations, Job Resources, Work-Life Balance and Control as independent variables and Physical and Psychological Ill Health as dependent variables (see Table 3).

Table 3

Standard Multiple Regression Analyses with Ill Health as Dependent Variable (N=111)

Variable		Unstandardised Coefficients		Standardised Coefficients	*t*	*p*	*F*	R^2
		B	SE	Beta				
Physical Ill Health					7,27	0,00	2,93*	0,17#
	(Constant)	12,59	1,73					
	Job Characteristics	-0,04	0,09	-0,05	-0,39	0,70		
	Job Overload	0,17	0,13	0,18	1,30	0,20		
	Security	-0,12	0,14	-0,10	-0,85	0,40		
	Relations	0,47	0,08	0,08	0,57	0,57		
	Resources	-0,17	0,16	-0,14	-1,10	0,28		
	Work-Life Balance	0,07	0,09	0,09	0,76	0,45		
	Control	0,31	0,14	0,32	2,20	0,03*		
Psychological Ill Health							3,50*	0,19#
	(Constant)	23,98	2,87		8,35	0,00		
	Job Characteristics	-0,24	0,16	-0,20	-1,55	0,12		
	Job Overload	0,43	0,22	0,26	1,95	0,05*		
	Security	-0,39	0,24	-0,18	-1,64	0,10		
	Relations	0,07	0,14	0,07	0,49	0,63		
	Resources	-0,22	0,26	-0,11	-0,85	0,40		
	Work-Life Balance	0,12	0,15	0,09	0,82	0,42		
	Control	0,60	0,23	0,37	2,57	0,01*		

* $p < 0,05$

#*Note: the % of variance can be calculated by* R^2 *x 100.*

Table 3 shows that seven occupational stressors, namely Job Characteristics, Job Overload, Security, Relations, Resources, Work-Life Balance and Control explained 17% of the variance in Physical Health (as measured by the Health Subscales of the ASSET). The

regression coefficient of the occupational stressor Control was moderate (β=0,32) and statistically significant ($p < 0,05$). Furthermore, occupational stressors explained 19% of the variance in Psychological Health (as measured by the Health Subscales of the ASSET). The regression coefficients of two occupational stressors, namely Job Overload and Control were statistically significant ($p < 0,05$). Furthermore, Table 3 indicates that the standardised regression coefficient for Control (β=0,37) was moderate. The standardised regression coefficient for Job Overload in predicting Psychological Health (β=0,26) was moderate.

Table 4

Standard Multiple Regression Analyses with Commitment as Dependent Variable (N=111)

Variable		Unstandardised Coefficients		Standardised Coefficients	*t*	*p*	*F*	R^2
		B	SE	Beta				
Individual Commitment							3,57*	0,17#
	(Constant)	17,31	1,77		9,77	0,00		
	Job Characteristics	0,27	0,10	0,36	2,76	0,01*		
	Job Overload	0,02	0,14	0,02	0,13	0,90		
	Security	0,08	0,14	0,06	0,60	0,55		
	Relations	-0,03	0,08	-0,04	-0,34	0,74		
	Resources	-0,31	0,15	-0,24	-2,10	0,04*		
	Work-Life Balance	-0,32	0,09	-0,41	-3,55	0,00*		
Organisational Commitment							3,31*	0,16#
	(Constant)	27,38	2,46		11,15	0,00		
	Job Characteristics	0,06	0,14	0,05	0,41	0,68		
	Job Overload	-0,04	0,19	-0,03	-0,23	0,82		
	Security	-0,07	0,19	-0,04	-0,35	0,73		
	Relations	0,04	0,12	0,05	0,37	0,71		
	Resources	-0,50	0,21	-0,29	-2,45	0,02*		
	Work-Life Balance	-0,27	0,13	-0,25	-2,16	0,03*		

* $p < 0,05$

Note: the % of variance can be calculated by R^2 x 100.

It is evident from Table 4 that six occupational stressors, namely Job Characteristics, Job Overload, Security, Relations, Resources and Work-life Balance explain 17% of the variance

in Individual Commitment (as measured by the ASSET). The regression coefficients of the occupational stressors, Job Characteristics, Job Resources and Work-life Balance were statistically significant ($p < 0,05$), with the standardised regression coefficients for Job Characteristics being moderate ($\beta=0,36$). Furthermore, occupational stressors explained 16% of the variance in Organisational Commitment. The two occupational stressors, namely Resources and Work-life Balance were the only two statistically significant ($p < 0,05$) predictors of Organisational Commitment. Furthermore,

A graphical representation of the moderation effect of Individual Commitment is reported in Figure 1.

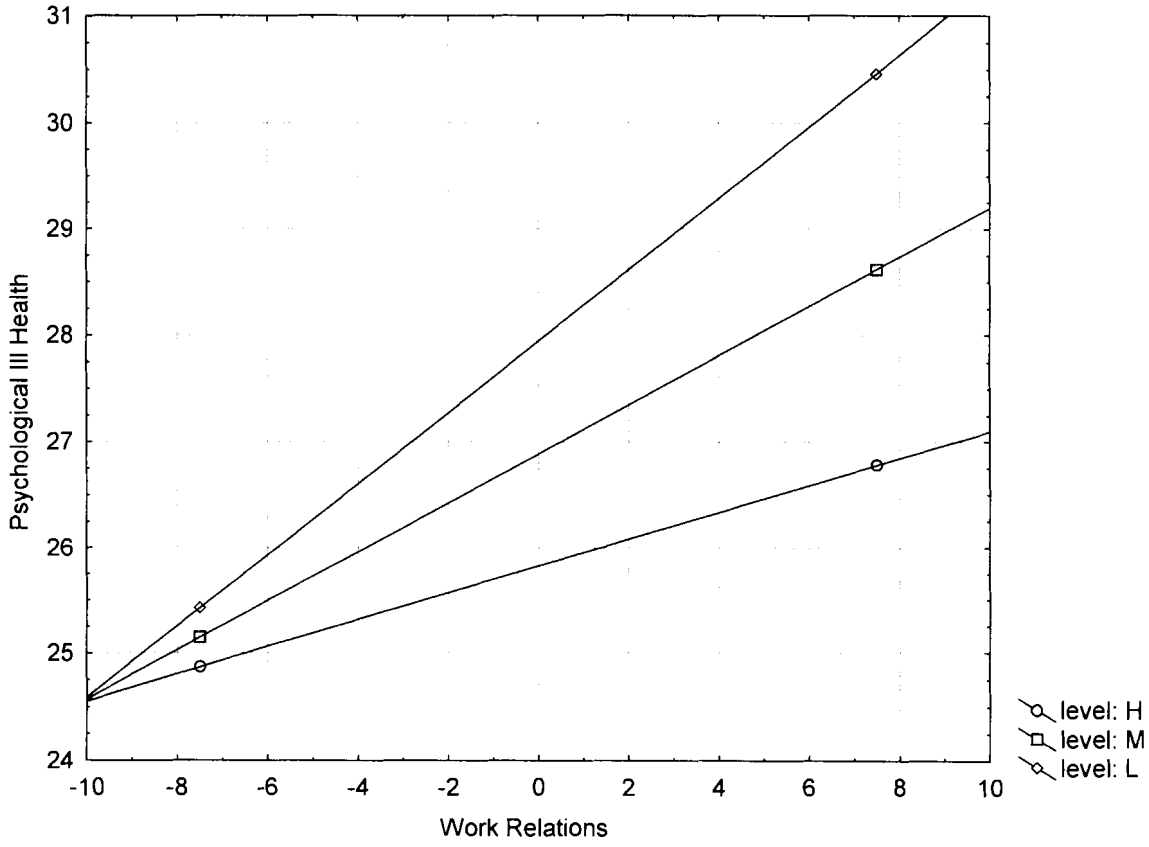

Figure 1. Regression analysis of psychological ill health at three levels of individual commitment

Figure 1 shows that Psychological Ill Health increases with stressful Work Relations under conditions of low Individual Commitment. In other words, the level of commitment of police officers plays an important role in terms of their psychological unwell-being whenever stress about work relations is high and commitment is low. This confirms one of the initial aims of this study, which was to investigate whether individual or organisational commitment moderates the effects of occupational stress on ill health. Therefore, Hypothesis 2 is accepted.

DISCUSSION

The aims of this study were to analyse the occupational stress of LCRC members, to assess the relationship between occupational stress and ill health, and to determine whether individual and organisational commitment moderate the effects of occupational stress on ill health. The results indicated that certain sources of occupational stress only explained 19% of the variance in psychological ill health and 17% of the variance in physical ill health. Low levels of control are a statistically significant predictor of both physical and psychological ill health, while job overload statistically significantly predicted psychological ill health. Certain sources of occupational stress also explained 17% of the variance in individual commitment and 16% of the variance in organisational commitment. Resources and Work-life Balance also statistically significantly predicted both Individual and Organisational Commitment, whilst Job Characteristics also significantly predicted Individual Commitment. It was concluded that individual commitment moderated the effects of work relations on ill health.

Analysis of the sten scores of the ASSET dimensions indicated average scores, although closer inspection revealed that two dimensions obtained high scores. Firstly, spending too much time travelling was identified as a stressor within the LCRC. This is indicative of the huge amount of time officials spend travelling from one crime scene to the other whilst on emergency service duties. The members often have multiple crime scenes to attend during one shift and have to haste from one scene to the other as the scenes are often far apart within the North West Province. Secondly, poor relationships with colleagues also obtained high scores, which could be indicative of the recent Resolution 7 policy that was implemented whereby members were assigned to new units in different environments in order to improve service delivery. This is in line with one of the short-term strain reactions recorded by Faragher, Cooper, and Cartwright (2004) as well as Maslach and Leiter (1997) namely poor human relations.

Alarmingly high scores were obtained for physical health symptoms of LCRC members. This is indicative of the members reporting symptoms such as headaches, heightened blood pressure, backaches, and digestive problems as measured by the Health Scales of the ASSET. High scores were also reported for psychological health symptoms as indicated by members feeling restless, anxious, depressed and the occurrence of substance abuse such as alcohol and prescription medicine. Research indicates that ill health is ultimately caused by psychological and physical strain (Eden, 1990). These findings are also supported by Maslach and Leiter (1997), indicating various physical problems such as headaches, gastrointestinal illness and chronic fatigue caused by stress. Individuals exposed to stress over a long period can experience irritability, depressive mood, back and chest pains, high blood pressure, gastrointestinal disturbances and a general increased susceptibility to illness. It has also been argued that prolonged exposure to stress can lead to long-term health problems including coronary heart disease and mental illness (Faragher et al., 2004). It should be kept in mind, however, that individuals may lead unhealthy lifestyles and therefore their ill health may not necessarily be a work-related outcome (Cartwright & Cooper, 2002).

It is clear that LCRC members are committed to the SAPS, which could contribute to the members experiencing meaning in their work and the extent to which they feel trusted and respected by the organisation. It is clear from the results that the individual does not perceive commitment from the organisation to the individual.

Hypotheses 1 and 2 stated that occupational stress contributes to ill health of LCRC members and this is confirmed by the findings that LCRC members experience physical and psychological ill health due to job demands, overload, work relations, work-life balance, control and a lack of individual commitment. It is clear that high job demands and work overload, a perceived lack of control and stressful relations contribute towards ill health. One possible explanation for this finding is the imbalance between the environmental demands and the individual's capabilities (Lazarus & Folkman, 1984). The LCRC member forms a subjective interpretation of the stressor whilst the resources that he perceives as available to address the stressor, lead to occupational stress (Beehr, 2000; Cooper, 2000). The response of the member to these stressors ultimately ends in either physical or psychological ill health. Pienaar and Rothmann (2003) found similar stressors in the SAPS, namely job demands, lack of job resources and police-specific demands. Karasek's (1979) JDC model supports this

finding whereby the LCRC psychological work environment is characterised by a combination of the demands of the work situation and the amount of control employees have to cope with these demands. The lack of control leads to members not being protected from excessive strain (Karasek & Theorell, 1990).

While control is the only occupational stressor that seems to contribute to the physical ill health of members of the LCRC, psychological ill health appears to be influenced by both control and job overload. Once again Karasek's Job demand-Control model supports this finding, namely that a psychological work environment can be characterised by a combination of the demands of the work situation and the amount of control employees have to cope with these demands (Karazek & Theorell, 1990). High job demands and low job control, therefore, contribute towards ill health of LCRC members. LCRC members with a strong sense of individual commitment to the organisation are characterised by experiencing satisfying job characteristics, having adequate resources and a healthy work-life balance.

While the lack of organisational commitment to the individual has a negative impact on members' work-life balance, the presence of commitment from the organisation has a positive influence on individual commitment. Perceived lack of control influences the commitment of the LCRC member to the SAPS, again supporting the finding of Karasek and Theorell (1990). It is worth mentioning that the results indicate that organisational commitment only significantly influences work-life balance and individual commitment to the organisation. This implies that when the LCRC member experiences lack of control over job demands, she/he feels less loyal and dedicated to the organisation, and when she/he perceives the organisation to be less committed this will have an influence on his work-life balance and the feeling of being trusted and respected by the organisation.

LCRC members therefore perceive commitment from the SAPS when they have adequate resources and when their work is not interfering with their personal and home life. It can ultimately be concluded that the level of commitment of individuals plays an important role in the level of well-being and the prevention and maintenance of psychological ill health of LCRC members. Members seem to feel more committed to the organisation when their resource needs are met. They perceive that the organisation values them and looks after their needs. Should their resource needs not be met, it could affect their level of commitment. This

confirms the second and third hypothesis of this study, which was to investigate whether individual or organisational commitment moderates the effects of occupational stress on ill health.

This study had two limitations of which the first was that the results were obtained by self-report measures. This could have led to "common method variance" which could, in turn, lead to an overestimation of the correlations studied. The second limitation refers to the sample size and sampling method. Only LCRC members in North West Province were included in the sample. Based on the results obtained in this study, future studies should make use of larger and more representative samples outside the border of North West Province.

RECOMMENDATIONS

A detailed needs analysis is required to determine which resources are lacking in members' working environment. Addressing the needs of LCRC members will ultimately improve their sense of commitment to the organisation.

Interventions should be implemented to prevent and reduce stress and to initiate coping mechanisms for LCRC members. If the physical and psychological stressors as indicated are not addressed, the SAPS could encounter negative costs associated with ill health and absenteeism. In this study, physical and psychological health, the perceived commitment from the organisation to the member, the large amount of time spent travelling and poor colleague relationships were found to be the major outcomes of perceived stressors. Tertiary and secondary level interventions should specifically aim at addressing these stressors. Primary level interventions can be utilised to liase with management to obtain their support in addressing LCRC members' work-related well-being.

Better recovery strategies should be put in place to allow effective recuperation of LCRC members from trauma and stress. Particular attention should be given to allow adequate time in between emergency duties for members to recover sufficiently before embarking on the next duty cycle by addressing resource needs within LCRC.

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CHAPTER 4

ARTICLE 3

THE EVALUATION OF A WORK-RELATED WELL-BEING INTERVENTION IN THE SOUTH AFRICAN POLICE SERVICE

ABSTRACT

The objective of this study was to evaluate interventions implemented to address the levels of burnout and engagement of members from the Local Criminal and Record Centre (LCRC) of the South African Police Service. An availability non-randomised sample (N=71) was used. The Maslach Burnout Inventory – General Survey, Utrecht Work Engagement Scale, a Job Demands-Resources Scale and Health and Organisational Commitment Scales were used as measuring instruments. An integrated intervention classification scheme of both the positive and negative aspects of work-related well-being on the organisational and individual level was developed and presented to members from the LCRC over a one-year period. LCRC members portrayed a high risk to fall ill due to exhaustion; they were less enthusiastic about their job and tended to derive a lower sense of significance from their work. Exhaustion influenced the way members view their job demands, organisational and social support, as well as growth opportunities available to them. In addition, members showed a major risk for developing low affective commitment due to low work engagement.

OPSOMMING

Die doelstelling van hierdie studie was om intervensies wat daarop gemik is om die vlakke van uitbranding en werksbegeestering by lede van die Provinsiale Kriminele Rekordsentrum (PKRS) in die Suid-Afrikaanse Polisiediens in die Noordwes-Provinsie aan te spreek, te evalueer. 'n Beskikbaarheidsteekproef (N=71) is geneem. Die Maslach Uitbrandingsvraelys – Algemene Opname, Utrecht Werksbegeesteringskaal, die Poseise-Hulpbronneskaal en Gesondheid- en Organisasieverbondenheidskale is afgeneem. 'n Geïntegreerde intervensie klassifiseringskema van beide positiewe en negatiewe aspekte van werkverwante welstand op organisatoriese en individuele vlak is ontwikkel en oor die loop van 'n jaar vir PKRS-lede aangebied. Lede het 'n hoë risiko tot uitputting getoon en het minder entoesiasties oor hul werk voorgekom. Uitputting het daartoe bygedra dat die lede werkseise, organisasie- en sosiale ondersteuning asook groeigeleenthede anders takseer. Lede het verder 'n hoë risiko tot lae affektiewe verbondenheid weens lae werksbegeestering getoon.

Work-related well-being, especially occupational stress, is a major area of research in the policing environment worldwide. Addressing stress in the workplace, including the potential cost to individuals and organisations, are major researched aspects (Anshel, 2000; Le Fevre, Kolt, & Matheny, 2006; Violanti, 1997). This is also true for the South African Police Service (SAPS), where thousands of rand are lost in man-hours, absenteeism, reduced productivity and workers' compensation benefits due to ill health. Furthermore, thousands of police members are leaving the service, citing stress and fatigue as the main reasons (Hosken, 2002; Seepe, 2001).

Stress has an adverse effect on police members, who often take their own lives (Hosken, 2002). Seven police members from one town in the North West Province have been admitted to hospital on the same day due to stress-related diseases, whilst reports have appeared in the media concerning the suicide rate among police members during 2005 in the North West Province (Cornelius, 2006; De Beer, 2005; Jordaan, 2005; Sa Joe, 2003). Studies have indicated the damaging effects stress has on an individual's physical and psychological health (Anshel, Robertson, & Caputi, 1997; Duckworth, 1986; Eden, 1990). It is evident from previous studies that SAPS members experience excessive stress and portray symptoms of burnout (Pienaar & Rothmann, 2003). From the previous two studies in this thesis, it was also clear that burnout impacts on the ill health of SAPS members.

Police officials in the North West Province have to cope with many job demands, limited resources and often a lack of control over these stressors. It is therefore important to research ways of addressing these stressors in order to assist SAPS members to address the distress they might be experiencing. Bakker and Geurts (2004) point out that to avoid employees' exhaustion, job demands have to be reduced or redesigned by means of interventions. Increasing job resources may also contribute to members experiencing work-related flow (Bakker & Geurts, 2004).

From a pathogenic, as well as a fortigenic perspective, burnout and work engagement are specific focus areas for research and intervention (Maslach, Schaufeli, & Leiter, 2001). According to Giga, Cooper, and Faragher (2003), proper methodical research involving scientific evaluation of interventions is extremely rare. According to Burke (2005), the purpose of the intervention are the most important aspect in intervention research and aim at

either the generation of knowledge or evaluation. Beer and Walton (1987) suggest that intervention research should be conducted from an action science approach whereby users of the research should be involved in the study. Self-corrective learning should be used, and the research should be used over time rather than episodically (Burke, 2005).

Kompier and Cooper (1999) identified three levels of intervention strategies to deal with work-related well-being (including stress, burnout and work engagement), namely primary, secondary and tertiary strategies. Primary level interventions are mainly concerned with modifying or eliminating the stressors inherent in the workplace in order to adapt the environment to better fit the individual. Secondary level interventions focus on the individual and are concerned with increasing awareness and extending the physical and psychological resources of employees to enable them to minimise the damaging effects of stress and manage stress more effectively. Stress-management programmes that use a cognitive behavioural approach are effective in reducing stress reactions, including burnout (see Schaufeli & Enzmann, 1998, pp. 146-168). Tertiary level interventions are targeted at individuals, but their role is recuperative rather than preventative. There is well-documented evidence (Kompier & Cooper, 1999) to suggest that counselling is effective in improving the psychological well-being of employees and has considerable cost benefits in terms of reduced sickness absence.

It seems that primary interventions are less often implemented than secondary and tertiary interventions, therefore more research is needed to address the broad area of stress management interventions (Le Fevre et al., 2006). According to Le Fevre et al. (2006), secondary approaches should be employed prior to the introduction of primary approaches within an organisation. Furthermore, stress management interventions will not be successful if organisational policies to sustain and develop employee health and well-being are not in place.

For interventions to make a real contribution, both individual and organisational participation are important (Dewe & O'Driscoll, 2001; De Frank & Cooper, 1987; Le Fevre et al.,2006).The effectiveness and potential cost benefits of interventions have not been thoroughly researched (Kompier & Cooper, 1999). Kompier and Cooper further state that the few studies that have been conducted showed significant improvements in employee

satisfaction and motivation levels, but little improvement in productivity outputs. Kompier and Cooper (1999) found that stress intervention practices often act on reducing the effect of stress on individuals and fail to reduce the actual workplace stressors.

According to Dewe and O'Driscoll (2001), one reason why many interventions fall short may be because little attempt has been made to find out what managers actually know of and understand by stress, and how they view their responsibility to address stress in the workplace. Furthermore, interventions should be more theory based instead of creating confusion regarding the term "stress". In order for stress interventions to be beneficial, the link between theory and practice is critical.

The objective of this study was to develop an integrated intervention model that could be used to promote work-related well-being, to evaluate the effectiveness of an intervention programme directed at the promotion of work-related well-being in the SAPS, and to assess the longitudinal effects of work-related well-being.

Work-related well-being interventions

According to Argyris (1970, p. 15), intervention entails "... to enter into an ongoing system of relationships, to come between or among persons, groups or objects for the purpose of helping them. The intervener exists independently of the system." French and Bell (1999) pointed out that an intervention can be viewed as a set of structured activities aiming at organisational improvement and individual development.

According to Quick, Quick, Nelson, and Hurrel (1997), there are potential benefits for the organisation as well as the employee when steps are taken to address well-being in the workplace. Elements of an intervention include activities, i.e. something that happens within an organisation, including methods, interviews or questionnaires, different levels of activities (i.e. a single task or an overall plan of improvement), and collaboration between the organisation and the client.

French and Bell (1999) identified the following four characteristics of interventions: a) interventions activities are used in addition to normal organisational activities; b) interventions activities are done according to an overall strategy. The strategy will be

compiled according to the goals of the change effort, the readiness of the organisation to be part of the intervention, the nature of the problem of the client system and the availability of the internal and external resources; c) intervention activities imply the planning and executing of actions and the evaluation of the consequences of actions. Observable, explicit and measurable objectives are developed as part of the action programmes and diagnostic activities precede interventions in organisations; d) multiple interventions are required if system-wide change is to be successful. Characteristics of interventions identified by Rothwell and Sullivan (2005) can be added to the abovementioned; e) it involves a change agent; f) it requires valid information, free choice and a high degree of ownership by the client. In summary, interventions will therefore aim to change some aspects of the organisation, for instance its climate, employees and structure, and improve the health and functioning of the organisation (Burke, 2005).

An intervention strategy to promote work-related well-being should be guided by the following principles: a) it should be problem-focused and holistic; b) it should take into account who are responsible for the problems and the solutions; c) it should include preventative, promotional and curative strategies. These principles will now be discussed in detail.

Principle 1: Problem-focused and holistic. Interventions should be founded in risk assessment and evaluation to ensure that the real problems are addressed. Kompier (2003) pointed out that it is of great importance to learn about the health and well-being of employees through risk assessment. The systemic causes of health and well-being problems should be investigated and interventions should theoretically fit in with problems. Therefore, a comprehensive model, which includes both positive and negative aspects of work-related well-being, should guide interventions, e.g. the Comprehensive Model of Burnout and Work Engagement (Jackson, Rothmann, & Van de Vijver, 2006; Schaufeli & Bakker, 2004). This model combines research findings on burnout and engagement with situational causes and the outcomes. The main assumption of the model is that two underlying processes exist, namely an effort-driven energetic process, in which burnout plays a key role and that could lead to negative health outcomes, and a motivational process that is driven by the availability of job resources and in which engagement plays a key role.

Negative (i.e. burnout) and positive (i.e. engagement) psychological states play similar roles in quite different processes. Burnout plays a mediating role in an effort-based energetic process that is driven by high job demands and could lead to ill health. Engagement, though, plays a mediating role in a motivational process that is driven by available resources and could lead to commitment to the organisation (Schaufeli & Bakker, 2004). Bakker and Geurts (2004) state that the dual process model can also be utilised for workplace interventions aimed at addressing psychological well-being and optimising employees' health. Furthermore, interventions will be more successful if they are tailored according to the specific job characteristics of the organisation.

One reason why interventions fail is because they address only the negative side of work-related well-being, e.g. ill health (Nelson & Simmons, 2003; Schaufeli & Bakker, 2004). According to Le Fevre et al. (2006), the eustress rather than the distress interpretation of the employee task environment should be encouraged by assisting employees to achieve more positive interpretations and reactions to their task environment.

Principle 2: Responsibility for problems and solutions. When deciding on interventions, it is necessary to determine who is responsible for the problem and the solution. By combining these two aspects, four models of helping and coping are identified, namely the medical, moral, enlightment and compensatory models (Meyer, 2003). Employees who occupy the medical model feel powerless and blame their problems on others or the situation; they take little responsibility in finding solutions to their problems. Employees in the moral model take high responsibility for solutions and problems and although they are valuable, they may run a risk of becoming stressed or burned out and being burdened with others' problems. Employees in the enlightment model blame themselves for problems but are powerless to find solutions; they tend to search for the right person to show them the solutions which, in turn, might lead to new disillusionment. Employees in the compensatory model recognise external sources that generate problems, but they take responsibility for working on solutions (Meyer, 2003).

Interventions can aim at three different levels, namely individual, individual/organisational and organisational level (Giga et al., 2003). Individual level interventions aim at reducing stress on an individual level and provide employees with skills to understand and cope with pressure and stress (Giga et al., 2003). Individual/organisational level target issues relate to the interface between individuals and their work, and ensure that employees can carry their

workload adequately. Organisational level interventions target issues such as policies and practices to prevent employee stress on an organisation-wide basis (Giga et al., 2003). Interventions aimed at the individual-focussed approach often fail to reduce actual stressors due to senior management failing to take responsibility, the ever-changing organisational setting and the lack of definite empirical evidence (Giga et al., 2003).

According to Kompier (2003), it is necessary to appoint people with sufficient influence and stature to look after the health and well-being of employees. Employees should be asked for their inputs regarding the status quo, causes and improvement. Interventions can then be tailored to address individual needs and desires. The support of top management is essential when intervening to promote work-related well-being.

Principle 3: Preventative, promotional and curative levels. From literature it is evident that preventing health and well-being issues is better than curing (Kompier, 2003). The removal or reduction of real or potential sources of stress is preferred to the moderation of their effects or the treatment of manifested damage (Quick et al., 1997). This study aims at placing intervention strategies into a framework of both the positive and negative aspects of work-related well-being with the interventions on the organisational and individual level. For the purposes of this study, interventions could be classified in terms of primary, secondary and tertiary levels (Kompier & Cooper, 1999).

Giga et al. (2003) refer to primary level interventions as organisational-level interventions where organisational issues such as policies and practices are targeted to *prevent* employee stress. Kompier and Cooper (1999) state that these interventions aim to reduce stressors inherent in the workplace in order to adapt the environment to better fit the individual. The effectiveness and potential cost benefits of primary level interventions have not been rigorously evaluated (Kompier & Cooper, 1999). The few studies that have been conducted showed significant improvements in employee satisfaction and motivation levels, but productivity outputs improved minimally (Kompier & Cooper, 1999). The development and evaluation of organisational interventions appear to be hampered by issues of power, control and ethics though. Changes on an organisational level may disrupt organisational functioning and issues of control will then, largely, be ignored, thereby reducing the potential impact of these interventions (Dewe, 1994).

According to Murphy (1995), human resource departments of organisations have a lot to offer in the primary intervention stage and consultation should take place between this department and the employee assistance services providing the interventions. Contributions of human resource departments include the revision of supervisory training programmes, adopting feasible work schedules and other organisational change strategies (Murphy, 1995). Cooper and Cartwright (1994) add that policies relating to job training and availability of health care are likely to have an impact on the work performance and job satisfaction of employees. These outcomes might also influence the quality of employees that can be recruited and the ability to retain employees once they are employed (Cooper & Cartwright, 1994).

For the purposes of this study, the following primary level interventions are relevant (see Giga et al., 2003): a) career development to provide opportunities for employees to acquire new skills and to develop themselves (Roberts & Davenport, 2002). Recommendations will be made to management regarding ways in which members can advance in the organisation and can be assisted to manage their careers; b) sharing in organisational goals to enable employees to share in the success of the organisation and to be proud of the quality of work they do. Specific interventions include a rewarding work environment, characterised by a positive climate, employees having the decision-making authority to do their jobs well, recognition for contributions, encouragement to look for new and better ways of doing things, and supervisors who create a motivating climate; c) selection and placement to ensure that individuals have the correct set of skills to deal with the demands of the tasks at hand; d) training and educational programmes to teach new methods and thereby reduce job strain (Bunce & West, 1996). Other aspects that will be addressed on an organisational level include physical and environmental characteristics, and communication (Giga et al., 2003).

According to Dewe (1994), secondary level interventions aim at equipping the individual with strategies, skills and techniques to cope better with job demands. These interventions focus on the individual and are concerned with increasing awareness and extending the physical and psychological resources of employees to enable them to minimise the damaging effects of stress and manage stress more effectively. Secondary level interventions aim at the level of the individual's interaction with the work and include three main types, namely cognitive, somatic and multimodal methods (Le Fevre et al., 2006). The cognitive type includes using mindfulness techniques such as affirmations and thought stopping. The

somatic type includes using relaxation techniques, biofeedback and breathing techniques, whilst the multimodal type combines aspects of both the somatic and cognitive type (Le Fevre et al., 2006). Stress management programmes are more preventative in nature, aiming at addressing health and wellness, although they are not designed to eliminate workplace stressors (Dewe, 1994). Results from a study by Van der Klink, Blonk, Schene, and Van Dijk (2001) indicated that generally employees did benefit from stress reduction interventions. Furthermore, secondary interventions were more effective than primary interventions.

The following secondary level interventions are relevant for this study (see Giga et al., 2003): a) health education to provide information to members concerning improvements in vitality and mood by means of moderate exercise and healthy lifestyle by visiting wellness centres; b) training and education programmes concerning skills development in areas such as stress prevention, time management, interpersonal skills and conflict management thereby assisting members in reducing some of the pressures. Trauma inoculation workshops will aim at equipping managers with specific skills in identifying and managing symptoms of trauma; And c) relaxation, meditation and biofeedback related to focus on breath and muscle calming, to reduce stress, anxiety and tension and to learn to respond to information relating to skin and muscle activity.

Tertiary level interventions focus mainly on individuals, with a recuperative (or curative) rather than preventative role. The main aim of tertiary level interventions is to rehabilitate employees who have suffered from the consequences of poor well-being at work by providing the necessary counselling (Dewe & O'Driscoll, 2002). There is well-documented evidence (Kompier & Cooper, 1999) to suggest that counselling is effective in improving the psychological well-being of employees and has considerable cost benefits in terms of reduced sickness absence. This level of intervention may also include services such as hospitalisation, community health centres or consultants (Dewe, 1994). Furthermore, Cooper and Cartwright (1994) report that workplace stress counselling and stress management training in the form of time management, relaxation training and cognitive skill development have an important part to play in extending the individual's psychological and physical resources.

According to Dewe and O'Driscoll (2002), the most prevalent intervention strategy on a tertiary level is an employee assistance programme (EAP). Berridge and Cooper (1994)

define an EAP as "a programmatic intervention at the workplace, usually at the level of the individual employee using behavioural science knowledge and methods for the recognition and control of certain work- and non work-related problems" (p. 5). The following tertiary level interventions are relevant for the purposes of this study (Giga et al., 2003): a) support groups will provide a supportive environment and reduce role stressors and their negative effects on members. Members are encouraged to share experiences and create a collective approach to problem solving; b) cognitive behaviour therapy to attempt to change the thought processes to enable the member to positively accept unpleasant experiences; c) counselling and therapy to focus on the rehabilitation of employees who have suffered the consequences of work stress; and d) trauma debriefing to focus on the rehabilitation of employees who have suffered the consequences of exposure to a traumatic incident.

Table 1 presents an integrated classification scheme of both the positive and negative aspects of work-related well-being with the primary, secondary and tertiary interventions on the organisational and individual level.

Table 1

A Classification Scheme for Interventions to Promote Work-related Well-being

Model	Primary Interventions	Secondary Interventions	Tertiary Interventions
Ill health and organisational commitment	• Implement an employee health and wellness policy • Performance management	• Health education (e.g. diet, exercise, lifestyle)	• Employee Assistance Programme (medical treatment and counselling) • Support groups
Burnout and work engagement	• Wellness survey to assess levels of burnout and work engagement • Train managers to deal with burnout and work engagement • Performance management • Review job and personal resources	• Wellness centres (e.g. gymnasiums) • Workshops (stress prevention, burnout, work engagement, resilience, time management, goal setting, conflict management, change management, interpersonal skills, assertiveness) • Relaxation, Meditation, Biofeedback • Health Education (e.g. diet, lifestyle, and exercise) • Coaching	• Burnout and ill health reintegration training • Counselling (cognitive behaviour therapy) to deal with burnout • Coaching to decrease disengagement • Post-traumatic stress interventions (e.g. trauma debriefing)
Job demands and job resources	• Organisational diagnosis • Organisational restructuring • Assess staff /workload ratio • Job design (e.g. Vitamin Model, Job Characteristics Model, Job Demand-Control Model) • Job rotation • Selection and placement (work/role fit) • Role clarification • Employee orientation, training and development • Career development • Participative management • Management training and development • Reduce number of temporary contracts • Team building	• Training/ education programmes • Workshops to change perceptions of stressors • Workshops in time management (to deal with overload) • Trauma-Management workshops	

Although the SAPS has introduced several initiatives to address stressors in the workplace (Seepe, 2001), questions are raised regarding the distribution of stress management services and police members' use of such services (Anon, 2002). No documented research is currently available regarding the effectiveness of interventions in the SAPS.

METHOD

Research design

A longitudinal survey design with only one group, namely the experimental group, was used. The same instrument was administered at two different times (with a one-year interval) to the same group of participants. The essential characteristic of the one-group design is that the group is compared to itself. Advantages of this research design include that actual changes and impacts experienced by participants can be assessed. Longitudinal research is best used to solve cause and effect issues and to disentangle the complex interplay between past experiences and psychological functioning (Montgomery, Peeters, Schaufeli, & Den Ouden, 2003).

Participants

The participants were in-tact working units of the Local Criminal Record Centre (LCRC) of the SAPS North West. A total number of 71 members participated in the study. The sample was equally distributed between male (50%) and female (49%), and the majority were Tswana- or Afrikaans speaking Inspectors (mainly Fingerprints Investigators (33,8%) or administration personnel with mostly 11-15 years of experience in the SAPS.

The characteristics of the participants are shown in Table 2.

Table 2

Characteristics of the Participants (N=71)

Item	Category	Frequency	Percentage
Gender	Male	36	50,7
	Female	35	49,3
Age	20-30	18	25,4
	31-35	22	31
	36-40	17	24
	41-45	9	12,7
	46-50	4	5,6
	50+	1	1,4
Years in SAPS	1-5	19	26,8
	6-10	10	14,1
	11-15	30	42,3
	16-20	7	9,9
	20+	5	7,0
Rank	Sergeant	5	7,0
	Inspector	28	39,4
	Captain	8	11,3
	Superintendent	2	2,8
	Administrative personnel	28	39,4
Home Language	Tswana	28	39,4
	Sotho	7	9,9
	Zulu	2	2,8
	Afrikaans	34	47,9
	English	1	1,4
Job Category	Management	12	16,9
	Data typist	15	21,1
	Administrative	12	16,9
	Facial Composition	1	1,4
	Fingerprints Investigator	24	33,8
	Crime Scene Investigator	7	9,9

Intervention programme

The content and the methodology of the work-related well-being intervention programme are reported in Table 3.

Table 3

Content and Methodology of a Work-related Well-being Intervention Programme

Phase	Intervention	Method	Time
Primary	Addressing job demands and resources	Engaging management	3 hours
Primary	Role clarity	Growth group	4 hours
Primary	Trauma Management workshop for managers	Growth group Lectures Role play	24 days
Secondary	Stress prevention and work engagement workshop	Growth group Lectures Role-play Relaxation techniques	8 hours
Secondary	Engagement (happiness and gratitude)	Growth group Lectures	4 hours
Secondary	Skills training: Interpersonal skills, conflict management and assertiveness	Growth group Lectures	8 hours
Secondary	Team enhancement and time management programme	Growth group Lectures	8 hours
Tertiary	Counselling sessions	EAP	Continuous
Tertiary	Multiple stressor debriefing	Trauma debriefing	Bi-monthly (6 sessions)
Tertiary	Address from ill health and Support Groups	Employee Assistance Programme	Continuous

Primary level intervention. One session pertaining to role clarity was facilitated. During the presentation at a specific unit, it became clear that job schedules were set on a national level and could not be redesigned. Therefore, clarification regarding each employee's role at the unit was facilitated. Team development interventions were presented at each unit in order to enhance group functioning and effectiveness in the working groups. During group discussions, certain themes emanated, namely the availability of resources, job demands and job control. A document stipulating this information was compiled by the researcher for the attention of top management of the unit in an attempt to address these issues on a managerial

level. Selection and placement procedures are in place to determine whether individuals have the correct set of skills to deal with the demands of the tasks at hand when recruited for the unit. Members are exposed to a rigorous psychometric selection process when applying for placement at the LCRC unit. Successful LCRC members are exposed to specialised training in the field of forensics to master skills unique to the job. Members are also sent on refresher courses.

Secondary level interventions. According to Murphy (1995), stress management intervention models should involve three critical phases, namely problem identification, intervention design and programme evaluation. With problem identification, the sources of the stress were identified (according to the model of work-related well-being that was used for the purposes of this study). An organisation-based stress-prevention and work engagement programme was developed during the second phase in order to assist members with identifying their own stress symptoms and coping mechanisms. Each working group was exposed to two workshops in this regard. The first workshop focussed on trauma management and coping mechanisms. Stress and trauma management skills were presented to the management of each unit in order for them to identify trauma symptoms in members and refer these members to counsellors. The second workshop focussed on stress symptoms and stressors and members were given the opportunity to identify their own stress symptoms. Members with high stress levels were referred for counselling with the Employee Assistance Programme in the SAPS. Finally, health in relation to happiness was discussed during a lecture with each unit. The programme evaluation phase entails the post-test in order to determine the effectiveness of the stress management intervention programme.

Tertiary level interventions. Tertiary level interventions focussed on the referral and counselling of employees. Field notes were made after each basic counselling and support group session and involved impressions and themes that emerged from the sessions. Members were referred to external psychologists due to a shortage of psychologists within the SAPS. Some members were also referred for medical intervention due to ill health and, subsequently, went on sick leave. During the year, LCRC members were exposed to 131 counselling sessions and 152 multiple stressor debriefing sessions, and three members were referred for medical interventions and subsequently enrolled for the ill health reintegration training.

The interventions indicated in Table 3 were arranged according to the time schedules of the different LCRC units and members of management. Although the days are indicated as consecutive, it is not necessarily the case and the interventions were presented during the course of one year at the nine LCRC units.

Measuring instruments

The following measuring instruments were used in this study:

A *biographical questionnaire* was used to gather demographic information on the participants (e.g. province, age, gender, years of service, years in current position, educational qualifications, marital status, and language).

The *Maslach Burnout Inventory – General Survey* (MBI-GS) (Maslach, Schaufeli, & Leiter, 1996) was used to measure burnout. Two subscales of the MBI-GS, namely Exhaustion and Cynicism were used for the purposes of this study. Exhaustion consisted of five items (e.g. "I feel tired when I get up in the morning and have to face another day on the job"), and Cynicism consisted of four items (e.g. "I have become less enthusiastic about my work"). All items were scored on a seven-point frequency rating scale ranging from 0 (*never*) to 6 (*always/daily*). Schaufeli, Van Diederendonck, and Van Gorp (1996) reported that Cronbach coefficient alphas varied from 0,87 to 0,89 for Exhaustion, and 0,73 to 0,84 for Cynicism. The construct validity of the MBI-GS was supported by Storm and Rothmann (2003a) in a study conducted among members of the SAPS with alpha coefficients varying from 0,88 (Exhaustion) to 0,70 (Cynicism).

The *Utrecht Work Engagement Scale* (UWES) was used to measure participants' level of engagement. The UWES was developed by Schaufeli, Martinez, Pinto, Salanova, and Bakker (2002) as a measure of engagement. Two subscales of the UWES, namely Vigour (e.g. "I am bursting with energy in my work"), and Dedication (e.g. "My job inspires me") were used for the purposes of this study. The UWES was scored on a seven-point frequency rating scale ranging from 0 (*never*) to 6 (*always*). The alpha coefficients for the three subscales varied between 0,68 and 0,91 (Schaufeli et al., 2002). Rothmann and Storm (2003b) obtained adequate alpha coefficients for the two subscales Vigour (0,78) and Dedication (0,89). Naudé

(2003) found values of 0,70 for Vigour and 0,83 for Dedication in a study conducted among emergency workers in South Africa.

The *Job Demands-Resources Scale* (JDRS) was used to measure the specific job characteristics. The JDRS comprises 48 items and the questions were rated on a four-point scale ranging from 1 (*never*) to 4 (*always*). The dimensions of the JDRS include pace and amount of work, mental load, emotional load, variety in work, opportunities to learn, independence in work, relationships with colleagues, relationships with immediate supervisors, ambiguities about work, information, communication, participation, contact possibilities, uncertainty about the future, remuneration and career possibilities. Jackson and Rothmann (2005) found that seven factors of the JDRS were reliable according to their alpha coefficients. These factors included organisational support: 0,88; growth opportunities: 0,80; overload: 0,75; job insecurity: 0,90; relationship with superiors: 0,76; control: 0,71; and rewards: 0,78. Rothmann, Mostert, and Strydom (2006) also found reliable alpha coefficients for the JDRS that varied between 0,76 to 0,92 in a South African sample.

The *Health Subscale of the ASSET* was used to assess respondents' level of health. The Health Scales consisted of 19 items arranged on two subscales, namely Physical Ill Health and Psychological Ill Health. All items on the Physical Ill Health subscale were related to physical symptoms of stress and were scored on a scale varying from 1 (*never*) to 4 (*often*). The items listed on the Psychological Ill Health subscale were symptoms of stress-induced mental ill health.

The *Organisational Commitment Subscale of the ASSET* was used to measure the individual's attitude to the organisation. The first subscale, namely Individual Commitment consisted of five items (e.g. "I am proud of this organisation"). The second subscale, namely Organisational Commitment consisted of four items (e.g. "I feel valued and trusted by the organisation"). The items were scored on a six-point scale varying from 1 (*strongly disagree*) to 6 (*strongly agree*).

Statistical analysis

The statistical analysis was carried out using SPSS (SPSS Inc., 2005). Descriptive statistics

(e.g. means, standard deviations, skewness and kurtosis) were used to analyse the data. Pearson product-moment correlations were used to specify the relationships between the variables. A cut-off point of 0,30 (medium effect, Cohen, 1988) was set for the practical significance of correlation coefficients. Paired-samples *t*-tests were used to determine the difference in results for year 1 and year 2.

Multiple regression analyses were used to investigate whether the independent variables (i.e. job demands and job resources) predict the dependent variables (i.e. burnout and work engagement). Independent variables were entered in two steps (e.g. to predict Exhaustion, Job Demands was entered in the first step as independent variable, followed by Job Resources).

RESULTS

The descriptive statistics and alpha coefficients of the scales of the measuring instruments are presented in Table 4.

Table 4

Descriptive Statistics and Cronbach Alpha Coefficients of the Scales

Item	Year 1			Year 2		
	Mean	*SD*	α	Mean	*SD*	α
Exhaustion	12,18	8,13	0,84	13,23	7,39	0,80
Cynicism	9,08	5,30	0,62	10,01	4,76	0,54
Vigour	19,77	5,63	0,60	19,17	5,85	0,64
Dedication	22,99	6,16	0,78	22,38	6,52	0,80
Organisational Support	45,32	8,90	0,91	45,56	8,56	0,91
Growth Opportunities	25,94	5,77	0,84	25,18	5,56	0,82
Social Support	19,27	2,98	0,58	18,83	3,19	0,76
Advancement	11,38	3,67	0,78	11,81	3,74	0,76
Job Insecurity	8,03	2,97	0,88	7,97	2,81	0,84
Job Demands	25,11	5,37	0,80	25,45	4,72	0,76
Physical Ill Health	16,25	4,65	0,84	16,20	4,53	0,85
Psychological Ill Health	24,42	7,49	0,91	25,01	7,34	0,91
Affective Commitment	19,55	6,53	0,77	19,14	5,82	0,60
Normative Commitment	16,85	4,90	0,86	16,35	4,15	0,80

Table 4 shows Cronbach alpha coefficients varying from 0,54 to 0,91. These values compare reasonably well with the guideline of 0,70, except for Cynicism (year 1 and 2), Vigour (year 1 and 2), Social Support (year 1) and Affective Commitment (year 2), thereby confirming internal consistency of the scales (Nunnally & Bernstein, 1994).

Further inspection of Table 4 shows that levels of Exhaustion and Cynicism decreased, while Psychological Ill Health increased from year 1 to year 2. Social Support decreased from year 1 to year 2 whilst Job Insecurity decreased from year 1 to year 2. Both Affective and Normative Commitment levels decreased slightly from year 1 to year 2. It is clear from the results that members experienced higher levels of (psychological) ill health and experienced less social support whilst feeling more insecure in their jobs. Members also felt less emotionally attached to the organisation as well as less inclined to remain in the organisation, although definite conclusions can only be drawn from the results of the T-test.

The product-moment correlation coefficients between the scales of the measurement model of work-related well-being for year 1 are reported in Table 5.

Table 5

Product-moment Correlation Coefficients (Year 1)

Item		1	2	3	4	5	6	7	8	9	10	11	12	13
1.	Exhaustion	-	-	-	-	-	-	-	-	-	-	-	-	-
2.	Cynicism	0,51*++	-	-	-	-	-	-	-	-	-	-	-	-
3.	Vigour	-0,25	-0,29	-	-	-	-	-	-	-	-	-	-	-
4.	Dedication	-0,32	-0,43*+	0,73*	-	-	-	-	-	-	-	-	-	-
5.	Organisational Support	-0,05	-0,20	0,30	0,39*+	-	-	-	-	-	-	-	-	-
6.	Growth Opportunities	-0,15	-0,24	0,43*+	0,55*++	0,55*++	-	-	-	-	-	-	-	-
7.	Social Support	-0,05	-0,24	0,38*+	0,45*+	0,60*++	0,45*	-	-	-	-	-	-	-
8.	Advancement	-0,26	-0,29	0,35*+	0,35*+	0,35*+	0,30	0,31*+	-	-	-	-	-	-
9.	Job Insecurity	-0,07	0,12	-0,13	-0,00	-0,11	0,07	-0,10	0,19	-	-	-	-	-
10.	Job Demands	0,55*++	0,42*+	-0,25	-0,15	-0,04	-0,08	-0,02	-0,38*+	0,05	-	-	-	-
11.	Physical Ill Health	0,58*++	0,32*+	-0,38*+	-0,21	-0,09	-0,16	-0,19	-0,28	0,11	0,43*+	-	-	-
12.	Psychological Ill Health	0,66*++	0,36*+	-0,46*+	-0,31*+	-0,10	-0,21	-0,19	-0,34*+	-0,03	0,39*+	0,78*++	-	-
13.	Affective Commitment	-0,34*+	-0,10	0,12	0,23	0,40*+	0,35*	0,27	0,29	0,13	-0,17	-0,31*+	-0,29	-
14.	Normative Commitment	-0,18	0,08	-0,09	0,02	0,26	0,13	0,14	0,08	0,04	0,01	-0,08	-0,06	0,75*++

* $p \leq 0,01$ - statistically significant
\+ $r \geq 0,30$ - practically significant (Medium effect)
++ $r \geq 0,50$ - practically significant (Large effect)

From Table 5 it is evident that Exhaustion is statistically significantly and positively related to Job Demands (r = 0,55; large effect), Physical Ill Health (r = 0,58; large effect) and Psychological Ill Health (r = 0,66; large effect), and negatively related to Affective Commitment (r = -0,34; medium effect). Cynicism (r = 0,51; large effect) is statistically significantly and positively related to Exhaustion, Job Demands, (r = 0,42; medium effect), Physical Ill Health (r = 0,32; medium effect), and Psychological Ill Health (r = 0,36; medium effect, while statistically and negatively related to Dedication (r = -0,43; large effect). Vigour is statistically significantly and positively related to Growth Opportunities (r = 0,43; medium effect), Social Support (r = 0,38; medium effect) and Advancement (r = 0,35; medium effect), and negatively related to Physical Ill Health (r = -0,38; medium effect) and Psychological Ill Health (r = -0,46; medium effect).

Vigour is further statistically significantly and positively related to Dedication (r = 0,73; large effect). Dedication is statistically significantly and positively related to Growth Opportunities (r = 0,55; large effect), Social Support (r = 0,45; medium effect), Advancement (r = 0,35;

medium effect) and Organisational Support (r = 0,39; medium effect), and statistically significantly negatively related to Psychological Ill Health (r = -0,31; medium effect).

Organisational Support is statistically significantly and positively related to Affective Commitment (r = 0,40; medium effect). Growth Opportunities is statistically significantly and positively related to Affective Commitment (r = 0,40; medium effect). Advancement is statistically significantly and negatively related to Psychological Ill Health (r = -0,34; medium effect). Job Demands is statistically significantly and positively related to Physical Ill Health (r = 0,43; medium effect) and Psychological Ill Health (r = 0,39; medium effect).

The product-moment correlation coefficients between the scales of the measurement model of work-related well-being for year 2 are reported in Table 6.

Table 6

Product-moment Correlation Coefficients (Year 2)

Item		1	2	3	4	5	6	7	8	9	10	11	12	13
1.	Exhaustion	-	-	-	-	-	-	-	-	-	-	-	-	-
2.	Cynicism	0,58*++	-	-	-	-	-	-	-	-	-	-	-	-
3.	Vigour	-0,50*	-0,45*+	-	-	-	-	-	-	-	-	-	-	-
4.	Dedication	-0,49*	-0,53*+	0,78*++	-	-	-	-	-	-	-	-	-	-
5.	Organisational Support	-0,50*+	-0,43*+	0,45*	0,45*	-	-	-	-	-	-	-	-	-
6.	Growth Opportunities	-0,33*	-0,24	0,51*+	0,47*	0,63*++	-	-	-	-	-	-	-	-
7.	Social Support	-0,37*	-0,41*	0,39*+	0,41*	0,65*++	0,52*++	-	-	-	-	-	-	-
8.	Advancement	-0,44*+	-0,21	0,30	0,28	0,48*	0,33*	0,31*	-	-	-	-	-	-
9.	Job Insecurity	-0,26	-0,12	0,13	0,14	0,19	0,19	0,13	0,18	-	-	-	-	-
10.	Job Demands	0,34*+	0,06	-0,06	-0,10	-0,07	-0,02	-0,09	-0,06	-0,07	-	-	-	-
11.	Physical Ill Health	0,57*++	0,31*	-0,41*	-0,34*	-0,30	-0,21	-0,23	-0,32*+	-0,20	0,40*+	-	-	-
12.	Psychological Ill Health	0,62*++	0,32*	-0,49*	-0,48*	-0,33*	-0,24	-0,29	-0,37*+	-0,16	0,31*+	0,78*++	-	-
13.	Affective Commitment	-0,50*+	-0,42*	0,58*++	0,63*++	0,43*+	0,39*+	0,31*+	0,29	0,10	-0,15	-0,29	-0,42*+	-
14.	Normative Commitment	-0,30	-0,29	0,34*	0,32*+	0,23	0,08	0,16	0,10	-0,16	-0,07	-0,09	-0,24	0,72*

* $p \leq 0,01$ - statistically significant
\+ $r \geq 0,30$ - practically significant (Medium effect)
++ $r \geq 0,50$ - practically significant (Large effect)

Table 6 shows that Exhaustion is statistically significantly and positively related to Cynicism (r = 0,58; large effect), Physical Ill health (r = 0,57; large effect) and Psychological Ill Health (r = 0,62; large effect), while related to Job Demands (r = 0,34; medium effect). Exhaustion

is statistically significantly and negatively related to Vigour (r = -0,50; large effect), Organisational Support (r = -0,50; large effect) and Affective Commitment (r = -0,50; large effect), and statistically significantly and negatively related to Dedication (r = -0,49; medium effect), Growth Opportunities (r = -0,33; medium effect), Social Support (r = -0,37; medium effect) and Advancement (r = -0,44; medium effect).

Table 6 further indicate that Cynicism is statistically significantly and positively related to Physical Ill Health (r = 0,31; medium effect) and Psychological Ill Health (r = 0,32; medium effect), and statistically significantly and negatively related to Vigour (r = -0,45; medium effect), Organisational Support (r = -0,43; medium effect), Social Support (r = -0,41; medium effect) and Affective Commitment (r = -0,42; medium effect). Vigour is statistically significantly and positively related to Affective Commitment (r = 0,58; large effect) and Organisational Support (r = 0,45; medium effect), Growth Opportunities (r = 0,51; medium effect), Social Support (r = 0,39; medium effect) and Normative Commitment (r = 0,34; medium effect). Vigour is also statistically significantly and negatively related to Physical Ill Health (r = -0,41; medium effect) and Psychological Ill Health (r = -0,49; medium effect).

Table 6 further shows that Dedication is statistically significantly and positively related to Organisational Support (r = 0,45; medium effect), Growth Opportunities (r = 0,47; medium effect), Social Support (r = 0,41; medium effect) and Normative Commitment (r = 0,32; medium effect), and Affective Commitment (r = 0,63; large effect). Dedication is further statistically significantly and negatively related to Physical Ill Health (r = -0,34; medium effect) and Psychological Ill Health (r = -0,48; medium effect). Organisational Support is statistically significantly and positively related to Growth Opportunities (r = 0,63; large effect) and Social Support (r = 0,65; large effect), Advancement (r = 0,48; medium effect) and Affective Commitment (r = 0,43; medium effect).

Organisational Support is further statistically significantly negatively related to Psychological Ill Health (r = -0,33; medium effect). Growth Opportunities is statistically significantly and positively related to Social Support (r = 0,52; large effect), Advancement (r = 0,33; medium effect) and Affective Commitment (r = 0,39; medium effect). Social Support is statistically significantly and positively related to Advancement (r = 0,31; medium effect) and Affective Commitment (r = 0,31; medium effect), while Job Demands is statistically significantly and positively related to Physical Ill Health (r = 0,40; large effect) and Psychological Ill Health (r

= 0,31; medium effect). Psychological Ill Health is statistically significantly and negatively related to Affective Commitment (r = -0,42; medium effect). Lastly, Affective Commitment is statistically significantly and positively related to Normative Commitment (r = 0,72; large effect).

The results of multiple regression analyses with Exhaustion, Cynicism, Vigour, Dedication, Physical and Psychological Ill Health, and Affective as well as Normative Commitment as dependent variables in year 1 and 2 are reported in Table 7. These dependent variables and their predictors were selected based on the model of work-related well-being (see Figure 1 in Article 1). *Note:* Only the statistically significant predictors, their standardised regression coefficients (β), the F-value, the multiple correlation (R), and squared multiple correlation (R^2) are reported.

Table 7

Regression Analysis with Statistically Significant Predictors for Year 1 and 2

	Year 1				Year 2			
Dependent variable	Best predictor(s)	F	R	$R^{2\#}$	Best predictor(s)	F	R	$R^{2\#}$
Physical Ill Health	Exhaustion (β = 0,53), Vigour (β = -0.36)	11,28*	0,64	0,41	Exhaustion (β = 0,52)	8,53*	0,59	0,34
Psychological Ill Health	Exhaustion (β = 0,60), Vigour (β = -0.37)	19,07*	0,73	0,54	Exhaustion (β = 0,53)	11,73*	0,65	0,42
Affective Commitment	Exhaustion (β = -0,39)	3,28*	0,41	0,17	Dedication (β = 0,39)	12,94*	0,67	0,44
Normative Commitment	Exhaustion (β = -0,32)	1,97	0,33	0,11	-	2,43	0,36	0,13
Exhaustion	Job Demands (β = 0,51)	5,42*	0,58	0,34	Job Demands (β = 0,26), Advancement (β = -0,26), Insecurity (β = -0,21)	6,94*	0,63	0,40
Cynicism	Job Demands (β = 0,37)	3,71*	0,51	0,26	-	-	-	-
Vigour	Growth Opportunities (β = 0,34)	4,53*	0,55	0,30	Growth Opportunities (β = 0,35)	4,00*	0,53	0,28
Dedication	Growth Opportunities (β = 0,42), Social Support (β = 0,25)	6,13*	0,60	0,37	-	-	-	-

* $p \leq 0,05$

\# *Note: the % of variance can be calculated by R^2 x 100.*

Table 7 shows that Exhaustion and low Vigour were the only statistically significant predictors of Physical and Psychological Ill Health in year 1, while Exhaustion was the only

statistically significant predictor of these components of Ill Health in year 2. Exhaustion statistically significantly predicted low Affective Organisational Commitment in year 1, while Dedication predicted Affective Organisational Commitment in year 2. Exhaustion statistically significantly predicted low Normative Commitment in year 1.

In year 1, Job Demands statistically significantly predicted Exhaustion and Cynicism. In year 2, Job Demands, Advancement (inverse), and Job Insecurity statistically significantly predicted Exhaustion. Growth Opportunities statistically significantly predicted Vigour in year 1 and 2, while Growth Opportunities and Social Support predicted Dedication in year 1.

It can be concluded that LCRC members portrayed a high risk to fall physically and psychologically ill due to exhaustion, whilst high job demands and a lack of support within LCRC related to a higher risk of burnout.

Next, the level of risk for burnout, low work engagement, ill health and low organisational commitment was calculated to guide the development of an intervention strategy for the LCRC. The level of risk (or risk factor) associated with the likely negative effects of a given variable was calculated by weighing the sample mean (perceived level of a given variable) by the sample correlation (between a specific variable and its outcome). This gives an estimate of the risk associated with exposure to a specific factor (Clarke & Cooper, 2000). The sample means were standardised to make it possible to assess the relative seriousness of each risk factor. Individual scores on the positive constructs (i.e. Vigour, Dedication, Affective Commitment, Normative Commitment, Organisational Support, Growth Opportunities, Social Support, and Advancement) were reversed to allow direct comparison of risk factors. The scores for the various risk factors are reported in Table 8. (*Please note:* The absolute value of a specific risk factor is not interpretable. However, because sample means are based on standardised scores, the scores of the different risk factors can be compared to assess the relative importance of different risk factors.)

Table 8

Risk Factors for Burnout, Disengagement, Ill Health and Low Commitment

	Year 1				Year 2			
	Physical Ill Health	Psychological Ill Health	Affective Commitment	Normative Commitment	Physical Ill Health	Psychological Ill Health	Affective Commitment	Normative Commitment
Exhaustion	**141,04**	**236,21**	**62,68**	17,57	**191,28**	**226,31**	147,18	52,99
Cynicism	65,48	82,87	6,39	4,09	66,14	70,48	121,40	57,88
Vigour	87,05	**127,56**	8,68	4,88	105,60	150,82	**211,32**	**72,62**
Dedication	23,66	54,14	28,39	0,21	64,74	124,42	**222,26**	**64,74**
	Exhaustion	Cynicism	Vigour	Dedication	Exhaustion	Cynicism	Vigour	Dedication
Job demands	**173,40**	**101,12**	35,83	12,90	69,53	2,17	2,17	6,01
Organisational support	1,09	1,09	39,30	1,09	**105,28**	**77,87**	**85,28**	**85,28**
Growth opportunities	11,31	28,96	**92,97**	**152,10**	**100,11**	31,19	**140,83**	**119,60**
Social support	0,67	24,09	**60,40**	**84,71**	62,73	**77,02**	69,69	77,02
Advancement	**61,38**	**47,79**	44,66	51,03	**97,08**	22,11	45,13	39,31
Insecurity	2,63	7,73	9,07	0,00	35,89	7,65	8,97	10,41

From Table 8 it is evident that LCRC members portrayed a high tendency both in year 1 and 2 to fall physically and psychologically ill due to exhaustion. The members also portrayed low vigour for year 1, which also attributed to them falling psychologically ill. LCRC members tended to derive a lower sense of significance from their work and felt less enthusiastic about their job in year 1 due to exhaustion. Furthermore, low work engagement can be regarded as a major risk factor for developing low affective commitment in year 2. Low work engagement in year 2 also presented as a moderate risk in terms of showing low levels of normative commitment.

The risk of burnout (exhaustion and cynicism) because of job demands was higher in year 1 than in year 2. Furthermore, a perceived lack of organisational support presented a substantial larger risk for developing burnout and low work engagement in year 2 compared with year 1. Low social support presented as a moderate risk for developing low work engagement in both years, while lack of advancement opportunities presented as a moderate risk for developing burnout.

The results of paired sample t-tests between the participants' scores on all the scales of the measurement model of work-related well-being in year 1 and 2 are reported in Table 9.

Table 9

Paired Samples T-Tests

Item	Mean Difference	*SD*	*t*	*P*
1. Exhaustion	-1,05	6,44	-1,37	0,17
2. Cynicism	-0,84	4,92	-1,43	0,16
3. Vigour	0,61	5,19	0,98	0,33
4. Dedication	0,61	6,23	0,82	0,42
5. Organisational Support	-0,25	8,27	-0,25	0,80
6. Growth Opportunities	0,76	5,39	1,12	0,24
7. Social Support	0,44	3,89	0,95	0,35
8. Advancement	-0,62	3,56	-1,46	0,15
9. Job Insecurity	0,06	3,16	0,15	0,88
10. Job Demands	-0,34	4,80	-0,59	0,56
11. Physical Ill Health	0,05	4,13	0,10	0,92
12. Psychological Ill Health	-0,60	6,81	-0,73	0,47
13. Affective Commitment	0,41	7,09	0,49	0,63
14. Normative Commitment	0,50	6,06	0,69	0,50

Table 9 shows that levels of Exhaustion and Cynicism decreased between year 1 and 2 while Psychological Ill Health increased during this period. Social Support, opportunities for Advancement and Job Demands decreased from year 1 to year 2. However, none of the differences between pre- and post-measurements was statistically significant.

Longitudinal effects on work-related well-being

No significant differences were found between the levels of work-related well-being between the pre- and post-measurement. Therefore, it was decided to analyse the effects of the scales in a longitudinal design thereby obtaining causal type structures.

The results of multiple regression analyses of the longitudinal effects of the facets of work-related well-being are reported in Table 10.

Table 10

Regression Analyses of Longitudinal Effects

Dependent variable (year 2)	Predictor(s)	*F*	*R*	$R^{2\#}$
Job Demands	Exhaustion (year 1) (β = 0,33)	8,32*	0,33	0,12
Exhaustion	Exhaustion (year 1) (β = 0,64)	47,35*	0,64	0,41
Exhaustion	Advancement (year 2) (β = -0,22)	11,27*	0,75	0,56
Exhaustion	Physical Ill Health (year 1) (0,33)	8,49*	0,33	0,11
Physical Ill Health	Exhaustion (year 2) (β = 0,46) Physical Ill Health (year 1) (β = 0,42)	35,53*	0,72	0,51
Organisational Support	Exhaustion (year 1) (β = -0,31)	7,54*	0,31	0,10
Growth Opportunities	Exhaustion (year 1) (β = -0,26)	4,96*	0,26	0,07
Social Support	Exhaustion (year 1) (β = -0,26)	4,99*	0,26	0,07
Advancement	Exhaustion (year 1) (β = 0,22)	3,49	0,22	0,05
Insecurity	Exhaustion (year 1) (β = -0,31)	7,19*	0,31	0,09
Job Demands	Cynicism (year 1) (β = 0,13)	1,09	0,13	0,02
Organisational Support	Cynicism (year 1) (β = -0,36)	10,05*	0,36	0,13
Growth Opportunities	Cynicism (year 1) (β = -0,38)	11,88*	0,38	0,15
Social Support	Cynicism (year 1) (β = -0,24)	4,18*	0,24	0,06
Advancement	Cynicism (year 1) (β = -0,18)	2,31	0,18	0,03
Insecurity	Cynicism (year 1) (β = -0,12)	0,94	0,12	0,01
Cynicism	Cynicism (year 1) (β = 0,50)	22,16*	0,50	0,25
Cynicism	Psychological Ill Health (year 1) (β = 0,37)	11,06*	0,37	0,14
Psychological Ill Health	Psychological Ill Health (year 1) (β = 0,56)	30,72*	0,56	0,31
Job Demands	Vigour (year 1) (β = -0,16)	1,78	0,16	0,02
Organisational Support	Vigour (year 1) (β = 0,26)	5,14*	0,26	0,07
Growth Opportunities	Vigour (year 1) (β = 0,34)	9,01*	0,34	0,12
Social Support	Vigour (year 1) (β = 0,17)	2,10	0,17	0,03
Advancement	Vigour (year 1) (β = 0,23)	3,84	0,23	0,05
Insecurity	Vigour (year 1) (β = 0,01)	0,01	0,01	0,00
Vigour	Vigour (year 1) (β = 0,57)	32,53*	0,57	0,33
Affective Commitment	Vigour (year 2) (β = 0,26)	2,27*	0,25	0,06
Affective Commitment	Affective Commitment (year 1) (β = 0,35) Dedication (year 2) (β = 0,45)	19,14*	0,68	0,46
Vigour	Behavioural Commitment (year 1) (β = 0,07)	0,34	0,07	0,00

* $p \leq 0,05$

#Note: the % of variance can be calculated by R^2 x 100.

Table 10 shows that Exhaustion in year 1 predicted Job Demands in year 2 ($p \leq 0,05$). Exhaustion in year 1 was the only significant predictor of Exhaustion in year 2 when it was entered with Job Demands (year 2) into the regression equation ($p \leq 0,05$). Physical Ill Health in year 1 predicted Exhaustion in year 2 ($p \leq 0,05$), while both Exhaustion in year 2 and

Physical Ill Health in year 1 predicted Physical Ill Health in year 2. Both Exhaustion and Cynicism in year 1 predicted Organisational Support, Growth Opportunities, Social Support and Insecurity in year 2 ($p \leq 0,05$). Cynicism in year 1 was the only significant predictor of Cynicism in year 2 when it was entered with Insecurity (year 2) into the regression equation ($p \leq 0,05$), whilst Psychological Ill Health in year 1 predicted Cynicism in year 2 ($p \leq 0,05$). Psychological Ill Health in year 1 also predicted Psychological Ill Health in year 2 ($p \leq 0,05$). Vigour in year 1 predicted Organisational Support and Growth Opportunities in year 2 ($p \leq 0,05$). Whilst Vigour in year 1 was the only predictor for Vigour in year 2 ($p \leq 0,05$), Affective Commitment in year 1 and Dedication in year 2 both predicted Affective Commitment in year 2 ($p \leq 0,05$).

DISCUSSION

The aim of this study was to evaluate the interventions implemented to address the levels of burnout and engagement of SAPS members. The pre- and post-measurement showed no significant differences in the levels of work-related well-being of participants. The post-intervention results did, however indicate that LCRC members portrayed a high risk to fall ill due to exhaustion. Within the LCRC, members were less enthusiastic about their jobs and tended to derive a lower sense of significance from their work. Members further showed a major risk for developing low affective commitment due to low work engagement. Exhaustion also influenced the way members view their job demands, organisational and social support, as well as growth opportunities available to them. A lack of advancement opportunities and job insecurity contributed to feelings of exhaustion and cynicism.

From the literature, it was clear that an intervention could be regarded as a set of structured activities aiming at organisational improvement and individual development. An intervention might include activities such as interviews or questionnaires with different levels of activities, for instance, either a single task or an overall plan of improvement.

Principles underlying an effective intervention programme include aspects such as using intervention activities as an overall strategy in addition to normal organisational activities compiled according to the goals of the change effort. It is important that the organisation is ready to be part of the intervention and that internal and external resources are available. Effective interventions will also involve a change agent that takes certain planned action

steps by intentionally entering into an ongoing system. The availability of valid information is important, as well as a high degree of ownership by the client to ensure effective interventions. Interventions will, therefore, aim to change some aspects of the organisation, for instance its climate, employees, and structure, and to improve the health and functioning of the organisation.

Previous studies indicated that interventions could aim at organisational level, i.e. policies and practices, individual/organisational level, i.e. to ensure that employees can carry their workload adequately and individual level, i.e. to provide employees with skills to understand and cope with pressure and stress. It is important that all organisational citizens take responsibility to ensure the successful implementation of interventions. The four models of helping and coping (Meyer, 2003) define taking responsibility for the problem and the solution in an organisation. Employees who blame their problems on others and take little responsibility in finding solutions to their problems often feel powerless and they would typically occupy the medical model. Employees in the moral model may run a risk of burnout due to taking high responsibility for solutions and problems. The enlightment model occupies employees who blame themselves for problems but are powerless to find solutions - they then search for the right person to show them the solutions, which might lead to new disillusionment. Finally, employees in the compensatory model recognise external sources that generate problems while taking responsibility for finding their own solutions.

In order to develop observable, explicit and measurable objectives as part of the action programmes, it is important that diagnostic activities precede interventions in organisations by means of a risk assessment. By obtaining an analysis of both the positive and negative aspects in an organisation, multiple interventions can be planned to ensure that a system-wide change is successful. Multiple interventions would include actions on primary, secondary and tertiary levels (Kompier & Cooper, 1999).

Interventions on primary level aim at reducing stressors inherent in the workplace in order to adapt the environment to better fit the individual. These interventions are more organisationally based and issues of power, control and ethics often seem to hamper change on this level. Intervention on this level would typically include supervisory training programmes, adopting feasible work schedules, availability of health care and selection and placement. On secondary level, interventions aim at the level of the individual's interaction

with the work and include aspects such as skills training. Tertiary level interventions focus mainly on individuals, with a recuperative rather than preventative role with actions such as relaxation training and cognitive skill development.

During the study, it was clear that the levels of intervention (primary, secondary and tertiary) should be targeted at organisational and individual level. From the literature, it was found that a multi-dimensional approach combining organisational and individual directed intervention strategies is likely to be an effective option to deal with stress in the workplace. In order to plan multiple level interventions for LCRC members of the SAPS, an integrated classification scheme of both the positive and negative aspects of work-related well-being on the organisational and individual level was developed and presented to members of the LCRC over a one-year period.

On an individual level, interventions aimed at reducing stress by providing skills to the members to understand and cope with pressure and stress, were applied. The interface between members and their work was applied on both individual and organisational level. Organisational level interventions targeted issues such as policies and practices to prevent employee stress on an organisation-wide basis.

Primary level interventions aimed at informing management regarding the resource needs of the unit. Attention was not given to these needs until after the last assessment was conducted. These resources included more posts allocated to the unit and a budget for better office accommodation and more equipment. On a secondary level, members were equipped with skills in managing stress symptoms, seeing that work that becomes too challenging demands more knowledge, skills and abilities (Schabracq, 2003). Some members experienced a crisis however, and were in need of medical attention for physical ill health. These members were referred to the EAP service and were, subsequently, hospitalised. Once these members were discharged, however, it was not desirable that they returned to the same working environment that caused the stress originally.

Secondary level interventions that were applied to address aforementioned included team enhancement sessions to increase support among members on unit level. Positive feedback was received and members communicated their need for each other's support during the difficult time. Growth group sessions offered members the opportunity to ventilate their

feelings and develop insight into their circumstances. As was the case previously mentioned, it was not desirable that the members returned to the same working conditions that caused the stress originally. Kompier and Kristensen (2000) state that most programmes aim at the reduction of the cognitive appraisal of stressors and their subsequent effects rather than the reduction or elimination of these stressors.

In order to reduce or eliminate stressors, the management of each unit was also trained in helping skills and trauma management skills to support their members. On a primary level, representations were made to senior management to reconsider moving LCRC members to different locations. Only a few of these representations were successful. On a tertiary level, counselling and support were provided on a regular basis to assist members to cope with their changing circumstances.

LCRC members' levels of risk for burnout, low work engagement, ill health and low organisational commitment were calculated to guide the development of an intervention strategy for the LCRC. The estimate of the risk associated with exposure to a specific factor showed that LCRC members portrayed a high risk to fall physically and psychologically ill due to exhaustion. This finding correlates with Bakker, Demerouti, and Schaufeli (2003) who found that high job demands lead to health problems.

Within the LCRC, a higher risk of burnout (exhaustion and cynicism) was found because of high job demands and a lack of support within the LCRC. These findings are in accordance with Le Fevre et al. (2003) who, stated that distress occurs when demands placed on the body exceed its capacity to extend energy in homeostasis. Bakker and Geurts (2004) also states that specific job demands should be redesigned in order to avoid employees' exhaustion. The members portrayed a high risk of falling psychologically ill due to low vigour. Within the LCRC, members were less enthusiastic about their job and tended to derive a lower sense of significance from their work (lower dedication). Members furthermore portrayed a major risk for developing low affective commitment due to low work engagement. Bakker, et al. (2003) confirmed these findings stating that employees who experience social support from their colleagues are more dedicated to their job and committed to their organisation and are consequently less inclined to leave the organisation.

It is evident from the results that exhaustion has an influence on the way members view their job demands, organisational and social support as well as growth opportunities available to them. Rothmann et al. (2003) confirm these findings since they found that high job demands and a lack of resources (organisational support) are strongly related to exhaustion and depersonalisation. A lack of advancement opportunities and job insecurity also contributed to feelings of exhaustion and cynicism in LCRC members.

Exhaustion further contributed to physically ill health symptoms. High job demands, a lack of organisational and social support as well as few growth opportunities contributed to members becoming negative, which in turn led to psychological ill health. High job demands, a lack of organisational support, growth opportunities and few opportunities for advancement contributed to low vigour. Affective commitment of LCRC members seemed to influence their levels of vigour, which contributed to low levels of behavioural commitment. When these finding are interpreted in relation to the COBE model (Schaufeli & Bakker, 2004), it is clear that the chain of negative high demands, burnout and ill health coupled with the lack of job resources (e.g. organisational support), impact negatively on both the energetic and the motivational processes of LCRC members.

It can only be speculated as to the reasons why no significant differences were found between the levels of work-related well-being between the pre- and post-measurement, thereby indicating that the interventions were not successful in bringing about change to the LCRC. Considering the problem-focused and holistic level, a possible reason could be that the organisation were not ready to be part of the intervention, as mentioned as one of the characteristics of interventions by French and Bell (1999). Internal and external resources were further not available to facilitate successful change according to the needs of the LCRC members (French & Bell, 1999). Although the dual-process model, as suggested by Bakker and Geurts (2004), was utilised it was difficult to tailor the interventions according to the members' job characteristics seeing, that certain job aspects were stipulated on national level and could not be altered.

On the second level, taking into account who is responsible for the problems and the solutions, it was difficult to suggest and implement change in the LCRC environment were no health related policy or practice to prevent (or merely acknowledge) stress exists. This is

in accordance with research from Giga et al. (2003), stating that individual-focussed interventions often fail due to senior management failing to take responsibility. Kompier (2003) further states that support from top management is essential to promote work-related well-being.

It seems that the third level, namely the preventative, promotional and curative strategies failed whereby the interventions could not reduce the stressors inherent in the workplace in order to adapt the environment to better fit the individual (Kompier & Cooper, 1999). One possible reason is that the application of Resolution 7 resulted in members feeling less supported in the organisation and this increased their levels of burnout. A substantial number of LCRC members were transferred to other units in different locations as a result of Resolution 7 – a move that created anxiety and uncertainty in members. According to Schabracq (2003), uncertainty and rumours about the future of members' jobs can unsettle their feelings of safety.

It can further be speculated that members from the LCRC experienced increased job demands due to the implementation of Resolution 7, seeing that less members were available to do the job since some members were transferred. The consequences of Resolution 7 could possibly be that LCRC members tended to derive a lower sense of significance from their work and felt less enthusiastic about their job. It seems that members seem to feel less committed to the organisation and perceive that the organisation does not value them and look after their needs. It can only be speculated that aspects such as few opportunities for advancement, few training opportunities and resource needs not being met could affect their level of commitment, thereby confirming the motivational process as described in the COBE model of Schaufeli and Bakker (2004). When considering the four models of helping and coping of Meyer (2003), it is clear that the LCRC members mostly find themselves in the medical model, whereby they feel powerless and blame their problems on others or the situation, taking little responsibility in finding solutions to their problems. The possibility exists, considering the members' low levels of vigour and dedication, that they have little energy and mental resilience to put effort and persistence into findings these solutions.

Bearing in mind the difficult environments in which the interventions were applied, some positive aspects did flow from the interventions. For instance, after consultation with management, more posts were allocated to the LCRC and their resource needs were

addressed. It is clear, however, that the role of management is crucial when instigating management and prevention strategies, recognising risk factors and supporting members. Intervention strategies in the SAPS should firstly start at primary level with issues such as policies and practices on employee health and work-related well-being. Management must understand their role in supporting members on both emotional and physical level. If management succeeds in effectively supplying resource needs, members' work might become a positive and fulfilling experience. It is clear that without ongoing support, the benefits of an intervention programme are often temporary, thereby concluding the initial aim of this study, which was to evaluate the interventions implemented to address the levels of burnout and engagement of SAPS members. The results from this study indicated that no significant differences in the levels of work-related well-being for LCRC members could be documented.

This study had several limitations. Firstly, although longitudinal research is favoured for intervention research, it does have the disadvantage that once the study is underway, it is difficult to manage the possibility of members withdrawing, as was the case in this study where a withdrawal rate of 36% was recorded. Secondly, the execution of Resolution 7 of 2002 midway through the research led to almost 25% of the members of the original sample being transferred to other components. This led to a considerable decrease in the sample size from the pre-test (N=111) to the post-test (N=71). Another limitation is the lack of a control group in the research design. It is difficult to determine whether the interventions had a positive effect without comparing it against a control group.

During the intervention programmes, members could not switch of their stand-by cellular phones due to always being on call and the possibility of being called for court cases. This often led to members being called away midway through interventions, which ultimately influenced the group cohesion.

Only LCRC members in the North West Province were included in the sample. Based on the results obtained in this study, future studies should make use of larger and more representative samples outside the border of the North West Province.

RECOMMENDATIONS

The development of an employee health and wellness policy will guide and assist management and SAPS members in the enhancement of work-related well-being within LCRC and the broader organisation. The current policy (EAP NI 3/2003) lacks in addressing the prevention of stress, providing health education to SAPS members, as well as incorporating multiple interventions to ensure a system-wide change. A detailed needs analysis is further required to determine which resources are lacking in members' working environment. Addressing the needs of LCRC members will ultimately improve their levels of engagement and commitment to the organisation.

It is recommended that within the SAPS, a support structure should be developed and a more participative decision-making process be followed when organisational changes, such as Resolution 7, are made. Management should also make the paradigm shift that not only individual, but also organisational-based strategies must be developed if stress and burnout in the LCRC are to be effectively identified, prevented and reduced. Organisational policies to sustain and improve employee health are lacking in the SAPS. The strategies should not only comprise plans to prevent and manage stress, but should also include management's support and acknowledgement of the stressful policing environment that members have to face daily.

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CHAPTER 5

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

The purpose of this chapter is to provide conclusions in respect of the findings from three empirical studies regarding the work-related well-being of members from the Local Criminal and Record Centre (LCRC) of the South African Police Service (SAPS) in the North West Province. The conclusions are based on the objectives of the three research articles. The limitations of the studies are discussed, followed by recommendations for the SAPS. In addition, the specific outcomes of the study are presented.

5.1 CONCLUSIONS

The general objective of this research was to investigate the work-related well-being (burnout and engagement, job demands, job resources, ill health and commitment) of LCRC members and to evaluate the effectiveness of interventions aimed at addressing the work-related well-being of LCRC members.

The first two objectives of the study were to assess the reliability and validity of the constructs in a structural model of work-related well-being, and to test the structural model for LCRC members. Firstly, a good fit was found for the model in which perceived job demands contributed to burnout, which, in turn, impacted on ill health. A factor analysis on the Job Demands-Resources scale showed high factor loadings and two factor structures emerged from the analysis. The results of the factor analysis on the MBI and UWES showed high factor loadings with two factor structures that emerged from the analysis. The Health subscales of the ASSET were also subjected to a factor analysis where the results indicated high factors loadings with only one factor emerging from the analysis. Finally, the results of the factor analysis on the Organisational Commitment subscale of the ASSET showed high factor loadings with one factor emerging from the analysis. Through product-moment correlation coefficients correlations were found between burnout, overload and health (large effect), and between engagement, organisational commitment, growth opportunities and organisational support.

Work-related well-being was determined by the relationship between two opposite constructs, namely burnout and engagement. Through structural equation modelling it was found that work-related well-being of LCRC members was affected by an environment of high job demands and inadequate resources. The structural model showed that job demands contribute to burnout, which is influenced by a lack of job resources. Members experienced a lack of support from the organisation and inadequate learning opportunities. The structural model further indicated that a lack of job resources played an extrinsic motivational role. Job demands and a lack of job resources could lead to ill health via burnout, leading to the conclusion that job demands could predict ill health through burnout. It can be concluded that physical and psychological ill health are, therefore, the results of burnout, which corresponds with Bergen and Bartol (1983), Faragher, Cooper, and Cartwright (2004) and Maslach and Leiter (1997). These findings are also in line with the results of Jackson, Rothmann, & Van de Vijver (2006), who found that burnout mediates the relationship between job demands and ill health.

Regarding the positive aspects of work-related well-being, the structural model indicated that work wellness (low burnout and high work engagement) mediated the relationship between job resources and organisational commitment. The results also indicated that LCRC members, who had adequate resources at their disposal, experienced support from the organisation and were more committed to the SAPS. This led to members feeling trusted and respected by the organisation and, in return, they were loyal and dedicated to the LCRC. This finding corresponds with Woodruffe (2006) and Jackson et al. (2006).

In conclusion, it is evident that the structural model of work-related well-being for LCRC members is in accordance with the COBE model of Schaufeli and Bakker (2004), indicating two psychological processes, namely the energetic and the motivational processes. The energetic process links job demands with ill health through burnout, while the motivational process links job resources with organisational outcomes through engagement.

The third objective of the study was to investigate the stressors, moderators and their outcomes, and the levels of stress among LCRC members. Occupational stress was described as situations in which characteristics of, or events related to, the workplace can lead to either ill health or welfare of individuals (Beehr, Johnson, & Nieva, 1995). Ill health was regarded

as an outcome of stress, which could be used to determine the effects of the work environment (Cartwright & Cooper, 2002). The descriptive statistics revealed that in the entire sample, all the stressors were perceived as moderately stressful, although work relations and work-life balance could be isolated as being very stressful. LCRC members obtained very high scores for ill health (physical and psychological health).

In order to determine which factors predict physical or psychological ill health of LCRC members, a series of standard multiple regression analyses were carried out with Job Overload, Security, Work Relations, Job Resources, Work-Life Balance and Control as independent variables and Physical and Psychological Ill Health as dependent variables. It was found that certain sources of Occupational Stress explained 17% of the variance in Physical Health and 19% of the variance in Psychological Health (as measured by the Health Subscales of the ASSET The results further indicated high scores for physical and psychological health symptoms of LCRC members. These symptoms included headaches, heightened blood pressure, backaches, digestive problems, anxiety, depression and substance abuse. The study indicated that members' ill health was ultimately caused by psychological and physical strain (Eden, 1990; Maslach & Leiter, 1997).

The fourth objective of the study was to determine whether organisational commitment moderated the effect of occupational stress on the ill health of LCRC members. Organisational commitment can be divided into two categories, namely commitment of the individual to the organisation and perceived commitment of the organisation to the individual (Cartwright & Cooper, 2002). The results clearly indicated that LCRC members are committed to the SAPS, which led them to experience meaning in their work and to feel trusted and respected by the organisation. These findings correlate with the research of Cartwright and Cooper (2002). However, it is clear from the results that the individual does not perceive commitment from the organisation to the individual.

The results further indicated that certain sources of Occupational Stress explained 17% of the variance in commitment of the individual to the organisation (Individual commitment) and 16% of the variance in the perceived commitment of the organisation to the individual (Organisational Commitment), while Individual Commitment moderated the effects of Work Relations on Ill Health. Regression coefficients confirmed that Organisational Commitment

was a significant moderator of the effect of occupational stress on ill health. In other words, the level of commitment of police officers plays an important role in terms of their psychological unwell-being whenever stress about work relations is high and commitment is low.

The fifth objective of the study was to investigate the aspects that should be included in an intervention programme directed at work-related well-being. An integrated classification scheme of both the positive and negative aspects of work-related well-being on the organisational and individual level was presented as an intervention strategy for the LCRC. It was evident from the results that by aiming to reduce the exhaustion levels of the members, their ill health could be prevented.

Aspects that should be included in an intervention programme include, primary level interventions aimed at informing management about the resource needs of the unit, although management only addressed these needs at a later stage. On a secondary level, members were equipped with skills in managing stress symptoms, while tertiary level interventions included hospitalising some members due to ill health.

In responding to the last objective of the study, namely to evaluate interventions used to promote work-related well-being of LCRC members, the results show that no significant differences were found between the levels of work-related well-being between the pre- and post-measurement indicating that the interventions were not successful in bringing about change to the LCRC. The true effect of Resolution 7 on LCRC members can only be speculated on, although it did create anxiety and uncertainty in members. The application of equity for career advancement could also contribute to them feeling more ill and exhausted. It seems that members tend to feel less committed to the organisation and perceive that the organisation does not value them and look after their needs. It can only be speculated that aspects, such as few opportunities for advancement, few training opportunities and resource needs not being met, could affect their level of commitment.

The major role management plays in an organisation is eminent in this study. They are the policy makers and keepers that should be held responsible for addressing employee health and work-related well-being. Management must understand their role in supporting members on an emotional and a physical level.

5.2 LIMITATIONS OF THE STUDY

This study had various limitations. The sample size and sampling method constitute the first limitation. Only LCRC members in North West Province were included in the sample. Based on the results obtained in this study, future studies should make use of larger and more representative samples outside the border of North West Province. Secondly, the research design used in the study had certain flaws. The cross-sectional survey design that was used for Chapters 2 and 3 makes it difficult to prove causal relationships even though advanced analytical procedures were applied. Although longitudinal research, as used in Chapter 4 has the advantage that actual changes and impacts experienced by participants were assessed, the limitations of this design are that, once the study is underway, it is difficult to make changes to the measuring instruments and members from the sample can withdraw, as was the case in this study. Furthermore, engagement is measured by positively worded items, while burnout is measured by negatively worded items. This could easily lead to an overestimation of the real correlation of items with similar wordings and to an underestimation of the real correlation of items with a different format.

The third limitation involves the use of self-report measures. This could have led to "common method variance" that could lead to an overestimation of the correlations studied.

Another limitation of this study was that the execution of the principles of Resolution 7 of 2002 midway into the research led to almost 25% of the members of the original sample being transferred to other components. This led to a considerable decrease in the sample size for the post-test. The group dynamics on unit level was also affected with new commanders being placed at some units in accordance with Resolution 7, resulting in interventions being influenced by the sudden change in the unit structure. The commanders were not aware of previous group dynamics, which often led to interventions not having the desired result and members withdrawing themselves whilst present at sessions.

The tendency of SAPS members to question procedures proved to be a challenge when attempting to convince the LCRC members to complete the questionnaire. The general perception among members was that the results would be used for the purposes of Resolution

7, despite all the assurances of confidentiality. This ultimately led to most members completing the questionnaires anonymously.

The lack of a control group in the research design constitutes another limitation. It is difficult to determine whether the interventions had a positive effect without comparing it against a control group.

During the intervention programmes, members could not switch of their stand-by cellular phones due to always being on call and the possibility of being called for court cases. This often led to members being called away midway through interventions, which ultimately influenced the group cohesion.

5.3 RECOMMENDATIONS

Recommendations in respect of the SAPS, other government departments as well as recommendations for future research are made in this section.

5.3.1 Recommendations for the organisation

Results from this study will only hold purpose and meaning if it is incorporated on an organisational level where policy makers can utilise the findings and implications. This would ensure that a strategically focussed approach, aimed at organisational and individual levels, is followed in the implementation of interventions.

According to police literature, stress has an adverse effect on members performing their duties in this demanding environment. The effect stress has on the individual cannot be denied and ranges from individual stress-related symptoms, such as headaches, to organisational-related symptoms, such as absenteeism. It is, therefore, recommended that addressing the work-related well-being of LCRC members in the SAPS should firstly start at managerial level, where the existence of stress and burnout in the organisation should be recognised and strategies set in place that could address the symptoms of stress and burnout. It is, therefore, vital that SAPS management should form a concept of stress, specifically

stress unique to the SAPS. Educating management in stress should be a starting point from which planning strategies can then be put in place.

It is further recommended that the SAPS should aim at addressing the work-related well-being of their employees within high-risk units, such as the LCRC, by increasing job resources and addressing workload in order to enhance the health of members. Having adequate resources has been proven, both theoretically and empirically, to enhance work-related well-being. It, therefore, makes sense to continuously keep LCRC members well resourced, thereby minimising the levels of stress and burnout. A detailed needs analysis is recommended to determine which resources are lacking in the working environment. Addressing the needs of LCRC members will ultimately improve their sense of commitment to the organisation.

The results further indicated that LCRC members are committed to the SAPS. In addition, they derive a sense of significance from their work and they feel trusted and respected by the organisation. This feeling is, however, not experienced as being mutual, indicating that the organisation should actively improve on the way they demonstrate their appreciation of members' input. The results indicated that the level of commitment of police officers plays an important role in terms of their psychological unwell-being whenever stress about work relations is high and commitment is low. The recommendation is made that SAPS management should attempt to make police members feel secure in their jobs by implementing primary interventions, such as training and development, job rotation, role clarity, providing in resources such as supplying in favourable working conditions, reviewing policies on remuneration and promotion opportunities. These interventions could ultimately play an important role in focusing on the health and well-being of the LCRC member.

A further primary intervention could be to conduct a skills analysis within the LCRC to determine the level of skills and development needs, thereby ensuring that focussed training and education could be provided to better equip members. Furthermore, an assessment of stress and burnout levels of LCRC members should be conducted to enable specific needs for a focussed approach.

As a secondary level intervention, stress management workshops can be presented to educate employees about the symptoms of stress, including post-traumatic stress, trauma and burnout.

On a tertiary level, specific attention should be given to the management of the ill health retirement process within the SAPS. The process does not seem to be effective, as members are forced to return to the cause of the stress (the working environment) before sufficient recovery has taken place. As a result, members are often more traumatised and effective recovery is thus prevented.

During contact sessions with members of the units, it was noted that by appointing more Specialists, supplying in physical resources needs such as vehicles and photographic equipment, members' working conditions would probably be made easier. Furthermore, by increasing job resources, members will feel valued by the organisation. By appointing more Specialists, provision could be made to place more members on stand-by duties, thereby ensuring that adequate recovery time in between emergency services duties for members is allowed. Furthermore, the job demands and ill health of LCRC members will also be addressed seeing that the results indicated that high job demands lead to ill health and burnout. A lack of control also leads to ill health, which implies that providing more autonomy to members to control their job demands could ultimately lead to healthier employees.

According to the results of the study, work relations and support structures within the LCRC are perceived as very stressful. Consideration should, therefore, be given to address these aspects. Primary level interventions that could be considered include team enhancement sessions and sharing of information in the workplace. As a secondary level intervention, interpersonal skills development programmes could further enhance interpersonal relationships, both at home and at the office.

Other secondary level interventions that could equip members with specific skills relate to time management, team roles and group cohesion. Emphasis should, however, be placed on the fact that the organisation needs to take responsibility for creating a caring and supportive culture. One way in which this can be achieved is to expose managers to supervisor training in terms of managing trauma and stimulating a supportive environment for members within the LCRC.

It is evident from the study that the SAPS is in need of more employee assistance practitioners to address the physical and psychological stressors as indicated in the study.

5.3.2 Recommendations for future research

Although some limitations exist in the study, the findings may have some important implications for future research.

Firstly, further longitudinal research regarding the causal relationships between burnout, work engagement, health and organisational commitment in the South African Police Service should be undertaken. This will facilitate the development of more effective intervention strategies to address the work-related well-being of the members of one of South Africa's crucial services.

It is recommended that future studies should not depend solely on self-report measures, but that appropriate designs should be considered in order to prevent data from being contaminated by common method variance, because both the dependent and independent variables tend to rely upon only the information from the respondents

Finally, the lack of intervention research in the SAPS posed a major problem. Because this is the only study that has been undertaken to date in this field in the SAPS, it is recommended that future research should be conducted in this area with larger samples.

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