

**THE INFLUENCE OF COPING AND STRESSORS ON BURNOUT AND  
COMPASSION FATIGUE AMONG HEALTH CARE PROFESSIONALS**

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## **DECLARATION**

**I declare that this thesis hereby submitted by me for the degree Philosophiae Doctor at the University of the Free State is my own independent work and has not previously been submitted by me at another university/faculty. I furthermore cede copyright of the thesis in favour of the University of the Free State.**

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**Jo-Anne Smit**

**30 November 2006**

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## CHAPTER 1

This thesis (presented in article format) focuses on burnout and compassion fatigue among health care professionals working in the South African public health sector.

In this chapter the motivation behind the inception of this research is discussed, research objectives are outlined and the division of chapters is set out.

### ***1.1 Problem Statement***

The motivation for this study grew from the researcher's involvement in an Employee Assistance Programme in a large public health care facility in a time of growing concern about the working conditions in many public hospitals and clinics. While it is known that providing care to people in need can be highly rewarding, the demands associated with health care delivery also mean that it can be highly stressful, particularly when working conditions are poor (Van den Berg, et al., 2006). In South Africa, doctors and nurses in the public health sector are faced with this exact scenario. Although the current working conditions in the public health sector are the result of numerous and diverse challenges, recent history has had the most significant impact (Van Rensburg, 2004).

Public health care has been affected by ongoing health sector reform implemented since the first democratic elections in South Africa in 1994. This process of transformation has lead to an unstable transitional phase characterised by unrealistic expectations, job insecurity, severe staff shortages and heightened stress levels (Gilson, 2004; Van Rensburg, 2004). Although health sector reform has theoretically lead to a more equitable distribution of health services and greater accessibility to services, the health of many South Africans continues to be influenced by prevailing socio-economic difficulties associated with South Africa's status as a developing country. Health service delivery thus occurs in the midst of poverty, unemployment, high levels of crime and violence, and backlogs in the provision of housing, drinking water and sanitation (Benatar, 2004; Van Rensburg, 2004). Furthermore, while other developing countries are primarily faced with a burden of infectious diseases and



poverty-related conditions such as HIV/AIDS, nutrition deficiency diseases and tuberculosis, South Africa is simultaneously also plagued by health issues arising from affluence (such as chronic lifestyle diseases), as well as health issues resulting from trauma and injuries. South Africa's high incidence of crime means that many doctors and nurses are exposed to traumatic scenes of damaged bodies (Redlinghuys & Van Rensburg, 2004). Consequently, South Africa's health status is poor in comparison with other countries of similar socio-economic standing such as Brazil and Argentina, which in itself holds major challenges for health care professionals.

Research has found that under these kinds of working conditions health care professionals are particularly vulnerable to occupational stress (Schaufeli & Enzmann, 1998). Furthermore, health care workers are among the broader occupational group of human service workers who are uniquely vulnerable to developing two distinct occupational stress syndromes, namely *burnout* and *compassion fatigue*. In view of this, this study examines the relationship between the working conditions of South African health care professionals and the syndromes of burnout and compassion fatigue, which both have a detrimental impact on health care workers and the organisations that employ them (Abendroth, 2005; Collins & Long, 2003; Schaufeli & Enzmann, 1998).

In this study burnout is conceptualised by Maslach's original three-component definition of the syndrome: A gradual process that develops in response to chronic exposure to job-related stressors, and which is characterised by emotional exhaustion, depersonalisation, and low levels of personal accomplishment (Maslach, 1993). While burnout is a gradual process primarily associated with a misfit or mismatch between a person and the job, compassion fatigue is a comparatively recent trauma-related syndrome that can have a sudden onset (Collins & Long, 2003). Although less clearly understood from a theoretical perspective than burnout, compassion fatigue is perhaps best described as a by-product of working with traumatised or suffering individuals and as such is unique to the human service occupations (Figley, 1995; Figley, 2002). Compassion fatigue can develop in response to emotional strain which arises when human service workers are required to sustain high levels of empathetic engagement with care recipients, or from secondary exposure to distressing and traumatic

events. In both cases the experiences reported by care providers are similar to those associated with posttraumatic stress disorder (PTSD) (Rodrigo, 2002; Salston & Figley, 2003). These secondary traumatic stress symptoms are considered to be the key component of compassion fatigue.

*Compassion satisfaction*, on the other hand, is another recent construct that encapsulates a caregiver's sense of satisfaction derived from the work of helping others (Collins & Long, 2003; Stamm, 2005). Although this construct is not a primary focus area of the present study, some of the potential factors that can contribute to health care workers experiencing more compassion satisfaction are also considered. For instance, an individual's mode of coping can potentially have a significant influence on the effects of stressors encountered in work and family life (Carr, 2004). Therefore coping is thought to play an important role in the onset of occupational stress reactions such as burnout and compassion fatigue, as well as in compassion satisfaction (Paton, 1996; Schaufeli & Enzmann, 1998). Based on these research findings, the coping strategies of health care workers will be another important focus of this study.

The importance of considering coping strategies in research on burnout and compassion fatigue is underscored by mounting concern that training programs may be contributing to the difficulties experienced by health care workers by not adequately preparing graduates for the challenges that they will encounter (Figley, 2002). Given that the health care institution in this study is also an academic hospital and training institution for medical and nursing students, findings can potentially highlight areas of need which can be addressed through additions to existing academic curricula.

From the problem statement the following research questions emerge:

- What is the prevalence of burnout, compassion fatigue and compassion satisfaction among health care professionals working in a public health care facility?
- What organisational and extra-organisational factors contribute to burnout, compassion fatigue and compassion satisfaction?

- How does coping influence burnout, compassion fatigue and compassion satisfaction in health care professionals?
- Given that compassion fatigue is a relatively new construct, are we able to assess this syndrome accurately?
- Based on human service workers' unique vulnerability to both burnout and compassion fatigue, what are the similarities and differences between the manifestations of these syndromes in health care workers?

It is anticipated that answers to these research questions will make a meaningful contribution to research in this area by:

- Illustrating the relevance of both burnout and compassion fatigue within a particular professional domain and occupational context. That is, considering aspects unique to health care work in South Africa by including consideration of the broader South African social and political context.
- Providing a better understanding of the demands that health care workers face and highlighting areas that can be addressed in order to better assist and prepare graduates for the demands that they will encounter.

## **1.2 Research Method**

### **1.2.1 Research design and sample**

A cross-sectional survey design was used to achieve the objectives of this study. In order to proceed with the study, permission was obtained from senior management personnel at the hospital in question and from the Medical Ethics Research Committee of the University of the Free State.

A convenience sample of doctors and nurses (N = 313) was drawn from a public regional hospital. The hospital in question is one of four district hospitals in the Free State province, which has a population of almost 3 million people. Statistics released by the Free State

Department of Health show that approximately 85% of individuals residing in this province do not have medical insurance and as such are dependent on these four district hospitals for all health care services other than the basic services provided at community based clinics (FSDOH, 2005). The hospital is also an accredited training hospital associated with the University of the Free State's Faculty of Health Sciences.

### ***1.2.2 Statistical Analysis***

The statistical analysis of data was carried out with the assistance of the SPSS program version 12. Given that few studies have undertaken to investigate burnout and compassion fatigue among human service workers and that little empirical data were available to guide the statistical analyses in the present study, an exploratory approach to the analyses was assumed for the most part. Descriptive statistics and inferential statistics were used to analyse the data. Factor analyses were performed in order to gather information on some of the measuring instruments used in this study. In addition, canonical correlation was used to investigate the relationships between coping, various stressors, burnout, compassion fatigue, and compassion satisfaction. Structural equation modelling was also used to investigate the influence of coping and work and life experiences on burnout and compassion fatigue.

### **1.2.3 Measuring instruments**

The questionnaires were compiled in English, which is the language of written communication within the organisation. A self-compiled biographical questionnaire was used to gather information on the respondents regarding the following areas: occupation; level of education; specialised training relevant to current department employed in; gender; ethnicity and home language; marital status; and age.

***The Maslach Burnout Inventory – Human Services Survey (MBI – HSS)*** (Maslach, Jackson & Leiter, 1996) was used to assess the three components of burnout. The items are phrased as statements regarding personal feelings and attitudes toward job-related aspects, and are self-scored on a seven-point frequency scale ranging from 0 (*never*) to 6 (*every day*).

High scores on Emotional Exhaustion and Depersonalisation and low scores on Personal Accomplishment are indicative of burnout. Cronbach's alpha reliability coefficients of .90 for Emotional Exhaustion, .79 for Depersonalisation and .71 for Personal Accomplishment are documented in the manual. Reliability and validity have also proven acceptable in several South African studies (Rothmann, 2003; Rothmann, Jackson & Kruger, 2003; Storm & Rothmann, 2003).

***The Professional Quality of Life Scale (ProQOL)*** (Stamm, 2005) was used to assess compassion fatigue. In addition to a subscale measuring compassion fatigue, the ProQOL also consists of two additional subscales used to assess burnout-like symptoms and respondents' potential for compassion satisfaction by way of Likert scale items ranging from 0 (*never*) to 6 (*very often*). The subscales are discrete and do not yield a composite score. It is therefore possible to report high scores on both compassion fatigue and on compassion satisfaction. Alpha coefficients are reported in the manual as .80 for Compassion Fatigue, .90 for Risk for Burnout and as .87 for Potential for Compassion Satisfaction.

***Coping Orientation to Problems Experienced Scale (COPE)*** (Carver, Scheier & Weintraub, 1989). The dispositional version of the COPE scale was used to measure participants' coping strategies. This instrument is a multidimensional 53-item questionnaire that measures 14 different coping strategies. Five subscales (comprising four items each) measure different aspects of problem-focused coping namely, Active Coping, Planning, Suppressing of Competing Activities, Restraint Coping and Seeking Emotional Support for Instrumental Reasons. Five subscales (4 items each) also measure aspects of emotion-focused coping strategies including Seeking Social Support for Emotional Reasons, Positive Reinterpretation and Growth, Acceptance, Denial and Turning to Religion. Four items also measure Focus on and Venting of Emotions and Behavioural Disengagement, while one item measures Alcohol-Drug Disengagement. Alpha coefficients varying from .45 to .92 have been reported (Carver, Scheier & Weintraub, 1989).

***Experience of Work and Life Questionnaire (WLQ)*** (Van Zyl, 1991). Stressors were measured by items taken from the WLQ, which has been standardised for South African

populations. In its original form the WLQ measures a broad range of organisational stressors by way of Likert scale items (ranging from *virtually never* to *virtually always*). For the purposes of this study, items were selected to represent the specific stressors to be investigated. These included physical working conditions, self-regulatory activity and stressors outside of the work environment. Alpha coefficients for these three measures are .63, .67, and .84 respectively.

***Job Insecurity.*** A measure of quantitative and qualitative job security was assessed by using four Likert scale items (ranging from *strongly disagree* to *strongly agree*) adapted from a measure developed by De Witte (2005). Although the alpha coefficient for the four items is quite low (.52), something which is commonly the case when utilising four-item measures, similar versions of this scale have been found to be a simple and accurate measure of job insecurity (De Witte, 2005).

### ***1.3 Chapter Division***

The following chapters will be presented in this thesis:

- Chapter 1: Introduction
- Chapter 2 – Article 1: Burnout and Compassion Fatigue: A review and Integration of Research Literature
- Chapter 3 – Article 2: The South African Public Health Sector and the Working Environment of Health Care Professionals: A Review
- Chapter 4 – Article 3: Burnout, Compassion Fatigue and Compassion Satisfaction among Health Care Professionals
- Chapter 5 – Article 4: The Relationship between Stressors, Burnout, Compassion Fatigue and Compassion Satisfaction in Health Care Professionals.
- Chapter 6 – Article 5: Coping, Burnout, Compassion Fatigue and Compassion Satisfaction in Health Care Professionals
- Chapter 7 – Article 6: The Influence of Coping and Work and Life Circumstances on Burnout and Compassion Fatigue

- Chapter 8 – Conclusion

#### ***1.4 Chapter Summary***

This chapter outlined the problem statement and research objectives of the present study. The research method and measuring instruments that were used in this study were introduced and were followed by the chapter outline of this thesis.

## REFERENCES

- Abendroth, M. (2005). *Predicting the risk for compassion fatigue: An empirical study of hospice nurses*. Unpublished masters dissertation. Florida: Florida State University.
- Benatar, S.R. (2004). Health care reform and the crisis of HIV/AIDS in South Africa. *New England Journal of Medicine*, 351(1), 81–92.
- Carr, A. (2004). *Positive psychology: The science of human happiness and human strengths*. New York: Brunner-Routledge.
- Carver, C.S., Scheier, M.F. & Weintraub, J.K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology*, 56(2), 267–283.
- Collins, S. & Long, A. (2003). Working with the psychological effects of trauma: consequences for mental health-care workers – a literature review. *Journal of Psychiatric and Mental Health Nursing*, 10, 17-24.
- De Witte, H. (2005). Job insecurity: Review of international literature on definitions, prevalence, antecedents and consequences. *South African Journal of Industrial Psychology*, 31(4), 1-6.
- Figley, C.R. (1995). *Compassion fatigue: Coping with secondary traumatic stress disorder in those who treat the traumatised*. New York: Brunner Mazel.
- Figley, C.R. (2002). Introduction. In C. R. Figley (Ed.), *Treating compassion fatigue* (pp. 1–14). New York: Brunner-Routledge.
- Free State Department of Health (FSDOH) (2005). *Strategic plan for 2005/2006 to 2007/2008*.
- Gilson, L. (2004). The state of decentralisation in the South African health sector – 2003. In *The Local Government & Health Consortium: Decentralising health services in South Africa: Constraints and opportunities – a cross cutting report*. Retrieved on January 13, 2005, from <http://www.hst.org>.
- Maslach, C. (1993). Burnout: a multidimensional perspective. In W.B.Schaufeli, C. Maslach & Marek, T. (Eds.), *Professional burnout: Recent developments in theory and research* (pp.19–32). Washington: Taylor & Francis.



- Maslach, C., Jackson, S.E. & Leiter, M.P. (1996). *Maslach Burnout Inventory Manual* (3<sup>rd</sup> ed.). Palo Alto, CA: Consulting Psychologists Press.
- Paton, D. (1996). Traumatic stress in critical occupations. In D. Paton & J.M. Violanti (Eds.) *Traumatic stress in critical occupations: Recognition, consequences and treatment* (pp. 3–14). Springfield: Charles C Thomas.
- Redlinghuys, N. & Van Rensburg, H.C.J. (2004). Health morbidity and mortality: The health status of the South African population. In H.C.J. van Rensburg (Ed.), *Health and Health Care in South Africa* (pp. 215–271). Pretoria: Van Schaik Publishers.
- Rodrigo, W.D. (2002). *Conceptual dimensions of compassion fatigue and vicarious trauma*. Unpublished Masters dissertation. Vancouver: Simon Fraser University.
- Rothmann, S. (2003). Burnout and engagement: A South African perspective. *South African Journal of Industrial Psychology*, 29 (4), 16–25.
- Rothmann, S., Jackson, L.T.B. & Kruger, M.M. (2003). Burnout and job stress in a local government: The moderating effect of sense of coherence. *South African Journal of Industrial Psychology*, 29(4), 52-60.
- Salston, M. & Figley, C.R. (2003). Secondary traumatic stress effects of working with victims of criminal victimisation. *Journal of Traumatic Stress*, 16(2), 167–174.
- Schaufeli, W.B. & Enzmann, D. (1998). *The burnout companion to study and practice – A critical analysis*. London: Taylor & Francis.
- Stamm, B.H. (2005). *The Professional Quality of Life Scale: Compassion satisfaction, burnout and compassion fatigue/secondary trauma scales*. Idaho University: Sidran Press.
- Storm, K. & Rothmann, S. (2003). The relationship between burnout, personality traits and coping strategies in a corporate pharmaceutical environment. *South African Journal of Industrial Psychology*, 29(4), 35-42.
- Van den Berg, H., Bester, C., Janse van Rensburg-Bonthuyzen, E., Engelbrecht, M., Hlophe, H., Summerton, J., Smit, J., Du Plooy, S. & Van Rensburg, D. (2006). *Burnout and compassion fatigue in professional nurses: A study in PHC facilities in the Free State, with special reference to the antiretroviral treatment program*. Bloemfontein: Centre for Health Systems Research and Development.

- Van Rensburg, H.C.J. (2004). Primary health care in South Africa. In H.C.J. van Rensburg (Ed.), *Health and health care in South Africa* (pp. 412–453). Pretoria: Van Schaik Publishers.
- Van Zyl, E.S. (1991). *Experience of Work and Life Circumstances Questionnaire*. Pretoria: Human Sciences Research Council.

## **CHAPTER 2**

### **ARTICLE 1**

#### **BURNOUT AND COMPASSION FATIGUE: A REVIEW AND INTEGRATION OF RESEARCH LITERATURE**

## **BURNOUT AND COMPASSION FATIGUE: A REVIEW AND INTEGRATION OF RESEARCH LITERATURE**

### **Abstract**

This article reviews research literature on the occupational stress syndromes of burnout and compassion fatigue. Although burnout and compassion fatigue are two distinct syndromes, in human service occupations the risk factors for each syndrome overlap somewhat. This is due to the fact that human service workers are simultaneously confronted with demands characteristic of modern day organisational life, as well as with the emotional demands inherent in their work. Despite this, few studies have concurrently investigated these syndromes. This review therefore aims to highlight the similarities and differences between the antecedents and consequences of burnout and compassion fatigue by examining past and current theoretical conceptualisations of these syndromes.

**Keywords:** *Burnout, compassion fatigue, human service occupations, occupational stress, job-related stress*

## **UITBRANDING EN MEDELYE-UITPUTTING: 'n OORSIG EN INTEGRASIE VAN NAVORSINGSLITERATUUR**

### **Opsomming**

Hierdie artikel bied 'n oorsig van navorsingsliteratuur oor die beroepspanningsindrome van uitbranding en medelye-uitputting. Alhoewel uitbranding en medelye-uitputting twee onderskeie sindrome is, oorvleuel die risikofaktore vir elke sindroom ietwat in die menslike diensberoepe. Dit is as gevolg van die feit dat werkers in die menslike dienste gelyktydig gekonfronteer word met vereistes kenmerkend van moderne organisatoriese lewe, sowel as die emosionele vereistes inherent aan hul werk. Ten spyte hiervan is daar min studies wat hierdie sindrome gelyktydig nagevors het. Hierdie oorsig mik dus om die ooreenkomste en verskille tussen die antedente en gevolge van uitbranding en medelye-uitputting na vore te bring deur die vorige en huidige teoretiese konseptualiserings van hierdie sindrome te ondersoek.

**Sleutelwoorde:** *Uitbranding, medelye-uitputting, menslike diens beroepe, beroepspanning, werksverwante spanning*

It has long been recognised that individuals in human service professions (that is, professions in which the key component is the relationship between a care provider and a care recipient), are at high risk for occupational stress. Research on job-related stress among these kinds of helping professionals (such as social workers, counsellors, psychologists, teachers, emergency workers, and health care workers) has primarily focused on two syndromes, namely burnout and compassion fatigue (Collins & Long, 2003; Schaufeli, 2003). However, these two focus areas have developed quite independently from each other despite the fact that human service workers are uniquely vulnerable to both; few empirical studies have undertaken to investigate burnout and compassion fatigue concurrently among human service workers. The purpose of this review is therefore to examine the constructs of burnout and compassion fatigue from a theoretical perspective and to provide an overview of the similarities and differences between the antecedents, manifestation, and consequences of these two syndromes.

## **Background**

The term burnout initially began appearing in research literature during the 1970's and was first explored almost simultaneously by two independent researchers, Herbert Freudenberger and Christina Maslach (Schaufeli & Enzmann, 1998). Burnout was initially exclusively studied in human service and health care settings. This initial focus was likely due to the fact that the *discovery* of burnout was to a large degree prompted by the sudden increase in workloads and job demands that occurred in many human service occupations at the time. In the 1990s research began to focus on other occupation groups and the conceptualisation of burnout evolved to a broader description that remains today. Burnout has often been equated with a myriad of related terms such as tedium, stress, job dissatisfaction, low morale, strain, tension and even chronic fatigue (Schaufeli, 2003; Schaufeli & Enzmann, 1998). In contemporary literature the term burnout is most often used interchangeably with the term *job stress* although it differs from this construct in several ways. The most important difference being that the burnout syndrome is characterised by multi-dimensional symptomatology and moreover, actually develops as a result of prolonged job stress (Maslach, 1993).

The term compassion fatigue emerged in occupational stress literature almost two decades after the discovery of burnout. Although the term was first used as a descriptive expression for the features of job-related burnout in nurses, the syndrome of compassion fatigue as it is understood today was conceptualised by Figley in 1995 and has its roots in the field of psychotraumatology (Figley, 1995; Figley, 2002). The conceptualisation of compassion fatigue as a trauma-related syndrome evolved from theoretical developments in this field regarding the similar effects of secondary exposure to trauma and suffering and primary exposure, which is known to potentially lead to posttraumatic stress disorder (PTSD). Although the secondary impact of trauma has also been identified among family and friends of trauma survivors, in contemporary literature compassion fatigue is almost exclusively referred to as a trauma-related stress reaction among human service workers (Figley, 1995). Despite these developments, a commonly accepted and exact definition of compassion fatigue has yet to be formulated. It appears that some of the ongoing uncertainty surrounding the theoretical distinction of compassion fatigue as a clearly defined syndrome may in fact have arisen during the initial stages of its conceptualisation (Figley, 1995; Figley, 2002). For example, in early works Figley both described compassion fatigue as a form of burnout and as a kind of secondary victimisation. Consequently the syndrome of compassion fatigue has been equated with various related terms such as vicarious traumatisation (VT), secondary traumatic stress (STS), and even the syndrome of burnout itself (Jenkins & Baird, 2002; Sabin-Farrell & Turpin, 2003). Nonetheless, more recent literature references to burnout and compassion fatigue increasingly reflect a clear consensus regarding their existence as two distinct occupational stress syndromes (Adams, Boscarino & Figley, in press; Collins & Long, 2003).

### **Burnout**

Burnout develops in response to chronic exposure to job-related stressors and across all occupation groups it is almost exclusively defined in terms of Maslach's original three-tier conceptualisation of the syndrome (Maslach, 1993). In the context of human service occupations, some specific distinctions are made regarding these three components (Schaufeli, 2003). The first component or dimension of burnout is termed *emotional*

*exhaustion* and refers specifically to the depletion of emotional resources. Essentially emotional exhaustion can leave human service workers or care providers feeling as if they are no longer able to give of themselves on a psychological or emotional level. The second dimension, characterised by disengagement from the job, is referred to specifically as *depersonalisation* in human service workers and is characterised by a negative, cynical, and impersonal attitude towards care recipients. Although mental distancing can initially be utilised as an adaptive mechanism in order to cope with excessive job demands and the feelings of exhaustion that result, when this mechanism is used habitually it becomes maladaptive and subsequently hampers the performance of job tasks. The third burnout component is referred to as *reduced personal accomplishment* and is associated with a tendency among care providers to judge and evaluate their work with care recipients in a negative way (Schaufeli, 2003; Schaufeli & Enzmann, 1998).

The symptoms of burnout are generally grouped into five major categories: affective, physical, cognitive, behavioural, and motivational (Schaufeli, 2003; Schaufeli & Enzmann, 1998). Affective symptoms may manifest as a tearful and depressed mood among those who suffer from burnout. Furthermore, in conjunction with physical symptoms such as psychosomatic complaints and ill-health, frustration tolerance is generally low, which can cause human service workers to be oversensitive and antagonistic towards care recipients, colleagues, superiors, and the organisation itself (Maslach, 1993). On a cognitive level, skills such as memory and attention might be impaired and thinking may become more rigid, schematic and detached (Cordes & Dougherty, 1993; Lee & Ashforth, 1996). The behavioural symptoms associated with burnout are generally related to an increased level of arousal which can potentially manifest as increased substance use (Nowack & Pentkowski, 1994), while on a motivational level a lack of enthusiasm and interest, and general disillusionment can be characteristic of burnout (Maslach, 1993; Schaufeli & Enzmann, 1998).

## **Compassion Fatigue**

In contrast to burnout, which develops gradually in response to various job-related demands, compassion fatigue is a trauma-related stress reaction that has a sudden onset (Bride, Robinson, Yegidis, & Figley, 2003; Collins & Long, 2003). Compassion fatigue is perhaps best described as a by-product of working with traumatised or suffering individuals and as such is unique to the human service occupations (Figley, 1995; Figley, 2002). Compassion fatigue can develop in response to emotional strain which arises when human service workers are required to sustain high levels of empathic engagement with care recipients, or from secondary exposure to distressing and traumatic events. In both cases the experiences reported by care providers are similar to those associated with PTSD (Adams, Boscarino & Figley, in press; Rodrigo, 2002; Salston & Figley, 2003). These (secondary) traumatic stress symptoms are considered to be the key component of compassion fatigue and may include re-experiencing a care recipient's trauma, heightened arousal, avoidance behaviours, numbing, and feelings of helplessness and emptiness. These symptoms develop in response to traumatic and distressing events which inadvertently impact on certain basic psychological needs of individuals such as safety, trust, esteem, control, and intimacy (McCann & Pearlman, 1990).

Despite their negative effect on human service workers, these symptoms are viewed by some authors as a normal response to abnormal circumstances (Paton, 1996). In contrast, other authors assert that compassion fatigue symptomatology may well rise to a more pathological level although to date none have provided guidelines as to how this distinction can be made (Rodrigo, 2002). Furthermore, although literature generally emphasises that these symptoms could have a sudden onset, some researchers also point out the cumulative effects of repeated exposure to the suffering of others (Abendroth, 2005; Larsen, Stamm & Davis, 2002).

A review of more recent literature also identifies certain areas of contention. For example, some authors commonly propose an element of job burnout as a feature or secondary component of compassion fatigue; or alternatively view the syndrome of burnout (as defined by Maslach) as a precursor to compassion fatigue (Pearlman & Saakvitne, 1995; Rodrigo,



2002). These perspectives appear to represent opposing conceptualisations of compassion fatigue; however, both innately provide support for the assumption that organisational stressors alone are insufficient to account for the range of stress symptoms commonly reported by human service workers (Collins & Long, 2003; Jenkins & Baird, 2002).

### **Causes of Burnout and Compassion Fatigue**

As noted previously, in contemporary literature there is growing support for the premise that additional emotional demands may in fact aggravate burnout, or conversely, that when human service workers are confronted with additional frustrations and stressors in the institutions in which they work, symptoms of compassion fatigue may be exacerbated (Collins & Long, 2003; Rodrigo, 2002; Wee & Myers, 2002). This premise clearly emphasises the complex interaction between various risk factors.

#### ***Risk Factors Within the Working Environment***

Quantitative and qualitative job demands have been identified as significant risk factors for the development of burnout and compassion fatigue (Peeters & Le Blanc, 2001; Sabin-Farrell & Turpin, 2003). Specifically, longer working hours, high workload, and time pressure have been found to be among the quantitative demands associated with a significant risk for burnout (Schaufeli & Enzmann, 1998), and to a lesser degree compassion fatigue (Meyers & Cornille, 2002). Similarly, role conflict and role ambiguity have been equally well researched as qualitative job demands. Higher levels of burnout are quite consistently identified among workers who are experiencing role conflict due to being faced with contradictory goals and behaviours in the course of performing their job (Lee & Ashforth, 1996). Similar results are also found when workers are faced with role ambiguity which in turn prevents effective and goal-directed work behaviour (Maslach, Leiter & Schaufeli, 2001; Schaufeli & Enzmann, 1998). In the case of compassion fatigue the research literature in this regard is substantially less extensive given that studies only date back to little over a decade. However, initial findings do suggest that role ambiguity stemming from a lack of clarity regarding job-related expectations and responsibilities may leave care providers feeling unsure of how to best help

care recipients, thereby intensifying symptoms of compassion fatigue (Adams, Boscarino & Figley, in press; Meldrum, King & Spooner, 2002; Meyers & Cornille, 2002).

Qualitative job demands unique to human service occupations have also been studied extensively in burnout literature, with studies consistently demonstrating a clear relationship between burnout and the emotional intensity of a job (Cordes & Dougherty, 1993; Maslach, 1993). Frequent interactions with care recipients, exposure to chronically or terminally ill patients, and confrontation with death and dying have been found to aggravate existing symptoms of burnout (Govender, 1995; McNeely, 1996; Peeters & Le Blanc, 2001). While these kinds of demands may potentially lead to an increased risk for burnout, demands of this nature are in fact the root cause of compassion fatigue (Larsen, Stamm & Davis, 2002; Salston & Figley, 2003). Essentially, in the course of working with victims of traumatic events, human service workers can themselves fall victim to secondary traumatic stress reactions.

Organisational processes such as hierarchy, operating rules, and resources have also been found to have a significant impact on the emotional and cognitive relationships that people have with their work (Maslach, Leiter & Schaufeli, 2001; Winnubst, 1993). Organisational related risk factors that associated robustly with burnout include a limited opportunity for participation in decision making, limited autonomy, and inadequate feedback about work performance (Demerouti, Bakker, Nachreiner & Schaufeli, 2001; De Rijk, Le Blanc, Schaufeli & De Jonge, 1998; Rafferty, Friend & Landsbergis, 2001). Moreover, these resources appear to be particularly important to human service workers given that they comprise a key part of professional functioning (Leiter, 1990). A lack of self-regulatory activity and opportunity for autonomous functioning also appear to inhibit the professional functioning of human service workers in such a way as to increase the intensity of compassion fatigue symptoms (Jenkins & Baird, 2002; Meyers & Cornille, 2002; Wee & Myers, 2002).

Another important aspect of organisational functioning which has been shown to be particularly relevant to burnout is that of the psychological contract (Cavanagh, 1996). A

psychological contract exists between employers and employees regarding the expectations and responsibilities of both parties (whether verbalised or unspoken). Job security has been found to form a key part of this contract. A number of studies have documented that changes in this regard, and the subsequent experience of job insecurity, are potential risk factors for burnout (Brysse, De Witte & Vlerick, 2002; Demerouti, Bakker, Nachreiner & Schaufeli, 2001). Although less is known about the potential impact of job insecurity on compassion fatigue, it can be hypothesised that job insecurity which forms part of the professional working context of human service workers, is likely to impact in a similar way (Rodrigo, 2002).

Inadequate social support is another significant risk factor that has consistently been linked to both burnout (Demerouti, Bakker, Nachreiner & Schaufeli, 2001; Proost, De Witte, De Witte & Evers, 2004) and compassion fatigue (Ortlepp & Friedman, 2002). In both cases the availability of social support (either at work or at home) seems to act as a buffer against the potentially detrimental impact of job-related stressors, thereby enabling employees to better cope with the demands of their job.

### ***Risk Factors on an Individual Level***

Although the risk factors for burnout and compassion fatigue can be found primarily in the working environment, research also shows that certain characteristics within an individual can serve as additional contributory factors (Collins & Long, 2003; Cordes & Dogherty, 1993; Lee & Ashforth, 1996; Schaufeli & Enzmann, 1998; Rodrigo, 2002).

In burnout studies the individual factors most commonly focused on include demographic characteristics, personality characteristics, and job-related attitudes (Maslach, Leiter & Schaufeli, 2001; Schaufeli & Enzmann, 1998). Specific demographic characteristics that have been linked to burnout include age, gender, marital status, and educational level (Cordes & Dogherty, 1993). Of these variables, age has been linked most consistently to higher levels of burnout with research indicating that younger employees are most susceptible to burnout (Lee & Ashforth, 1996). This finding appears to be associated with either a lack of

experience or with being confronted with the unexpected realities of one's occupation (Bernstein & Carmel, 1991; Kilfedder, Power & Wells, 2001). While the role of gender in the development of burnout is less clear, most studies report higher levels of emotional exhaustion among women and higher levels of depersonalisation among men. Unmarried employees, particularly men, have also been found to be more susceptible to burnout, as have employees with higher levels of education (Schaufeli & Enzmann, 1998).

In more recent studies on compassion fatigue, the potential relationship between various demographic variables such as age, gender, and marital status and the onset and development of this syndrome are also investigated (Abendroth, 2005; Adams, Boscarino & Figley, in press; Meyers & Cornille, 2002; Wee & Myers, 2002). Empirical data are often contradictory, probably because the construct of compassion fatigue is not yet well developed either in theory or in measure validation (Jenkins & Baird, 2002; Rodrigo, 2002). In contrast, research suggests a general consensus regarding the complex interaction between various personality characteristics, and burnout and compassion fatigue (Collins & Long, 2003; Schaufeli & Enzmann, 1998). Although the exact mechanism by which this interaction occurs is not always clearly noted, neuroticism, introversion, and negative affectivity have been linked to higher levels of burnout, while traits such as openness to experience, agreeableness, conscientiousness, positive affectivity and a sense of coherence have been found to reduce burnout levels (Kilfedder, Power & Wells, 2001; Rothmann, Jackson & Kruger, 2003; Storm & Rothmann, 2003).

In burnout literature the impact of other dispositional characteristics, such as individuals' personal coping strategies, is also well documented (Lee & Ashforth, 1996). Studies quite consistently show that in general burned-out employees are more likely to cope with stressful events in a rather passive, defensive way, whereas individuals who use active and confronting coping strategies report lower levels of burnout (Kilfedder, Power & Wells, 2001; Leiter, 1990, Naudé, 2003). Research into the potential relationship between compassion fatigue and dispositional traits has generally focussed on a sense of coherence (Ortlepp & Friedman, 2001) or on individual coping strategies (Nkosi, 2002). In these initial studies, findings suggest that a positive sense of coherence and adaptive coping strategies are

likely to enable human service workers to deal more effectively with the emotional and psychological demands associated with their work (Levert, Lucas & Orlepp, 2000; Ortlepp & Friedman, 2001; Wee & Myers, 2002).

The potential impact of job related attitudes on burnout has also been well documented in research literature. Numerous studies have found that high or unrealistic expectations of one's occupation and of the organisation, as well as over commitment, can potentially lead to burnout (Ullrich & FitzGerald, 1990; Hillhouse, Adler & Walters, 2000). Similarly, in secondary stress literature, unachievable standards of work performance and low levels of work satisfaction have also been found to contribute to higher levels of compassion fatigue, although the exact underlying theoretical mechanism of this relationship is less clearly described (Meyers & Cornille, 2002; Rodrigo, 2002; Sexton, 1999).

Excessive demands in either the domains of work or family life are also known to deplete a person's resources and trigger stress reactions (Decker, 1997; Leiter, 1990). A review of more contemporary burnout literature indicates that a number of factors including interference between work and home, various family problems, health problems, and socio-economic difficulties have been identified as possible risk factors for burnout as well as for other occupational stress reactions (Demerouti, Bakker & Bulters, 2004; Proost, De Witte, De Witte & Evers, 2004). Similar results have been documented with regards to compassion fatigue and other secondary stress reactions (Gentry, Baranowsky & Dunning, 2002; Meyers & Cornille, 2002). Research suggests that past and current life stressors may interact with characteristics such as personality, age, and job experience to influence the way in which the act of providing care is experienced and the meaning attributed to this experience (Collins & Long, 2003).

## **Consequences of Burnout and Compassion Fatigue**

The possible effects of burnout and compassion fatigue can be broadly categorised as consequences for the individual, for work orientation and attitudes, and for the organisation (Collins & Long, 2003; Schaufeli, 2003; Schaufeli & Enzmann, 1998). However, it is often difficult to clearly distinguish between the symptoms of burnout and compassion fatigue, their manifestation, and the resulting consequences of these syndromes. Therefore, some of the symptoms that individuals may present with are also relevant to a review of the consequences of burnout and compassion fatigue. Symptoms such as depression, psychosomatic complaints, health problems, and heightened levels of arousal are also likely consequences for individuals suffering from burnout (Melamed, Kushnir, & Shirom, 1992; Schaufeli & Enzmann, 1998). Furthermore, given that employees suffering from burnout also commonly experience a decrease in frustration tolerance and increased irritability, an additional consequence may be a carry over of these symptoms into their private lives (Geurts, Kompier, Roxburgh & Houtman, 2003; Geurts, Rutte & Peeters, 1999).

The potential consequences of compassion fatigue on an individual level are similar to those for burnout, but more extensive due to the very nature of traumatic stress type symptoms such as intrusive thoughts or images, difficulty separating work life from personal life, decreased frustration tolerance, increased outbursts of anger, and an increase in transference or countertransference with patients (Collins & Long, 2003; Pearlman & Saakvitne, 1990; Sabin-Farrell & Turpin, 2003; Valent, 2002).

At an organisational level burnout can potentially have negative consequences such as absenteeism, high staff turnover, job dissatisfaction, and impaired performance (Aiken, Clarke, Sloane, Sochalski & Silber, 2002; Iverson, Olekalns, & Erwin, 1998). These organisational consequences primarily stem from the feelings of hopelessness and failure, and the poor job-related self-esteem characteristic of this syndrome (Maslach, 1993). In comparison with the literature available on the organisational consequences of burnout, few studies have investigated the specific effects of compassion fatigue on organisational outcomes and studies to date are somewhat unclear regarding the complex relationship

between compassion fatigue, absenteeism, and staff turnover (Figley; 2002; Meyers & Cornille, 2002).

## **Theoretical Approaches**

Given the complexity of the syndromes of burnout and compassion fatigue, numerous theoretical conceptualisations can be found for both (Figley, 2002; Schaufeli, 2003). This section will review the theoretical mechanisms documented to date as likely explanations for the development of these two syndromes. In the case of burnout, theoretical approaches specifically associated with the onset and development of this syndrome in human service workers is reviewed.

### ***Theoretical Approaches to Burnout***

In burnout literature three broad theoretical approaches (differing in their emphasis on specific groups of factors) to understanding the development of burnout in care providers can be found (Schaufeli, 2003; Schaufeli & Enzmann, 1998). Firstly, individual approaches emphasise the role of intra-personal processes in the development of this syndrome. Examples of individual approaches include viewing burnout as a failure to retain one's idealized self-image, as a result of progressive disillusionment, burnout as a narcissistic disorder, as an imbalance between conscious and unconscious functions, as a failed quest for existential meaning, as a pattern of wrong expectations, as a disturbed action process, or as a result of a loss of coping resources (see Schaufeli & Enzmann, 1998 for a comprehensive summary). Secondly, interpersonal approaches primarily highlight either the importance of emotional demands in relationships with care recipients, or the dynamics of social relationships in the workplace (Bakker, Killmer, Siegrist & Schaufeli, 2000; Buunk & Schaufeli, 1993; Schaufeli, 2003). Three different inter-personal approaches are commonly cited: (a) burnout as a lack of reciprocity, (b) burnout as a result of social comparison and (c) burnout as a result of emotional contagion.

The theoretical view that burnout can develop due to a lack of reciprocity emphasises that people pursue reciprocity in interpersonal relationships: what they invest and gain from a

relationship should be proportional to the investments and gains of the other party in the relationship. However, in human service work in particular this is not the case, as the caregiver-recipient relationship is an unbalanced one (Buunk & Schaufeli, 1993). This lack of reciprocity may eventually deplete the professional's emotional resources and result in responding to care recipients in a depersonalised way. Burnout is also thought to develop when there is a lack of reciprocity between the employee and the organisation, such as inadequate financial, social, or institutional rewards (Bakker, Killmer, Siegrist & Schaufeli, 2000).

Social comparison theory has also been proposed as a theoretical explanation for burnout. That is, given that human services professionals are faced with high emotional demands, they may tend to compare their own emotional reactions with those of their co-workers. This theory of burnout holds that individuals under stress, particularly those who are uncertain of their own responses, will compare their feelings to those of others in order to determine the appropriateness of their own reactions (Buunk & Schaufeli, 1993; Buunk, Schaufeli & Ybema, 1994).

It has also been proposed that burnout may result due to emotional contagion given findings that burnout tends to be concentrated in particular task groups, wards, or departments (Bakker, Schaufeli, Sixma & Bosveld, 2001; Buunk & Schaufeli, 1993). This theoretical assumption holds that individuals who are experiencing stress of their own may perceive symptoms of burnout in colleagues and unconsciously assimilate these symptoms.

Although these interpersonal theories have been studied empirically, the aetiology of burnout is most commonly studied from an organisational perspective which stresses the relevance of the wider organisational context for understanding burnout (Buunk & Schaufeli, 1993; Maslach, Leiter & Schaufeli, 2001). Various organisational approaches also differ in their emphasis on different organisational sources of stress such as job demands, lack of autonomy or control, lack of rewards, incongruent institutional goals or values, and lack of social support (Schaufeli, 2003; Schaufeli & Enzmann, 1998).



The Job Demands – Resources model is a model that has been developed in order to explain how various working conditions, irrespective of the types of demands and resources involved, can lead to burnout and other occupational outcomes (Demerouti, Bakker, Nachreiner & Schaufeli, 2001; Llorens, Bakker, Schaufeli & Salanova, in press).

Another recent and comprehensive model places a similar emphasis on the influence of a chronic imbalance in which the job demands more than an employee can give, or provides less than he or she needs (Maslach, Leiter & Schaufeli, 2001). This model encompasses the major organisational antecedents of burnout within a framework of six important areas of work life. These areas pertain to work overload (having to do too much in too little time with too few resources), lack of control (having no opportunities to make choices and decisions, using one's abilities to think and solve problems), lack of rewards (inadequate monetary rewards as well as internal rewards such as recognition and appreciation), lack of community (a loose and non-supportive social fabric; social isolation and chronic and unresolved problems), lack of fairness (employee's are inequitably treated and respect and self-worth is not confirmed) and value conflict (the requirements of the job do not agree with personal principles).

### ***Theoretical Approaches to Compassion Fatigue***

Many of the earlier theoretical conceptualisations of compassion fatigue were broadly based on theories emphasising the potential negative effects of helping others and the underlying psychological mechanisms of empathic engagement (Sabin-Farrell & Turpin, 2003; Valent, 2002). Early works also drew on constructivist self-development theory as a theoretical framework for understanding secondary stress reactions (Collins & Long, 2003). Though constructivist self-development theory was initially linked to the underlying psychological mechanisms and responses to primary traumatic exposure, it was later also put forward by McCann and Pearlman (1990) that secondary exposure to traumatic material could also potentially disrupt the cognitive schemas of individuals in the areas of dependency and trust, safety, power, independence, esteem, intimacy, and frame of reference.

Another theoretical conceptualisation of compassion fatigue proposes that this syndrome develops as a result of maladaptive responses to specific occupational aspects such as care, responsibility and nurture (also collectively termed compassion stress), which subsequently results in a sense of burden, strain, distress and a feeling of being burned-out (Collins & Long, 2003; Jenkins & Baird, 2002; Valent, 2002). Moreover, researchers have also theorised that empathy may play an important role in the onset of compassion fatigue in a similar way to burnout, namely by way of the unconscious identification with victims' stressors and traumas (Moosa, 1992; Paton, 1996; Straker & Moosa, 1994; Valent, 2002).

More recently Figley (2001) proposed a theoretical framework incorporating a number of these theories, highlighting the interaction between empathy, compassion stress, and chronic exposure to traumatic material, traumatic memories, and added life stressors. Although researchers appear to have some consensus as to the role of these theoretical and psychological components, a number of authors have since proposed a wider focus on the individual within the context (Collins & Long, 2003). This framework aims to better encapsulate the interaction between the nature of a traumatic event and factors that are likely to influence the stress appraisal process, such as individual characteristics of the care provider and the presence of other work-related stressors (Meldrum, King & Spooner, 2002; Orllepp & Friedman, 2001).

In more recent studies investigating the emotional effects of human service work, an additional focus has been on *compassion satisfaction* among care providers (Collins & Long, 2003; Figley, 2002). Essentially compassion satisfaction refers to the sense of fulfilment that can potentially be found in performing human service work and is even considered by some researchers to be a protective mechanism against compassion fatigue (Stamm, 2002). The growing interest in this fairly new construct appears to be in keeping with a broader movement towards positive psychology and optimal functioning (Llorens, Bakker, Schaufeli & Salanova, in press) and as such is likely to become an important focus of future research.

## **Conclusion**

Burnout and compassion fatigue as occupational stress syndromes share some common antecedents yet hold distinct consequences for human service workers. Despite human service workers unique vulnerability to both syndromes, very few empirical studies were found to have concurrently investigated burnout and compassion fatigue. A review of available research indicates that while job-related stressors play a more prominent role in the onset of burnout, compassion fatigue as a trauma-related syndrome is also potentially impacted by organisational and job-related stressors which appear to intensify the emotional effects of human service work. Nonetheless, it is clear that more research is needed in order to develop the construct of compassion fatigue from a theoretical perspective, and to allow for a clearer understanding of the similarities, differences, and interaction between burnout and compassion fatigue as they manifest in human service workers.

## REFERENCES

- Abendroth, M. (2005). *Predicting the risk for compassion fatigue: an empirical study of hospice nurses*. Unpublished masters dissertation. Florida: Florida State University.
- Adams, R.E., Boscarino, J.A. & Figley, C.R. (in press). Compassion fatigue among a sample of New York social workers: Instrument psychometrics. *Journal of Orthopsychiatry*.
- Aiken, L.H., Clarke, S.P., Sloane, D.M., Sochalski, J. & Silber, J.H. (2002). Hospital nurse staffing and patient mortality, nurse burnout and job dissatisfaction. *Journal of the American Medical Association*, 288(16), 1987-1993.
- Bakker, A.B., Killmer, C.H., Siegrist, J. & Schaufeli, W.B. (2000). Effort-reward imbalance and burnout among nurses. *Journal of Advanced Nursing*, 31(4), 884–891.
- Bakker, A.B., Schaufeli, W.B., Sixma, H.J. & Bosveld, W. (2001). Burnout contagion among general practitioners. *Journal of Social and Clinical Psychology*, 20(1), 82-98.
- Bernstein, J. & Carmel, S. (1991). Gender differences over time in medical school stressors, anxiety and the sense of coherence. *Sex Roles*, 5/6, 335-344.
- Bride, B.E., Robinson, M.M., Yegidis, B. & Figley, C.R. (2003). Development and validation of the secondary traumatic stress scale. *Research on Social Work Practice*, 13(10), 1–16.
- Brysse, H., De Witte, H. & Vlerick, P. (2002). Over de samenhang tussen jobonsekerheid en verloopintentie. Een replicatiestudie op basis van ‘Belstress’-data. In P. Vlerick, F. Lievens & R. Claes (Eds.), *Mens en Organisatie*. Academia Press: Universiteit Gent.
- Buunk, B.P., & Schaufeli, W.B. (1993). Burnout: A perspective from social comparison theory. In W.B. Schaufeli, C. Maslach & T. Marek (Eds.), *Professional Burnout: Recent developments in theory and research* (pp. 53–66). Washington: Taylor & Francis.
- Buunk, B.P., Schaufeli, W.B. & Ybema, J.F. (1994). Burnout, uncertainty and the desire for social comparison among nurses. *Journal of Applied Social Psychology*, 24(19), 1701-1718.
- Cavanagh, S.J. (1996). A ‘new’ psychological contract for nurses: Some management implications. *Journal of Nursing Management*, 4, 79-83.

- Collins, S. & Long, A. (2003). Working with the psychological effects of trauma: consequences for mental health-care workers – a literature review. *Journal of Psychiatric and Mental Health Nursing*, 10, 17-24.
- Cordes, C.L. & Dougherty, T.W. (1993). A review and integration of research on job burnout. *Academy of Management Review*, 18(4), 621-656.
- Decker, F.H. (1997). Occupational and nonoccupational factors in job satisfaction and psychological distress among nurses. *Research in Nursing and Health*, 20, 453-464.
- Demerouti, E., Bakker, A.B. & Bulters, A.J. (2004). The loss spiral of work pressure, work-home interference and exhaustion: Reciprocal relations in a three-wave study. *Journal of Vocational Behaviour*, 64, 131–149.
- Demerouti, E., Bakker, A.B., Nachreiner, F. & Schaufeli, W.B. (2001). The job-demands resources model of burnout. *Journal of Applied Psychology*, 86 (3), 499-512.
- De Rijk, A.E., Le Blanc, P.M., Schaufeli, W.B. & De Jonge, J. (1998). Active coping and need for control as moderators of the job-demand control model: Effects on burnout. *Journal of Occupational and Organisational Psychology*, 71, 1-18.
- Figley, C.R. (1995). *Compassion fatigue: Coping with secondary traumatic stress disorder in those who treat the traumatised*. New York: Brunner Mazel.
- Figley, C.R. (2001). *The Compassion Fatigue Model*. Florida: The Greencross Foundation.
- Figley, C.R. (2002). Introduction. In C. R. Figley (Ed.), *Treating compassion fatigue* (pp. 1-14). New York: Brunner-Routledge.
- Gentry, J.E., Baranowsky, A.B. & Dunning, K. (2002). The accelerated recovery program (ARP) for compassion fatigue. In C. R. Figley (Ed.), *Treating compassion fatigue* (pp. 123–133). New York: Brunner-Routledge.
- Geurts, S., Rutte, C. & Peeters, M. (1999). Antecedents and consequences of work-home interference among medical residents. *Social Science & Medicine*, 48, 1135-1148.
- Geurts, S.A.E., Kompier, M.A.J, Roxburgh, S. & Houtman, I.L.D. (2003). Does work-home interference mediate the relationship between workload and well-being? *Journal of Vocational Behaviour*, 63, 532-559.

- Govender, K. (1995). *An investigation into the role of perceived sources of stress, perception of work environment, type of hospital ward and nurse rank in occupational distress, coping and burnout among practising nurses*. Unpublished masters dissertation. Pietermaritzburg: University of Natal.
- Hillhouse, J.J., Adler, C.M. & Walters, D.N. (2000). A simple model of stress, burnout and symptomatology in medical residents: A longitudinal study. *Psychology, Health & Medicine*, 5(1), 63-73.
- Iverson, R.D., Olekalns, M. & Erwin, P.J. (1998). Affectivity, organisational stressors, and absenteeism: A causal model of burnout and its consequences. *Journal of Vocational Behaviour*, 52, 1-23.
- Jenkins, S.R. & Baird, S. (2002). Secondary traumatic stress and vicarious trauma: A validation study. *Journal of Traumatic Stress*, 15(5), 423-432.
- Kilfedder, C.J., Power, K.G. & Wells, T.J. (2001). Burnout in psychiatric nursing. *Journal of Advanced Nursing*, 34(3), 383-396.
- Larsen, D., Stamm, B.H. & Davis, K. (2002). Telehealth for the prevention and intervention of the negative effects of caregiving. Retrieved on October 8, 2005, from <http://www.istss.org/publications/TS/Fall02/telehealth.htm>
- Lee, R.T. & Ashforth, B.E. (1996). A meta-analytic examination of the correlates of the three dimensions of job burnout. *Journal of Applied Psychology*, 81(2), 123-133.
- Leiter, M.P. (1990). The impact of family resources, control coping, and skill utilisation on the development of burnout: a longitudinal study. *Human Relations*, 43(11), 1067-1083.
- Levert, T., Lucas, M. & Ortlepp, K. (2000). Burnout in psychiatric nurses: contributions of the work environment and a sense of coherence. *South African Journal of Psychology*, 30(2), 36-43.
- Llorens, S., Bakker, A.B., Schaufeli, W. & Salanova, M. (in press). Testing the robustness of the job demands-resources model. *International Journal of Stress Management*.
- Maslach, C. (1993). Burnout: a multidimensional perspective. In W.B.Schaufeli, C. Maslach & Marek, T. (Eds.), *Professional burnout: Recent developments in theory and research* (pp.19–32). Washington: Taylor & Francis.

- Maslach, C., Leiter, M.P. & Schaufeli, W.B. (2001). Job burnout. *Annual Review of Psychology*, 52, 397–422.
- McCann, L. & Pearlman, L.A. (1990). Vicarious traumatising: a framework for understanding the psychological effects of working with victims. *Journal of Traumatic Stress*, 3(1), 131-149.
- McNeely, S. (1996). Stress and coping strategies in nurses from palliative, psychiatric and general nursing areas. *Health Manpower Management*, 22(3), 10-12.
- Melamed, S., Kushnir, T. & Shirom, A. (1992). Burnout and risk factors for cardiovascular disease. *Behavioural Medicine*, 18, 53-60.
- Meldrum, L., King, R. & Spooner, D. (2002). Secondary traumatic stress in case managers working in mental health services. In C.R. Figley (Ed.), *Treating compassion fatigue* (pp. 85-106). New York: Brunner–Routledge.
- Meyers, T. & Cornille, T.A. (2002). The trauma of working with traumatised children. In C.R. Figley (Ed.), *Treating compassion fatigue* (pp. 39-55). New York: Brunner–Routledge.
- Moosa, F. (1992). Countertransference in trauma work in South Africa: for better or for worse. *South African Journal of Psychology*, 22(3), 126-133.
- Naudé, J.L.P. (2003). *Occupational stress, coping, burnout and work engagement of emergency workers in Gauteng*. Unpublished doctoral thesis. Potchefstroom: Northwest University.
- Nkosi, S.N.P-C. (2002). *The relationship between compassion fatigue and coping styles in nurses working in a hospital trauma unit*. Unpublished masters dissertation. Johannesburg: University of the Witwatersrand.
- Nowack, K.M. & Pentkowski, A.M. (1994). Lifestyle habits, substance use and predictors of job burnout in professional working women. *Work and Stress*, 8(1), 19-35.
- Ortlepp, K. & Friedman, M. (2001). The relationship between sense of coherence and the indicators of traumatic stress in non-professional trauma counsellors. *South African Journal of Psychology*, 31(2), 38-45.
- Ortlepp, K. & Friedman, M. (2002). Prevalence and correlates of secondary traumatic stress in workplace lay trauma counsellors. *Journal of Traumatic Stress*, 15(3), 213-222.

- Paton, D. (1996). Traumatic stress in critical occupations. In D. Paton & J.M. Violanti (Eds.), *Traumatic stress in critical occupations: Recognition, consequences and treatment*, (pp. 3–14). Springfield: Charles C Thomas.
- Pearlman, L.A. & Saakvitne, K.W. (1995). Treating therapists with vicarious traumatisation and secondary traumatic stress disorders. In C.R. Figley (Ed.), *Compassion fatigue: Coping with secondary traumatic stress disorders in those who treat the traumatised* (pp.157–177). New York: Brunner/Mazel.
- Peeters, M.C.W. & Le Blanc, P.M. (2001). Towards a match between job demands and sources of social support: A study among oncology care providers. *European Journal of Work and Organisational Psychology*, 10(1), 53-72.
- Proost, K., De Witte, H., De Witte, K. & Evers, G. (2004). Burnout among nurses - Extending the job-control-support model with work-home interference. *Psychologica Belgica*, 44(4), 269-288.
- Rafferty, Y., Friend, R. & Landsbergis, P.A. (2001). The association between job skill discretion, decision authority and burnout. *Work and Stress*, 15(1), 73-85.
- Rodrigo, W.D. (2002). *Conceptual dimensions of compassion fatigue and vicarious trauma*. Unpublished masters dissertation. Vancouver: Simon Fraser University.
- Rothmann, S., Jackson, L.T.B. & Kruger, M.M. (2003). Burnout and job stress in a local government: The moderating effect of sense of coherence. *South African Journal of Industrial Psychology*, 29(4), 52-60.
- Sabin-Farrell, R. & Turpin, G. (2003). Vicarious traumatisation: Implications for the mental health of health workers? *Clinical Psychology Review*, 23, 449-480.
- Salston, M. & Figley, C.R. (2003). Secondary traumatic stress effects of working with survivors of criminal victimisation. *Journal of Traumatic Stress*, 16(2), 167-174.
- Schaufeli, W.B. (2003). Past performance and future perspectives of burnout research. *South African Journal of Industrial Psychology*, 29 (4), 1-15.
- Schaufeli, W.B. & Enzmann, D. (1998). *The burnout companion to study and practice – A critical analysis*. London: Taylor & Francis.
- Sexton, L. (1999). Vicarious traumatisation of counsellors and effects on their workplace. *British Journal of Guidance and Counselling*, 27(3), 393-402.



- Stamm, B.H. (2002). Measuring compassion satisfaction as well as fatigue: Developmental history of the compassion satisfaction and fatigue test. In C.R. Figley (Ed.), *Treating compassion fatigue* (pp.107-119). New York: Brunner – Routledge.
- Storm, K. & Rothmann, S. (2003). The relationship between burnout, personality traits and coping strategies in a corporate pharmaceutical environment. *South African Journal of Industrial Psychology*, 29(4), 35-42.
- Straker, G. & Moosa, F. (1994). Interacting with trauma survivors in contexts of continuing trauma. *Journal of Traumatic Stress*, 7(3), 457-465.
- Ullrich, A. & FitzGerald, P. (1990). Stress experienced by physicians and nurses in the cancer ward. *Social Science and Medicine*, 31(9), 1013-1022.
- Valent, P. (2002). Diagnosis and treatment of helper stresses, traumas and illnesses. In C. R. Figley (Ed.), *Treating compassion fatigue* (pp. 17-37). New York: Brunner-Routledge.
- Wee, D.F. & Myers, D. (2002). Stress response of mental health workers following disaster: The Oklahoma City bombing. In C.R. Figley (Ed.), *Treating Compassion Fatigue* (pp. 181-211). New York: Brunner–Routledge.
- Winnubst, J. (1993). Organisational structure, social support and burnout. In W.B.Schaufeli, C. Maslach & Marek, T. (Eds.), *Professional burnout: Recent developments in theory and research* (pp.151-160). Washington: Taylor & Francis.

## **CHAPTER 3**

### **ARTICLE 2**

#### **THE SOUTH AFRICAN PUBLIC HEALTH SECTOR AND THE WORKING ENVIRONMENT OF HEALTH CARE PROFESSIONALS: A REVIEW**

## **THE SOUTH AFRICAN PUBLIC HEALTH SECTOR AND THE WORKING ENVIRONMENT OF HEALTH CARE PROFESSIONALS: A REVIEW**

### **Abstract**

The demands associated with health care delivery also mean that it can be highly stressful, particularly when working conditions are poor. In South Africa doctors and nurses in the public sector are faced with this scenario. Though current working conditions are as a result of numerous and diverse challenges, recent history have had the most significant impact. Challenges stemming from reform measures implemented since the first democratic elections held in 1994 and additional problems such as severe understaffing, poverty and HIV/AIDS are reviewed. Under present working conditions, doctors and nurses may be at an increased risk for burnout and compassion fatigue. The present status of the South African public health sector is discussed in terms of potential risk factors for burnout and compassion fatigue.

*Keywords: South African public health sector, burnout, compassion fatigue, occupational stress, health care professionals, doctors, nurses, transformation, health sector reform*

## **DIE SUID-AFRIKAANSE PUBLIEKE GESONDHEIDSEKTOR EN DIE WERKSOMGEWING VAN GESONDHEIDSORGWERKERS: 'n OORSIG**

### **Opsomming**

Die vereistes wat met gesondheidsorglewering geassosieer word kan ook beteken dat dit hoogs spanningsvol kan wees, veral wanneer werksomstandighede swak is. In Suid-Afrika kom verpleegsters in die publieke sektor voor hierdie scenario te staan. Alhoewel huidige werkstoestande die resultaat van veelvuldige en uiteenlopende uitdagings is, het onlangse geskiedenis die mees beduidende impak gehad. Uitdagings wat voortspruit uit hervormingsmaatreëls wat sedert die eerste demokratiese verkiesings in 1994 geïmplementeer is, en addisionele probleme soos ernstige personeeltekorte, armoede en MIV/Vigs, word ondersoek. Onder huidige werksomstandighede is daar vir dokters en verpleegsters 'n hoër risiko van uitbranding en medelye-uitputting. Die huidige stand van die Suid-Afrikaanse publieke gesondheidsektor word in terme van potensiële risikofaktore vir uitbranding en medelye-uitputting bespreek.

**Sleutelwoorde:** *Suid-Afrikaanse publieke gesondheidsektor, uitbranding, medelye-uitputting, beroepspanning, gesondheidsorgwerkers, dokters, verpleegsters, transformasie, gesondheidsektorehervorming*

This review examines the working conditions of South African health care professionals in the public sector and the possible relationship between these working conditions and burnout and compassion fatigue. The impact of health sector reform on health care professionals and the relevant components of the South African national health care system are discussed. While health sector reform has theoretically lead to greater accessibility and equitable distribution of health services, the health of many South Africans continues to be influenced by prevailing socio-economic difficulties associated with South Africa's status as a developing country. These difficulties include poverty, unemployment, high levels of crime and violence, and backlogs in the provision of housing, drinking water and sanitation (Benatar, 2004a; Van Rensburg, 2004a). Moreover, while other developing countries are primarily faced with a burden of infectious diseases and poverty-related conditions such as HIV/AIDS, nutrition deficiency diseases and tuberculosis, South Africa is simultaneously also plagued by health issues arising from affluence (such as chronic lifestyle diseases) as well as health issues resulting from trauma and injuries. As a result, South Africa's health status is poor in comparison with other countries of similar socio-economic standing such as Brazil and Argentina, which in itself holds major challenges for health care professionals.

### **Background: Recent History and Present Challenges**

Recent history has had the most influence in shaping the present health care system in South Africa (Benatar; 2004a; Van Rensburg, 2004a). One of the most noteworthy factors has been the ANC government's implementation of reform measures following the first democratic elections in 1994. These reform measures were initially shaped by a broad reconstruction and development plan (RDP) which unfortunately soon came under severe criticism amid allegations of mismanagement and corruption resulting in the original RDP ministry being dissolved within the first two years (Van Rensburg, 2004a).

The National Health Plan for South Africa (ANC, 1994) was later formulated and consisted of restructuring the health system by basing it on the primary health care approach. However, as a key component of this process, decentralisation has proved to be complex. Together with a lack of leadership, indecision, and capacity deficiencies, decentralisation has been further

hampered by the often unrealistic pace at which transformation has been conducted (Pillay, 2001; Van Rensburg & Pelsers, 2004). Major parts of the decentralisation process still need to be implemented in practice, which in turn has left many unresolved issues.

As part of the overall restructuring of the health system, a number of significant reform measures were also undertaken in order to ensure a rapid increase in access to health care within previously disadvantaged communities (ANC, 1994b; Van Rensburg & Pelsers, 2004). These measures included (a) the elimination of fees for primary health care services, (b) the elimination of fees for children under six years and for pregnant and lactating women, (c) building new primary health care clinics and upgrading existing clinics, and (d) promulgating the Choice on Termination of Pregnancy Act in order to provide access to safe termination services previously unavailable in South Africa. However, given that the process of decentralisation was still very much in its infancy, in many instances the introduction of free health care was not adequately planned or budgeted for, resulting in overcrowding, shortages of supplies and equipment, poor working conditions, low staff morale, and a deterioration in the overall quality of public health care services (Schweitzer, 1994; Redelinghuys & Van Rensburg, 2004; Van Rensburg, 2004a).

## **HIV/AIDS**

Although transformation is an ongoing process, its success continues to be hampered by factors such as poverty, unemployment and HIV/AIDS (Benatar, 2004a; Pillay, 2001). While the HIV/AIDS pandemic is a global problem, it has impacted the South African health care system in a devastating way (Van Rensburg & Pelsers, 2004). In contrast to the sharp decline in patient mortality reported in industrialised countries, South Africa continues to experience an ever increasing burden as a result of HIV/AIDS. The HIV/AIDS pandemic thus continues to hamper the progress of transformation and reform and has an ever increasing detrimental impact on organisational functioning, service delivery, and the working conditions of health care professionals (Health Systems Trust, 2003; Shishana & Davids, 2004).

Specifically, the growing needs of HIV/AIDS-affected communities can be identified as significant threats to service delivery and to the wellbeing and functioning of health care workers (Mhlambi, 2002, Wibulpolprasert, 2004). In terms of service delivery, factors such as changes in patient profiles and the significant increase in the number of patients requiring specialised care are particularly debilitating. In areas with high rates of infection many public health institutions are simply unable to cope with the patient numbers, which is in part also due to the severe and critical staff shortages in the public health sector in general (Mogaladi, 2003; Swartz & Roux; 2004). Moreover, HIV/AIDS is placing health workers at an increased risk of contracting HIV in the workplace. As a result, Employee Assistance Programmes are now required to address issues associated with HIV/AIDS in the work place, thereby inadvertently further placing an additional burden on service delivery in an already stretched health care system (Rapea, 2002).

One of the most disturbing realities of the HIV/AIDS pandemic facing South Africa and the public health sector is the growing number of health workers falling ill due to HIV/AIDS contracted outside of the workplace. Given that the public sector is the largest employer in the South African economy, the loss of human labour power and the increased need for specialised care will have a profound effect on the country (Benatar, 2004a; Mbanga, 2004; Pelser, Ngwena & Summerton, 2004).

### **Critical Staff Shortages**

In the public health sector effective human resource planning is being hampered by a debilitating shortage of health care workers. This shortage is primarily due to the migration of health care workers to either the private sector or to other countries (Ntuli & Day, 2004). Although the overwhelming rate of migration among doctors and nurses is in part due to the aggressive recruitment of beneficiary countries, a number of so-called *push factors* have been identified both within the public health sector and within the larger social context of South Africa (Buchan, Parkin & Sochalski, 2003).

Within the larger social context external push factors include political insecurity, crime, high taxation, and poor service standards, while so-called internal push factors include low remuneration levels, poor infrastructure and technology, the potential exposure to diseases such as HIV/AIDS and TB in the work place, and excessive workloads (Adams & Stillwell, 2004; Buchan, Parkin & Sochalski, 2003; Hagopian, Thompson, Fordyce, Johnson & Hart, 2004; Vujicic, Zurn, Diallo, Adams & Dal Poz, 2004).

Ironically, health sector reform has also been identified as a significant push factor contributing to present staff shortages, given that certain reform measures have inadvertently altered critical aspects of the work environments of many doctors and nurses (Gilson, 2004; Pillay, 2001). The mechanism of affirmative action has been found to be one such measure and in many cases has meant that increasing numbers of inexperienced staff have been absorbed into the public health system while more experienced staff have been laid off, particularly at managerial level (Van Rensburg, 2004b).

### **Implications for Health Care Workers**

In short, the transformation of the South African health system has resulted in a climate of unrealistic expectations, job insecurity, and heightened stress levels (Pillay, 2001). Job dissatisfaction in the public health sector has been exacerbated by intra-organisational factors such as the absence of sound human resource plans, top-down management practices, continuous lack of basic equipment and drugs, budget-driven instead of service-driven approaches, loss of skills, and increased pressure on remaining staff (Kolehmainen-Aitken, 2004; Van Rensburg, 2004b).

Research indicates that under these kinds of working conditions health care professionals are particularly vulnerable to occupational stress (Schaufeli & Enzmann, 1998). Burnout and compassion fatigue are two occupational stress syndromes that have been found to have a significant and detrimental impact on health care workers and the organisations that employ them (Abendroth, 2005; Collins & Long, 2003; Schaufeli & Enzmann, 1998).

Burnout is a gradual process that develops in response to chronic exposure to job-related stressors and demands and is characterised by emotional exhaustion, depersonalisation, and low levels of personal accomplishment (Maslach, 1993; Maslach, Jackson & Leiter, 1996; Schaufeli & Enzmann, 1998). One of the most commonly cited definitions of burnout holds that

“Burnout is a persistent, negative, work-related state of mind in ‘normal’ individuals characterised by exhaustion and accompanied by distress, a sense of reduced effectiveness, decreased motivation and the development of dysfunctional attitudes and behaviours at work. This psychological condition develops gradually but may remain unnoticed for some time. It results from a misfit between intentions and reality in the job. Burnout is often self-perpetuating because of inadequate coping strategies that are associated with the syndrome” (Schaufeli & Enzmann, 1998, p.36).

While burnout is a gradual process primarily associated with a misfit or mismatch between a person and the job, compassion fatigue is a comparatively recent trauma-related syndrome that can have a sudden onset (Collins & Long, 2003). Although less clearly understood from a theoretical perspective than burnout, compassion fatigue is known to develop due to the adverse emotional effects of having to sustain high levels of empathic engagement with care recipients, or from secondary exposure to traumatic material (Figley, 1995). Compassion fatigue is primarily characterised by secondary traumatic stress symptoms in conjunction with cumulative stress or burnout and is unique to workers in helping occupations (Adams, Boscarino, Figley, in press; Figley, 1995; Gentry, Baranowsky & Dunning, 2002; Jenkins & Baird, 2002; Sexton, 1999).

Both burnout and compassion fatigue hold potentially negative outcomes for individuals and organisations. In the case of burnout the following can manifest on an individual level: depression, psychosomatic complaints, health problems, heightened levels of arousal, low frustration tolerance, and increased irritability (Corrigan, Holmes & Luchins, 1995; Melamed, Kushnir & Shirom, 1992; Nowack & Pentkowski, 1994). Also, on an individual



level, compassion fatigue is associated with debilitating intrapersonal consequences due to secondary stress symptomatology such as intrusive thoughts or images, hyper vigilance, and difficulty separating work life from personal life (Gentry, Baranowsky & Dunning, 2002; Sabin-Farrell & Turpin, 2003; Valent, 2002).

At an organisational level burnout and compassion fatigue have been linked to declining levels of job satisfaction, high levels of absenteeism, intention to leave the job, and declining quality of care (Collins & Long, 2003; Schaufeli & Enzmann, 1998). Clearly burnout and compassion fatigue do not only have a negative impact on the functioning of health care workers, but can have an equally detrimental impact on the quality of health care that patients receive.

### **Risk Factors for Burnout and Compassion Fatigue in the Public Health Sector**

In human service occupations the factors that have been linked to burnout and compassion fatigue, and the consequences and outcomes associated with these syndromes, overlap somewhat but differ in the extent to which they contribute to each syndrome (Collins & Long, 2003; Schaufeli, 2003).

Given that the emotional demands of human service work, such as health care, are considered to be the primary cause of compassion fatigue, all professionals in these kinds of occupation groups are at risk for experiencing compassion fatigue (Figley, 1995; Figley, 2002; Paton, 1996). This finding raises even more concern given South Africa's high incidence of crime and violence, as this means that doctors and nurses are likely to be exposed to traumatic scenes of damaged bodies (Nkosi, 2002; Van Rensburg, 2004b).

It is now being recognised that the onset of compassion fatigue can also be influenced by additional organisational and job-related factors in much the same way as burnout (Rodrigo, 2002). These factors include stressors and demands stemming from job characteristics, occupational characteristics, or organisational characteristics, as well as some individual factors such as demographic characteristics, personality characteristics and job attitudes

(Cordes & Dougherty, 1993; Lee & Ashforth, 1996; Maslach, Leiter & Schaufeli, 2001; Schaufeli & Enzmann, 1998). Furthermore, there is growing recognition of the mutually influential relationship between employees' work and home lives (Geurts, Rutte & Peeters, 1999; Hillhouse, Adler & Walters, 2000; Ortlepp & Friedman, 2002; Proost, De Witte, De Witte & Evers, 2004; Sabin-Farrell & Turpin, 2003).

Researchers in the fields of burnout and secondary traumatic stress reactions can thus be viewed as being largely in agreement regarding the importance of recognising the complex interactions between the individual and the social and organisational context of their occupation (Maslach, Leiter & Schaufeli, 2001; Valent, 2002). However, given that the syndrome of compassion fatigue is still an evolving theoretical construct; a comprehensive theoretical model does not yet exist. In contrast, a recently developed model of burnout, the job-person fit model (Maslach, Leiter & Schaufeli, 2001), provides a comprehensive framework which highlights the interaction between the various organisational risk factors that are essentially the focus of this review. These factors include work overload (having to do too much in too little time with too few resources), lack of control (having no opportunities to make choices and decisions), lack of rewards (inadequate monetary rewards and/or internal rewards such as recognition appreciation), lack of community (a loose and non-supportive social fabric and chronic and unresolved problems), lack of fairness (unequal treatment of employees; respect and self-worth is not confirmed) and value conflict (the requirements of the job do not agree with personal principles). This model therefore provides a comprehensive theoretical framework from within which to more carefully consider the impact of the various stressors in the South African public health sector briefly reviewed thus far.

### ***Workload***

High workloads and excessive job demands are common risk factors for both burnout and compassion fatigue (Cordes & Dougherty, 1993; Figley, 2002; Lee & Ashforth, 1996). In the South African public health sector several macro-economic and social factors appear to have resulted in the excessive workloads reported by many doctors and nurses (Pelser, 2004;

Rapea, 2002). These include the implementation of reform policies and consequently the sudden and rapid increase in the demand for health care services, the migration of health care workers to the private sector and to overseas countries, and also inequities in the distribution of health care professionals within public health care institutions (Ntuli & Day, 2004; Van Rensburg, 2004b).

A significant escalation in the cost of medical scheme coverage in South Africa has further contributed to high workloads (Mogaladi, 2003). Despite the rapid expansion of the private health sector, medical insurance has become increasingly unaffordable to lower income earners. Blecher and Thomas (2004) estimate that between 1995 and 2005 the uninsured population grew by an estimated 7 million. This increase has meant that despite a substantial increase in real funding of health services over the past decade, per capita funding has in fact remained similar to 1995 levels and has therefore lead to higher patient populations in the face of inadequate resources.

The HIV/AIDS pandemic is another such contributory factor. While industrialized countries have experienced a sharp decline in patient mortality among HIV/AIDS sufferers, South Africa continues to experience an ever increasing burden as a result of HIV/AIDS (Benatar, 2004a; McIntyre & Doherty, 2004). As such the HIV/AIDS pandemic has hampered the success of reform and impacted heavily on organisational functioning, service delivery, and working conditions (Shisana et al, 2003). The extent of this impact on quality of care and working conditions is illustrated by recent statistics that only 65% of all primary health facilities reported having an adequate supply of sterilising equipment (DOH, 2003). The potential consequences of this reality on health care workers, health care institutions, and patients are staggering. As increasing numbers of people become infected by HIV, patient loads will continue to increase and impact further on health services through financial needs and through the added burden on health care workers (Benatar, 2004a; Pelser, Ngweni & Summerton, 2004; Van Rensburg, 2004b; Wibulpolprasert, 2004). Moreover, an alarming number of health care workers are already exhibiting stress-related symptoms such as low morale, stress-related illnesses and absenteeism (Shisana et al, 2003). Despite the fact that the emotional demands of caring for those who are suffering are well documented, health care

institutions will need to become more aware of the potential consequences of HIV/AIDS as a significant risk factor for burnout and compassion fatigue.

### ***Control***

Research has shown that in cases where workers have insufficient control over the resources needed to do their work, or have insufficient authority to perform their work in what they perceive to be as the most effective manner, higher levels of burnout are likely to occur (Barber & Iwai, 1996; Rafferty, Friend & Landsbergis, 2001; Sargent & Terry, 1998). In the public health sector these kinds of stressors are highly prevalent, in part due to bureaucratic management structures and an authoritarian organisational culture characteristic of many public health care institutions (Rapea, 2002, van Rensburg & Pelser, 2004).

Perceptions of a lack of control among health care workers are also likely to be exacerbated by the mandated implementation of policies in the absence of due consideration of resource availability, or of the potential effects on the working conditions of doctors and nurses (Kolehmainen-Aitken, 2004; Rapea, 2002; Van Rensburg, 2004a). Policies aimed at relieving shortages of human resources such as the intentional redistribution of health professionals, the importation of Cuban doctors, and the introduction of compulsory community service for newly qualified health care workers, are essentially coercive in nature and have as such further damaged morale and increased job insecurity among health care workers (Gilson; 2004; Van Rensburg, 2004a).

### ***Rewards***

Higher levels of occupational stress have been found when workers are faced with either insufficient financial rewards or when they encounter a lack of social and institutional rewards (Buunk & Schaufeli, 1993; Maslach, Leiter & Schaufeli, 2001). This risk factor is an area of particular concern given that South African public health care professionals receive notoriously poor remuneration (Ntuli & Day, 2004; Van Rensburg, 2004b). In addition to a lack of financial reward, doctors and nurses are also likely to experience a lack of social reward due to the unbalanced caregiver-recipient relationship (known to affect human service

workers in general) (Buunk & Schaufeli, 1993), as well as an unbalanced employee-organisation relationship. Given the authoritarian and bureaucratic structures of public health institutions (Rapea, 2002), feedback from patients and supervisors is generally lacking and is likely to contribute to the perception among employees that their input is not recognised or valued.

### *Community*

The influence of organisational culture, particularly the availability of support, is an important factor to consider in understanding occupational stress (Corrigan, Holmes & Luchins, 1995; Wee & Myers, 2002). In order for an organisation to function well, each member of the organisation should be willing to do something for another, recognise each others' individuality and be willing to help each other (Winnubst, 1993). In organisations in which this kind of support and sense of community is lacking, employees are likely to be at greater risk for burnout (Maslach, Leiter & Schaufeli, 2001) and compassion fatigue (Ortlepp & Friedman, 2002). In the South African public sector it is likely that a sense of community has largely been eroded by the implementation of policies that have changed working conditions, often through coercive measures (Benatar, 2004b; van Rensburg, 2004b). Moreover, these policies will most likely also have an influence on perceptions of fair organisational practice among doctors and nurses.

### *Fairness*

Workers who perceive a lack of fairness in the institutions in which they work have been found to be at a high risk for burnout in at least two ways (Maslach, Leiter & Schaufeli, 2001). The first way is that of being emotionally upset by the experience of unfair treatment, while the second appears to stem from a deep sense of cynicism about the organisation itself (Demir, Ulusoy & Ulusoy, 2003; Winnubst, 1993). In the public sector, policies such as the decentralisation of health care services have inadvertently led to inequities in salary levels, terms of employment, and professional development opportunities (Gilson, 2004; Pillay,

2001; Van Rensburg, 2004a). These factors are likely to increase health care workers' risk for burnout (Winnubst, 1993) and compassion fatigue (Rodrigo, 2002).

### ***Values***

An additional risk factor is known to emerge when there is a discrepancy between organisational and individual values (Maslach, Leiter & Schaufeli, 2001; Wolpin, Burke & Greenglass, 1991). Due to various ethical dilemmas encountered in daily service delivery in the public sector, such as having to discharge patients who may still be in need of care in order to accommodate new patients, doctors and nurses may be at a significant risk for burnout and compassion fatigue (Benatar, 2004b; Mogaladi, 2003; Redelinghuys & Van Rensburg, 2004). Affirmative action is another factor that can contribute to discrepancies between organisational and individual values (Benatar, 2004b; Pillay, 2001). Although affirmative action has been aimed at effecting an equitable and representative workforce, it has also led many employees to believe that certain characteristics previously held in high esteem (such as experience, competency and sound work ethics) are no longer held in high regard (Nzanira, 2002; Van Rensburg, 2004b). By encountering these kinds of stressors, the professional and personal development of public health sector employees is undermined and this is likely to have an impact on their overall functioning and well-being.

### **Conclusion**

While the South African constitution is considered to be one of the most progressive, its implementation has in fact posed a number of obstacles for transformation of the health sector. Despite some successes, transformation has been slow and challenging and service delivery in the public sector is presently characterised by inadequate facilities, critical shortages of health care workers and shortages of basic medicines. Health sector reform has also inadvertently raised a number of human resource issues as policies continue to change critical aspects of the working conditions of health care professionals. In effect the cumulative impact of reform, HIV/AIDS, inadequate resources, deficient infrastructure and

excessive job demands, is likely to render doctors and nurses in the public health sector vulnerable to burnout and compassion fatigue. Given the possible negative outcomes of burnout and compassion fatigue for both organisations and individual workers, there is an urgent need to investigate not only the prevalence of burnout and compassion fatigue, but also the specific areas in which health care workers experience the highest levels of distress.

## REFERENCES

- Abendroth, M. (2005). *Predicting the risk for compassion fatigue: an empirical study of hospice nurses*. Unpublished Masters dissertation. Florida: Florida State University.
- Adams, O. & Stillwell, B. (2004). Health professionals and migration. *Bulletin of the World Health Organisation*, 82(8). Retrieved on January 21, 2005, from [http://www.who/int](http://www.who.int).
- Adams, R.E., Boscarino, J.A. & Figley, C.R. (in press). Compassion fatigue among a sample of New York social workers: Instrument psychometrics. *Journal of Orthopsychiatry*.
- ANC (1994). A National Health plan for South Africa. Pretoria: ANC.
- Barber, C.E. & Iwai, M. (1996). Role conflict and role ambiguity as predictors of burnout among staff caring for elderly dementia patients. *Journal of Gerontological Social Work*, 26(1/2), 101-116.
- Benatar, S.R. (2004a). Health care reform and the crisis of HIV/AIDS in South Africa. *New England Journal of Medicine*, 351(1), 81–92.
- Benatar, S.R. (2004b). Ethical challenges for health care in South Africa. In H.C.J. van Rensburg (Ed.), *Health and health care in South Africa* (pp.561-606). Pretoria: Van Schaik Publishers.
- Blecher, M. & Thomas, S. (2004). Health care financing. *South African Health Review 2003/2004*. Durban: Health Systems Trust.
- Buchan, J., Parkin, T. & Sochalski, J. (2003). International nurse mobility: Trends and policy implications. Retrieved on January 23, 2005, from <http://www.who/int/hq/2003/whoeip/osd/2003.3.pdf>.
- Buunk, B.P. & Schaufeli, W.B. (1993). Burnout: A perspective from social comparison theory. In W.B. Schaufeli, C. Maslach and T. Marek (Eds.), *Professional burnout: recent developments in theory and research* (pp. 53-66). Washington: Taylor & Francis.
- Collins, S. & Long, A. (2003). Working with the psychological effects of trauma: consequences for mental health-care workers – a literature review. *Journal of Psychiatric and Mental Health Nursing*, 10, 17-424.



- Cordes, C.L. & Dougherty, T.W. (1993). A review and integration of research on job burnout. *Academy of Management Review*, 18(4), 621-656.
- Corrigan, P.W., Holmes, E.P. & Luchins, D. (1995). Burnout and collegial support in state psychiatric staff. *Journal of Clinical Psychology*, 51 (5), 703-710.
- Demir, A., Ulusoy, M. & Ulusoy, M.F. (2003). Investigation of factors influencing burnout levels in the professional and private lives of nurses. *International Journal of Nursing Studies*, 40, 807-827.
- Department of Health (2003). *Primary health care facilities survey*. Pretoria: DOH.
- Figley, C.R. (1995). *Compassion fatigue: Coping with secondary traumatic stress disorder in those who treat the traumatised*. New York: Brunner Mazel.
- Figley, C.R. (2002). Introduction. In C. R. Figley (Ed.), *Treating Compassion Fatigue* (pp. 1-14). New York: Brunner-Routledge.
- Gentry, J.E., Baranowsky, A.B. & Dunning, K. (2002). The accelerated recovery program (ARP) for compassion fatigue. In C. R. Figley (Ed.), *Treating Compassion Fatigue* (pp.123-133). New York: Brunner-Routledge.
- Geurts, S., Rutte, C. & Peeters, M. (1999). Antecedents and consequences of work-home interference among medical residents. *Social Science & Medicine*, 48, 1135- 1148.
- Gilson, L. (2004). The state of decentralisation in the South African health sector – 2003. In *The Local Government & Health Consortium: Decentralising health services in South Africa: Constraints and opportunities – a cross cutting report*. Retrieved on January 13, 2005, from <http://www.hst.org>.
- Hagopian, A., Thompson, M.J., Fordyce, M., Johnson, K.E. & Hart, L.G. (2004). The migration of physicians from sub-Saharan Africa to the United States of America: Measures of the African brain drain. *Human Resources for Health*, 2(17). Retrieved on January 13, 2005, from <http://www.human-resources-health.com/content/2/1/17>.
- Health Systems Trust. (2003). *HIV/AIDS and health sector responses in South Africa – treatment access and equity: Balancing the act*. Retrieved on January 13, 2005, from <http://www.hst.org.za>.
- Hillhouse, J.J., Adler, C.M. & Walters, D.N. (2000). A simple model of stress, burnout and symptomatology in medical residents: A longitudinal study. *Psychology, Health and Medicine*, 5(1), 63-73.

- Jenkins, S.R. & Baird, S. (2002). Secondary traumatic stress and vicarious trauma: A validation study. *Journal of Traumatic Stress, 15*(5), 423-432.
- Kolehmainen-Aitken, R. (2004). Decentralisation's impact on the health workforce: Perspectives of managers, workers and national leaders. *Human Resources for Health, 2* (5). Retrieved on January 19, 2005, from <http://www.human-resources-health.com/content/2/1/5>.
- Lee, R.T. & Ashforth, B.E. (1996). A meta-analytic examination of the correlates of the three dimensions of job burnout. *Journal of Applied Psychology, 81*(2), 123-133.
- Maslach, C. (1993). Burnout: A multidimensional perspective. In W.B.Schaufeli, C. Maslach & Marek, T. (Eds.), *Professional burnout: Recent developments in theory and research* (pp. 19-32). Washington: Taylor & Francis.
- Maslach, C., Jackson, S.E. & Leiter, M.P. (1996). *Maslach Burnout Inventory Manual* (3<sup>rd</sup> ed.). Palo Alto, CA: Consulting Psychologists Press.
- Maslach, C., Leiter, M.P., & Schaufeli, W.B. (2001). Job burnout. *Annual Review of Psychology, 52*, 397 – 422.
- Mbanga, S. (2004). Strategies for addressing the skills gap in the South African Public sector: A people's development toolbox. *Service Delivery Review, 3*(2), p. 102–111.
- McIntyre, D. E. & Doherty, J. E. (2004). Health care financing and expenditure – progress since 1994 and remaining challenges. In H.C.J. van Rensburg (Ed.), *Health and health care in South Africa* (pp.378-408). Pretoria: Van Schaik Publishers.
- Melamed, S., Kushnir, T. & Shirom, A. (1992). Burnout and risk factors for cardiovascular disease. *Behavioural Medicine, 18*, 53-60.
- Mhlambi, S. (2002). Challenges in health service delivery. *Service Delivery Review, 1*(2), 62-64.
- Mogaladi, S. (2003). Health care: Towards the need for intervention and balance. *Service Delivery Review, 2*(1), 78–81.
- Nkosi, S.N.P-C. (2002). *The relationship between compassion fatigue and coping styles in nurses working in a hospital trauma unit*. Unpublished Masters dissertation. Johannesburg: University of the Witwatersrand.
- Nowack, K.M. & Pentkowski, A.M. (1994). Lifestyle habits, substance use and predictors of job burnout in professional working women. *Work and Stress, 8*(1), 19-35.

- Ntuli, A & Day, C. (2004). Ten years on – have we got what we ordered. In: Ijumba, P., Day, C & Ntuli, A (Eds.), *South African Health Review 2003/2004*. Durban: Health Systems Trust.
- Nzanira, G.D. (2002). Transforming health service delivery through quality improvement and accreditation. *Service Delivery Review*, 1(3), 9–13.
- Ortlepp, K. & Friedman, M. (2002). Prevalence and correlates of secondary traumatic stress in workplace lay trauma counsellors. *Journal of Traumatic Stress*, 15(3), 213-222.
- Paton, D. (1996). Traumatic stress in critical occupations. In D. Paton & J.M. Violanti (Eds.) *Traumatic Stress in Critical Occupations: Recognition, Consequences and Treatment* (pp. 3–14). Springfield: Charles C Thomas.
- Pelser, A.J. (2004). Health, environment and development in South Africa. In H.C.J. van Rensburg (Ed.), *Health and health care in South Africa* (pp.171-211). Pretoria: Van Schaik Publishers.
- Pelser, A.J., Ngwena, C.G. & Summerton, J.V. (2004). The HIV/AIDS epidemic in South Africa: Trends, impacts and policy responses. In H.C.J. van Rensburg (Ed.), *Health and health care in South Africa* (pp. 276-311). Pretoria: Van Schaik Publishers.
- Pillay, Y. (2001). The impact of South Africa's new constitution on the organisation of health services in the post-apartheid era. *Journal of Health Politics and Law*, 26(4), 747–766.
- Proost, K., De Witte, H., De Witte, K. & Evers, G. (2004). Burnout among nurses: Extending the job-control-support model with work-home interference. *Psychologica Belgica*, 44(4), 269-288.
- Rafferty, Y., Friend, R. & Landsbergis, P.A. (2001). The association between job skill discretion, decision authority and burnout. *Work and Stress*, 15(1), 73-85.
- Rapea, A. (2002). People management that supports service delivery. *Service Delivery Review*, 1(3), 27–30.
- Redlinghuys, N. & Van Rensburg, H.C.J. (2004). Health morbidity and mortality: The health status of the South African population. In H.C.J. van Rensburg (Ed.), *Health and health care in South Africa* (pp. 215-271). Pretoria: Van Schaik Publishers.
- Rodrigo, W.D. (2002). *Conceptual dimensions of compassion fatigue and vicarious trauma*. Unpublished masters dissertation. Vancouver: Simon Fraser University.

- Sabin-Farrell, R. & Turpin, G. (2003). Vicarious traumatising: Implications for the mental health of health workers? *Clinical Psychology Review*, 23, 449-480.
- Sargent, L.D. & Terry, J.D. (1998). The effects of work control and job demands on employee adjustment and work performance. *Journal of Occupational and Organisational Psychology*, 71, 219-236.
- Schaufeli, W.B. (2003). Past performance and future perspectives of burnout research. *South African Journal of Industrial Psychology*, 29(4), 1-15.
- Schaufeli, W.B. & Enzmann, D. (1998). *The burnout companion to study and practice – A critical analysis*. London: Taylor & Francis.
- Schweitzer, B. (1994). Stress and burnout in junior doctors. *South African Medical Journal*, 84, 352-354.
- Sexton, L. (1999). Vicarious traumatising of counsellors and effects on their workplace. *British Journal of Guidance and Counselling*, 27(3), 393-402.
- Shisana, O. & Davids, A. (2004). Correcting gender inequalities is central to controlling HIV/AIDS. *Bulletin of the World Health Organisation*, 82(10). Retrieved on January 16, 2005, from <http://www.sahara.org>.
- Shisana, O., Hall, E., Maluleke, K.R., Stoker, D.J., Schwabe, C., Colvin, M., Chauveau, J., Botha, C., Gumede, T., Fomundam, H., Shaikh, N., Rehle, T., Udjo, E. & Gisselquist, D. (2003). The impact of HIV/AIDS on the health sector: National survey of health personnel, ambulatory and hospitalized patients and health facilities for 2002. Pretoria: DOH.
- Swartz, L. & Roux, N. (2004). A study of local government HIV/AIDS projects in South Africa. *Journal of Social Aspects of HIV/AIDS*, 1(2). Retrieved on January 22, 2005, from <http://www.sahara.org>.
- Valent, P. (2002). Diagnosis and treatment of helper stresses, traumas and illnesses. In C. R. Figley (Ed.), *Treating compassion fatigue* (pp.17-37). New York: Brunner-Routledge.
- Van Rensburg, H.C.J. (2004a). The history of health care in South Africa. In H.C.J. van Rensburg (Ed.), *Health and health care in South Africa* (pp.52-103). Pretoria: Van Schaik Publishers.

- Van Rensburg, H.C.J. (2004b). Primary health care in South Africa. In H.C.J. van Rensburg (Ed.), *Health and health care in South Africa* (pp. 412-453). Pretoria: Van Schaik Publishers.
- Van Rensburg, H.C.J. & Pelsers, A. J. (2004). The transformation of the South African health system. In H.C.J. van Rensburg (Ed.), *Health and Health Care in South Africa* (pp. 110-165). Pretoria: Van Schaik Publishers.
- Vujicic, M., Zurn, P., Diallo, K., Adams, O. & Dal Poz, M.R. (2004). The role of wages in the migration of health care professionals from developing countries. *Human Resources for Health*, 2 (3). Retrieved on January 16, 2005, from <http://www.human-resources-health.com/content/2/1/3>.
- Wee, D.F. & Myers, D. (2002). Stress response of mental health workers following disaster: the Oklahoma City bombing. In C.R. Figley (Ed.), *Treating compassion fatigue* (pp.181-211). New York: Brunner–Routledge.
- Wibulpolprasert, M.D. (2004). Human resources for health in the era of AIDS epidemic. *Human Resources for Health*, 4(3). Retrieved on January 15, 2005, from <http://www.who.int/hrh>.
- Winnubst, J. (1993). Organisational structure, social support and burnout. In W.B.Schaufeli, C. Maslach & Marek, T. (Eds.), *Professional burnout: Recent developments in theory and research* (pp.151-160). Washington: Taylor & Francis.
- Wolpin, J., Burke, R.J. & Greenglass, E.R. (1991). Is job satisfaction an antecedent or a consequence of psychological burnout? *Human Relations*, 44(2), 193-209.

## **CHAPTER 4**

### **ARTICLE 3**

#### **BURNOUT, COMPASSION FATIGUE AND COMPASSION SATISFACTION AMONG HEALTH CARE PROFESSIONALS**

## **BURNOUT, COMPASSION FATIGUE AND COMPASSION SATISFACTION AMONG HEALTH CARE PROFESSIONALS**

### **Abstract**

Given the detrimental impact of burnout and compassion fatigue on health care workers and organisations, this study undertook to investigate the levels of burnout, compassion fatigue and also compassion satisfaction, among doctors and nurses (N = 313) employed in a South African public hospital. The prevalence of burnout was found to be comparable, if slightly higher, than generally found internationally for health care workers. In comparison with similar South African populations, a larger percentage of the respondents in this study reported high levels of emotional exhaustion and low levels of personal accomplishment. High levels of compassion fatigue and also compassion satisfaction were reported as measured by revised scales of the Professional Quality of Life Scale (ProQOL), although further investigation into the structural validity of this scale is recommended.

**Keywords:** *Burnout, compassion fatigue, compassion satisfaction, health care workers, doctors, nurses, occupational stress, MBI-HSS, ProQOL*

## **UITBRANDING, MEDELYE-UITPUTTING EN MEDELYE-BEVREDIGING ONDER GESONDHEIDSORG BEROEPSLUI**

### **Opsomming**

Gegewe die skadelike impak van uitbranding en medelye-uitputting op gesondheidsorgwerkers en organisasies, het hierdie studie ten doel om die vlakke van uitbranding, medelye-uitputting en medelye-bevrediging onder dokters en verpleegsters in diens van 'n Suid-Afrikaanse publieke hospitaal te ondersoek (N = 313). Daar is gevind dat die voorkoms van uitbranding vergelykbaar is met dit wat internasionaal onder gesondheidsorgwerkers gevind is, hoewel dit effens hoër is. In vergelyking met soortgelyke Suid-Afrikaanse bevolkings het daar 'n groter persentasie van die respondente in hierdie studie hoë vlakke van emosionele uitputting en lae vlakke van persoonlike vervulling gerapporteer. Hoë vlakke van medelye-uitputting is ook gerapporteer, soos gemeet deur die hersiene skale van die Professional Quality of Life Scale (ProQOL), alhoewel daar aanbeveel word dat verdere ondersoek na die strukturele geldigheid van hierdie skaal ingestel word.

**Sleutelwoorde:** *Uitbranding, medelye-uitputting, medelye-bevrediging, gesondheidsorgwerkers, dokters, verpleegsters, beroepspanning, MBI-HSS, ProQOL*

Health care professionals face numerous organisational and work-related stressors typical of modern day organisational life, in addition to the emotional and psychological demands inherent in their work. As a result, individuals in these occupations are vulnerable to burnout and compassion fatigue - two distinct, yet related occupational stress reactions (Collins & Long, 2003). Although this dual level of exposure to work-related demands is common to health care workers worldwide, in South Africa doctors and nurses also face poor working conditions and added stressors generally not found in more developed countries (Benatar, 2004).

In the South African public health sector, service delivery and working conditions have inadvertently been negatively effected by the transformation of the health system undertaken since the first democratic elections held in 1994 (Benatar, 2004). Moreover, high levels of violence, economic difficulties and a rampant HIV/AIDS pandemic mean that working conditions are characterised by high workloads, an under supply of medication and equipment, poor infrastructure, and poor remuneration (Mogaladi, 2003; Rapea, 2002; Roberts, 2003).

### **Burnout and Compassion Fatigue**

It is well documented that adverse working conditions, excessive work related demands and insufficient job-related resources significantly increase the prevalence of occupational stress reactions such as burnout (Schaufeli, 2003) and compassion fatigue (closely related to secondary traumatic stress and vicarious traumatisation) (Figley, 2002).

Burnout develops in response to persistent exposure to job-related stressors and is a syndrome characterised by emotional exhaustion, depersonalisation, and reduced personal accomplishment (Maslach, 1993). Burnout has been found to be more prevalent in work environments in which resources such as social support, job enhancement opportunities, participation in decision making, autonomy, and reinforcement contingencies are lacking (Cordes & Dougherty, 1993; Lee & Ashforth, 1996; Maslach, Leiter & Schaufeli, 2001). Research suggests that when these resources are deficient, individuals are less able to cope



with demands such as job insecurity, role conflict, heavy workload, and time pressure (Lee & Ashforth; 1996; Maslach, Leiter & Schaufeli, 2001). These findings hold significant implications for South African health care workers given that health sector reform has inadvertently led to an increase in job demands amid limited job resources, thereby creating a negative organisational environment and adverse working conditions (Pillay, 2001). In contrast to the direct impact of job-related demands on burnout, compassion fatigue develops primarily due to the effects of emotional and psychological job-related strain characteristic of human service work (Collins & Long, 2003; Figley, 2002). Compassion fatigue manifests due to the strain of having to sustain high levels of empathic engagement with care recipients, or due to the negative psychological effects of secondary exposure to traumatic material. Compassion fatigue is as such essentially a trauma-related construct characterised by a secondary traumatic stress reaction (where symptoms include re-experiencing a care recipient's trauma, heightened arousal and avoidance behaviour) together with elements of job burnout (Figley, 2002). Here the burnout component represents the onset of exhaustion due to the emotional demands of human service work (Adams, Boscarino & Figley, in press; Figley, 1995; Gentry, Baranowsky & Dunning, 2002; Jenkins & Baird, 2002; Sexton, 1999).

Compassion fatigue has been found to be particularly problematic in occupations such as health care which are characterised by frequent exposure to critical incidents (Figley, 2002; Sabin-Farrell & Turpin 2003). Critical incidents are considered to be unusual occurrences within the general population and involve exposure to traumatic events that are sudden, overwhelming and emotionally challenging (Paton, 1996). Given the frequency with which many South African health care professionals encounter violence- and crime-related injuries, the effects of critical incidents are of particular concern (Redelinghuys & Van Rensburg, 2004). Compassion fatigue has also been found to be more prevalent among individuals who work long hours, experience time pressure and have high workloads (Sabin-Farrell & Turpin, 2003). Although these stressors have a direct path to burnout they also appear to indirectly contribute to compassion fatigue by intensifying the emotional effect of human service work (Jenkins & Baird, 2002; Meyers & Cornille, 2002; Salston & Figley, 2003).

## **Impact of Burnout and Compassion Fatigue**

Burnout and compassion fatigue potentially hold numerous negative outcomes for individuals and organizations (Figley, 2002; Schaufeli & Enzmann, 1998). The impact and severity of these outcomes is also strongly influenced by the way in which an individual responds to, and copes with, various job-related demands and stressors. This in turn can be influenced by aspects such as stress levels outside of work, demographic characteristics, personality traits, and individual coping strategies (Lee & Ashforth, 1996; Proost, De Witte, De Witte & Evers, 2004; Sabin-Farrell & Turpin, 2003).

Despite differences in individual responses to burnout and compassion fatigue, research quite consistently shows that burnout may also lead to health problems, an increased vulnerability to depression, or to increased substance use (Corrigan, Holmes & Luchins, 1995; Nowack & Pentkowski, 1994; Schaufeli & Enzmann, 1998). Studies focusing more specifically on the impact of burnout on nurses and doctors report a deterioration in the nurse-patient and doctor-patient relationship, declining interest in work-related responsibilities, less commitment to patients, and a decline in person orientated care (Berg, Hansson & Hallberg, 1994). Furthermore, in addition to poor quality patient care and impaired work performance, burnout can also have an impact on the overall organisational functioning of health care institutions due to higher levels of absenteeism, more job dissatisfaction and a higher turnover of doctors and nurses (Aiken, Clarke, Sloane, Sochalski & Silber, 2002; Iverson, Olekalns, & Erwin, 1998).

The effects of compassion fatigue are comparable to those of burnout, although some are more distressing on a personal level due to the presence of posttraumatic stress type symptoms characteristic of the syndrome (Rodrigo, 2002). Specifically, individuals may exhibit avoidance behaviour and heightened arousal, experience a sense of emotional numbing, and may feel as if they are re-experiencing a care recipient's trauma (Sabin-Farrell & Turpin, 2003; Valent, 2002). Although some of these emotional reactions are considered to be normal responses to traumatic material, they can nonetheless also lead to poorer overall

occupational functioning and poor patient care (Figley, 2002). At an organisational level the impact of compassion fatigue is less clearly understood, although some studies suggest a similar effect to that of burnout, such as increased absenteeism and high staff turnover (Figley; 2002; Meyers & Cornille, 2002). Given the potential effects of burnout and compassion fatigue, it is clear that sound organisational practice should consider the prevalence of these syndromes among employees as well as their underlying causes within a specific organisation or specific occupation group (Schaufeli, 2003; Figley, 2002). While such undertakings have proved beneficial across occupation groups, ethical and moral considerations make this imperative in organisations where impaired job performance translates directly into substandard health service delivery and patient care.

### **Identifying Burnout and Compassion Fatigue**

A review of research literature indicates that studies investigating burnout or compassion fatigue almost exclusively utilize one of two assessment measures. Within the field of burnout research, studies undertaken within the human services (including health care professions) almost exclusively utilize the Maslach Burnout Inventory Human Services Survey (MBI-HSS) (Maslach, Jackson & Leiter, 1996). Studies on compassion fatigue most commonly use The Professional Quality of Life Scale (ProQOL) (Stamm, 2005). In addition to assessing secondary traumatic stress symptoms, this instrument now also includes measures of burnout-like symptoms and of an individual's potential for compassion satisfaction (that is satisfaction derived from working as a caregiver).

In view of the potential impact of burnout and compassion fatigue on individuals and on organisations, the availability of reliable and valid measuring instruments is of the utmost importance. While the MBI-HSS has been found to be a reliable measure across various occupation groups in South Africa (Coetzee & Rothmann, 2004; Storm & Rothmann, 2003), very little is known about the ProQOL's applicability to South African populations. In addition, the ProQOL is not well researched internationally given that studies focusing on compassion fatigue have only recently emerged (Jenkins & Baird, 2002).

## **Prevalence of Burnout and Compassion Fatigue**

To date very few studies have simultaneously investigated burnout and compassion fatigue, thus very little is known about the comorbidity of these syndromes in human service workers, despite their unique risk for both (Rodrigo, 2002). However, preliminary findings do suggest that the concurrent exposure to emotional job-related demands may aggravate burnout which initially resulted from stressors in the workplace setting in general (Leiter, 1992), or conversely that additional frustrations and stressors encountered in an organisation may exacerbate compassion fatigue (Collins & Long, 2003; Wee & Myers, 2002).

To date much of the research on compassion fatigue has focused only on emergency service workers, social workers and police officers (Figley, 2002; Paton, 1996). Comparative analysis is also proving problematic given that different versions of the ProQOL were used in earlier studies (Abendroth, 2005; Rodrigo, 2002). Nonetheless, despite these limitations findings suggest that the prevalence of compassion fatigue may be linked to occupation type (Collins & Long, 2003).

In a recent North American study of hospice nurses, Abendroth (2005) found 78% to be at moderate to high risk for compassion fatigue, while Bride, Robinson, Yegidis and Figley (2003) found that 15,2% of social workers who participated in his study met the criteria for PTSD. In a similar South African study of lay trauma counsellors, only 8% showed a high risk for compassion fatigue, while 14% also reported a high potential for compassion satisfaction as measured by an earlier version of the ProQOL (Ortlepp & Friedman, 2002).

Schaufeli & Enzmann (1998) note some difficulties in ascertaining the prevalence of burnout. In particular, their primary caution pertains to the fact that only the Dutch version of the MBI has clinically validated cut-off points, whereas other versions only present numerical cut-off points based on arbitrary statistical norms. A review of research findings undertaken by the researcher also found that a number of studies only report on the prevalence of high scores on the emotional exhaustion and depersonalisation scales and fail to report on the prevalence of the full burnout syndrome (high emotional exhaustion, high

depersonalisation and low personal accomplishment) (Heyns, Venter, Esterhuyse, Bam & Odendaal, 2003; Nixon, 1995).

Be this as it may, given that the vast majority of studies make use of the MBI, it is still possible to make a relative comparison between levels of burnout across various occupational fields and professions. Based primarily on several European studies, researchers estimate that the prevalence of burnout may vary between 4% and 7% among the general working population (Schaufeli & Enzmann, 1998). Cross-nationally (including South African studies), research suggests that burnout is more prevalent in human service occupations than in other occupation groups (Maslach, Leiter & Schaufeli, 2001). Studies have found that the prevalence of burnout may rise to between 8% and 12% among health care workers (Schaufeli & Enzmann, 1998). This finding is thought to be indicative of the relationship between burnout and the emotional intensity of these kinds of occupations (Maslach, 1993).

Research has also found that occupation-specific burnout profiles exist within the field of medicine. Findings generally indicate that doctors and nurses commonly experience similar (high) levels of emotional exhaustion, although doctors may experience higher levels of depersonalisation and nurses may experience lower levels of personal accomplishment (Buunk & Schaufeli, 1993; Schaufeli & Enzmann, 1998). Despite the differences found for the separate burnout components, which can be attributed to specific stressors and demands unique to each occupation, in overseas studies overall burnout levels can generally be categorized as moderate for both nurses and doctors (Schaufeli & Enzmann, 1998). In the majority of South African studies, however, this is generally not the case and notably higher overall levels of burnout among doctors and nurses are generally found in comparison with most overseas studies (Govender, 1995; Nixon, 2001; Ortlepp & Friedman, 2001). Higher levels of burnout are generally also found in health care workers in the public sector than those in private hospitals and clinics. These findings are by and large attributed to poorer working conditions in the public sector (Heyns, Venter, Esterhuyse, Bam & Odendaal, 2003).

Given these findings, this study undertook to investigate, as well as compare, the prevalence of burnout and compassion fatigue among doctors and nurses working in the South African

public health sector. Psychometric information was also gathered on the ProQOL in order to determine its applicability in measuring the relatively new theoretical construct of compassion fatigue. Although compassion satisfaction was not an initial focus of this study, this more recently developed construct has now been included in the ProQOL and as such was considered during some of the statistical analyses performed.

## **Method**

### ***Research Design and Sample***

A cross-sectional survey design was used in order to achieve the objectives of this study. A convenience sample of doctors and nurses (N = 313) was drawn from a public regional hospital. The hospital in question is one of four district hospitals in the Free State province which has a population of almost 3 million people. Statistics released by the Free State Department of Health show that approximately 85% of individuals residing in this province do not have medical insurance and as such are dependent on these four district hospitals for all health care services other than the basic services provided at community based clinics (FSDOH, 2005). The hospital in question is also an accredited training hospital associated with the University of the Free State's Faculty of Health Sciences.

In order to proceed with this study, permission was obtained from senior management personnel of the hospital and from the Medical Ethics Research Committee of the University of the Free State. A total of 600 questionnaires were sent out to the various units and departments within the hospital. A cover letter explained the purpose of the study, stated that participation was voluntary and informed participants that any identifying particulars would be held in the strictest confidence. Participants were also provided with the option of providing their contact details if they indicated that they would be interested in receiving feedback regarding the results of the study. A total of 330 completed questionnaires were received back of which 318 could be analysed, yielding a response rate of 55%. However, five respondents were found to be employed on a part-time basis and were subsequently excluded from further analysis. The final sample was comprised of 31.3% male respondents

and 68.7% female respondents with a mean age of 40.09 years. The final sample included 76 doctors and 237 nurses. Further demographic information is shown in Table 1.

**Table 1: Characteristics of the Respondents**

Item	Category	Frequency	Percentage
Gender	Male	98	31.3
	Female	215	68.7
Ethnicity	Black	253	80.3
	White	51	16.3
	Asian	1	0.3
	Coloured	7	2.2
	Missing data	1	0.3
Occupation	Doctor	76	24.0
	Nurse	237	76.0
Home Language	Afrikaans	53	16.9
	English	14	4.5
	Southern Sotho	92	29.4
	Northern Sotho	9	2.9
	Siswali	8	2.6
	Xitsonga	9	2.9
	Setswana	91	29.1
	Tshivenda	8	2.6
	Isixhosa	24	7.7
	Isizulu	5	1.6
Marital Status	Single	109	34.8
	Married	160	51.1
	Remarried	3	1.0
	Divorced	24	7.7
	Widowed	15	4.8
	Engaged	2	0.6
Qualification	Grade 10 - 11	50	16.0
	Grade 12	88	29.1
	Grade 12 + diploma	74	23.6
	Grade 12 + degree	76	24.3
	Grade 12 + postgraduate degree/diploma	25	8.0
Specialised training relevant to department/unit	Yes	141	45.0
	No	172	55.0
Average working hours per day	6 – 8 hours	102	32.6
	9 – 11 hours	115	36.7
	12 – 14 hours	77	24.6
	15 – 17 hours	19	6.1

### ***Measuring Instruments***

The questionnaires were compiled in English, which is the language of written communication within the organisation. A self-compiled biographical questionnaire was used to gather information on the respondents in the following areas: occupation, level of education, specialized training relevant to current department employed in, gender, ethnicity and home language, marital status, and age.

The Maslach Burnout Inventory – Human Services Survey (MBI – HSS) (Maslach, Jackson & Leiter, 1996) was used to assess the three components of burnout. Items consisting of statements regarding personal feelings and attitudes toward job-related aspects are self-scored on a seven-point frequency scale ranging from 0 (*never*) to 6 (*every day*). High scores on Emotional Exhaustion and Depersonalisation and low scores on Personal Accomplishment are indicative of burnout. Cronbach's alpha reliability coefficients of .90 for Emotional Exhaustion, .79 for Depersonalisation and .71 for Personal Accomplishment are documented in the manual. Reliability and validity have also proven acceptable in several South African studies (Rothmann, 2003; Rothmann, Jackson & Kruger, 2003; Storm & Rothmann, 2003).

The Professional Quality of Life Scale (ProQOL) (Stamm, 2005) was used to assess compassion fatigue. The ProQOL also consists of two additional subscales used to assess burnout-like symptoms and respondents' potential for compassion satisfaction by way of Likert scale items ranging from 0 (*never*) to 6 (*very often*). The subscales are discrete and do not yield a composite score. It is therefore possible to report high scores on compassion fatigue and on compassion satisfaction. Alpha coefficients are reported in the manual as .80 for Compassion Fatigue, .90 for Risk for Burnout and as .87 for Potential for Compassion Satisfaction (Stamm, 2005).



### ***Statistical Analyses***

The statistical analysis was carried out with the help of the SPSS. Cronbach's alpha coefficients were calculated for both the MBI-HSS and ProQOL. An exploratory factor analysis was also performed on the ProQOL to determine construct validity. Descriptive statistics were used to describe the data. Independent samples t-tests were used to investigate the statistical differences in the levels of burnout, compassion fatigue, and compassion satisfaction reported by doctors and nurses.

## **Results**

### ***Factor Analysis of the ProQOL***

An exploratory factor analysis was performed on the 30 items of the ProQOL. The exploratory approach was carried out in order to obtain a general overview of the underlying factor structure of this instrument. As such, less emphasis was placed on the guidelines for the inclusion of individual items based on communalities and factor loadings (Hair, Black, Babin, Anderson & Tatham, 2005). These authors assert that this approach can be particularly advantageous when using an exploratory approach to analyzing multi-category items such as Likert scales, as is the case with the ProQOL.

Prior to principal axis factoring, Kaiser-Meyer-Olkin's measure of sampling adequacy and Bartlett's Test of Sphericity were conducted and found to be acceptable. Following oblique rotation with Kaiser Normalisation which converged in 25 iterations, eight factors with Eigen values greater than one were extracted. As shown in Table 2, Factors 1, 4 and 5 are comprised of items from the original compassion satisfaction subscale. On the first factor only Item 2 loaded incorrectly. This item (*I am preoccupied with more than one person I help*) is likely problematic as it appears that respondents may interpret "preoccupation" in a positive light. Similarly, Factors 2, 3, 6, and 7 were comprised of a combination of items from the original compassion fatigue and burnout subscales. Two theoretically unrelated items loaded on Factor 8.

**Table 2: First Order EFA of the ProQOL**

Item number and description		Factor Loading	Factor	Eigen value	% variance
20	Happy thoughts and feelings	.727	1	4.990	16.634
22	Make a difference through work	.579			
3	Get satisfaction from helping	.527			
4	Feel connected	.513			
2	Preoccupied with people I help	.467			
25	Frightening thoughts	.746	2	4.162	13.872
23	Avoid activities and situations	.701			
28	Can't remember parts of work	.605			
8	Losing sleep over trauma	.460			
11	Feel on "edge"	.356			
19	Feel exhausted	.632	3	1.555	5.183
26	"Bogged down" by system	.466			
13	Feel depressed as result of work	.402			
10	Feel trapped by work as helper	.274			
15	Have beliefs that sustain me	.227			
6	Have energy after helping	.703	4	1.375	4.584
1	I am happy	.409			
18	Work satisfies me	.255			
17	I am the person I wanted to be	.231			
24	Plan to be a helper for long time	-.861	5	1.184	3.946
27	I am a success as a helper	-.489			
12	I like my work as a helper	-.416			
16	Keeping up with helping techniques	-.242			
29	I am unduly sensitive	.374	6	1.168	3.893
14	Experiencing trauma of someone	.318			
7	Difficult separating work/private life	-.505	7	1.059	3.529
21	Overwhelmed by size of caseload	-.333			
9	"Infected" by traumatic stress	-.327			
5	Startled by unexpected sounds	-.500	8	1.048	3.492
30	I am happy I chose this work	-.455			

When the resulting factor correlation matrix as shown in Table 3 is considered, it can be seen that although Factors 1, 4 and 5 contain items that are theoretically robustly related, the factors themselves are poorly correlated. This is also the case for Factors 2, 3, 6 and 7.

**Table 3: Factor Correlation Matrix**

Factor	1	2	3	4	5	6	7	8
1	1.000	-.008	.082	.293	-.403	.119	-.124	-.290
2	-.008	1.000	.270	-.159	.210	.174	-.388	-.177
3	.082	.270	1.000	-.118	-.049	.015	-.211	-.207
4	.293	-.159	-.118	1.000	-.364	-.053	.066	-.144
5	-.403	.210	-.049	-.364	1.000	.037	-.121	.138
6	.119	.174	.015	-.053	.037	1.000	-.154	-.095
7	-.124	-.388	-.211	.066	-.121	-.154	1.000	.233
8	-.290	-.177	-.207	-.144	.138	-.095	.233	1.000

Note: Extraction Method: Principal Axis Factoring  
Rotation Method: Oblimin with Kaiser Normalization

Table 4 shows the Eigen values, factor loadings and variances of the first order factors as found during the second order analysis. As can be seen, two second order factors were extracted with Eigen values greater than one. Items loading on Factor I represent compassion satisfaction. A combination of compassion fatigue and burnout items loaded on Factor II, thereby indicating some conceptual overlap between these constructs as presently measured by the ProQOL.

**Table 4: Second Order EFA of the ProQOL Scale**

Item number and description	First Order Factor	Loading Second Order Factor I	Loading Second Order Factor II	Eigen value	% variance
20 <i>Happy thoughts and feelings</i> 22 <i>Make a difference through work</i> 3 <i>Get satisfaction from helping</i> 4 <i>Feel connected</i> 2 <i>Preoccupied with people I help</i>	1	.738		2.429	30.357
25 <b>Frightening thoughts</b> 23 <b>Avoid activities and situations</b> 28 <i>Can't remember parts of work</i> 8 <i>Losing sleep over trauma</i> 11 <i>Feel on "edge"</i>	2		.764	1.852	23.145
19 <i>Feel exhausted</i> 26 <i>"Bogged down" by system</i> 13 <b>Feel depressed as result of work</b> 10 <i>Feel trapped by work as helper</i> 15 <i>Have beliefs that sustain me</i>	3		.548	.897	11.211
6 <i>Have energy after helping</i> 1 <i>I am happy</i> 18 <i>Work satisfies me</i> 17 <i>am the person I wanted to be</i>	4	.591		.704	8.802
24 <i>Plan to be a helper for long time</i> 27 <i>I am a success as a helper</i> 12 <i>I like my work as a helper</i> 16 <i>Keeping up with helping techniques</i>	5	.777		.654	8.172
29 <i>I am unduly sensitive</i> 14 <b>Experiencing trauma of someone</b>	6		.382	.594	7.419
7 <i>Difficult separating work/private life</i> 21 <i>Overwhelmed by size of caseload</i> 9 <b>"Infected" by traumatic stress</b>	7		.764	.499	6.237
5 <i>Startled by unexpected sounds</i> 30 <i>I am happy I chose this work</i>	8	.431		.373	4.657

Note: Items in bold print used to measure compassion fatigue  
Items in italics used to measure compassion satisfaction

In order to proceed with further statistical analyses, item selection was necessary in order to ensure a theoretically and empirically sound representation of secondary trauma symptomatology and compassion satisfaction. Five items from the original compassion fatigue scale (which consists of 10 items measuring secondary trauma symptoms) were selected and retained for further analyses. These items were selected by firstly considering important theoretical assumptions. Secondly, the strength and direction of factor loadings as well as the cross-loading of each item were considered as yielded in the pattern matrix. The five selected items representative of secondary trauma symptoms (Items 9, 13, 14, 23, and

25) are printed in bold in Table 4, as shown above, in order to ease interpretation of the data. Similarly, the eight items measuring compassion satisfaction selected by way of the same procedures (Items 3, 4, 12, 20, 22, 24, 27, and 30) are printed in italics in Table 4.

In keeping with one of the key aims of this research, namely the simultaneous investigation of the prevalence of the syndrome of burnout and the syndrome of compassion fatigue, it was decided to exclude items of the original burnout scale of the ProQOL from further analysis. These items were excluded in order to ensure that compassion fatigue could be readily distinguished as a separate trauma-related construct, distinct from Maslach's conceptualisation of burnout.

In keeping with this consideration, the original theoretical burnout construct as measured by the MBI-HSS was utilised. However, upon calculation of the alpha coefficients for each of the three subscales it was decided to omit Item 20 (*I worry that the job is hardening me emotionally*) from the subscale of depersonalisation as the initial alpha coefficient calculated for this scale was .615. Although similar coefficients have been found for this subscale (Schaufeli & Enzmann, 1998), analysis of inter-item statistics showed that omitting Item 20 would improve the alpha coefficient of this subscale.

The alpha coefficients and other descriptive statistics (means, standard deviations, skewness, and kurtosis) for the MBI-HSS and revised ProQOL scales are shown in Table 5. As can be seen, alpha coefficients are within the range of .70 considered to be acceptable by Nunnally and Bernstein (1994).

**Table 5: Descriptive Statistics of MBI and ProQOL**

	<b><math>\alpha</math></b>	<b>Mean</b>	<b>SD</b>	<b>Skewness</b>	<b>Kurtosis</b>
MBI: Emotional Exhaustion	.85	27.82	12.579	.101	-.625
MBI: Depersonalisation	.63	7.26	5.374	.474	-.507
MBI: Personal Accomplishment	.69	31.10	8.427	.127	-.764
ProQOL: Compassion Fatigue	.70	10.16	5.468	.233	-.387
ProQOL: Compassion Satisfaction	.80	25.37	8.313	-.174	-.899

### ***Prevalence of Burnout, Compassion Fatigue and Compassion Satisfaction***

Next, it was undertaken to determine the levels of burnout, compassion fatigue, and compassion satisfaction reported by respondents. Due to the exclusion of Item 20 from the depersonalisation subscale of the MBI-HSS, a revised range of scores was calculated. Similarly, due to utilising revised scales for assessing compassion fatigue and compassion satisfaction in these analyses, a revised range of scores were computed in keeping with the original approach as set out in the ProQOL manual (Stamm, 2005). These results are summarized in Table 6.

**Table 6: Levels of Burnout, Compassion Fatigue and Compassion Satisfaction**

	<b>Level and range of scores</b>	<b>Frequency</b>	<b>Percent</b>
MBI: Emotional Exhaustion	Low ( $\leq 16$ )	62	19.8
	Average (17-25)	75	24.0
	High ( $\geq 26$ )	176	56.2
MBI: Depersonalisation	Low ( $\leq 4.80$ )*	117	37.4
	Average (5.6-9.6)*	114	36.4
	High ( $\geq 10.4$ )*	82	26.2
MBI: Personal Accomplishment	Low ( $\leq 31$ )	72	23.0
	Average (32-38)	69	22.0
	High ( $\geq 39$ )	172	55.0
ProQOL: Compassion Fatigue	Low (lower 25%)	85	27.2
	Average (middle 50%)	144	46.0
	High (upper 25%)	84	26.8
ProQOL: Compassion Satisfaction	Low (lower 25%)	87	27.8
	Average (middle 50%)	144	46.0
	High (upper 25%)	82	26.2

\* Revised range of scores

As can be seen from the results summarised in Table 6, in the case of burnout, 56.2% of the respondents reported high levels of emotional exhaustion, 26.2% reported high levels of depersonalisation, and 23% reported low levels of personal accomplishment. The majority of respondents (46%) reported average levels of both compassion fatigue and compassion satisfaction. High levels of compassion fatigue were reported by 26.8% of the respondents, while a similar proportion (26.2%) reported high levels of compassion satisfaction.

Analyses were also performed in order to investigate any occupation-specific differences regarding the levels of burnout, compassion fatigue and compassion satisfaction reported by the group of doctors, and the levels reported by the group of nurses. As shown below in Table 7, significant differences by way of an independent samples t-test were found for two burnout components (emotional exhaustion and personal accomplishment), and for both compassion fatigue and compassion satisfaction. Thus, while doctors and nurses report similar (moderate) levels of depersonalisation, doctors report moderate levels of emotional exhaustion in comparison with nurses who report high levels. Doctors also reported moderate levels of personal accomplishment while nurses reported low levels. Doctors reported lower levels of compassion fatigue and higher levels of compassion satisfaction than nurses.

**Table 7: Differences between occupation groups**

	Mean Score Doctors	Mean Score Nurses	t-Test for Equality of Means						
			t	df	Sig (2-tailed)	Mean diff	Std. Error diff	95% confidence interval	
								Lower	Upper
MBI: Emotional Exhaustion	22.91	29.38	-.396	310	0.000	-0.673	1.631	-9.682	-3.264
MBI: Depersonalisation	7.71	7.11	0.843	310	0.400	0.601	0.713	-0.802	2.005
MBI: Personal Accomplishment	33.59	30.33	2.946	310	0.003	3.253	1.104	1.081	5.426
ProQOL: Compassion Fatigue	6.89	11.19	-6.277	310	0.000	-4.297	0.684	-5.643	-2.950
ProQOL: Compassion Satisfaction	26.93	24.90	2.062	151.741	0.041	2.030	0.985	0.085	3.976

Having analysed the levels of burnout, compassion fatigue and compassion satisfaction, together with occupation specific differences in this regard, further analyses were also performed in order to determine the prevalence of the full burnout syndrome (that is, high levels of emotional exhaustion, high levels of depersonalisation, and low levels of personal accomplishment). As shown in Table 8, 13.4% (n = 42) of respondents met the criteria for the burnout syndrome.

**Table 8: Respondents Reporting Total Burnout Syndrome**

			High PA	Average PA	Low PA	Total
Low EE	Dp	Low	19	9	11	39
		Average	5	8	4	17
		High	1	2	3	6
Average EE	Dp	Low	9	2	11	22
		Average	8	6	17	31
		High	2	1	19	22
High EE	Dp	Low	11	19	26	56
		Average	12	15	39	66
		High	5	7	42	54

The number of respondents who reported both burnout and compassion fatigue was also calculated. As summarized in Table 9, of 42 respondents found to be suffering from burnout, 13 (that is 30.9%) also reported high levels of compassion fatigue. The majority of respondents who met the criteria for the burnout syndrome reported moderate levels of compassion fatigue.

**Table 9: Respondents Reporting Both Burnout and Compassion Fatigue**

	Compassion Fatigue			Total
	Low	Average	High	
Respondents not meeting criteria for burnout	82	118	71	271
Respondents meeting criteria for burnout	3	26	13	42
	85	144	84	313

## Discussion

The purpose of this study was essentially threefold. Firstly, this study undertook to investigate the structural (factorial) validity of the ProQOL. Secondly, this study investigated the prevalence of burnout and compassion fatigue in a sample of health care workers comprised of doctors and nurses. Although not a key focus area of the study, compassion satisfaction was also included in some of the analyses conducted. Thirdly, this study investigated differences between the doctors and nurses who participated in this study.



In order to achieve the first aim, an exploratory factor analysis (principal axis factoring with oblique rotation) was performed on the ProQOL. Second order analysis yielded a two-factor solution with Factor I representing the construct of compassion satisfaction. Factor II was comprised of a combination of secondary trauma symptoms from the ProQOL's original compassion fatigue subscale, together with burnout-like symptoms from the burnout subscale.

The results suggest that the ProQOL in its current form does not effectively differentiate between burnout-type symptoms and secondary traumatic stress symptoms. In a study utilizing an earlier version of the ProQOL similar results were found (Jenkins & Baird, 2002). By way of factor analysis this study found that burnout symptoms as measured by this instrument were not easily distinguished from compassion fatigues' secondary trauma symptoms or from other measures of general distress. Moreover, these authors suggested that the burnout subscale may inadvertently diffuse the intended theoretical focus of the instrument as a measure of the trauma-related construct of compassion fatigue. The findings of the present study appear to support this concern. Further refinement of the ProQOL is likely needed in order to allow for valid assessment of the two theoretical components of compassion fatigue (that is, secondary trauma symptoms and secondary compassion fatigue-related burnout symptoms).

This study also undertook to investigate and compare the levels and prevalence of burnout, compassion fatigue and compassion satisfaction as reported by the two occupational groups of doctors and nurses comprising the total group of respondents.

With regards to the levels of burnout of the total sample, high levels of emotional exhaustion were reported. Moderate levels of depersonalisation and low levels of personal accomplishment were also found. Similar findings have been reported in comparable South African populations, with high levels of emotional exhaustion and low levels of personal accomplishment found among nurses (Nixon, 1995; Ribeiro, 2004) and doctors (Dhaniram & Cilliers, 2004) working in various public health care institutions.

The findings of the present study are also in keeping with previous studies that have documented higher levels of burnout among health care professionals working under poor conditions, than levels of burnout found among health care workers in Europe and North America (De Rijk, Le Blanc & Schaufeli, 1998; Heyns, Venter, Esterhuyse, Bam & Odendaal, 2003).

In contrast to the plethora of available comparable research findings regarding burnout among health care workers, little empirical data are available regarding the prevalence of compassion fatigue and compassion satisfaction among this occupation group. Comparative analysis of the finding that approximately 26% of respondents reported high levels of compassion fatigue and a high potential for compassion satisfaction, is further problematical given that revised measures of these constructs were used in this study. At most it can be noted that the prevalence of compassion satisfaction is higher than that found among a group of South African lay trauma counsellors (14%) (Ortlepp & Friedman, 2002). Also, the prevalence of compassion fatigue found for the total group is higher than found among American social workers (Adams, Boscarino & Figley, in press) but similar to the prevalence of compassion fatigue found among disaster mental health workers in North America (Wee & Myers, 2002). Some support can thus be found for preliminary assertions that the prevalence of compassion fatigue may be linked to occupation type and to the frequency and duration of exposure to critical incidents (Collins & Long, 2003; Paton, 1996).

Given this likely influence of occupation type on compassion fatigue and the well documented findings for occupation specific burnout profiles (Schaufeli & Enzmann, 1998), differences between the doctors and nurses who participated in this study were also considered. It was found that doctors reported less compassion fatigue and a greater potential for compassion satisfaction than nurses. Significant differences were also found for two of the three burnout components. While doctors and nurses reported similar (moderate) levels of depersonalisation, doctors reported moderate levels of emotional exhaustion in comparison with the high levels reported by nurses. Furthermore, doctors reported moderate levels of personal accomplishment while nurses reported low levels of personal accomplishment. Although the levels reported by both occupation groups are still considerably higher than

found among physicians and nursing staff in more developed countries, these findings support the premise for occupation specific profiles within the field of medicine (Bakker, Killmer, Siegreest & Schaufeli, 2000; De Rijk, Le Blanc & Schaufeli, 1998).

The differences in the burnout profiles of the research participants in this study, as well as occupation specific differences regarding compassion fatigue and compassion satisfaction, appear to support previous findings that aspects such as limited decision making capabilities and more frequent one-on-one patient care that are more characteristic of the nursing profession, can be particularly stressful and demanding (Buunk & Schaufeli, 1993).

An important finding and contribution of the present study pertains to the data gathered regarding the comorbid manifestation of the syndromes of burnout and compassion fatigue. In this study, 13 of the 42 respondents who met the criteria for the full burnout syndrome also reported high levels of compassion fatigue. To the researcher's knowledge the comorbidity of these syndromes has not been documented. Nonetheless, this finding does provide empirical support for the premise that the simultaneous exposure to emotional job-related demands may aggravate burnout which initially resulted from stressors in the workplace setting in general (Leiter, 1992), and that additional frustrations and stressors encountered in an organisation may exacerbate compassion fatigue (Collins & Long, 2003; Wee & Myers, 2002).

These findings may however have limited generalisability given the fact that the respondents were employed in the same hospital. Future studies should therefore aim to include employees employed in various health care institutions, or utilise a stratified random sample design which would ensure representation of the different groups of nurses and doctors with regards to seniority and area of speciality. Furthermore, the findings of this study need to be considered within the context of the limitations inherent in cross-sectional research designs. Moreover, the data was obtained by way of self-report measures, which potentially lend themselves to the problem of common method variance, whereby the exclusive use of these measures increases the likelihood that at least part of the shared variances between measures can be attributed to common method variance (Schaufeli, Enzmann & Girault, 1993).

Nonetheless, this study does make some important contributions to this field of study that hold a number of practical implications. Firstly, this study highlights a growing concern about the prevalence of burnout and compassion fatigue among health care workers in the public sector. Burnout and compassion fatigue are known to have a significant impact on individuals and on organisations (Collins & Long, 2003; Schaufeli & Enzmann, 1998). As such, the high levels of burnout and compassion fatigue found among doctors and nurses in this study underscore the necessity for further research in this regard. Specifically, these findings support pleas made by various role-players for the development of a comprehensive human resource strategy in the public health sector (Benatar, 2004). Given that approximately 80% of South Africa's population is unable to afford medical insurance, the potential effects of burnout and compassion fatigue mean that health service delivery for the vast majority of South Africans can be affected.

The findings of this study also hold implications for future graduates in the medical and nursing professions. Specifically, attention will need to be given to adequately preparing young graduates for the job-related demands they will encounter. Although the potential preventative role that training programs can play in addressing burnout and compassion fatigue is gaining recognition internationally, this may prove to be especially important in South Africa given that compulsory community service in public health care institutions is required of graduates (Benatar, 2004). While available research on the syndrome of burnout will be able to provide a sound theoretical framework for the development of such programs, a great deal more research on compassion fatigue will be needed in order to better prepare young graduates for the emotional and psychological job-related strain that they will encounter.

## REFERENCES

- Abendroth, M. (2005). *Predicting the risk for compassion fatigue: An empirical study of hospice nurses*. Unpublished masters dissertation. Florida: Florida State University.
- Adams, R.E., Boscarino, J.A. & Figley, C.R. (in press). Compassion fatigue among a sample of New York social workers: Instrument psychometrics. *Journal of Orthopsychiatry*.
- Aiken, L.H., Clarke, S.P., Sloane, D.M., Sochalski, J. & Silver, J.H. (2002). Hospital nurse staffing and patient mortality, nurse burnout and job dissatisfaction. *Journal of the American Medical Association*, 288(16), 1987-1993.
- Bakker, A.B., Killmer, C.H., Siegreist, J. & Schaufeli, W.B. (2000). Effort-reward imbalance and burnout among nurses. *Journal of Advanced Nursing*, 31(4), 884-891.
- Benatar, S.R. (2004). Ethical challenges for health care in South Africa. In H.C.J. van Rensburg (Ed.), *Health and health care in South Africa* (pp.561-606). Pretoria: Van Schaik Publishers.
- Berg, A., Hansson, U.W. & Hallberg, I.R. (1994). Nurses' creativity, tedium and burnout during 1 year of clinical supervision and implementation of individually planned nursing care: Comparisons between a ward for severely demented patients and a similar control ward. *Journal of Advanced Nursing*, 20, 742-749.
- Bride, B.E., Robinson, M.M., Yegidis, B. & Figley, C.R. (2003). Development and validation of the secondary traumatic stress scale. *Research on Social Work Practice*, 13(10), 1-16.
- Buunk, B.P., & Schaufeli, W.B. (1993). Burnout: A perspective from social comparison theory. In W.B. Schaufeli, C. Maslach & T. Marek (Eds.), *Professional Burnout: Recent developments in theory and research* (pp. 53-66). Washington: Taylor & Francis.
- Coetzee, S.E. & Rothmann, S. (2004). An adapted model of burnout for employees at a higher education institution in South Africa. *South African Journal of Industrial Psychology*, 30(3), 29-40.
- Collins, S. & Long, A. (2003). Working with the psychological effects of trauma: consequences for mental health-care workers – A literature review. *Journal of Psychiatric and Mental Health Nursing*, 10, 17-424.

- Cordes, C.L. & Dougherty, T.W. (1993). A review and integration of research on job burnout. *Academy of Management Review*, 18(4), 621-656.
- Corrigan, P.W., Holmes, E.P. & Luchins, D. (1995). Burnout and collegial support in state psychiatric staff. *Journal of Clinical Psychology*, 51(5), 703-710.
- De Rijk, A.E., Le Blanc, P.M. & Schaufeli, W.B. (1998). Active coping and need for control as moderators of the job-demand control model: Effects on burnout. *Journal of Occupational and Organisational Psychology*, 71, 1-18.
- Dhaniram, N. & Cilliers, F. V. N. (2004). *Stress, burnout and salutogenic functioning amongst community service doctors in Kwazulu-Natal hospitals*. Poster presented at the 2nd Annual Work Wellness Conference, Potchefstroom, South Africa.
- Figley, C.R. (1995). *Compassion fatigue: Coping with secondary traumatic stress disorder in those who treat the traumatised*. New York: Brunner Mazel.
- Figley, C.R. (2002). Introduction. In C. R. Figley (Ed.), *Treating compassion fatigue*. New York: Brunner-Routledge.
- Free State Department of Health. *Strategic plan for 2005/2006 to 2007/2008*. Bloemfontein: FSDOH.
- Gentry, J.E., Baranowsky, A.B. & Dunning, K. (2002). The accelerated recovery program (ARP) for compassion fatigue. In C. R. Figley (Ed.), *Treating compassion fatigue* (pp. 123-133). New York: Brunner-Routledge.
- Govender, K. (1995). *An investigation into the role of perceived sources of stress, perception of work environment, type of hospital ward and nurse rank in occupational distress, coping and burnout among practising nurses*. Unpublished masters dissertation. Pietermaritzburg: University of Natal.
- Hair, J. E., Black, W. C., Babin, B. J., Anderson, R. E. & Tatham, R. L. (2006). *Multivariate Data Analysis* (Sixth Edition). New Jersey: Pearson Prentice Hall.
- Heyns, P.M., Venter, J.H., Esterhuyse, K.G., Bam, R.H. & Odendaal, D.C. (2003). Nurses caring for patients with Alzheimer's disease: Their strengths and risk for burnout. *South African Journal of Psychology*, 33(2), 80-85.
- Iverson, R.D., Olekalns, M. & Erwin, P.J. (1998). Affectivity, organisational stressors, and absenteeism: A causal model of burnout and its consequences. *Journal of Vocational Behaviour*, 52, 1-23.

- Jenkins, S.R. & Baird, S. (2002). Secondary traumatic stress and vicarious trauma: A validation study. *Journal of Traumatic Stress, 15*(5), 423-432.
- Lee, R.T. & Ashforth, B.E. (1996). A meta-analytic examination of the correlates of the three dimensions of job burnout. *Journal of Applied Psychology, 81*(2), 123-133.
- Leiter, M.P. (1992). Burnout as a crisis in professional role structures: Measurement and conceptual issues. *Anxiety, Stress and Coping, 5*, 79-93.
- Maslach, C. (1993). Burnout: a multidimensional perspective. In W.B.Schaufeli, C. Maslach & Marek, T. (Eds.), *Professional Burnout: Recent developments in theory and research* (pp.19–32). Washington: Taylor & Francis.
- Maslach, C., Jackson, S.E. & Leiter, M.P. (1996). *Maslach Burnout Inventory Manual* (3<sup>rd</sup> ed.). Palo Alto, CA: Consulting Psychologists Press.
- Maslach, C., Leiter, M.P. & Schaufeli, W.B. (2001). Job burnout. *Annual Review of Psychology, 52*, 397-422.
- Meyers, T. & Cornille, T.A. (2002). The trauma of working with traumatised children. In C.R. Figley (Ed.), *Treating compassion fatigue* (pp. 39-55). New York: Brunner–Routledge.
- Mogaladi, S. (2003). Health care: Towards the need for intervention and balance. *Service Delivery Review, 2*(1), 78-81.
- Nixon, M. (1995). *Burnout, work environment, and coping in surgical hospital nurses*. Unpublished masters dissertation. Cape Town: University of Cape Town.
- Nowack, K.M. & Pentkowski, A.M. (1994). Lifestyle habits, substance use and predictors of job burnout in professional working women. *Work and Stress, 8*(1), 19-35.
- Nunally, J.C. & Bernstein, I.H. (1994). *Psychometric theory* (3rd ed.). New York: McGraw-Hill.
- Ortlepp, K. & Friedman, M. (2001). The relationship between sense of coherence and the indicators of traumatic stress in non-professional trauma counsellors. *South African Journal of Psychology, 31* (2), 38-45.
- Ortlepp, K. & Friedman, M. (2002). Prevalence and correlates of secondary traumatic stress in workplace lay trauma counsellors. *Journal of Traumatic Stress, 15*(3), 213-222.

- Paton, D. (1996). Traumatic stress in critical occupations. In D. Paton & J.M. Violanti (Eds.), *Traumatic Stress in Critical Occupations: Recognition, consequences and treatment* (pp. 3-14). Springfield: Charles C Thomas.
- Pillay, Y. (2001). The impact of South Africa's new constitution on the organisation of health services in the post – apartheid era. *Journal of Health Politics and Law*, 26(4), 747-766.
- Proost, K., De Witte, H., De Witte, K. & Evers, G. (2004). Burnout among nurses; extending the job-control-support model with work-home interference. *Psychologica Belgica*, 44(4), 269-288.
- Rapea, A. (2002). People management that supports service delivery. *Service Delivery Review*, 1(3), 27-30.
- Redlinghuys, N. & van Rensburg, H.C.J. (2004). Health morbidity and mortality: The health status of the South African population. In H.C.J. van Rensburg (Ed.), *Health and health care in South Africa* (pp.215-271). Pretoria: Van Schaik Publishers.
- Ribeiro, J.F. (2004). *A programme to assist nurses exposed to vicarious traumatisation*. Unpublished masters dissertation. Bloemfontein: University of the Free State.
- Roberts, J. (Ed). (2003). The national primary health care facilities survey 2003. Retrieved from the World Wide Web at <http://www.hst.org.za/publications/617> on 07/01/2005.
- Rodrigo, W.D. (2002). *Conceptual dimensions of compassion fatigue and vicarious trauma*. Unpublished Masters dissertation. Vancouver: Simon Fraser University.
- Rothmann, S. (2003). Burnout and engagement: A South African perspective. *South African Journal of Industrial Psychology*, 29 (4), 16-25.
- Rothmann, S., Jackson, L.T.B. & Kruger, M.M. (2003). Burnout and job stress in a local government: the moderating effect of sense of coherence. *South African Journal of Industrial Psychology*, 29(4), 52-60.
- Sabin-Farrell, R. & Turpin, G. (2003). Vicarious traumatisation: implications for the mental health of health workers? *Clinical Psychology Review*, 23, 449-480.
- Salston, M. & Figley, C.R. (2003). Secondary traumatic stress effects of working with survivors of criminal victimisation. *Journal of Traumatic Stress*, 16(2), 167-174.
- Schaufeli, W.B. (2003). Past performance and future perspectives of burnout research. *South African Journal of Industrial Psychology*, 29(4), 1-15.



- Schaufeli, W.B. & Enzmann, D. (1998). *The burnout companion to study and practice – A critical analysis*. London: Taylor & Francis.
- Schaufeli, W.B., Enzmann, D. & Girault, N. (1993). Measurement of burnout: A review. In W.B. Schaufeli, C. Maslach, & T. Marek (Eds.), *Professional burnout: Recent developments in theory and research* (pp. 199-215). Washington: Taylor & Francis.
- Sexton, L. (1999). Vicarious traumatising of counsellors and effects on their workplace. *British Journal of Guidance and Counselling*, 27(3), 393-402.
- Stamm, B.H. (2005). *The Professional Quality of Life Scale: Compassion satisfaction, burnout and compassion fatigue/secondary trauma scales*. Idaho University: Sidran Press.
- Storm, K. & Rothmann, S. (2003). The relationship between burnout, personality traits and coping strategies in a corporate pharmaceutical environment. *South African Journal of Industrial Psychology*, 29(4), 35-42.
- Valent, P. (2002). Diagnosis and treatment of helper stresses, traumas and illnesses. In C. R. Figley (Ed.), *Treating compassion fatigue* (pp. 17-37). New York: Brunner-Routledge.
- Van Rensburg, H.C.J. (2004). The history of health care in South Africa. In H.C.J. van Rensburg (Ed.), *Health and health care in South Africa* (pp.52-103). Pretoria: Van Schaik Publishers.
- Wee, D.F. & Myers, D. (2002). Stress response of mental health workers following disaster: the Oklahoma City bombing. In C.R. Figley (Ed.), *Treating compassion fatigue* (pp. 181-211). New York: Brunner-Routledge.

## **CHAPTER 5**

### **ARTICLE 4**

#### **THE RELATIONSHIP BETWEEN STRESSORS, BURNOUT, COMPASSION FATIGUE AND COMPASSION SATISFACTION IN HEALTH CARE PROFESSIONALS**

# **THE RELATIONSHIP BETWEEN STRESSORS, BURNOUT, COMPASSION FATIGUE AND COMPASSION SATISFACTION IN HEALTH CARE PROFESSIONALS**

## **Abstract**

The objective of this research was to investigate the relationship between job-related stressors, stressors outside of the working environment, burnout, compassion fatigue, and compassion satisfaction among health care professionals (N = 313). Among the total sample of respondents as well as among nurses, stressors outside of work and job insecurity were related to burnout, compassion fatigue and compassion satisfaction. Among doctors stressors outside of work correlated with the burnout component of emotional exhaustion and with compassion fatigue. Less significant relationships were found between a lack of self-regulatory activity and physical working conditions and burnout, compassion fatigue and compassion satisfaction.

**Keywords:** *burnout, emotional exhaustion, depersonalisation, personal accomplishment, compassion fatigue, health care workers, doctors, nurses, stressors, job insecurity, South African public health sector*

# **DIE VERHOUDING TUSSEN STRESSORS, UITBRANDING, MEDELYE-UITPUTTING, EN MEDELYE-BEVREDIGING ONDER GESONDHEIDSORG BEROEPSLUI**

## **Opsomming**

Die doel van hierdie navorsing was om die verhouding tussen werksverwante stressors, stressors buite die werksomgewing, uitbranding, medelye-uitputting, en medelye-bevrediging onder gesondheidsorgberoepslui (N = 313) te ondersoek. Onder die totale groep proefpersone, sowel as onder verpleegsters, was stressors buite werk en werksveiligheid verwant aan uitbranding, medelye-uitputting, en medelye-bevrediging. Onder dokters het stressors buite werk met die uitbrandingskomponent, emosionele uitputting, en met medelye-uitputting gekorreleer. Minder aanmerklike verhoudings is tussen 'n gebrek aan selfregulerende aktiwiteit en fisiese werksomstandighede, uitbranding, medelye-uitputting en medelye-bevrediging gevind.

**Sleutelwoorde:** *uitbranding, emosionele uitputting, ontpersoonliking, persoonlike vervulling, medelye-uitputting, gesondheidsorgwerkers, dokters, verpleegsters, stressors, werksonsekerheid, Suid-Afrikaanse publieke gesondheidsektor*

While providing care to people in need can be highly rewarding, the demands associated with health care delivery also mean that it can be highly stressful, particularly under poor working conditions. In South Africa many doctors and nurses in the public sector face this challenge. Although the current working conditions in the public health sector are as a result of numerous and diverse challenges, recent history has had the most significant impact (Benatar; 2004; Van Rensburg, 2004). One of the most noteworthy aspects has been the implementation of numerous reform measures since the first democratic elections held in 1994. Although vital and necessary reform measures were greatly needed in order to provide disadvantaged communities with access to health care, inadequate planning resulted in overcrowding, shortages of supplies and equipment, and an overall deterioration in the quality of health care (Schweitzer, 1994; Redelinghuys & Van Rensburg, 2004; Van Rensburg, 2004). Moreover, these problems have subsequently been compounded by severe shortages of doctors and nurses in most public hospitals, the HIV/AIDS pandemic, poverty and violence (Health Systems Trust, 2003; Shisana & Davids, 2004). The aforementioned factors have also had a direct impact on health care workers by way of increasing their vulnerability to burnout and compassion fatigue; two distinct, yet related occupational stress reactions (Sabin-Farrell & Turpin, 2003; Schaufeli & Enzmann, 1998).

### **Burnout and Compassion Fatigue**

Burnout develops in response to persistent exposure to job-related stressors and is characterised by high levels of emotional exhaustion and depersonalisation, together with a declining sense of personal accomplishment (Maslach, 1993; Schaufeli & Enzmann, 1998). In contrast to the prominent role of specific job-related stressors in the onset of burnout, compassion fatigue develops primarily due to emotional job-related strain and is a disruptive by-product of working with traumatised or suffering individuals (Figley, 2002; Stamm, 2005). A review of research literature reveals that the term compassion fatigue is often used interchangeably with related terms such as secondary traumatic stress and vicarious traumatisation, although it is actually a distinct trauma-related construct (Collins & Long, 2003).

Compassion fatigue is most often defined as “the natural consequent behaviours and emotions resulting from knowing about a traumatizing event experienced by another individual” and as the “stress resulting from helping, or wanting to help, traumatised or suffering individuals” (Figely, 1995, p.8). Burnout and compassion fatigue have also been found to impact on the well-being of human service workers in distinctive ways (Collins & Long, 2003; Schaufeli, 2003). Yet despite their unique impact, few studies have simultaneously investigated the prevalence of these syndromes among human service workers.

Burnout has the potential to affect health care workers on a cognitive, affective (motivational), physical, and behavioural level and as such can have a significant impact on the interactions between health care workers and their patients, colleagues, and family members (Demir, Ulusoy & Ulusoy, 2003; Geurts, Kompier, Roxburgh & Houtman, 2003; Geurts, Rutte & Peeters, 1999). While compassion fatigue can affect health care workers in a similar manner, its impact occurs primarily by way of heightened psychological and emotional distress and secondary traumatic stress symptoms (Figley, 1995; Figley, 2002; Gentry, Baranowsky & Dunning, 2002). In addition, burnout and compassion fatigue both hold potentially negative outcomes for organisations, such as poor organisational commitment, reduced organisational efficiency, low morale, rapid staff turnover, compromised quality of care, declining productivity, and absenteeism (Sabin-Farrell & Turpin, 2003; Schaufeli & Enzmann, 1998).

### **Risk Factors**

There is growing evidence that in human service occupations, such as health care, emotional demands may aggravate burnout which initially resulted from stressors in the workplace in general (Leiter, 1992), and that when human service workers are confronted with additional frustrations and stressors in the institutions in which they work, symptoms of compassion fatigue may be exacerbated (Figley, 2002). This perspective places a strong emphasis on the view that the onset of burnout and compassion fatigue is influenced by the complex

interaction between numerous situational and individual risk factors (Collins & Long, 2003; Maslach, 1993). For example, individual factors such as coping strategies and work experience are likely to influence how someone reacts to the situational, job-related stressors they encounter (Maslach, 1993).

Research indicates that the manifestation of burnout and compassion fatigue can also be influenced by occupation type (Rodrigo, 2002; Schaufeli & Enzmann, 1998). Specifically, noteworthy differences are commonly found within the field of medicine, given that this field is largely comprised of heterogeneous groups that face diverse and occupation-specific stressors (Buunk & Schaufeli, 1993; Schaufeli & Enzmann, 1998). For example, doctors commonly report a lack of necessary equipment and a lack of self-regulatory ability as particularly stressful (Schaufeli & Enzmann, 1998). Nurses on the other hand commonly cite the demands of one-on-one patient care, conflict with physicians and a lack of decision making ability as significant stressors (Buunk & Schaufeli, 1993; Demerouti, Bakker, Nachreiner & Schaufeli, 2001).

Research also indicates that many of the situational risk factors associated with burnout and compassion fatigue among health care workers in general are widespread in the public health sector (Nkosi, 2002; Van den Berg et al., 2006). Some of the most salient risk factors include high workloads, long working hours, inadequate physical working environments, limited opportunity for self-regulatory action at work, job insecurity, and extra-organisational sources of stress (Dhaniram & Cilliers, 2004; Govender, 1995; Nixon, 1995; Rothmann, 2003).

Excessive workloads have been found to put health care workers at risk for both burnout and compassion fatigue. These syndromes have been found to be more prevalent among human service workers who have frequent contact with care recipients and have to deal with severe problems (Cordes & Dougherty, 1993; Figley, 2002; Lee & Ashforth, 1996; Sabin-Farrell & Turpin, 2003; Schaufeli & Enzmann, 1998). Although workload is commonly cited as an important stressor, the relationship between these syndromes and longer working hours is

only occasionally studied, despite posing a significant risk to health care workers (Schaufeli & Enzmann, 1998).

Furthermore, as a result of overcrowding and severe staff shortages, particularly in rural areas of South Africa, health care professionals are likely to be particularly vulnerable to burnout and compassion fatigue (Van den Berg et al, 2006). The physical conditions under which doctors and nurses in the public sector are required to perform their duties are often abysmal (Benatar, 2004; Roberts, 2003). Many buildings are run down and are likely further to deteriorate due to inadequate funding for programmes needed to maintain and upgrade facilities (Van Rensburg, 2004). Necessary equipment is often unavailable or in poor working condition; facilities are inadequate and problems with heating are also commonly reported (Van den Berg et al., 2006).

Research has also found that burnout may be more prevalent in organisations where certain job-related resources such as job enhancement opportunities, participation in decision making, and opportunities for autonomous functioning are not readily available (De Rijk, Le Blanc, Schaufeli & de Jonge, 1998; Rafferty, Friend & Landsbergis, 2001; Van der Doef & Maes, 1999). While less is known about the potential impact of these factors on compassion fatigue, given the growing evidence of the compounding effect of organisational stressors on individuals who also face emotionally taxing caregiving demands, these factors are likely to have a similarly negative impact (Figley, 2002).

Several South African authors have expressed concern regarding certain aspects in the health sector, including the availability of job enhancement opportunities and participative decision making opportunities (Benatar, 2004). Specific concern has been voiced regarding the bureaucratic management structures and authoritarian organisational cultures still found in many health care institutions today and their negative impact on the working conditions of many health care workers (Rapea, 2002; Van Rensburg, 2004).

Another risk factor likely to garner increased attention in the South African context is that of job insecurity (De Witte, 2005; Gilson, 2004). In recent international studies, job insecurity

was found to act as a distinct stressor that was linked to high staff turnover, job dissatisfaction and also to burnout (Testa, 2001). Research is focusing progressively more on the effects of both quantitative and qualitative job insecurity (De Witte, 2005). Quantitative job insecurity (which is associated with uncertainty about retaining one's current position within the organisation) and qualitative job insecurity (which is associated with anxiety about retaining certain aspects associated with one's position such as work content or remuneration levels) have both been found to lead to psychological distress and increased stress levels (Sverke, Hellgren, Näswall, Chirumbolo, De Witte & Goslinga, 2004).

Furthermore, Demerouti, Bakker, Nachreiner and Schaufeli (2001) found that perceptions of job insecurity increased the levels of depersonalisation reported by nurses. This finding suggests that nurses who were experiencing uncertainty about their future in an organisation may be more likely to treat their patients in a cynical and detached manner. Thus it appears that job insecurity can potentially impact on the quality of care provided to patients. This finding may hold significant implications given the prevalence of job insecurity among nurses and doctors in the public health sector that has been documented by South African researchers (Benatar, 2004). According to Gilson (2004) the prevalence of job insecurity in this sector is as a direct result of the large-scale organisational change that has occurred during the transformation process of the broader South African health system. However, despite the well-documented effects of organisational change and the prevalence of job insecurity in the public sector, a review of South African literature suggests that the impact of job insecurity has not been closely studied among health care workers in general.

Excessive demands outside of the work-setting are now also being recognised as a further risk factor for both burnout and compassion fatigue (Proost, De Witte, De Witte & Evers, 2004). Recent studies have investigated the effects of various extra-organisational sources of stress such as work-home interference, family problems, high stress levels at home, health problems, and socio-economic difficulties on burnout and other job-related outcomes (Demerouti, Bakker & Bulters, 2004; Geurts, Kompier, Roxburgh & Houtman, 2003; Geurts, Rutte & Peeters, 1999; Hart, 1999). However, despite a growing body of research in this regard, the impact of extra-organisational stressors remains less frequently studied in



comparison with other stressors. The need to better understand the impact of non-work related stressors is also supported by findings of studies undertaken in other developing countries. A recent study conducted on nurses in Turkey found that low wages, poor living conditions, economic hardships, poor quality housing, and difficulties with transportation to and from work significantly increased nurses' vulnerability to burnout (Demir, Ulusoy & Ulusoy, 2003). Given that many South African health care workers (particularly those from previously disadvantaged communities) face similar challenges, the impact of non-work related sources of stress deserves further investigation (Van Rensburg, 2004).

Although research has led to a considerable expansion in the knowledge about the risk factors that potentially contribute to burnout and compassion fatigue, an ongoing yet central question remains: Who is most vulnerable to burnout and compassion fatigue, and in what type of work setting or under what kinds of working conditions? Few studies have also simultaneously investigated the influence of job-related stressors on both burnout and compassion fatigue in human service workers, who are clearly vulnerable to both. This study thus undertook to investigate burnout, compassion fatigue, as well as compassion satisfaction, in terms of their potential relationship with stressors known to be prevalent in the working environments of many doctors and nurses in South Africa. Given previous research findings that the overall impact of stressors may be influenced by occupation type, results were also compared by way of occupation group.

## **Method**

### ***Research Design and Study Population***

A cross-sectional survey design was used in order to achieve the objectives of this study. A convenience sample of doctors and nurses (N = 313) was drawn from a regional public hospital. The hospital in question is one of four district hospitals in the Free State province, which has a population of almost 3 million people. Statistics released by the Free State Department of Health show that approximately 85% of individuals residing in this province do not have medical insurance and are therefore dependent on these four district hospitals for

all health care services other than the basic services provided at community based clinics (FSDOH, 2005). The hospital is also a tertiary training facility affiliated with the Faculty of Health Sciences of the University of the Free State.

In order to proceed with this study, permission was obtained from senior management personnel of the hospital in question and from the Medical Ethics Research Committee of the University of the Free State. A total of 600 questionnaires were sent out to the various units and departments within the hospital. A cover letter explained the purpose of the study, stated that participation was voluntary and informed participants that any identifying particulars would be held in the strictest confidence. Participants were also provided with the option of providing their contact details to indicate their interest in receiving feedback regarding the results of the study. A total of 330 completed questionnaires were received back of which 318 could be analysed. However, five respondents were found to be employed on a part-time basis and were subsequently excluded from further analyses. The final sample was comprised of 31.3% male respondents and 68.7% female respondents with a mean age of 40.09 years. The sample included 75 doctors and 237 nurses. Further demographic information is shown in Table 1.

**Table 1: Characteristics of the respondents**

Item	Category	Frequency	Percentage
Gender	Male	98	31.3
	Female	215	68.7
Ethnicity	Black	253	80.3
	White	51	16.3
	Asian	1	0.3
	Coloured	7	2.2
	Missing data	1	0.3
Occupation	Doctor	76	24.0
	Nurse	237	76.0
Home Language	Afrikaans	53	16.9
	English	14	4.5
	Southern Sotho	92	29.4
	Northern Sotho	9	2.9
	Siswali	8	2.6
	Xitsonga	9	2.9
	Setswana	91	29.1
	Tshivenda	8	2.6
	Isixhosa	24	7.7
	Isizulu	5	1.6
Marital Status	Single	109	34.8
	Married	160	51.1
	Remarried	3	1.0
	Divorced	24	7.7
	Widowed	15	4.8
	Engaged	2	0.6
Qualification	Grade 10 - 11	50	16.0
	Grade 12	88	29.1
	Grade 12 + diploma	74	23.6
	Grade 12 + degree	76	24.3
	Grade 12 + postgraduate degree/diploma	25	8.0
Specialised training relevant to department/unit	Yes	141	45.0
	No	172	55.0
Average working hours per day	6 – 8 hours	102	32.6
	9 – 11 hours	115	36.7
	12 – 14 hours	77	24.6
	15 – 17 hours	19	6.1

### ***Measuring Instruments***

The questionnaires were compiled in English, which is the language of written communication of the organisation. A self compiled biographical questionnaire was used to

gather information on the respondents in the following areas: occupation; level of education; specialized training relevant to current department employed in; gender; ethnicity and home language; marital status; and age.

***The Maslach Burnout Inventory – Human Services Survey (MBI – HSS)*** (Maslach, Jackson & Leiter, 1996) was used to assess the three components of burnout. Items are phrased as statements regarding personal feelings and attitudes toward job-related aspects and are self-scored on a seven-point frequency scale ranging from 0 (*never*) to 6 (*every day*). High scores on Emotional Exhaustion and Depersonalisation and low scores on Personal Accomplishment are indicative of burnout. Although reliability and validity coefficients have been found to be acceptable in several South African studies (Rothmann, 2003; Rothmann, Jackson & Kruger, 2003; Storm & Rothmann, 2003), alpha coefficients for each of the three subscales were calculated. For the second subscale of Depersonalisation an initial alpha coefficient of .615 was calculated. Although similar coefficients have been found for this subscale (Schaufeli & Enzmann, 1998), analysis of inter-item statistics showed that omitting Item 20 (*I worry that this job is hardening me emotionally*), would improve the alpha coefficient of this subscale to .63. The alpha coefficients for the Emotional Exhaustion and Personal Accomplishment subscales were calculated as .85 and .69 respectively.

***Professional Quality of Life Scale (ProQOL)*** (Stamm, 2005). Specific items were used to assess compassion fatigue. In its original form the ProQOL consists of two additional subscales used to assess burnout-like symptoms as well as respondents' potential for compassion satisfaction by way of Likert scale items ranging from 0 (*never*) to 6 (*very often*). The three subscales are discrete and do not yield a composite score. It is therefore possible to report high scores on Compassion Fatigue and on Compassion Satisfaction. Following factor analysis of the ProQOL, two revised subscales measuring secondary stress symptoms and potential for compassion satisfaction respectively, were compiled. The alpha coefficients calculated for these revised scales are .70 in the case of compassion fatigue (measured by five items), and .80 for compassion satisfaction (measured by eight items).

***Physical Working Environment; Self-regulatory Activity; Stressors Outside of the Work Environment.*** These stressors were measured by items taken from the Experience of Work and Life Questionnaire (WLQ) (van Zyl, 1991), which has been standardised for South African populations. In its original form the WLQ measures a broad range of organisational stressors byway of Likert scale items ranging from *virtually never* to *virtually always*. For the purposes of this study, specific items were selected to represent the stressors to be investigated. To assess stressors in the physical work environment, four items were selected such as “facilities meet your needs” and “your job equipment is in working order”. On these items *high scores* are indicative of *low levels* of stress. Five items were selected to measure self-regulatory activity and include items such as “your abilities and skills are developed and extended” and “you are included in decision making that concerns you”. Once again, for these items *high scores* are associated with *less stress* in this particular area. Stressors outside of the work environment were assessed by 12 items such as “facilities at home are a problem” and “financial obligations make life difficult for you” were used. Here *high scores* are indicative of *higher stress* due to outside sources. Alpha coefficients for these three measures are .63, .67, and .84 respectively.

***Job insecurity.*** Quantitative and qualitative job insecurity was assessed by two items each adapted from a measure developed by De Witte (2005). Although the alpha coefficient for the four items is quite low (.52), which is commonly the case when utilising four-item measures, similar versions of this scale have been found to be a simple and accurate measure of job security (De Witte, 2005).

***Working hours.*** This stressor was measured by one question included in the biographical questionnaire in which respondents were asked to report their average number of working hours per day.

### **Statistical Analyses**

The statistical analysis was carried out with the help of the SPSS program. Descriptive statistics and canonical correlations were used to analyse the data. Given the exploratory

nature of this study in which both burnout and compassion fatigue are investigated, canonical correlation was used to analyse the relationship between the two sets of variables, since this is a descriptive rather than a hypothesis-testing technique. Effect sizes were used to determine the practical significance of the findings. Based on sample size ( $N = 313$ ) an Eta value of .35 was set for interpretation of the data obtained on the total sample of respondents. Similarly, effect sizes of .65 and .40 were set for the interpretation of practically significant results for the group of doctors ( $n = 76$ ) and group of nurses ( $n = 237$ ) respectively (Hair, Black, Babin, Anderson & Tatham, 2005).

## Results

### *Descriptive Statistics*

The alpha coefficients and other descriptive statistics (means, standard deviations, skewness, and kurtosis) for the MBI-HSS, revised ProQOL scales, and stressors measured, are shown in Table 2. As can be seen the alpha coefficients are, with the exception of job insecurity, within the range of .70 considered to be acceptable by Nunnally and Bernstein (1994). Among the total sample of research participants the mean score for the burnout component of emotional exhaustion falls within the high range, while the mean scores for depersonalisation and personal accomplishment are moderate and low respectively. Moderate levels of compassion fatigue and compassion satisfaction are also indicated.

**Table 2: Descriptive Statistics**

	<b><math>\alpha</math></b>	<b>Mean</b>	<b>SD</b>	<b>Skewness</b>	<b>Kurtosis</b>
MBI: Emotional Exhaustion	.85	27.82	12.579	.101	-.625
MBI: Depersonalisation*	.63	7.26	5.374	.474	-.507
MBI: Personal Accomplishment	.69	31.10	8.427	.127	-.764
ProQOL: Compassion Fatigue	.70	10.16	5.468	.233	-.387
ProQOL: Compassion Satisfaction	.80	25.37	8.313	-.174	-.899
Physical Work Environment	.67	12.81	4.016	.272	-.251
Self Regulatory Activity	.63	10.53	3.505	.378	-.357
Stressors Outside of Work	.84	39.02	11.319	.117	-.638
Job Insecurity	.52	10.60	3.001	-.031	.177

\*Note: Item 20 omitted

A subsequent independent samples t-test found that doctors and nurses reported similar (moderate) levels of depersonalisation, but that doctors reported moderate levels of emotional exhaustion in comparison with nurses who reported statistically higher levels. Similarly doctors also reported moderate levels of personal accomplishment while nurses reported statistically lower levels. Doctors also experienced lower levels of compassion fatigue and higher levels of compassion satisfaction than nurses.

### *Canonical Analyses*

Canonical correlation was performed on the data obtained for the total group of respondents, as well as for the two occupation groups comprising this total group. The results of the canonical analysis of the total sample of respondents are shown in Table 3. The overall canonical correlation, representative of the bivariate correlation obtained between the two canonical variables, was fairly large for the total sample population ( $R = .60$ ). A chi-square significance test found that only the first and second canonical roots were statistically significant and should be examined further. In the second canonical root only emotional exhaustion and compassion fatigue yielded significant loadings. In order to determine which relationships hold practical significance, given the sample size ( $N = 313$ ), an Eta value cut-off of .35 was set (Hair et al., 2005). The practically significant correlations are printed in **bold** in Table 3 to ease differentiation from the statistically significant correlations.

**Table 3: Canonical Correlation for Total Sample of Participants**

<b>Canonical Root</b>		<b>Correlation Coefficients</b>		
First	Working hours	- .18	<b>-.74</b>	<b>Emotional Exhaustion</b>
	Self Regulatory Activity	.28	<b>-.35</b>	<b>Depersonalisation</b>
	Physical Work Environment	.10	<b>.58</b>	<b>Personal Accomplishment</b>
	<b>Stressors: Outside of Work</b>	<b>- .90</b>	<b>.57</b>	<b>Compassion Satisfaction</b>
	<b>Quantitative Job Insecurity</b>	<b>- .53</b>	<b>-.63</b>	<b>Compassion Fatigue</b>
	<b>Qualitative Job Insecurity</b>	<b>- .35</b>		
Canonical R		R = .60		
Variance Extracted		88.83%	100%	
Total Redundancy		12.25%	15.22%	
Second	Working hours	- .10	<b>-.50</b>	<b>Emotional Exhaustion</b>
	<b>Self-Regulatory Activity</b>	<b>.82</b>	.25	Depersonalisation
	<b>Physical Work Environment</b>	<b>.76</b>	-.28	Personal Accomplishment
	Stressors: Outside of Work	.29	.07	Compassion Satisfaction
	Quantitative Job Insecurity	.16	<b>.56</b>	<b>Compassion Fatigue</b>
	Qualitative Job Insecurity	-.28		

As can be seen in Table 3 burnout, compassion fatigue and compassion satisfaction account for about 15.22% of the variance of the stressors based on the first canonical root. Conversely, the various stressors account for approximately 12.25% of the variance in the levels of burnout, compassion fatigue and compassion satisfaction.

In the first canonical root practically significant correlations were found between stressors outside of the work setting (-.90), quantitative job insecurity (-.53), qualitative job insecurity (-.35) and emotional exhaustion (-.74), depersonalisation (-.35), personal accomplishment (.58), compassion satisfaction (.57), and compassion fatigue (-.63). In the second canonical root practically significant relationships were found between self regulatory activity (.82), stressors in the physical working environment (.76), and emotional exhaustion (-.50) and compassion fatigue (.56).

Next, canonical analysis was performed on the group of doctors. The results of this analysis are summarised in Table 4. As found in the previous analysis, the overall canonical



correlation was also fairly large ( $R = .70$ ). Given this strong correlation, the relatively small sample size ( $n = 76$ ) is still likely to allow for accurate canonical analysis. In order to investigate which of the relationships found to be statistically significant also hold practical significance, a cut-off of .65 was set given the sample size ( $N = 76$ ) (Hair et al., 2005). The practically significant correlations are printed in **bold** to ease differentiation from the statistically significant correlations.

**Table 4: Canonical Analysis for Doctors**

Canonical Root		Correlation Coefficients		
First	Working hours	- .46	<b>-.89</b>	<b>Emotional Exhaustion</b>
	Self-Regulatory Activity	.19	-.20	Depersonalisation
	Physical Work Environment	.43	.21	Personal Accomplishment
	<b>Stressors: Outside of Work</b>	<b>-.96</b>	.23	Compassion Satisfaction
	Quantitative Job Insecurity	- .42	<b>-.81</b>	<b>Compassion Fatigue</b>
	Qualitative Job Insecurity	- .42		
Canonical R		$R = .70$		
Variance Extracted		85.07%	100%	
Overall Redundancy		23.22%	22.53%	
Second	Working hours	- .27	-.42	Emotional Exhaustion
	<b>Self Regulatory Activity</b>	<b>.70</b>	-.21	Depersonalisation
	<b>Physical Work Environment</b>	<b>.81</b>	-.34	Personal Accomplishment
	Stressors: Outside of Work	.12	.42	Compassion Satisfaction
	Quantitative Job Insecurity	.30	.42	Compassion Fatigue
	Qualitative Job Insecurity	-.18		

As shown in Table 4, a chi-square significance test found only the first and second canonical roots to be statistically significant. Subsequent calculation of the redundancy values for each set of variables found that burnout, compassion fatigue and compassion satisfaction account for about 22.53% of the variance in the various stressors based on the first canonical root, and that conversely the various stressors account for approximately 23.22% of the variance in the levels of burnout, compassion fatigue and compassion satisfaction. Furthermore, based on the first canonical root, practically significant correlations were found between stressors outside of the working environment (**-.96**) and emotional exhaustion (**-.89**) and compassion

fatigue (-.81). Based on the second canonical root only the correlations yielded for self-regulatory activity (.70) and stressors in the physical work environment (.81) were found to be of practical significance.

Canonical analysis was then performed on the group of nurses who comprised the larger part of the total group of respondents. As shown in Table 5, as found in the previous analyses, the overall canonical correlation was also fairly large ( $R = .55$ ). A chi-square significance test also indicated that only the first and second canonical roots were statistically significant. In order to identify those relationships with practical significance, an Eta value of .40 was set given the sample size ( $n = 237$ ) (Hair et al., 2005). These practically significant correlations are printed in **bold** to ease differentiation from the statistically significant correlations.

**Table 5: Canonical Analysis for Nurses**

Canonical Root	Correlation Coefficients		
First	Working hours	-.25	<b>-.51</b>
	Self Regulatory Activity	.17	<b>-.56</b>
	Physical Work Environment	-.08	<b>.70</b>
	<b>Stressors: Outside of Work</b>	<b>-.85</b>	<b>.69</b>
	<b>Quantitative Job Insecurity</b>	<b>-.48</b>	<b>-.43</b>
	Qualitative Job Insecurity	-.24	
Canonical R	R = .55		
Variance Extracted	88.60%	100%	
Total Redundancy	10.25%	13.81%	
Second	Working hours	-.01	<b>-.65</b>
	<b>Self Regulatory Activity</b>	<b>.90</b>	.35
	<b>Physical Work Environment</b>	<b>.68</b>	-.32
	Stressors: Outside of Work	.16	.08
	Quantitative Job Insecurity	.07	.36
	Qualitative Job Insecurity	-.27	

Calculation of the redundancy values for each set of variables found that burnout, compassion fatigue and compassion satisfaction account for about 13.81% of the variance in the various stressors based on the first canonical root, and conversely that the various stressors account for approximately 10.25% of the variance in the levels of burnout, compassion fatigue and compassion satisfaction. Subsequently, in the first canonical root

practically significant correlations were found between stressors outside of work (-.85), quantitative job insecurity (-.48) and emotional exhaustion (-.51), depersonalisation (-.56), personal accomplishment (.70), compassion satisfaction (.69), and compassion fatigue (-.43). Based on the second canonical root, practically significant relationships were found between self-regulatory activity (.90), stressors in the physical work environment (.68) and emotional exhaustion (-.65).

## **Discussion and Recommendations**

Descriptive statistical analyses found high levels of emotional exhaustion, moderate levels of depersonalisation and low levels of personal accomplishment among most of the respondents. Moderate levels of compassion fatigue and compassion satisfaction were also reported. Comparison across the two occupation groups found that doctors and nurses reported similar (moderate) levels of depersonalisation, but that doctors reported less emotional exhaustion than nurses. Doctors also reported moderate levels of personal accomplishment while nurses reported low levels. Doctors also experienced lower levels of compassion fatigue and higher levels of compassion satisfaction than nurses. Overall these findings are in keeping with previous studies that have documented higher levels of burnout among health care professionals in South African public health care settings, than the levels of burnout found among health care workers in Europe and North America (De Rijk, Le Blanc & Schaufeli, 1998; Heyns, Venter, Esterhuyse, Bam & Odendaal, 2003).

Canonical analysis was used to investigate the relationships between various job-related stressors and extra-organisational sources of stress on the one hand and burnout, compassion fatigue, and compassion satisfaction on the other. Canonical analyses were performed for the total sample population as well as for the two occupation groups of doctors and nurses.

Canonical analysis of the data gathered on the total sample found that stressors outside of the work environment, as well as quantitative and qualitative job insecurity, were associated with compassion fatigue, compassion satisfaction and all three burnout components. Firstly, this finding provides strong support for the spill-over effect between work and home life found in

other studies (Demir, Ulusoy & Ulusoy, 2003; Geurts, Kompier, Roxburgh & Houtman, 2003; Geurts, Rutte & Peeters, 1999). Secondly, this finding provides support for previous findings linking job insecurity and burnout (Demerouti, Bakker, Nachreiner & Schaufeli, 2001). This finding also provides new information regarding the potential relationship between job insecurity and compassion fatigue, of which little is presently known (Rodrigo, 2002). The results of this study suggest that job insecurity may have a similar effect on the severity of compassion fatigue symptoms than as on burnout symptoms. Another important finding is that job insecurity also appears to negatively influence compassion satisfaction – that is how doctors and nurses experience the act of caregiving, the meaning they derive from their work, and their feelings of success as helpers. This finding may begin to yield a clearer picture of the possible effects of job insecurity on health care provision and its disruptive effect on job performance in other occupation groups (Brysse, De Witte, & Vlerick, 2002).

Comparison of the findings for the two occupation groups found that among doctors, stress due to extra-organisational sources was strongly correlated with emotional exhaustion and compassion fatigue. This finding concurs with previous studies regarding the compounding effect that excessive demands encountered in one's private life can have on job-related stress (Decker, 1997; Leiter, 1990). Further support for this compounding influence was found among nurses by way of robust correlations between stressors outside of the work setting and personal accomplishment, as well as with practically significant correlations with emotional exhaustion, depersonalisation, compassion fatigue, and compassion satisfaction. Among nurses quantitative job insecurity was found to be related to these same aspects. This suggests that perceived uncertainty regarding continuity of the job itself (quantitative job insecurity), is more stressful than insecurity regarding the continued existence of certain aspects of the job such as remuneration levels and job content (De Witte, 2005).

The redundancy indexes calculated for the second canonical roots of all three canonical analyses suggest that the relationships between self-regulatory activity, stressors in the physical work environment and emotional exhaustion and compassion fatigue may be less relevant. Nonetheless, these findings do provide some support for the stressful impact that a

lack of self-regulatory ability (Leiter, 1992) and an adverse physical working environment (Van den Berg et al., 2006) can have on health care professionals.

The finding that working hours did not correlate significantly with burnout, compassion fatigue or compassion satisfaction is in contrast with other studies that found that longer working hours increased levels of burnout and compassion fatigue (Heyns, Venter, Esterhuyse, Bam & Odendaal, 2003; Wee & Myers, 2002). The finding in the present study suggests that other stressors may be more problematic to the doctors and nurses in this particular organisation. Alternatively, long working hours may be seen as “part of the job”. In a study among oncology care providers, Peeters and Le Blanc (2001) found that physicians were inclined to focus less on those stressors that they deemed to be inherent in their work and focus more on stressors that they did not consider to be characteristic of their job.

It is important to recognise that the findings of the present study may have limited generalisability given that the respondents were employed in the same hospital. Future studies should therefore aim to include employees employed in various health care institutions. Furthermore, the limitations inherent in cross-sectional research designs must also be considered. Moreover, the exclusive use of self-report measures may also have increased the likelihood that at least part of the variances in the variables found in this study can be attributed to common method variance (Schaufeli, Enzmann & Girault, 1993).

Nonetheless, this study does make some important contributions to this field of study that also hold a number of practical implications. Firstly, this study highlights the high levels of burnout and compassion fatigue among health care workers in the public sector also found in other comparable studies (Nixon, 1995; Ribeiro, 2004; Van den Berg et al., 2006). Secondly, this study yields some empirical support for the theoretical assumption that compassion fatigue can be influenced indirectly by more general sources of work-related and non-work related stressors in much the same way as in the case of burnout (Collins & Long, 2003; Figley, 2002).

In view of the above, some specific recommendations can be made. First of all, in line with research findings, a focus on the job environment, as well as on individuals, will be needed in order to deal with the levels of burnout and compassion fatigue within the organisation. Research suggests that the most effective mode for intervention will be to combine changes in managerial practice with educational interventions (Gentry, Baranowsky & Dunning, 2002; Maslach, Schaufeli & Leiter, 2001; Schaufeli & Enzmann, 1998). However, although the potential value of large scale organisational interventions is great they are often difficult to implement and require a considerable investment of time, effort and money (Maslach, Schaufeli & Leiter, 2001). Thus, although large scale intervention would prove beneficial theoretically, particularly with regard to job insecurity, in reality the severe lack of financial and human resources within the South African public health sector would likely hamper the timely implementation of such strategies (Van Rensburg, 2004). The primary focus of future interventions may therefore need to be on educational strategies aimed at enhancing the capacity of doctors and nurses to cope with stressors both inside and outside of the workplace (Schaufeli & Enzmann, 1998). Effective intervention strategies may include stress inoculation training, relaxation, time management, assertiveness training and rational emotive therapy (Maslach, Schaufeli & Leiter, 2001). In addition, the implementation of future interventions should also allow for empirical research in this regard, given that little has been documented to date regarding the effectiveness of preventative and remedial intervention strategies (Collins & Long, 2003; Schaufeli, 2003; Schaufeli & Enzmann, 1998).

## REFERENCES

- Benatar, S.R. (2004). Ethical challenges for health care in South Africa. In H.C.J. van Rensburg (Ed.), *Health and health care in South Africa* (pp.561-606). Pretoria: Van Schaik Publishers.
- Brysse, H., De Witte, H. & Vlerick, P. (2002). Over de samenhang tussen jobonsekerheid en verloopintentie. Een replicatiestudie op basis van 'Belstress'-data. In P. Vlerick, F. Lievens and R. Claes (Eds.), *Mens en Organisatie*. Academia Press: Universiteit Gent.
- Buunk, B.P. & Schaufeli, W.B. (1993). Burnout: A perspective from social comparison theory. In W.B. Schaufeli, C. Maslach & T. Marek (Eds.), *Professional Burnout: Recent developments in theory and research* (pp.53-66). Washington: Taylor & Francis.
- Collins, S. & Long, A. (2003). Working with the psychological effects of trauma: consequences for mental health-care workers – A literature review. *Journal of Psychiatric and Mental Health Nursing*, 10, 17-424.
- Cordes, C.L. & Dougherty, T.W. (1993). A review and integration of research on job burnout. *Academy of Management Review*, 18(4), 621-656.
- Decker, F.H. (1997). Occupational and nonoccupational factors in job satisfaction and psychological distress among nurses. *Research in Nursing and Health*, 20, 453-464.
- Demerouti, E., Bakker, A.B. & Bulters, A.J. (2004). The loss spiral of work pressure, work – home interference and exhaustion: Reciprocal relations in a three-wave study. *Journal of Vocational Behaviour*, 64, 131–149.
- Demerouti, E., Bakker, A.B., Nachreiner, F. & Schaufeli, W.B. (2001). The job-demands resources model of burnout. *Journal of Applied Psychology*, 86(3), 499-512.
- Demir, A., Ulusoy, M. & Ulusoy, M.F. (2003). Investigation of factors influencing burnout levels in the professional and private lives of nurses. *International Journal of Nursing Studies*, 40, 807-827.

- De Rijk, A.E., Le Blanc, P.M. & Schaufeli, W.B. (1998). Active coping and need for control as moderators of the job-demand control model: Effects on burnout. *Journal of Occupational and Organisational Psychology*, 71, 1-18.
- De Witte, H. (2005). Job insecurity: Review of international literature on definitions, prevalence, antecedents and consequences. *South African Journal of Industrial Psychology*, 31(4), 1-6.
- Dhaniram, N. & Cilliers, F. V. N. (2004). *Stress, burnout and salutogenic functioning amongst community service doctors in Kwazulu-Natal hospitals*. Poster presented at the 2nd Annual Work Wellness Conference, Potchefstroom, South Africa.
- Figley, C.R. (1995). *Compassion fatigue: Coping with secondary traumatic stress disorder in those who treat the traumatised*. New York: Brunner Mazel.
- Figley, C.R. (2002). Introduction. In C. R. Figley (Ed.), *Treating compassion fatigue* (pp. 1-14). New York: Brunner-Routledge.
- Free State Department of Health (2005). *Strategic plan for 2005/2006 to 2007/2008*. Bloemfontein: FSDOH.
- Gentry, J.E., Baranowsky, A.B. & Dunning, K. (2002). The accelerated recovery program (ARP) for compassion fatigue. In C. R. Figley (Ed.), *Treating compassion fatigue* (pp. 123–133). New York: Brunner-Routledge.
- Geurts, S., Rutte, C. & Peeters, M. (1999). Antecedents and consequences of work-home interference among medical residents. *Social Science and Medicine*, 48, 1135- 1148.
- Geurts, S.A.E., Kompier, M.A.J, Roxburgh, S. & Houtman, I.L.D. (2003). Does work-home interference mediate the relationship between workload and well-being? *Journal of Vocational Behaviour*, 63, 532-559.
- Gilson, L. (2004). The state of decentralisation in the South African health sector – 2003. In *The Local Government & Health Consortium: Decentralising health services in South Africa: Constraints and opportunities – a cross cutting report*. Retrieved on January 13, 2005, from <http://www.hst.org>.
- Govender, K. (1995). *An investigation into the role of perceived sources of stress, perception of work environment, type of hospital ward and nurse rank in occupational distress, coping and burnout among practising nurses*. Unpublished masters dissertation. Pietermaritzburg: University of Natal.



- Hair, J. E., Black, W. C., Babin, B. J., Anderson, R. E. & Tatham, R. L. (2005). *Multivariate Data Analysis* (Sixth Edition). New Jersey: Pearson Prentice Hall.
- Hart, P.M. (1999). Predicting employee life satisfaction: a coherent model of personality, work and nonwork experiences, and domain satisfactions. *Journal of Applied Psychology*, 84(4), 564-584.
- Health Systems Trust. (2003). *HIV/AIDS and health sector responses in South Africa – treatment access and equity: Balancing the act*. Retrieved on January 13, 2005, from <http://www.hst.org.za>.
- Heyns, P.M., Venter, J.H., Esterhuyse, K.G., Bam, R.H. & Odendaal, D.C. (2003). Nurses caring for patients with Alzheimer's disease: Their strengths and risk for burnout. *South African Journal of Psychology*, 33(2), 80-85.
- Lee, R.T. & Ashforth, B.E. (1996). A meta-analytic examination of the correlates of the three dimensions of job burnout. *Journal of Applied Psychology*, 81(2), 123-133.
- Leiter, M.P. (1990). The impact of family resources, control coping, and skill utilisation on the development of burnout: a longitudinal study. *Human Relations*, 43(11), 1067-1083.
- Leiter, M.P. (1992). Burnout as a crisis in professional role structures: measurement and conceptual issues. *Anxiety, Stress and Coping*, 5, 79-93.
- Maslach, C. (1993). Burnout: a multidimensional perspective. In W.B.Schaufeli, C. Maslach & Marek, T. (Eds.), *Professional burnout: Recent developments in theory and research* (pp. 19-32). Washington: Taylor & Francis.
- Maslach, C., Jackson, S.E. & Leiter, M.P. (1996). *Maslach Burnout Inventory Manual* (3<sup>rd</sup> ed.). Palo Alto, CA: Consulting Psychologists Press.
- Maslach, C., Leiter, M.P., & Schaufeli, W.B. (2001). Job burnout. *Annual Review of Psychology*, 52, 397-422.
- Nixon, M. (1995). *Burnout, work environment, and coping in surgical hospital nurses*. Unpublished masters dissertation. Cape Town: University of Cape Town.
- Nkosi, S.N.P-C. (2002). *The relationship between compassion fatigue and coping styles in nurses working in a hospital trauma unit*. Unpublished masters dissertation. Johannesburg: University of the Witwatersrand.

- Nunally, J.C. & Bernstein, I.H. (1994). *Psychometric theory* (3rd ed.). New York: McGraw-Hill.
- Peeters, M.C.W. & Le Blanc, P.M. (2001). Towards a match between job demands and sources of social support: a study among oncology care providers. *European Journal of Work and Organisational Psychology*, 10(1), 53-72.
- Proost, K., De Witte, H., De Witte, K. & Evers, G. (2004). Burnout among nurses; extending the job-control-support model with work-home interference. *Psychologica Belgica*, 44(4), 269-288.
- Rafferty, Y., Friend, R. & Landsbergis, P.A. (2001). The association between job skill discretion, decision authority and burnout. *Work and Stress*, 15(1), 73-85.
- Rapea, A. (2002). People management that supports service delivery. *Service Delivery Review*, 1(3), 27-30.
- Redlinghuys, N., & van Rensburg, H.C.J. (2004). Health morbidity and mortality: The health status of the South African population. In H.C.J. van Rensburg (Ed.), *Health and Health Care in South Africa* (pp.215-271). Pretoria: Van Schaik Publishers.
- Ribeiro, J.F. (2004). *A programme to assist nurses exposed to vicarious traumatisation*. Unpublished masters dissertation. Bloemfontein: University of the Free State.
- Roberts, J. (Ed). (2003). The national primary health care facilities survey 2003. Retrieved from the World Wide Web at <http://www.hst.org.za/publications/617> on 07/01/2005.
- Rodrigo, W.D. (2002). *Conceptual dimensions of compassion fatigue and vicarious trauma*. Unpublished Masters dissertation. Vancouver: Simon Fraser University.
- Rothmann, S. (2003). Burnout and engagement: A South African perspective. *South African Journal of Industrial Psychology*, 29(4), 16-25.
- Rothmann, S., Jackson, L.T.B. & Kruger, M.M. (2003). Burnout and job stress in a local government: the moderating effect of sense of coherence. *South African Journal of Industrial Psychology*, 29(4), 52-60.
- Sabin-Farrell, R. & Turpin, G. (2003). Vicarious traumatisation: implications for the mental health of health workers? *Clinical Psychology Review*, 23, 449-480.
- Schaufeli, W.B. (2003). Past performance and future perspectives of burnout research. *South African Journal of Industrial Psychology*, 29(4), 1-15.

- Schaufeli, W.B. & Enzmann, D. (1998). *The burnout companion to study and practice – A critical analysis*. London: Taylor & Francis.
- Schaufeli, W.B., Enzmann, D. & Girault, N. (1993). Measurement of burnout: A review. In W.B. Schaufeli, C. Maslach, & T. Marek (Eds.), *Professional burnout: Recent developments in theory and research* (pp. 199 – 215). Washington: Taylor & Francis.
- Schweitzer, B. (1994). Stress and burnout in junior doctors. *South African Medical Journal*, 84, 352-354.
- Shisana, O. & Davids, A. (2004). Correcting gender inequalities is central to controlling HIV/AIDS. *Bulletin of the World Health Organisation*, 82(10). Retrieved on January 16, 2005, from <http://www.sahara.org>.
- Stamm, B.H. (2005). *The Professional Quality of Life Scale: Compassion satisfaction, burnout and compassion fatigue/secondary trauma scales*. Idaho University: Sidran Press.
- Storm, K. & Rothmann, S. (2003). The relationship between burnout, personality traits and coping strategies in a corporate pharmaceutical environment. *South African Journal of Industrial Psychology*, 29(4), 35-42.
- Sverke, M., Hellgren, J., Näswall, K., Chirumbolo, A., De Witte, H. & Goslinga, S. (2004). *Job insecurity and union membership: European unions in the wake of flexible production*. Brussels: P.I.E.-Peter Lang.
- Testa, M.R. (2001). Organisational commitment, job satisfaction, and effort in the service environment. *The Journal of Psychology*, 135 (2), 226-236.
- Van den Berg, H., Bester, C., Janse-van Rensburg-Bonthuyzen. E., Engelbrecht, M., Hlophe, H., Summerton, J., Smit, J., Du Plooy, S. & van Rensburg, D. (2006). *Burnout and compassion fatigue in professional nurses: A study in PHC facilities in the Free State, with special reference to the antiretroviral treatment program*. Bloemfontein: Centre for Health Systems Research and Development.
- Van Der Doef, M. & Maes, S. (1999). The job demand-control (-support) model and psychological well-being: A review of 20 years of empirical research. *Work and Stress*, 13(2), 87-114.

- Van Rensburg, H.C.J. (2004). The history of health care in South Africa. In H.C.J. van Rensburg (Ed.), *Health and health care in South Africa* (pp.52-103). Pretoria: Van Schaik Publishers.
- Van Zyl, E.S. (1991). *Experience of Work and Life Circumstances Questionnaire*. Pretoria: Human Sciences Research Council.
- Wee, D.F. & Myers, D. (2002). Stress response of mental health workers following disaster: The Oklahoma City bombing. In C.R. Figley (Ed.), *Treating compassion fatigue* (pp. 181-211). New York: Brunner–Routledge.

## **CHAPTER 6**

### **ARTICLE 5**

#### **COPING, BURNOUT, COMPASSION FATIGUE AND COMPASSION SATISFACTION IN HEALTH CARE PROFESSIONALS**

## **COPING, BURNOUT, COMPASSION FATIGUE AND COMPASSION SATISFACTION IN HEALTH CARE PROFESSIONALS**

### **Abstract**

This study investigated the relationship between approach coping, avoidance coping, specialised training (an external coping resource) and burnout, compassion fatigue and compassion satisfaction in health care workers (N = 313). The research participants were doctors and nurses working in a public health care facility. Canonical analyses were performed by occupation group and by gender. Among doctors avoidance coping correlated with compassion fatigue. Among nurses and female respondents approach coping correlated with two components of burnout namely depersonalisation and personal accomplishment, as well with compassion satisfaction. Both approach and avoidance coping were found to correlate with these same constructs in male health care workers. In this study the coping-related resource of specialised training was not found to correlate significantly with burnout, compassion fatigue or compassion satisfaction.

**Keywords:** *coping, gender, approach coping, avoidance coping, burnout, emotional exhaustion, depersonalisation, personal accomplishment, compassion fatigue, compassion satisfaction, health care professionals, doctors, nurses*

## **HANTERING (“COPING”), UITBRANDING, MEDELYE-UITPUTTING, EN MEDELYE-BEVREDIGING ONDER GESONDHEIDSORG BEROEPSLUI**

### **Opsomming**

Hierdie studie het die verhouding tussen naderingshantering, vermydingshantering, gespesialiseerde opleiding (‘n eksterne hanteringsbron) en uitbranding, medelye-uitputting en medelye-bevrediging onder gesondheidsorgwerkers (N = 313) ondersoek. Die navorsingsdeelnemers was dokters en verpleegsters in ‘n publieke gesondheidsorgfasiliteit. Kanonikale analise is uitgevoer met beroepsgroep en met geslag. Onder verpleegsters en vroulike respondente het vermydingshantering met twee komponente van uitbranding gekorreleer, naamlik ontpersoonliking en persoonlike vervulling, sowel as met medelye-bevrediging. Beide naderings- en vermydingshantering het onder manlike gesondheidsorgwerkers met hierdie selfde konstruksies gekorreleer. In hierdie studie is daar gevind dat die hanteringsverwante bron, gespesialiseerde opleiding, nie aanmerklik met uitbranding, medelye-uitputting of medelye-bevrediging korreleer nie.

**Sleutelwoorde:** *hantering, geslag, naderingshantering, vermydingshantering, uitbranding, ontpersoonliking, persoonlike vervulling, medelye-uitputting, medelye-bevrediging, gesondheidsorg beroepslui, dokters, verpleegsters*

An individual's mode of coping can potentially have a significant influence on the effects of stressors encountered in work and family life (Carr, 2004). As such, coping is also thought to be an important consideration in the onset of occupational stress reactions such as burnout and compassion fatigue (Paton, 1996; Schaufeli & Enzmann, 1998). Research suggests that certain maladaptive or ineffective modes of coping may actually be potential risk factors for the development of burnout (Leiter, 1990) and compassion fatigue (Nkosi, 2002).

Burnout is characterised by emotional exhaustion, depersonalisation and a poor sense of personal accomplishment (Maslach, 1993). Although burnout is influenced by the complex interaction between various risk factors, excessive job-related and organisational demands are considered to be the root cause of this syndrome (Maslach, 1993; Maslach, Jackson & Leiter, 1996; Schaufeli & Enzmann, 1998). In contrast, compassion fatigue is a secondary traumatic stress reaction unique to human service occupations that develops primarily due to the adverse emotional effects of empathic engagement with care recipients, or from secondary exposure to disturbing and traumatic incidents (Figley, 1995; Figley, 2002; Adams, Boscarino & Figley, in press). Compassion fatigue is characterised by posttraumatic stress symptoms such as re-experiencing a patient's trauma, avoidance behaviour, heightened arousal, and feelings of helplessness (Figley, 1995). On the other end of the spectrum is compassion satisfaction which is a relatively new construct that encapsulates a caregiver's sense of satisfaction derived from the work of helping others (Collins & Long, 2003; Stamm, 2005).

Although health care professionals are among a broader occupational group of human service workers who can potentially experience high levels of compassion satisfaction, they are also vulnerable to burnout and compassion fatigue (Figley, 2002). The emotional demands characteristic of health care work put doctors and nurses at a direct risk for these syndromes, although other risk factors such as biographical characteristics (particularly age and gender), high stress levels in one's private life, unrealistic job expectations, and organisational constraints due to inadequate resources, are equally influential (Cordes & Dougherty, 1993; Lee & Ashforth, 1996; Ortlepp & Friedman, 2001; Sabin-Farrell & Turpin, 2003; Schaufeli, 2003). Although burnout and compassion fatigue are influenced by the complex interaction

between these factors, inadequate coping strategies are potentially important preconditions for their development (McVicar, 2003; Schaufeli & Enzmann, 1998). Given that burnout and compassion fatigue both hold significant negative outcomes for health care workers and the institutions that employ them, the role of coping in the manifestation of these syndromes is also an important area of research (Leiter, 1990; McVicar, 2003).

### **Coping As a Determinant of Burnout, Compassion Fatigue and Compassion Satisfaction**

Coping strategies are consciously selected routines employed to manage situations in which there is a perceived discrepancy between stressful demands and available resources for meeting the demands (Carr, 2004). As such, coping forms part of a complex stressor-strain relationship characterised by the interaction between numerous contextual and individual factors (Carver, Scheier & Weintraub, 1989). Given that coping is embedded in this complex process, the selection procedure of coping strategies by an individual is influenced by a number of factors. Theoretical conceptualisations of this process generally subsume dispositional or contextual models (Carr, 2004). Dispositional models highlight the role of relatively stable personal characteristics and traits in determining the choice and effectiveness of coping strategies. Contextual models hold that the nature of the stressor with which one must cope, together with one's appraisal of the stressor, determine the choice and effectiveness of coping strategies. Thus, in any occupational setting an individual's personal attributes are likely to interact with various situational factors (Bergh, 2006).

Research has found that gender can serve as a possible dispositional influence in the coping process (Stanton, Parsa & Austenfeld, 2005). Carver, Scheier and Weintraub (1989) found that women use strategies such as seeking emotional support and venting their emotions more frequently than men. Men on the other hand, may be more inclined to use problem-focused coping strategies than emotion-focused coping strategies. Findings also suggest that men may use alcohol as a strategy to disengage from their problems more often than women. Gender is likely to interact with other personal coping resources as well, including self-



efficacy, personal control, self-esteem and freedom from self-disparagement (Shaw, Fields, Thacker & Fisher, 1993).

Organisational and occupational characteristics have been found to act as contextual or situational influences on the coping process in a similar way to the dispositional influence of gender (Naudé, 2003; Nixon, 1995). Aspects such as a lack of supervision and training opportunities, the availability of social support at work and the availability of information within an organisation, have been linked to the onset and development of burnout (Winnubst, 1993) and compassion fatigue (Jenkins & Baird, 2002; Meyers & Cornille, 2002; Wee & Myers, 2002). Findings suggest that the interaction between these factors can influence an individual's perception of stressors in the work environment as well as the actual strain experienced (Leiter, 1992; Shaw, Fields, Thacker, & Fisher, 1993; Taylor, Kemeny, Reed, Bower & Gruenewald, 2000). In addition, based on the availability of these kinds of external coping resources, different occupation groups in different working environments are likely to employ different coping strategies (Naudé, 2003; Nixon, 1995).

Despite the complexity of stress appraisal and coping processes, personal coping strategies are generally categorised in terms of more adaptive coping strategies such as approach-orientated or confronting coping strategies, and less adaptive strategies such as avoidant type strategies (Carver, Scheier, & Weintraub, 1989). In keeping with this distinction, burnout studies generally show that burned-out employees are more likely to cope with stressful events in a passive, defensive way, whereas individuals who use active and confronting coping strategies are likely to experience lower levels of burnout (Kilfedder, Power & Wells, 2001; Leiter, 1992; Schaufeli & Enzmann, 1998). In particular, problem-focused coping and avoidant coping styles have been found to be influential in determining levels of personal accomplishment (Nowack & Pentkowski, 1994). While the use of an avoidant strategy such as denial is considered to be maladaptive, some researchers suggest that denial may in fact be an effective short-term strategy aimed at facilitating an illusory sense of control and well-being within the work setting (Leiter, 1992).

Given that compassion fatigue and compassion satisfaction are comparatively new constructs, less is known about the relationship between specific coping strategies and these constructs than in the case of burnout (Collins & Long, 2003; Rodrigo, 2002). However, in a recent South African study, Nkosi (2002) found negative correlations between action-orientated coping strategies and compassion fatigue among nurses. Adaptive coping strategies thus appear to buffer the impact of the emotional demands encountered in human service occupations (Levert, Lucas & Orlepp, 2000; Ortlepp & Friedman, 2001; Wee & Myers, 2002). In addition, adaptive coping strategies actually appear to contribute to positive work-related outcomes in human service workers by instilling feelings of competence and increasing a sense of compassion satisfaction (Ortlepp & Friedman, 2001).

### **Measuring Coping Strategies**

A myriad of measures assessing coping styles and strategies can be found (Carr, 2004). Among researchers certain areas of contention are evident though, particularly regarding the distinction between types of coping styles. While some researchers contend that coping styles are primarily context dependent, others assert that coping strategies are primarily dispositional in nature and as such suggest that individuals have an inherent dispositional propensity to make use of certain coping strategies (Parkes, 1994).

As members of the latter group of researchers Carver, Scheier and Weintraub (1989) developed the Coping Orientation to Problems Experienced (COPE) scale, which measures coping strategies from a dispositional framework. In subsequent studies factor analyses of this instrument have yielded varying factor structures, suggesting that further investigation in this regard is needed (Pienaar, 2002; Naudé, 2003). In keeping with these findings and given the potential influence of coping strategies on burnout, compassion fatigue and compassion satisfaction, the current study firstly undertook to determine the structural validity of the COPE. Secondly, the relationship between dispositional coping strategies and specialised training as an external coping resource, and burnout, compassion fatigue and compassion satisfaction will be investigated. Results will also be compared by way of occupation type

(doctors and nurses) and by gender, given previous findings that coping can potentially be influenced by these dispositional and contextual influences (Carr, 2004).

## **Method**

### ***Research Design and Study Population***

A cross-sectional survey design was used in this study. A convenience sample of doctors and nurses (N = 313) was drawn from a regional public hospital. The hospital is one of four district hospitals in the Free State province, which has a population of almost 3 million. Statistics released by the Free State Department of Health show that approximately 85% of individuals residing in this province do not have medical insurance and are therefore dependent on district hospitals for all health care other than the basic services provided at community-based clinics (FSDOH, 2005). The hospital in question is also an academic training facility for medical and nursing students. In order to proceed with this study, permission was obtained from senior management personnel of the hospital and from the Medical Ethics Research Committee of the University of the Free State. A total of 600 questionnaires were sent out to the various units and departments within the hospital. A cover letter explained the purpose of the study, stated that participation was voluntary and informed participants that any identifying particulars would be held in the strictest confidence. Participants were also provided with the option of providing their contact details to indicate their interest in receiving feedback regarding the results of this study. A total of 330 completed questionnaires were received back, yielding a response rate of 55%. Of these questionnaires 318 could be analysed. However, five respondents were found to be employed on a part-time basis and were subsequently excluded from further analyses. The final sample was composed of 31.3% male respondents and 68.7% female respondents with a mean age of 40.09 years. This sample included 75 doctors and 237 nurses. Further demographic information is shown in Table 1.

**Table 1: Characteristics of the respondents**

Item	Category	Frequency	Percentage
Gender	Male	98	31.3
	Female	215	68.7
Ethnicity	Black	253	80.3
	White	51	16.3
	Asian	1	0.3
	Coloured	7	2.2
	Missing data	1	0.3
Occupation	Doctor	76	24.0
	Nurse	237	76.0
Home Language	Afrikaans	53	16.9
	English	14	4.5
	Southern Sotho	92	29.4
	Northern Sotho	9	2.9
	Siswali	8	2.6
	Xitsonga	9	2.9
	Setswana	91	29.1
	Tshivenda	8	2.6
	Isixhosa	24	7.7
	Isizulu	5	1.6
Marital Status	Single	109	34.8
	Married	160	51.1
	Remarried	3	1.0
	Divorced	24	7.7
	Widowed	15	4.8
	Engaged	2	0.6
Qualification	Grade 10 - 11	50	16.0
	Grade 12	88	29.1
	Grade 12 + diploma	74	23.6
	Grade 12 + degree	76	24.3
	Grade 12 + postgraduate degree/diploma	25	8.0
Specialised training relevant to department/unit	Yes	141	45.0
	No	172	55.0
Average working hours per day	6 – 8 hours	102	32.6
	9 – 11 hours	115	36.7
	12 – 14 hours	77	24.6
	15 – 17 hours	19	6.1

### ***Measuring Instruments***

The questionnaires were compiled in English, which is the language of written communication of the organisation. A self-compiled biographical questionnaire was used to

gather information on the respondents regarding the following areas: occupation; level of education; gender; ethnicity and home language; marital status; and age.

***The Maslach Burnout Inventory – Human Services Survey (MBI – HSS)*** (Maslach, Jackson & Leiter, 1996) was used to assess burnout. Items of the MBI-HSS are phrased as statements regarding personal feelings and attitudes toward job-related aspects and are self-scored on a seven-point frequency scale ranging from 0 (*never*) to 6 (*every day*). High scores on Emotional Exhaustion and Depersonalisation and low scores on Personal Accomplishment are indicative of burnout. Although reliability and validity coefficients have been found to be acceptable in several South African studies (Rothmann, 2003; Rothmann, Jackson & Kruger, 2003; Storm & Rothmann, 2003), alpha coefficients for each of the three subscales were calculated. For the second subscale of Depersonalisation an initial alpha coefficient of .615 was calculated. Although similar coefficients have been found for this subscale (Schaufeli & Enzmann, 1998), analysis of inter-item statistics showed that omitting Item 20 (*I worry that this job is hardening me emotionally*), would improve the alpha coefficient of this subscale to .63 and this was subsequently done. The alpha coefficients for the Emotional Exhaustion and Personal Accomplishment subscales were calculated as .85 and .69 respectively.

***Professional Quality of Life Scale (ProQOL)*** (Stamm, 2005). Specific items of the ProQOL were used to assess compassion fatigue and compassion satisfaction. In its original form the ProQOL also consists of a subscale to assess burnout-like symptoms, but this was not used in this study. Likert scale items ranging from 0 (*never*) to 6 (*very often*) comprise the subscales which are discrete and as such do not yield a composite score. It is thus possible to report high scores on Compassion Fatigue and on Compassion Satisfaction. Following an exploratory factor analysis of the ProQOL, two revised subscales measuring secondary traumatic stress symptoms and potential for compassion satisfaction were compiled. The alpha coefficients calculated for these revised scales were .70 in the case of compassion fatigue (measured by five items), and .80 for compassion satisfaction (measured by eight items).

***The COPE Questionnaire.*** The dispositional version of the Coping Orientation to Problems Experienced (COPE) scale (Carver, Scheir & Weintraub, 1989) was used to measure participants' coping strategies. This instrument is a multidimensional 53-item questionnaire that measures 14 different coping strategies. Five subscales (comprising four items each) measure different aspects of problem-focused coping namely, Active Coping, Planning, Suppressing of Competing Activities, Restraint Coping and Seeking Emotional Support for Instrumental Reasons. Five subscales (four items each) measure aspects of emotion-focused coping strategies including Seeking Social Support for Emotional Reasons, Positive Reinterpretation and Growth, Acceptance, Denial and Turning to Religion. Four items measure Focus on and Venting of Emotions and Behavioural Disengagement, while one item measures Alcohol-Drug Disengagement. Alpha coefficients varying from .45 to .92 have been reported (Carver, Scheier & Weintraub, 1989).

***Specialised Training.*** Specialised training was included as a potential external coping resource in statistical analysis as measured by one question in the biographical questionnaire. Respondents were requested to indicate whether they had received any specialized training for the work they were performing currently.

### ***Statistical Analysis***

An exploratory factor analysis was performed on the COPE, following which descriptive statistics and canonical correlations were used to analyse the main effects of coping on burnout, compassion fatigue and compassion satisfaction. Eta values were used to determine which effect sizes were of practical significance. Based on sample size, effect sizes of .65 and .40 were set for the interpretation of practically significant results for the group of doctors ( $n = 76$ ) and group of nurses ( $n = 237$ ) respectively. Correlations of .55 and .40 were set for determining practically significant correlations among male and female respondents respectively (Hair, Black, Babin, Anderson & Tatham, 2005).

## Results

### *Factor Analysis of the COPE*

An exploratory factor analysis was performed on the 53 items comprising the dispositional version of the COPE. The exploratory approach was assumed in order to obtain an overview of the underlying factor structure of this instrument. Hair et al. (2005) advocate guidelines for communalities and factor loadings when carrying out exploratory factor analyses. Although factor loadings of  $\pm 0.30$  to  $\pm 0.40$  are minimally accepted, values greater than  $\pm 0.50$  are generally considered necessary for practical purposes. However, complete emphasis was not placed on these guidelines as a necessary balance was required by the researcher between practicality and theoretical usefulness. These authors also note that such an approach is often necessary when analysing multi-category items such as Likert scales as in the case of the COPE scale.

Prior to first order analysis by way of principal axis factoring, Kaiser-Meyer-Olkin's measure of sampling adequacy and Bartlett's Test of Sphericity were conducted and found to be acceptable. Following oblique rotation with Kaiser Normalisation which converged in 47 iterations, 16 factors with eigenvalues greater than one were extracted. In Table 2 the factor loadings, eigenvalues and cumulative percentages of variance explained of the factors are shown.

**Table 2: First Order EFA of COPE**

Item	Factor loading	Factor	Eigenvalue	Cumulative % of variance explained
8: talk to someone about how I feel 35: try to come up with a strategy 3: I try to grow as a person	.456 .354 .245	Factor 1	7.925	13.903
42: I act as though it hasn't happened 50: I give up trying to reach my goal 26: I give up the attempt to get what I want 44: I hold off doing anything 29: I pretend that it hasn't happened	.606 .595 .430 .325 .273	Factor 2	3.929	20.195
27: I get upset and let my emotions out 14: I let my feelings out 40: I feel distress and express those feelings	-.675 -.415 -.220	Factor 3	1.093	22.708
51: I seek God's help 24: I pray more 37: I try to find comfort in my religion 10: I put my trust in God	-.657 -.643 -.593 -.478	Factor 4	1.739	24.971
49: I discuss my feelings with someone 41: I talk to someone to find out more 15: I try to get emotional support 34: I talk to someone who could do something	-.592 -.500 -.396 -.316	Factor 5	1.650	26.987
2: I refuse to believe it has happened 16: Say to myself "this isn't real" 19: Prevent things from interfering 11: I sleep more than usual	-.656 -.493 -.299 -.272	Factor 6	1.540	28.831
21: I learn to live with it	-.926	Factor 7	1.482	30.600
13: I admit that I can't deal with this and quit 9: I think about how best to handle the problem 12: I drink alcohol or take drugs to think less	.454 -.307 .277	Factor 8	1.419	32.221
17: I try to see it in a different light 43: I learn something from the experience 39: I reduce the amount of effort	.645 .466 .253	Factor 9	1.393	33.755
31: I restrain myself from acting too quickly 32: I take direct action 33: I accept that this has happened 30: I look for something good 38: I focus on dealing with the problem 18: I make sure not to make matters worse	.472 .466 .457 .376 .278 .246	Factor 10	1.299	35.066
5: I put aside other activities 7: I get used to the idea that it has happened 6: I take additional action 23: I do what has to be done	.480 .451 .317 .279	Factor 11	1.229	36.344
36: I go to the movies or watch TV 25: I turn to other activities	.465 .454	Factor 12	1.184	37.461
47: I think hard about what steps to take 48: I accept the reality 45: I concentrate my efforts	.592 .440 .284	Factor 13	1.105	38.476
53: I get upset and am aware of it 52: I daydream 46: I keep myself from getting distracted	-.472 -.380 -.204	Factor 14	1.075	39.452
4: I force myself to wait for the right time 28: I get sympathy and understanding	-.313 -.265	Factor 15	1.055	40.339
22: I try to get advice 1: I ask people who have had similar experiences 20: I make a plan	-.537 -.393 -.198	Factor 16	1.024	41.142



As can be seen in Table 2, many of the factors extracted by way of the first order analysis contained few items. Examination of the specific items loading on each factor shows that Factors 1, 5, 10, 11, 13, 15, and 16 are comprised of items from a number of subscales. These include Active Coping, Planning, Suppression of Competing Activities, and Seeking Support (both for emotional and instrumental reasons). These factors are largely representative of approach or action-orientated coping strategies. In contrast, Factors 2, 6, 8, 10, 11, 12, 13, and 15 contain items that are less action orientated and that are more representative of avoidant coping. These factors are comprised of a combination of items from the subscales Denial, Restraint Coping and Disengagement.

Factors 3 and 4 contain items from the subscales Venting of Emotions and Turning to Religion respectively while the items loading on factor 15 appear to be theoretically unrelated. Of particular interest is the finding that Item 21 (*I learn to live with it*) loaded on its own which may suggest that this item can be interpreted as being ambiguous.

Following second order analysis by way of principal axis factoring and oblimin rotation with Kaiser Normalisation (which converged in 13 iterations), four factors with eigenvalues greater than one were extracted. In Table 3 the factor loadings of the 16 factors extracted during first order analysis are shown together with the eigenvalues and cumulative percentages of these factors. The first order factors are listed in the order obtained in the pattern matrix of the second order analysis. The final four second order factors which were extracted are highlighted in **bold** print.

**Table 3: Second Order EFA of COPE**

First Order Factor	Second Order Factor				Eigenvalue	Cumulative % of variance explained
	I	II	III	IV		
10	.644					
11	.589		.165			
13	.573	-.167				
4	.527			-.123		
<b>1</b>	<b>.461</b>	<b>-.207</b>	<b>-.248</b>	<b>-.317</b>	<b>4.06</b>	<b>25.37</b>
16	.380			-.354		
7	.281					
15	.249	.152	-.233			
<b>2</b>		<b>.594</b>		<b>.208</b>	<b>2.01</b>	<b>12.56</b>
6		.498	-.165	-.108		
8		.461				
9	.200	.. 446	.174	-.288		
12	.191	.204	-.130			
<b>3</b>			<b>-.534</b>	<b>-.105</b>	<b>1.06</b>	<b>6.64</b>
14	.106	.238	-.401	.114		
<b>5</b>	<b>.131</b>		<b>-.190</b>	<b>-.642</b>	<b>1.04</b>	<b>6.52</b>

Factor I, extracted during the second order analysis, accounts for 25.37% of the variance in the data and is comprised of 26 items from the first order factors found to be representative of various types of approach-orientated coping. These factors are 1, 10, 11, 13, 15, and 16. The first order factor comprising items from the Turning to Religion subscale of the COPE (first order Factor 4) also loaded on this factor suggesting that these items in fact represent directive spiritual coping strategies. Given the robust theoretical relationship between these first order factors, this second order factor was used in subsequent statistical analyses in this study and was labelled as Approach Coping.

Factor II accounts for 12.56% of the variance in the data and is comprised of 17 items primarily from the first order Factors 2, 6, 8, and 12, which are all theoretically related to avoidant coping strategies. As such, Factor II was labelled Avoidant Coping and was used in further statistical analyses in this study. Interestingly, the first order Factor 9, containing Items 17 (*I try to see it in a different light*), and 43 (*I learn something from the experience*), also loaded together with the factors representing avoidant coping. This may be due to the fact that the wording of these items is quite passive and not as directive as Item 30 (*I look for something good in the situation*), although all of these items comprise the COPE subscale of

Positive Reinterpretation and Growth. Items 17 and 43 were therefore omitted from subsequent analyses of Avoidant Coping.

Two first order factors (3 and 14) loaded on the second order Factor III which accounts for 6.64% of the variance in the data. The first order Factor 3 contains items from the COPE subscale Focus on and Venting of Emotions, while the other first order factor (Factor 14) contains items that appear to be theoretically unrelated but that once again contain less specific wording (*Item 46: I keep myself from getting distracted*) than some of the other items (*Item 31: I restrain myself from acting too quickly*). This factor was therefore not included in further statistical analyses.

The fourth second order factor (6.52% of the variance) contains four items representing the first order Factor 5. These items are from the subscales of Seeking Social Support for Emotional Reasons and Seeking Social Support for Instrumental Reasons. Although these items are theoretically related, the alpha coefficient calculated for these items yielded a poor reliability and thus were subsequently excluded from the remainder of the statistical analysis.

### ***Descriptive Statistics***

The alpha coefficients and other descriptive statistics (means, standard deviations, skewness, and kurtosis) for the MBI-HSS and revised ProQOL and revised COPE scales are shown in Table 4.

**Table 4: Descriptive Statistics**

	<b><math>\alpha</math></b>	<b>Mean</b>	<b>SD</b>	<b>Skewness</b>	<b>Kurtosis</b>
MBI: Emotional Exhaustion	.85	27.82	12.579	.101	-.625
MBI: Depersonalisation*	.63	7.26	5.374	.474	-.507
MBI: Personal Accomplishment	.69	31.10	8.427	.127	-.764
ProQOL: Compassion Fatigue	.70	10.16	5.468	.233	-.387
ProQOL: Compassion Satisfaction	.80	25.37	8.313	-.174	-.899
COPE: Approach Coping	.84	67.42	10.559	-.145	-.191
COPE: Avoidance Coping	.72	29.65	6.301	-.216	-.401

\*Note: Item 20 omitted

As shown in Table 4, the alpha coefficients are within the range of .70 considered to be acceptable by Nunnally and Bernstein (1994). Among the total sample of research participants the mean score for the burnout component of emotional exhaustion falls within the high range, while the mean scores for depersonalisation and personal accomplishment are moderate and low respectively. Moderate levels of compassion fatigue and compassion satisfaction are also indicated.

Independent samples t-tests found that doctors and nurses reported similar (average) levels of depersonalisation, but that doctors reported moderate levels of emotional exhaustion in comparison with nurses who reported high levels. Doctors reported average levels of personal accomplishment while nurses reported low levels. Doctors also experienced lower levels of compassion fatigue and higher levels of compassion satisfaction than nurses.

### *Canonical Analysis*

Canonical correlation was performed on the data obtained for the two occupation groups making up the total number of respondents, as well as on the data obtained for the two gender groups.

The first canonical analysis was performed on the data obtained from the doctors who participated in this study ( $n = 76$ ). The results of this analysis are summarised in Table 5. Based on the sample size, the level of practical significance for Eta was set at a value of .65 (Hair et al., 2005). In this case the overall canonical correlation was calculated as .48. A chi-square significance test found that only the first canonical root was statistically significant and should be examined further. The practically significant correlations are printed in **bold** to distinguish them from statistically significant correlations.

**Table 5: Canonical Analysis of Doctors**

Canonical Root		Correlation Coefficients		
First	Specialised Training Approach Coping <b>Avoidance Coping</b>	.20 -.06 <b>-.95</b>	-.37 -.11 -.32 .01 <b>-.73</b>	Emotional Exhaustion Depersonalisation Personal Accomplishment Compassion Satisfaction <b>Compassion Fatigue</b>
Canonical R		R = .48		
Variance Extracted		100%	76.44%	
Total Redundancy		11.36%	8.26%	

As shown in Table 5, the coping variables (specialised training, approach coping, and avoidance coping) account for about 11.36% of the variance in burnout, compassion fatigue, and compassion satisfaction. Conversely, burnout, compassion fatigue, and compassion satisfaction account for only approximately 8.26% of the variance in the coping variables. Practically significant correlations were only found between avoidance coping (-.95) and compassion fatigue (-.73).

Next, canonical analysis was performed on the group of nurses ( $n = 237$ ). The results of this analysis are shown in Table 6. Correlations of .40 and higher were set as indicators of practically significant relationships, given the sample size (Hair et al., 2005). Here the overall canonical correlation was found to be fairly large ( $R = .66$ ). A chi-square significance test found that the first and second canonical roots were statistically significant and should be examined further. Once again practically significant correlations are printed in **bold**.

**Table 6: Canonical Analysis of Nurses**

Canonical Root		Correlation Coefficients		
First	Specialised Training <b>Approach Coping</b> Avoidance Coping	.10 <b>-.95</b> .30	.01 <b>.69</b> <b>-.80</b> <b>-.79</b> .15	Emotional Exhaustion <b>Depersonalisation</b> <b>Personal Accomplishment</b> <b>Compassion Satisfaction</b> Compassion Fatigue
Canonical R		R = .66		
Variance Extracted		100%	63.08%	
Total Redundancy		17.35%	16.81%	
Second	Specialised Training Approach Coping <b>Avoidance Coping</b>	-.23 -.30 <b>-.94</b>	.19 -.19 -.13 -.25 <b>-.86</b>	Emotional Exhaustion Depersonalisation Personal Accomplishment Compassion Satisfaction <b>Compassion Fatigue</b>

Calculation of the redundancy values for each set of variables found that burnout, compassion fatigue, and compassion satisfaction account for about 16.81% of the variance in the coping variables based on the first canonical root, and that the coping variables also account for approximately 17.35% of the variance in the levels of burnout, compassion fatigue, and compassion satisfaction. Subsequently, in the first canonical root practically significant correlations were found between approach coping (-.95), depersonalisation (.69), personal accomplishment (-.80), and compassion satisfaction (-.79). Based on the second canonical root, practically significant relationships were found between avoidance coping (-.94) and compassion fatigue (-.86).

Given the research findings of the role of gender in coping (Stanton, Parsa & Austenfeld, 2005), canonical analyses were also performed on the two gender groups, as shown in Table 7. In the analysis of the male respondents (n = 98) a level of .55 was set for determining practically significant relationships (Hair et al., 2005). In this analysis an overall canonical correlation index of .69 was calculated. A chi-square significance test found that the first and second canonical roots were statistically significant and should be examined further. Practically significant relationships are highlighted in **bold** print.

**Table 7: Canonical Analysis on Male Respondents**

Canonical Root		Correlation Coefficients		
First	Specialised Training <b>Approach Coping</b> <b>Avoidance Coping</b>	.37 <b>-.88</b> <b>.57</b>	.15 <b>.57</b> <b>-.90</b> <b>-.70</b> .48	Emotional Exhaustion <b>Depersonalisation</b> <b>Personal Accomplishment</b> <b>Compassion Satisfaction</b> Compassion Fatigue
Canonical R		R = .69		
Variance Extracted		100%	71.56%	
Total Redundancy		29.48%	24.41%	
Second	Specialised Training Approach Coping <b>Avoidance Coping</b>	-.21 .30 <b>.82</b>	.47 -.22 .20 -.12 <b>.78</b>	Emotional Exhaustion Depersonalisation Personal Accomplishment Compassion Satisfaction <b>Compassion Fatigue</b>

As shown in Table 7, calculation of the redundancy values for each set of variables found that burnout, compassion fatigue, and compassion satisfaction account for about 24.41% of the variance in the coping variables based on the first canonical root, and conversely that the coping variables account for approximately 29.48% of the variance in levels of burnout, compassion fatigue, and compassion satisfaction. In the first canonical root practically significant correlations were found between approach coping (-.88), avoidance coping (.57), depersonalisation (.57), personal accomplishment (-.90), and compassion satisfaction (-.70). Based on the second canonical root practically significant relationships were found between avoidance coping (.82) and compassion fatigue (.78).

Next, canonical analysis was performed on the data gathered on the female respondents (n = 215). These results are shown in Table 8. Correlations of .40 and higher were set as indicators of practically significant relationships, given the sample size (Hair et al., 2005). Here the overall canonical correlation was .54. Following a chi-square significance test, the first and second canonical roots were found to be statistically significant. Practically significant correlations are printed in **bold**.

**Table 8: Canonical Analysis on Female Respondents**

Canonical Root		Correlation Coefficients		
First	Specialised Training	.10	-.01	Emotional Exhaustion
	<b>Approach Coping</b>	<b>.96</b>	<b>-.67</b>	<b>Depersonalisation</b>
	Avoidance Coping	-.19	<b>.78</b>	<b>Personal Accomplishment</b>
			<b>.84</b>	<b>Compassion Satisfaction</b>
			-.18	Compassion Fatigue
Canonical R		R = .54		
Variance Extracted		.100%	69.30	
Total Redundancy		12.16%	11.98%	
Second	Specialised Training	-.03	-.03	Emotional Exhaustion
	Approach Coping	-.24	-.14	Depersonalisation
	<b>Avoidance Coping</b>	<b>-.98</b>	-.09	Personal Accomplishment
			-.17	Compassion Satisfaction
			<b>-.92</b>	<b>Compassion Fatigue</b>

The redundancy indexes found that burnout, compassion fatigue, and compassion satisfaction account for about 11.98% of the variance in the coping variables based on the first canonical root, and that the coping variables also account for approximately 12.16% of the variance in the levels of burnout, compassion fatigue, and compassion satisfaction. In the first canonical root, practically significant correlations were found between approach coping (.96), depersonalisation (-.67), personal accomplishment (.78), and compassion satisfaction (.84). Based on the second canonical root, practically significant relationships were found between avoidance coping (-.98) and compassion fatigue (-.92).

## Discussion

### *Factor Analysis of the COPE Scale*

The aim of this study was essentially two-fold. Firstly, this study undertook to investigate the structural validity of the COPE Scale in the South African context. A second order exploratory factor analysis yielded a theoretically sound four factor solution similar to the factor structures identified in other South African studies (Naudé, 2003). One noteworthy difference, however, was the finding that the items representing Turning to Religion loaded together with other items representing various cognitive and affective approach orientated



coping strategies from the COPE subscales Active Coping, Planning, Restraint Coping, Acceptance, Positive Reinterpretation and Growth, and Turning to Religion. This factor was subsequently labelled as approach coping. This factor structure does differ however from the structure commonly found wherein the items comprising Turning to Religion load on a separate factor (Pienaar, 2002; Raphela, 2000).

A second factor was extracted containing items from the subscales Behavioural Disengagement, Mental Disengagement, Denial, and Alcohol and Drug Disengagement. Although the various items differ with regards to whether the avoidant behaviour is cognitive or affective in origin, all of the items were found to be representative of avoidant and passive-type coping strategies. This factor was subsequently labelled as avoidant coping. The remaining two factors extracted were found to comprise items related to Venting of Emotions and Seeking Emotional Support respectively. However, reliability analyses of these factors did not yield acceptable alpha coefficients and therefore only the factors representing approach coping and avoidance coping were utilised in further analyses undertaken in this study. The findings of this study also support the need for further investigation into the structural and psychometric validity of the COPE Scale as noted in previous studies (Pienaar, 2003; Raphela, 2000).

### ***Canonical Analysis***

This study undertook to investigate the relationships between approach coping, avoidance coping, burnout, compassion fatigue, and compassion satisfaction. The relationship between these variables and specialised training (an external coping resource) was also investigated. These relationships were analysed by way of canonical correlations for the groups of doctors and nurses comprising the total sample population, as well as for the two gender groups.

The most significant finding among doctors was the strong correlation between avoidance coping and compassion fatigue, suggesting that passive, less directive coping strategies render doctors more vulnerable to the effects of secondary exposure to traumatic material. This finding supports the theoretical assumption that coping mediates the influence of

demands inherent in human service work in much the same way as for occupational stress reactions in general (Nkosi, 2002; Paton, 1996).

Among nurses and women, approach coping was found to play a more prominent role. Approach coping yielded practically significant relationships with the burnout components of depersonalisation and personal accomplishment, as well as with compassion satisfaction. Among men, both approach and avoidance coping were related to the same constructs. These findings suggest that by using approach-orientated coping strategies, health care workers may be less likely to treat patients in a detached and cynical manner. Moreover, by using approach-orientated coping strategies for dealing with the demands they encounter, it also appears that they will be more likely to experience a greater sense of accomplishment and meaning from their work as caregivers. The findings of this study therefore support previous findings that have documented a robust relationship between approach-orientated coping and lower levels of burnout, and avoidance coping and higher levels of burnout (Leiter, 1992; Schaufeli & Enzmann, 1998).

### **Limitations of Study and Recommendations**

While the present study found support for the relationship between coping and burnout identified in previous studies, it also yielded potentially valuable information regarding the relationship between coping and compassion fatigue and compassion satisfaction, which to date has been less commonly researched (Collins & Long, 2003). The results obtained in this study suggest that approach orientated coping and avoidance coping can potentially influence compassion fatigue in much the same way as found for burnout. Furthermore, approach and avoidance coping appear to influence compassion satisfaction in a similar way to the burnout component personal accomplishment. Approach coping appears to be associated with less compassion fatigue and a greater potential for compassion satisfaction, whereas avoidance coping appears to have the opposite relationship with these constructs.

However, given that this study is cross-sectional in nature, specific causal attributions cannot be made. A further limitation may lie in the generalisability of the findings, given that the respondents are all employed in one hospital. Furthermore, although the constructs of

approach and avoidance coping were comprised of a diverse set of coping strategies, these strategies cannot be assumed to be exclusively representative of approach or avoidance coping as such. Despite these limitations, the findings of this study do underscore the importance of considering the impact of coping on the levels of burnout and compassion fatigue that health care workers may experience. A strong recommendation can thus be made to the organisation in question to make the development and the implementation of intervention strategies aimed at facilitating the development of approach-orientated coping strategies, among both doctors and nurses, a priority.

Future research should also undertake to empirically investigate the effects of such interventions, as little systematic research has been conducted on the success of these kinds of person-directed intervention strategies (Maslach, Leiter, & Schaufeli, 2001; Schaufeli & Enzmann, 1998). Furthermore, future studies could aim to investigate the interaction between coping and other interpersonal factors such as personality traits and sense of coherence, which are also known to be associated with burnout and compassion fatigue.

## REFERENCES

- Adams, R.E., Boscarino, J.A. & Figley, C.R. (in press). Compassion fatigue among a sample of New York social workers: Instrument psychometrics. *Journal of Orthopsychiatry*.
- Bergh, Z. (2006). Personality: Individual differences in work performance. In Z. Bergh & A. Theron (Eds.), *Psychology in the work context* (pp. 460-486). Cape Town: Oxford University Press.
- Carr, A. (2004). *Positive psychology: The science of human happiness and human strengths*. New York: Brunner-Routledge.
- Carver, C.S., Scheier, M.F. & Weintraub, J.K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology*, 56(2), 267-283.
- Collins, S. & Long, A. (2003). Working with the psychological effects of trauma: consequences for mental health-care workers – A literature review. *Journal of Psychiatric and Mental Health Nursing*, 10, 17-424.
- Cordes, C.L. & Dougherty, T.W. (1993). A review and integration of research on job burnout. *Academy of Management Review*, 18 (4), 621-656.
- Figley, C.R. (1995). *Compassion fatigue: Coping with secondary traumatic stress disorder in those who treat the traumatised*. New York: Brunner Mazel.
- Figley, C.R. (2002). Introduction. In C. R. Figley (Ed.), *Treating compassion fatigue* (pp. 1-14). New York: Brunner-Routledge.
- Free State Department of Health (2005). *Strategic plan for 2005/2006 to 2007/2008*. Bloemfontein: FSDOH.
- Hair, J. E., Black, W. C., Babin, B. J., Anderson, R. E. & Tatham, R. L. (2005). *Multivariate Data Analysis* (Sixth Edition). New Jersey: Pearson Prentice Hall.
- Jenkins, S.R. & Baird, S. (2002). Secondary traumatic stress and vicarious trauma: a validation study. *Journal of Traumatic Stress*, 15(5), 423-432.
- Kilfedder, C.J., Power, K.G., & Wells, T.J. (2001). Burnout in psychiatric nursing. *Journal of Advanced Nursing*, 34(3), 383-396.
- Lee, R.T. & Ashforth, B.E. (1996). A meta-analytic examination of the correlates of the three dimensions of job burnout. *Journal of Applied Psychology*, 81(2), 123-133.

- Leiter, M.P. (1990). The impact of family resources, control coping, and skill utilisation on the development of burnout: a longitudinal study. *Human Relations*, 43(11), 1067-1083.
- Leiter, M.P. (1992). Burnout as a crisis in professional role structures: Measurement and conceptual issues. *Anxiety, Stress and Coping*, 5, 79-93.
- Lever, T., Lucas, M. & Ortlepp, K. (2000). Burnout in psychiatric nurses: contributions of the work environment and a sense of coherence. *South African Journal of Psychology*, 30(2), 36-43.
- McVicar, A. (2003). Workplace stress in nursing: A literature review. *Journal of Advanced Nursing*, 44(6), 633-642.
- Maslach, C. (1993). Burnout: a multidimensional perspective. In W.B.Schaufeli, C. Maslach & Marek, T. (Eds.), *Professional burnout: Recent developments in theory and research* (pp.19-32). Washington: Taylor & Francis.
- Maslach, C., Jackson, S.E. & Leiter, M.P. (1996). *Maslach Burnout Inventory Manual* (3<sup>rd</sup> ed.). Palo Alto, CA: Consulting Psychologists Press.
- Maslach, C., Leiter, M.P., & Schaufeli, W.B. (2001). Job burnout. *Annual Review of Psychology*, 52, 397-422.
- Meyers, T. & Cornille, T.A. (2002). The trauma of working with traumatised children. In C.R. Figley (Ed.), *Treating compassion fatigue* (pp.39-55). New York: Brunner–Routledge.
- Naudé, J.L.P. (2003). *Occupational stress, coping, burnout and work engagement of emergency workers in Gauteng*. Unpublished doctoral thesis. Potchefstroom: Northwest University.
- Nixon, M. (1995). *Burnout, work environment, and coping in surgical hospital nurses*. Unpublished masters dissertation. Cape Town: University of Cape Town.
- Nkosi, S.N.P-C. (2002). *The relationship between compassion fatigue and coping styles in nurses working in a hospital trauma unit*. Unpublished masters dissertation. Johannesburg: University of the Witwatersrand.
- Nowack, K.M. & Pentkowski, A.M. (1994). Lifestyle habits, substance use and predictors of job burnout in professional working women. *Work and Stress*, 8(1), 19-35.
- Nunally, J.C. & Bernstein, I.H. (1994). *Psychometric theory* (3rd ed.). New York: McGraw-Hill.

- Ortlepp, K. & Friedman, M. (2001). The relationship between sense of coherence and the indicators of traumatic stress in non-professional trauma counsellors. *South African Journal of Psychology*, 31(2), 38-45.
- Parkes, K.R. (1994). Personality and coping as moderators of work stress processes: Models, methods and measures. *Work and Stress*, 8, 110-129.
- Paton, D. (1996). Traumatic stress in critical occupations. In D. Paton & J.M. Violanti (Eds.), *Traumatic stress in critical occupations: Recognition, consequences and treatment* (pp. 3 – 14). Springfield: Charles C Thomas.
- Pienaar, J. (2002). *Coping, job stress and suicide ideation in the South African Police Service*. Unpublished doctoral thesis. Potchefstroom: University of the North West.
- Raphela, M.M.R. (2000). *Stress and coping in nurses who care for terminally ill patients*. Unpublished masters dissertation. University of Port Elizabeth.
- Rothmann, S. (2003). Burnout and engagement: A South African perspective. *South African Journal of Industrial Psychology*, 29(4), 16-25.
- Rothmann, S., Jackson, L.T.B. & Kruger, M.M. (2003). Burnout and job stress in a local government: the moderating effect of sense of coherence. *South African Journal of Industrial Psychology*, 29(4), 52-60.
- Rodrigo, W.D. (2002). *Conceptual dimensions of compassion fatigue and vicarious trauma*. Unpublished Masters dissertation. Vancouver: Simon Fraser University.
- Sabin-Farrell, R. & Turpin, G. (2003). Vicarious traumatising: implications for the mental health of health workers? *Clinical Psychology Review*, 23, 449-480.
- Schaufeli, W.B. (2003). Past performance and future perspectives of burnout research. *South African Journal of Industrial Psychology*, 29(4), 1-15.
- Schaufeli, W.B. & Enzmann, D. (1998). *The burnout companion to study and practice – a critical analysis*. London: Taylor & Francis.
- Shaw, J.B., Fields, M.W., Thacker, J.W. & Fisher, C.D. (1993). The availability of personal and external coping resources: Their impact on job stress and employee attitudes during organisational restructuring. *Work and Stress*, 7(3), 329-246.
- Stamm, B.H. (2005). *The Professional Quality of Life Scale: Compassion satisfaction, burnout and compassion fatigue/secondary trauma scales*. Idaho University: Sidran Press.

- Stanton, A.L., Parsa, A. & Austenfeld, J.L (2005). The adaptive potential of coping through emotional approach. In C.R. Snyder & S.J. Lopez (Eds.), *Handbook of positive psychology* (pp.148-158). New York: Oxford University Press, Inc.
- Storm, K. & Rothmann, S. (2003). The relationship between burnout, personality traits and coping strategies in a corporate pharmaceutical environment. *South African Journal of Industrial Psychology*, 29(4), 35-42.
- Taylor, S.E., Kemeny, M.E., Reed, G.M., Bower, J.E. & Gruenewald, T.L. (2000). Psychological resources, positive illusions and health. *American Psychologist*, 99-109.
- Wee, D.F. & Myers, D. (2002). Stress response of mental health workers following disaster: The Oklahoma City bombing. In C.R. Figley (Ed.), *Treating compassion fatigue* (pp. 181-211). New York: Brunner–Routledge.
- Winnubst, J. (1993). Organisational structure, social support and burnout. In W.B.Schaufeli, C. Maslach & Marek, T. (Eds.), *Professional burnout: Recent developments in theory and research* (pp.151-160). Washington: Taylor & Francis.

## **CHAPTER 7**

### **ARTICLE 6**

#### **THE INFLUENCE OF COPING AND WORK AND LIFE CIRCUMSTANCES ON BURNOUT AND COMPASSION FATIGUE**



## THE INFLUENCE OF COPING AND WORK AND LIFE CIRCUMSTANCES ON BURNOUT AND COMPASSION FATIGUE

### Abstract

The aim of this study was to investigate the relationship between coping, life demands, work demands and resources, and burnout and compassion fatigue in health care workers (N = 313). A model based on the Job Demands-Resources Model was tested by structural equation modelling. In this study a relationship between job resources (self regulatory activity and job security) and burnout and compassion fatigue was not found. A revised model found that coping mediated the influence of job demands and extra-organisational demands on burnout and compassion fatigue, but did not found influence job resources as initially hypothesised. Physical working conditions were found to influence the burnout component of emotional exhaustion and approach coping was found to have direct paths to both depersonalisation and personal accomplishment.

**Keywords:** *burnout, compassion fatigue, health care workers, emotional exhaustion, depersonalisation, personal accomplishment, job demands, job resources, Job Demands-Resources Model (JD-R model), coping*

## DIE INVLOED VAN HANTERING (“COPING”) EN WERKS- EN LEWENSOMSTANDIGHEDEN OP UITBRANDING EN MEDELYE-UITPUTTING

### Opsomming

Die doel van hierdie studie was om die verhouding tussen coping, lewensvereistes, werksvereistes en hulpbronne, en uitbranding en medelye-uitputting onder gesondheidsorg werkers (N = 313) te ondersoek. ‘n Model gebaseer op die Job Demands-Resources Model is getoets deur middel van strukturele vergelykingsmodellering. In hierdie studie is daar nie ‘n verhouding tussen werkshulpbronne (selfregulerende aktiwiteit en werksekuriteit) en uitbranding en medelye-uitputting gevind nie. ‘n Hersiene model het gevind dat hantering as bemiddelaar optree in die invloed van werksvereistes en buite-organisatoriese vereistes op uitbranding en medelye-uitputting, maar nie in die invloed van werkshulpbronne soos aanvanklik gehipotees is nie. Daar is gevind dat fisiese werksomstandighede die uitbrandingskomponent, emosionele uitputting, beïnvloed en dat naderingshantering direkte paaie na beide ontpersoonliking en persoonlike vervulling het.

**Sleutelwoorde:** *uitbranding, medelye-uitputting, gesondheidsorg werkers, emosionele uitputting, ontpersoonliking, persoonlike vervulling, werksvereistes, werkshulpbronne, Job Demands-Resources Model (JD-R model), hantering*

While providing care to people in need can be highly rewarding, the interpersonal demands of health care work also mean that it can be highly stressful (Buunk & Schaufeli, 1993). In South Africa, health care professionals, particularly those working in the public sector, have to cope with care-giving demands under extremely poor working conditions and with limited resources (van Rensburg, 2004). It is also well documented that excessive work-related demands and insufficient job-related resources significantly increase the prevalence of occupational stress reactions such as burnout (Schaufeli, 2003) and compassion fatigue (Figley, 2002).

### **Burnout and Compassion Fatigue**

Burnout develops in response to persistent exposure to job-related stressors and is characterised by emotional exhaustion, depersonalisation, and reduced personal accomplishment (Maslach, 1993). High levels of emotional exhaustion leave health care workers unable to perform their job tasks due to lack of energy, while mental distancing or depersonalisation is characterised by the development of negative, callous, and cynical attitudes towards patients and is likely to manifest as a way of attempting to cope with excessive job demands and the feelings of exhaustion that result (Schaufeli & Enzmann, 1998). The final dimension of burnout is a lack of personal accomplishment or the tendency to evaluate one's work with care recipients negatively. Burned-out health care professionals believe that their personal goals and objectives have not been achieved, which results in feelings of inadequacy and poor professional self-esteem (Maslach, Leiter & Schaufeli, 2001; Schaufeli, 2003).

In contrast to the direct impact of job-related or organisational demands on burnout, compassion fatigue develops primarily due to emotional and psychological job-related strain inherent in human service work such as health care (Collins & Long, 2003; Figley, 2002). Compassion fatigue can manifest either due to the strain of having to sustain high levels of empathic engagement with care recipients, or due to the psychological effects of secondary exposure to traumatic material. Compassion fatigue is therefore essentially a trauma-related construct that is characterised by secondary traumatic stress symptoms (such as re-experiencing a care recipient's trauma, heightened arousal, and avoidance behaviour)

together with elements of job burnout (Figley, 2002). Here, the burnout component is primarily associated with the onset of exhaustion due to the emotional demands of human service work and caregiving (Figley, 1995; Gentry, Baranowsky & Dunning, 2002; Jenkins & Baird, 2002; Sexton, 1999).

Although burnout and compassion fatigue hold distinctive and detrimental consequences for health care workers and the organisations that employ them, few studies have simultaneously investigated these syndromes (Collins & Long, 2003).

### **The Interaction between Demands, Resources, and Coping**

The Job Demands – Resources (JD-R) model (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001) provides a framework for conceptualizing how specific demands and resources can influence various job-related outcomes (Llorens, Bakker, Schaufeli & Salanova, in press). This model refers to job demands as physical, social, or organisational aspects of the job that require sustained effort (physical, mental or both) and as such are associated with certain physiological and psychological costs (Llorens, Bakker, Schaufeli & Salanova, in press). On the other hand, job resources refer to physical, social, or organisational aspects of the job that are functional in achieving work goals, reducing job demands, or stimulating personal growth, learning, and development (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). The JD-R model holds that job-related demands and resources are likely to have a cumulative, interactive effect on each other.

Research has found that the demands and lack of resources likely to act as risk factors for burnout and compassion fatigue are widespread in the public health sector (Nkosi, 2002; Van den Berg et al., 2006). Some of the most salient demands include high workloads, long working hours, and inadequate physical working environments, while the opportunity for self-regulatory action at work and job security are resources commonly lacking (Dhaniram & Cilliers, 2004; Govender, 1995; Nixon, 1995; Rothmann, 2003).

High workloads render health care workers vulnerable to both burnout and compassion fatigue, as both have been found to be more prevalent when human service workers are

required to work long hours, have frequent contact with care recipients and have to deal with severe problems (Cordes & Dougherty, 1993; Figley, 2002; Lee & Ashforth, 1996; Sabin-Farrell & Turpin, 2003; Schaufeli & Enzmann, 1998). Furthermore, as a result of overcrowding and severe staff shortages, particularly in rural areas of South Africa, health care professionals are required to work in very poor physical working environments (Benatar, 2004; Roberts, 2003; Van den Berg et al., 2006).

Research has found that burnout may be more prevalent in organisations where certain job-related resources such as job enhancement opportunities, participation in decision making, and opportunities for autonomous functioning are not readily available (De Rijk, Le Blanc, Schaufeli & De Jonge, 1998; Rafferty, Friend & Landsbergis, 2001; Van der Doef & Maes, 1999). South African studies suggest that the availability of job enhancement opportunities and participative decision making opportunities are severely limited in the public sector, due to the bureaucratic management structures and authoritarian organisational cultures characteristic of many health care institutions (Rapea, 2002; van Rensburg, 2004). While less is known about the potential impact of these resources on compassion fatigue, given the growing evidence of the compounding effect of organisational stressors on individuals who also face emotionally taxing caregiving demands, these resources are likely to play a similar role as potential risk factors for compassion fatigue (Figley, 2002).

Another risk factor that is particularly relevant to the South African context is that of job insecurity (De Witte, 2005; Gilson, 2004). In recent international studies, job security was found to act as an important job-related resource, while job insecurity was found to contribute to high staff turnover, low job satisfaction and to higher levels of burnout (Testa, 2001). Research is focusing increasingly on the effects of quantitative and qualitative job insecurity (De Witte, 2005). Both quantitative job insecurity (associated with uncertainty about retaining one's current position within the organisation) and qualitative job insecurity (associated with anxiety about retaining certain aspects associated with one's position such as work content or remuneration levels), have been found to lead to psychological distress and increased stress levels (Sverke, Hellgren, Näswall, Chirumbolo, De Witte & Goslinga, 2004). The relevance of job insecurity to health care organisations was also highlighted in a study by Demerouti, Bakker, Nachreiner and Schaufeli (2001), who found that job insecurity

increased the levels of depersonalisation reported by nurses. This finding suggests that nurses who were experiencing uncertainty due to job insecurity were more likely to treat their patients in a detached manner. It therefore appears that job insecurity can have a generally negative impact on the quality of care provided to patients.

The impact of demands outside of the work-setting is increasingly being recognised as an additional risk factor for burnout and compassion fatigue (Proost, De Witte, De Witte & Evers, 2004). Studies have investigated the effects of various extra-organisational sources of stress - such as work-home interference, family problems, high stress levels at home, health problems, and socio-economic difficulties - on burnout and other job-related outcomes (Demerouti, Bakker & Bulters, 2004; Geurts, Kompier, Roxburgh & Houtman, 2003; Geurts, Rutte & Peeters, 1999; Hart, 1999). The need to better understand the impact of non-work related stressors is supported by research findings in other developing countries. One such study among nurses in Turkey found that low wages, poor living conditions, economic hardships, poor quality housing, and difficulties with transportation to and from work significantly increased nurses' vulnerability to burnout (Demir, Ulusoy & Ulusoy, 2003). Given that many South African health care workers currently employed in the public health sector are themselves from previously disadvantaged communities and as such face similar challenges, the impact of non-work related sources of stress deserve further investigation (Van Rensburg, 2004).

Although the J-DR model provides a useful theoretical framework for understanding the interaction between job-related demands and job-related resources, it is equally important to consider the complex interaction between an employee's personal coping resources and various external resources and demands found in the work environment (Bergh, 2006). Research findings indicate that inadequate coping strategies can potentially further compound the impact of various other demands and a lack of resources (Leiter, 1992; Shaw, Fields, Thacker, & Fisher, 1993; Taylor, Kemeny, Reed, Bower & Gruenewald, 2000).

Specifically, research consistently shows that burned-out employees are more likely to cope with job-related demands in a rather passive, defensive way, whereas individuals who use active and confronting coping strategies are likely to be less vulnerable to burnout (Kilfedder,

Power & Wells, 2001; Leiter, 1992; Schaufeli & Enzmann, 1998). Although fewer empirical studies have investigated the interaction between personal coping resources, external resources and compassion fatigue, initial findings suggest that more adaptive ways of coping are likely to mediate stressful person-environment relations associated with human service work in much the same way as found in other occupational stress reactions (Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986; Wheaton, 1983). Approach orientated rather than avoidant types of coping strategies therefore appear to buffer the effects of the emotional demands encountered in human service occupations (Bernstein & Carmel, 1991; Levert, Lucas & Orlepp, 2000; Ortlepp & Friedman, 2001; Wee & Myers, 2002).

### **The Present Study**

The research findings reviewed in this study all provide growing evidence that in human service occupations (such as health care), exposure to taxing emotional demands may aggravate burnout (which initially resulted from stressors in the workplace in general) (Leiter, 1992), and that when human service workers are simultaneously confronted with insufficient resources in the institutions in which they work, symptoms of compassion fatigue may be exacerbated (Figley, 2002). This places a strong emphasis on the view that burnout and compassion fatigue are both influenced by the complex interaction between various job-related demands, job-related resources, as well as individual coping strategies (Collins & Long, 2003; Maslach, 1993). This study thus undertook to investigate the influence of specific job demands and job resources on burnout and compassion fatigue within the framework of the JD-R model. The JD-R model was also extended to investigate the influence of demands outside of the working environment, as well as the impact of coping, on the complex interactive processes known to lead to burnout and compassion fatigue.

## **Method**

### ***Research Design and Study Population***

A cross-sectional survey design was used in order to achieve the objectives of this study. A convenience sample of doctors and nurses ( $N = 313$ ) was drawn from a public regional hospital which is also an accredited tertiary training hospital affiliated with the Faculty of Health Sciences at the University of the Free State. The hospital in question is one of four district hospitals in the Free State province, which has a population of almost 3 million people. Statistics released by the Free State Department of Health show that approximately 85% of individuals residing in this province do not have medical insurance and are therefore dependent on these four district hospitals for all health care services other than the basic services provided at community based clinics (FSDOH, 2005).

In order to proceed with this study, permission was obtained from senior management personnel of the hospital and from the Medical Ethics Research Committee of the University of the Free State. A total of 600 questionnaires were sent out to the various units and departments within the hospital. A cover letter explained the purpose of the study, stated that participation was voluntary and informed participants that any identifying particulars would be held in the strictest confidence. Participants were also provided with the option of providing their contact details to indicate their interest in receiving feedback regarding the results of the study. A total of 330 completed questionnaires were received back yielding a response rate of 55%. Of these 330 questionnaires, 318 could be analysed. However, five respondents were found to be employed on a part-time basis and were subsequently excluded from further analysis. The final sample was comprised of 31.3% male respondents and 68.7% female respondents, with a mean age of 40.09 years. The final sample included 75 doctors and 237 nurses. Further demographic information is shown in Table 1.

**Table 1: Characteristics of the respondents**

Item	Category	Frequency	Percentage
Gender	Male	98	31.3
	Female	215	68.7
Ethnicity	Black	253	80.3
	White	51	16.3
	Asian	1	0.3
	Coloured	7	2.2
	Missing data	1	0.3
Occupation	Doctor	76	24.0
	Nurse	237	76.0
Home Language	Afrikaans	53	16.9
	English	14	4.5
	Southern Sotho	92	29.4
	Northern Sotho	9	2.9
	Siswali	8	2.6
	Xitsonga	9	2.9
	Setswana	91	29.1
	Tshivenda	8	2.6
	Isixhosa	24	7.7
	Isizulu	5	1.6
Marital Status	Single	109	34.8
	Married	160	51.1
	Remarried	3	1.0
	Divorced	24	7.7
	Widowed	15	4.8
	Engaged	2	0.6
Qualification	Grade 10 - 11	50	16.0
	Grade 12	88	29.1
	Grade 12 + diploma	74	23.6
	Grade 12 + degree	76	24.3
	Grade 12 + postgraduate degree/diploma	25	8.0
Specialised training relevant to department/unit	Yes	141	45.0
	No	172	55.0
Average working hours per day	6 – 8 hours	102	32.6
	9 – 11 hours	115	36.7
	12 – 14 hours	77	24.6
	15 – 17 hours	19	6.1

### ***Measuring Instruments***

The questionnaires were compiled in English, which is the language of written communication of the organisation. A self-compiled biographical questionnaire was used to gather information on the respondents in the following areas: occupation; level of education;



specialized training relevant to current department employed in; gender; ethnicity and home language; marital status; and age.

***The Maslach Burnout Inventory – Human Services Survey (MBI – HSS)*** (Maslach, Jackson & Leiter, 1996) was used to assess the three components of burnout. Items are phrased as statements regarding personal feelings and attitudes toward job-related aspects and are self-scored on a seven-point frequency scale ranging from 0 (*never*) to 6 (*every day*). High scores on Emotional Exhaustion and Depersonalisation and low scores on Personal Accomplishment are indicative of burnout. Although reliability and validity coefficients have been found to be acceptable in several South African studies (Rothmann, 2003; Rothmann, Jackson & Kruger, 2003; Storm & Rothmann, 2003), alpha coefficients for each of the three subscales were calculated for the current sample. For the second subscale of Depersonalisation an initial alpha coefficient of .615 was calculated. Although similar coefficients have been found for this subscale (Schaufeli & Enzmann, 1998), analysis of inter-item statistics showed that omitting Item 20 (*I worry that the job is hardening me emotionally*), would improve the alpha coefficient of this subscale to .63 and this was subsequently done. The alpha coefficients for the Emotional Exhaustion and Personal Accomplishment subscales were calculated as .85 and .69 respectively.

***Professional Quality of Life Scale (ProQOL)*** (Stamm, 2005). Specific items were used to assess compassion fatigue. In its' original form the ProQOL also consists of two additional subscales used to assess burnout-like symptoms as well as respondents' potential for compassion satisfaction by way of Likert scale items ranging from 0 (*never*) to 6 (*very often*). These subscales were not used in this study. Following factor analysis of the ProQOL, a revised subscale measuring secondary stress symptoms was compiled. The alpha coefficient calculated for this revised scale measuring compassion fatigue is .70 (measured by 5 items).

***The COPE Questionnaire.*** The dispositional version of the Coping Orientation to Problems Experienced (COPE) scale (Carver, Scheir & Weintraub, 1989) was used to measure participant's coping strategies. Following exploratory factor analyses of this instrument a four-factor solution was found. Two of the four factors were found to have reliably sound alpha coefficients which were subsequently utilised in further analyses. These factors were

found to represent Approach Coping and Avoidance Coping respectively. Alpha coefficients of .84 and .72 were calculated for these respective measures.

The demands investigated in this study pertain to the physical working environment, working hours, and stressors outside of the work environment.

***Physical Working Environment and Stressors Outside of the Work Environment.*** These demands were measured by items taken from the Experience of Work and Life Questionnaire (WLQ) (van Zyl, 1991) which has been standardised for South African populations. For the purposes of this study, specific items were selected to represent the specific demands to be investigated. Factor analysis of these Likert scale items (ranging from *virtually never* to *virtually always*) was performed in order to ensure a reliable and valid measure of each demand. To assess the job-related demand of the physical working environment, 4 items were selected such as “*facilities meet your needs*” and “*your job equipment is in working order*”. On these items high scores are indicative of low levels of stress. Extra-organisational demands encountered outside of the work environment were assessed by 12 items such as “*facilities at home are a problem*” and “*financial obligations make life difficult for you*”. Here high scores are indicative of higher stress due to non-work-related sources. Alpha coefficients for these measures for the current sample are .63 and .84 respectively.

***Working Hours.*** This job-related demand was measured by one question included in the biographical questionnaire in which respondents were asked to report their average number of working hours per day.

The resources investigated in this study include job security and self-regulatory activity.

***Job Security.*** A measure of quantitative and qualitative job security was obtained by using four (inverted) Likert scale items (ranging from *strongly disagree* to *strongly agree*) adapted from a measure developed by De Witte (2005). Although the alpha coefficient for the four items is quite low (.52), which is commonly the case when utilising four-item measures, similar versions of this scale have been found to be a simple and accurate measure of job security (De Witte, 2005).

***Self-regulatory Activity.*** This resource was measured by items taken from the WLQ (Van Zyl, 1991). Five items were selected and include items such as “*your abilities and skills are developed and extended*” and “*you are included in decision making that concerns you*”. For these items high scores are associated with less stress in this particular area. An alpha coefficient of .67 was calculated for this measure.

## **Statistical Analysis**

The statistical analysis was carried out with the help of the both the SPSS program and its AMOS module. Prior to structural equation modelling, descriptive statistics, canonical correlations and Pearson product correlation coefficients were calculated and used to specify the relationships between the variables. Based on sample size ( $N = 313$ ), an Eta value of .30 was set for interpretation of practically significant relationships (Hair, Black, Babin, Anderson & Tatham, 2005).

## **Results**

### ***Descriptive Statistics***

The alpha coefficients and other descriptive statistics (means, standard deviations, skewness, and kurtosis) for the MBI-HSS, revised ProQOL and revised COPE scale are shown in Table 2.

**Table 2: Descriptive Statistics**

	<b><i>α</i></b>	<b>Mean</b>	<b>SD</b>	<b>Skewness</b>	<b>Kurtosis</b>
MBI: Emotional Exhaustion	.85	27.82	12.579	.101	-.625
MBI: Depersonalisation*	.63	7.26	5.374	.474	-.507
MBI: Personal Accomplishment	.69	31.10	8.427	.127	-.764
ProQOL: Compassion Fatigue	.70	10.16	5.468	.233	-.387
COPE: Approach Coping	.84	67.42	10.559	-.145	-.191
COPE: Avoidance Coping	.72	29.65	6.301	-.216	-.401
Physical Work Environment	.67	12.81	4.016	.272	-.251
Self Regulatory Activity	.63	10.53	3.505	.378	-.357
Stressors Outside of Work	.84	39.02	11.319	.117	-.638
Job Security	.52	10.60	3.001	-.031	.177

*\*Note: Item 20 omitted*

As shown in Table 2, the alpha coefficients are, with the exception of job security, in the range of .70 considered to be acceptable by Nunnally and Bernstein (1994). Furthermore, the mean score for the burnout component of emotional exhaustion falls within the high range, while the mean scores for depersonalisation and personal accomplishment are moderate and low respectively. Moderate levels of compassion fatigue are also indicated.

### ***Pearson Product-Moment Correlations and Canonical Analysis***

As shown in Table 3, Pearson product-moment coefficients were calculated in order to obtain an overview of the likely relationships between the variables. Statistically significant results are shown together with the correlation coefficients of practical significance, which are highlighted in **bold print**.

**Table 3: Pearson Product-Moment Correlation Coefficients between Variables**

	<b>W Hours</b>	<b>EE</b>	<b>Dp</b>	<b>PA</b>	<b>CF</b>	<b>SRA</b>	<b>PWE</b>	<b>SO</b>	<b>Approach coping</b>	<b>Avoid. Coping</b>	<b>Qnt JI</b>	<b>Qlt JI</b>
W Hrs	1	.088	.067	-.112(*)	.014	-.010	-.035	.045	-.080	-.029	.017	.026
EE	.088	1	.205(*)	-.027(*)	<b>.303(**)</b>	-.291(*)	-.211(**)	<b>.347(**)</b>	-.046	.117(*)	.189(**)	.176(**)
Dp	.067	.205(**)	1	<b>-.320(**)</b>	.106	.047	.030	.227(**)	<b>-.352(**)</b>	.110	.095	.019
PA	-.112(*)	-.127(*)	<b>-.320(**)</b>	1	-.181(**)	-.009	-.047	<b>-.325(**)</b>	<b>.458(**)</b>	-.136(*)	-.234(**)	-.117(*)
CF	.014	<b>.303(**)</b>	.106	-.181(**)	1	.068	.136(*)	<b>.412(**)</b>	-.048	<b>.391(**)</b>	.223(**)	.050
SRA	-.010	-.291(**)	.047	-.009	.068	1	<b>.398(**)</b>	.036	.029	.101	-.052	-.195(**)
PWE	-.035	-.211(**)	.030	-.047	.136(*)	<b>.398(**)</b>	1	.083	-.103	.183(**)	-.081	-.163(**)
SOS	.045	<b>.347(**)</b>	.227(**)	<b>-.325(**)</b>	<b>.412(**)</b>	.036	.083	1	-.259(**)	<b>.352(**)</b>	.291(**)	.167(**)
ApC	-.080	-.046	<b>-.352(**)</b>	<b>.458(**)</b>	-.048	.029	-.103	-.259(**)	1	-.021	-.074	-.066
AvC	-.029	.117(*)	.110	-.136(*)	<b>.391(**)</b>	.101	.183(**)	<b>.352(**)</b>	-.021	1	.171(**)	.015
Qnt. JI	.017	.189(**)	.095	-.234(**)	.223(**)	-.052	-.081	.291(**)	-.074	.171(**)	1	.195(**)
Qlt. JI	.026	.176(**)	.019	-.117(*)	.050	-.195(**)	-.163(**)	.167(**)	-.066	.015	.195(**)	1

Inspection of Table 3 shows practically significant correlations between emotional exhaustion, compassion fatigue (.303), and demands outside of the work setting (.347). For depersonalisation practically significant relationships were found with personal accomplishment (-.320) and approach coping (-.352). Personal accomplishment is related to depersonalisation (-.320), demands outside of the work setting (-.325) and approach coping (-.352). Compassion fatigue shows practically significant correlations with the burnout component of emotional exhaustion (.303), demands encountered outside of work (.412) and avoidance coping (.391). Conversely, demands outside of work are also related to emotional exhaustion (.347), compassion fatigue (.412) and avoidance coping (.352). Approach coping is related to two burnout components, namely depersonalisation (-.352) and personal accomplishment (.458). Avoidance coping shows practically significant correlations with compassion fatigue (.391) and demands outside of the work setting (.352).

Furthermore, Table 3 indicates that working hours and quantitative and qualitative job insecurity yielded statistically significant results, but did not show practically significant relationships with any of the other variables. Moreover, self regulatory ability and physical working conditions only yielded practically significant correlations with each other. Based on these findings, a canonical analysis was subsequently undertaken before progressing to structural equation analysis, in order to obtain a clearer picture of the possible relationships between job-related demands (working hours and physical working conditions), demands outside of work, resources (self regulatory activity and job security), and approach and avoidance coping.

As summarised in Table 4, canonical analysis subsequently yielded an overall canonical correlation of .47 indicating a moderate correlation between these two sets of variables. In addition a chi-square significance test showed that only the first canonical root was statistically significant and should be examined further. Again practically significant relationships are highlighted in **bold print**.

**Table 4: Canonical Analysis of Demands, Resources and Coping**

Canonical Root		Correlation Coefficients		
First	Working hours	.06	-.58	<b>Approach Coping</b> <b>Avoidance Coping</b>
	Self Regulatory Activity	.14	.35	
	<b>Physical Work Environment</b>	<b>.43</b>		
	<b>Demands Outside of Work</b>	<b>.92</b>		
	<b>Quantitative Job Security</b>	<b>.38</b>		
	<b>Qualitative Job Security</b>	<b>.01</b>		
Canonical R		R = .47		
Variance Extracted		37.15%	100%	
Total Redundancy		4.78%	12.18%	

As can be seen from the results summarised in Table 4, practically significant correlations were found between demands in the physical working environment (.43), demands outside of the work setting (.92), quantitative job insecurity (.38), approach coping (-.58), and avoidance coping (.35).

Based on this analysis and the low correlations found for working hours, self-regulatory activity and job security, it was anticipated that demands would likely yield more robust relationships with the other variables in the structural equation model. Based on the exploratory analyses by way of Pearson product correlations and the canonical correlation analysis, the following predictions were made:

1. Burnout and compassion fatigue are positively related to each other.
2. Coping will mediate the influence of job demands, extra-organisational demands, and job resources on burnout and compassion fatigue.

### ***Structural Equation Modelling***

Analysis of the proposed model proceeded by first obtaining an overview of the fit of the model by considering the overall  $X^2$  value and its degrees of freedom value. Based on several other goodness-of-fit statistics, a global assessment of fit indicated an ill-fitting hypothesised

model in its initial form. Possible misspecifications were thus investigated by considering both the modification indices obtained during this early stage of analysis, as well as theoretical assumptions.

Although based on initial analyses it was expected that job resources would show less robust relationships with burnout, compassion fatigue and coping, analysis of the modification indices found that resources in fact failed to show any significant relation to these variables. As a result, subsequent attempts to respecify the model in order to obtain a meaningful fit for the dimension of resources (based on modification indices and on underlying theoretical considerations) proved unsuccessful. This meant that this variable (comprising self-regulatory activity and job security) had to be removed from the initially hypothesised model. A similar situation occurred with average working hours, which was not found to correlate significantly with burnout or compassion fatigue and as such was also removed from the model.

This decision yielded a significantly improved model fit. One negative error variance, termed a Hayward case, was also encountered for coping. This type of error variance is considered to be logically impossible because it implies a less than 0 percent error in an item, and by inference, implies that more than 100 percent of the variance in an item is explained. Hayward cases are particularly problematic in confirmatory factor analysis models with small samples sizes. Two possible solutions can be considered in such cases. Firstly, the researcher can set the error variance at an arbitrary number (such as 0.005), as was selected in this case. Although this value may identify the parameter, it can lead to lower fit given that the value is not likely to be the true sample value. Another solution for Hayward cases is to delete the offending variable, but in this case the option of setting the error variance at 0.05 was deemed to be theoretically more meaningful.

Following this, the modification indices were again analysed and three indices were found to require further consideration. Firstly, this analysis indicated that model fit would improve by correlating the burnout dimension of personal accomplishment with approach coping (MI = 27.473). Approach coping was indicated to correlate with depersonalisation (MI = 27.573), while emotional exhaustion was indicated to correlate with physical working conditions (MI



= 22.301). Hereafter, all modification indices were below 10 and found to be acceptable given the model's fit. The goodness-of-fit statistics of the initial model as well as those of the revised and final model are shown in Table 5.

**Table 5: Goodness-of-fit Indices for Initial Model and Revised Model**

Index	Value of Initial Model	Value of Final Model
Degrees of Freedom	64	16
Chi-Square	346.334 (P=0.0)	53.647 (P=0.0)
Root Mean Square Error of Approximation (RMSEA)	.119	.087
90% Confidence Interval for RMSEA	(.107; .131)	(.062; .113)
PCLOSE	.000	.009
Normed Fit Index (NFI)	.523	.868
Comparative Fit Index (CFI)	.565	.900
Incremental Fit Index (IFI)	.574	.903
Relative Fit Index (RFI)	.419	.768
Root Mean Square Residual (RMR)	5.688	4.137
Goodness of Fit Index (GFI)	.839	.959
Adjusted Goodness of fit (AGFI)	.771	.908
Parsimony Goodness of fit (PGFI)	.590	.426

As can be seen in Table 5, a number of goodness-of-fit indexes were used to evaluate model fit, including the GFI (Goodness-Of-Fit Index) (Hair et al., 2005). As shown, the GFI of the final model is in keeping with the accepted value .90 used by convention to accept a model. Similarly, the AGFI (Adjusted Goodness-Of-Fit Index), which is a variant of GFI and uses mean squares instead of total sums of squares in the numerator and denominator of  $1 - \text{GFI}$ , is above the .90 level.

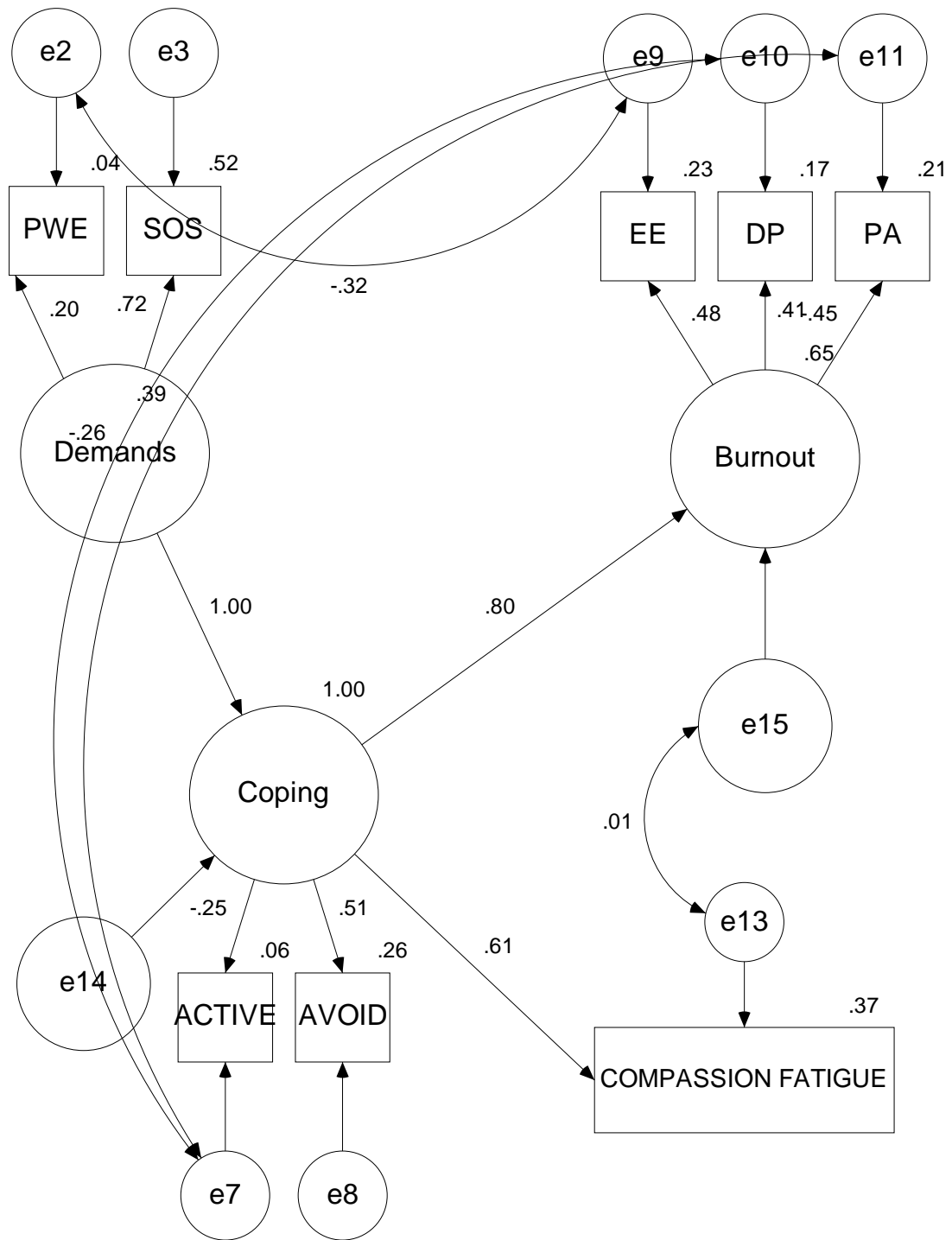
The CFI (Comparative Fit Index) was also considered in this study, as it compares the existing model fit with a null model (which assumes the latent variables in the model are uncorrelated). The value of this index found for the final model meets the minimum requirements set for the CFI of .90, which indicates that 90% of the covariation in the data can be reproduced by the final model.

The RMSEA (Root Mean Square Error of Approximation) was also considered in this study, as it is a popular fit index that gives an indication of discrepancy per degree of freedom. In

the final model, RMSEA = .087, indicating adequate fit (Hair et al., 2005). PCLOSE was also considered in addition as it tests the null hypothesis that RMSEA is no greater than .05.

The Normed Fit Index (NFI), Incremental Fit Index (IFI), and Relative Fit Index (RFI) also showed improved values in the final model. Although the Root Mean Square Residual (RMR) (Hair et al., 2005) is above the expected value, based on the overall fit indices this was not considered to be problematic. Finally, the Parsimony goodness-of-fit index (PGFI) was considered as it addresses the issue of parsimony in SEM. As such the PGFI takes into account the complexity (i.e. number of estimated parameters) of the hypothesised model in the assessment of overall fit and provides a more realistic fit of the hypothesised model. Although values of greater than .80 are considered more appropriate in the final model PGFI = .426 was calculated, which is in keeping with findings that indexes in the .90's accompanied by PGFI's in the .50's are not unexpected. The final model is illustrated in Figure 1.

As can be seen in Figure 1, the paths from demands (job-related and non-job related) to burnout and compassion fatigue through coping are significant. Demands encountered within the physical working environment have a direct path to the emotional exhaustion component of burnout. Direct paths from approach coping to the burnout components of depersonalisation and personal accomplishment are also significant. The path between burnout and compassion fatigue is less significant.



**Figure 1: Final Model of Burnout and Compassion Fatigue**

Note: EE: Emotional Exhaustion  
 PA: Personal Accomplishment  
 Avoid: Avoidance-orientated Coping  
 PWE: Physical working environment  
 DP: Depersonalisation  
 Active: Approach-orientated Coping  
 SOS: Stressors outside of work

## Discussion

The aim of this study was to test a model of burnout and compassion fatigue for health care professionals working in a public health care institution. The model tested in this study was based on the JD-R Model (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001), that was extended to investigate the influence of demands encountered outside of the working environment, as well as the role of coping in burnout and compassion fatigue.

Analysis of the model by way of structural equation modelling found that the initially hypothesised relationship between job resources (self-regulatory activity and job security), burnout, compassion fatigue, and coping did not fit the data well. It was found that adequate model fit was achieved when job demands and demands outside of the work-setting were considered in isolation. Due to this only partial support for the JD-R model of burnout and compassion fatigue was found.

The poor relationship between job resources, burnout and compassion fatigue may be due to two independent factors. Firstly, it must be considered that the conceptualisation of self-regulatory activity, and perhaps also the measurement of job insecurity by way of four items, may need to be adapted. It is possible that different measures of these resources would yield significant findings in future studies. The finding of a robust relationship between demands, burnout and compassion fatigue, and a poor relationship between job resources, must also be considered from a theoretical perspective. Specifically, the health care professionals in this institution face high workloads amid poor working conditions such as a lack of basic equipment and inadequate basic facilities (FSDOH, 2005; Van Rensburg, 2004). The less prominent role of job resources may thus be due to the debilitating impact that a lack of basic equipment has on health care workers' ability to perform their jobs and subsequently also on burnout and compassion fatigue (Van den Berg et al., 2006). This assumption appears to be supported by the direct path found between demands in the physical working environment and the burnout component of emotional exhaustion. It appears that difficulties due to a lack of basic equipment and infrastructure increase levels of emotional exhaustion which is considered to be the key component of burnout (Demir, Ulusoy, & Ulusoy, 2003; Schaufeli & Enzmann, 1998).

A robust relationship between demands outside of the work-setting and burnout and compassion fatigue was found. This provides support for other more recent findings of a spill-over effect between work and home life found in other studies (Demir, Ulusoy & Ulusoy, 2003; Geurts, Kompier, Roxburgh & Houtman, 2003; Geurts, Rutte & Peeters, 1999).

An important finding of this study is that coping has a mediating influence on the impact of job-related demands and extra-organisational demands on burnout as well as on compassion fatigue. Firstly, this provides support for the well-documented relationship between work-related stressors and burnout (Maslach, Schaufeli & Leiter, 2001; Schaufeli & Enzmann, 1998). Secondly, this finding also provides support to more recent findings that occupational stress reactions, such as burnout and compassion fatigue, can also be influenced by stressors and demands encountered outside of the work-setting (Meyers & Cornille, 2002; Proost, De Witte, De Witte & Evers, 2004). Thirdly, this finding provides empirical evidence for the impact of organisational demands on the trauma-related construct of compassion fatigue (Figley, 2002).

Furthermore, this finding highlights the important role that coping can have in the onset of burnout and compassion fatigue. Approach coping was found to correlate negatively with the burnout component of depersonalisation and positively with personal accomplishment, which supports previous findings that have documented a robust relationship between approach orientated coping and lower levels of burnout (Schaufeli & Enzmann, 1998) and compassion fatigue (Nkosi, 2002).

Few studies have investigated the simultaneous occurrence of burnout and compassion fatigue among health care workers and other human service workers, who are uniquely vulnerable to both. An important finding of this study was thus the small positive correlation between burnout and compassion fatigue. Although both coping and demands showed similar relationships with both syndromes, this finding emphasises that despite the similar impact of job-related demands, burnout and compassion fatigue are distinct syndromes and that each syndrome's unique impact on health care workers needs to be considered (Collins & Long, 2003).

Finally, coping was found to mediate the influence of job demands and extra-organisational demands on burnout and compassion fatigue, but was not found to influence job resources as initially hypothesised. A limitation of this study is that a cross-sectional research design was used, which makes it difficult to determine causality in the relationships found between the variables. A further limitation may lie in the generalisability of the findings given that the respondents were employed in the same hospital. However, as in all studies conducted, the generality and theoretical contribution of the findings of this study will largely depend on the replication of findings in diverse sample populations.

### **Recommendations**

Despite the limitations of this study, the findings of the present research hold important considerations for future research. Firstly, more studies are needed that concurrently investigate the syndromes of burnout and compassion fatigue among human service workers, as they are uniquely vulnerable to both (Collins & Long, 2003). Future research should focus specifically on identifying the potential antecedents in high risk occupations. Furthermore, future studies should aim to include other stressors and demands associated with burnout and compassion fatigue that were not investigated in this study. Specifically, qualitative workload may likely be an important consideration in this regard (Collins & Long, 2003; Schaufeli & Enzmann, 1998).

Based on the findings of the present study, both work-directed and person-directed are recommended for the organisation in question. Firstly, a priority needs to be to address the poor physical working conditions and shortage of resources and supplies in the facility. Although this recommendation is made with consideration of the budget constraints faced by the Department of Health, urgent attention to the physical working environments of health care workers is needed. The shortages of medicine, equipment and other resources are not only impacting on individual levels of burnout and compassion fatigue but are undoubtedly also hampering service delivery. It will be important to conduct an audit in consultation with the doctors and nurses currently working in the relevant departments in order to accurately determine the greatest area of need (Van den Berg, et al., 2006).

In addition to the aforementioned recommendations, person-directed interventions are also recommended. Based on the findings that work-related demands and demands outside of the work environment are related to both burnout and compassion fatigue, interventions are needed that will focus on promoting effective coping and a healthy lifestyle. Workshops aimed at promoting a healthy lifestyle and facilitating the acquisition of effective coping skills may empower health care workers by enabling them to deal with challenging work and life demands more effectively.

## REFERENCES

- Adams, R.E., Boscarino, J.A. & Figley, C.R. (in press). Compassion fatigue among a sample of New York social workers: Instrument psychometrics. *Journal of Orthopsychiatry*.
- Benatar, S.R. (2004b). Ethical challenges for health care in South Africa. In H.C.J. van Rensburg (Ed.), *Health and Health Care in South Africa* (pp.561-606). Pretoria: Van Schaik Publishers.
- Bergh, Z. (2006). Personality: Individual differences in work performance. In Z. Bergh & A. Theron (Eds.), *Psychology in the work context* (pp. 460 – 486).
- Bernstein, J. & Carmel, S. (1991). Gender differences over time in medical school stressors, anxiety and the sense of coherence. *Sex Roles*, 5/6, 335-344.
- Buunk, B.P., & Schaufeli, W.B. (1993). Burnout: A perspective from social comparison theory. In W.B. Schaufeli, C. Maslach & T. Marek (Eds.), *Professional Burnout: Recent Developments in Theory and Research*. Washington: Taylor & Francis.
- Carver, C.S., Scheier, M.F. & Weintraub, J.K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology*, 56(2), 267–283.
- Collins, S. & Long, A. (2003). Working with the psychological effects of trauma: consequences for mental health-care workers – a literature review. *Journal of Psychiatric and Mental Health Nursing*, 10, 17-424.
- Cordes, C.L. & Dougherty, T.W. (1993). A review and integration of research on job burnout. *Academy of Management Review*, 18(4), 621-656.
- Demerouti, E., Bakker, A.B. & Butlers, A.J. (2004). The loss spiral of work pressure, work – home interference and exhaustion: Reciprocal relations in a three – wave study. *Journal of Vocational Behaviour*, 64, 131–149.
- Demerouti, E., Bakker, A.B., Nachreiner, F. & Schaufeli, W.B. (2001). The job-demands resources model of burnout. *Journal of Applied Psychology*, 86(3), 499-512.
- Demir, A., Ulusoy, M. & Ulusoy, M.F. (2003). Investigation of factors influencing burnout levels in the professional and private lives of nurses. *International Journal of Nursing Studies*, 40, 807-827.



- De Rijk, A.E., Le Blanc, P.M., Schaufeli, W.B. & De Jonge, J. (1998). Active coping and need for control as moderators of the job-demand control model: effects on burnout. *Journal of Occupational and Organisational Psychology*, 71, 1-18.
- De Witte, H. (2005). Job insecurity: Review of international literature on definitions, prevalence, antecedents and consequences. *South African Journal of Industrial Psychology*, 31(4), 1-6.
- Dhaniram, N. & Cilliers, F. V. N. (2004). *Stress, burnout and salutogenic functioning amongst community service doctors in Kwazulu-Natal hospitals*. Poster presented at the 2nd Annual Work Wellness Conference, Potchefstroom, South Africa.
- Figley, C.R. (1995). *Compassion fatigue: Coping with Secondary Traumatic Stress Disorder in Those Who Treat the Traumatized*. New York: Brunner Mazel.
- Figley, C.R. (2002). Introduction. In C. R. Figley (Ed.), *Treating Compassion Fatigue*. New York: Brunner-Routledge.
- Folkman, S., Lazarus, R.S., Dunkel-Schetter, C., DeLongis, A. & Gruen, R.J. (1986). Dynamics of a stressful encounter: Cognitive appraisal, coping, and encounter outcomes. *Journal of Personality and Social Psychology*, 50(5), 992-1003.
- Free State Department of Health (FSDOH). *Strategic plan for 2005/2006 to 2007/2008*.
- Gentry, J.E., Baranowsky, A.B., & Dunning, K. (2002). The accelerated recovery program (ARP) for compassion fatigue. In C. R. Figley (Ed.), *Treating Compassion Fatigue*. New York: Brunner-Routledge.
- Geurts, S., Rutte, C. & Peeters, M. (1999). Antecedents and consequences of work-home interference among medical residents. *Social Science & Medicine*, 48, 1135- 1148.
- Geurts, S.A.E., Kompier, M.A.J, Roxburgh, S. & Houtman, I.L.D. (2003). Does work-home interference mediate the relationship between workload and well-being? *Journal of Vocational Behaviour*, 63, 532-559.
- Gilson, L. (2004). The state of decentralisation in the South African health sector – 2003. In *The Local Government & Health Consortium: Decentralising health services in South Africa: Constraints and opportunities – a cross cutting report*. Retrieved on January 13, 2005 from <http://www.hst.org>.

- Govender, K. (1995). *An investigation into the role of perceived sources of stress, perception of work environment, type of hospital ward and nurse rank in occupational distress, coping and burnout among practising nurses*. Unpublished masters dissertation. Pietermaritzburg: University of Natal.
- Hair, J. E., Black, W. C., Babin, B. J., Anderson, R. E. & Tatham, R. L. (2005). *Multivariate Data Analysis* (Sixth Edition). New Jersey: Pearson Prentice Hall.
- Hart, P.M. (1999). Predicting employee life satisfaction: a coherent model of personality, work and nonwork experiences, and domain satisfactions. *Journal of Applied Psychology*, 84, 564-584.
- Jenkins, S.R. & Baird, S. (2002). Secondary traumatic stress and vicarious trauma: a validation study. *Journal of Traumatic Stress*, 15(5), 423-432.
- Kilfedder, C.J., Power, K.G., & Wells, T.J. (2001). Burnout in psychiatric nursing. *Journal of Advanced Nursing*, 34(3), 383-396.
- Lee, R.T. & Ashforth, B.E. (1996). A meta-analytic examination of the correlates of the three dimensions of job burnout. *Journal of Applied Psychology*, 81(2), 123-133.
- Leiter, M.P. (1992). Burnout as a crisis in professional role structures: measurement and conceptual issues. *Anxiety, Stress and Coping*, 5, 79 – 93.
- Levert, T., Lucas, M. & Ortlepp, K. (2000). Burnout in psychiatric nurses: contributions of the work environment and a sense of coherence. *South African Journal of Psychology*, 30(2), 36-43.
- Llorens, S., Bakker, A.B., Schaufeli, W. & Salanova, M. (in press). Testing the robustness of the job demands-resources model. *International Journal of Stress Management*.
- Maslach, C. (1993). Burnout: a multidimensional perspective. In W.B.Schaufeli, C. Maslach & Marek, T. (Eds.), *Professional Burnout: Recent Developments in Theory and Research*. Washington: Taylor & Francis.
- Maslach, C., Jackson, S.E. & Leiter, M.P. (1996). *Maslach Burnout Inventory Manual* (3<sup>rd</sup> ed.).
- Maslach, C., Leiter, M.P., & Schaufeli, W.B. (2001). Job burnout. *Annual Review of Psychology*, 52, 397 – 422.
- Meyers, T., & Cornille, T.A. (2002). The trauma of working with traumatised children. In C.R. Figley (Ed.), *Treating Compassion Fatigue* (pp. 39-55). New York: Brunner – Routledge.

- Nixon, M. (1995). *Burnout, work environment, and coping in surgical hospital nurses*. Unpublished Masters dissertation. Cape Town: University of Cape Town
- Nkosi, S.N.P-C. (2002). *The relationship between compassion fatigue and coping styles in nurses working in a hospital trauma unit*. Unpublished Masters dissertation. Johannesburg: University of the Witwatersrand.
- Nunally, J.C., & Bernstein, I.H. (1994). *Psychometric theory* (3rd ed.). New York: McGraw-Hill.
- Ortlepp, K. & Friedman, M. (2001). The relationship between sense of coherence and the indicators of traumatic stress in non-professional trauma counsellors. *South African Journal of Psychology*, 31(2), 38-45.
- Proost, K., De Witte, H., De Witte, K. & Evers, G. (2004). Burnout among nurses; extending the job-control-support model with work-home interference. *Psychologica Belgica*, 44(4), 269-288.
- Rafferty, Y., Friend, R. & Landsbergis, P.A. (2001). The association between job skill discretion, decision authority and burnout. *Work & Stress*, 15(1), 73-85.
- Rapea, A. (2002). People management that supports service delivery. *Service Delivery Review*, 1 (3), 27–30.
- Raphela, M.M.R. (2000). *Stress and coping in nurses who care for terminally ill patients*. Unpublished masters dissertation. University of Port Elizabeth.
- Roberts, J. (Ed). (2003). The national primary health care facilities survey 2003. Retrieved on January 7, 2005 from <http://www.hst.org.za/publications/617>
- Rothmann, S. (2003). Burnout and engagement: A South African perspective. *South African Journal of Industrial Psychology*, 29(4), 16–25.
- Rothmann, S., Jackson, L.T.B. & Kruger, M.M. (2003). Burnout and job stress in a local government: the moderating effect of sense of coherence. *South African Journal of Industrial Psychology*, 29(4), 52-60.
- Sabin-Farrell, R. & Turpin, G. (2003). Vicarious traumatisation: implications for the mental health of health workers? *Clinical Psychology Review*, 23, 449-480.
- Schaufeli, W.B. (2003). Past performance and future perspectives of burnout research. *South African Journal of Industrial Psychology*, 29(4), 1-15.

- Schaufeli, W.B. & Enzmann, D. (1998). *The burnout companion to study and practice – a critical analysis*. London: Taylor & Francis.
- Sexton, L. (1999). Vicarious traumatising of counsellors and effects on their workplace. *British Journal of Guidance and Counselling*, 27 (3), 393- 402.
- Shaw, J.B., Fields, M.W., Thacker, J.W. & Fisher, C.D. (1993). The availability of personal and external coping resources: Their impact on job stress and employee attitudes during organizational restructuring. *Work and Stress*, 7(3), 329-246.
- Stamm, B.H. (2005). *The Professional Quality of Life Scale: Compassion satisfaction, burnout and compassion fatigue/secondary trauma scales*. Idaho University: Sidran Press.
- Storm, K. & Rothmann, S. (2003). The relationship between burnout, personality traits and coping strategies in a corporate pharmaceutical environment. *South African Journal of Industrial Psychology*, 29(4), 35-42.
- Sverke, M., Hellgren, J., Näswall, K., Chirumbolo, A., De Witte, H. & Goslinga, S. (2004). *Job insecurity and union membership: European unions in the wake of flexible production*. Brussels: P.I.E.-Peter Lang.
- Taylor, S.E., Kemeny, M.E., Reed, G.M., Bower, J.E. & Gruenewald, T.L. (2000). Psychological resources, positive illusions and health. *American Psychologist*, 99-109.
- Testa, M.R. (2001). Organisational commitment, job satisfaction, and effort in the service environment. *The Journal of Psychology*, 135(2), 226-236.
- Van den Berg, H., Bester, C., Janse-van Rensburg-Bonthuyzen, E., Engelbrecht, M., Hlophe, H., Summerton, J., Smit, J., Du Plooy, S. & van Rensburg, D. (2006). *Burnout and compassion fatigue in professional nurses: A study in PHC facilities in the Free State, with special reference to the antiretroviral treatment program*. Bloemfontein: Centre for Health Systems Research and Development.
- Van Der Doef, M. & Maes, S. (1999). The job demand-control (-support) model and psychological well-being: A review of 20 years of empirical research. *Work and Stress*, 13(2), 87-114.
- Van Rensburg, H.C.J. (2004). The history of health care in South Africa. In H.C.J. van Rensburg (Ed.), *Health and health care in South Africa* (pp.52-103). Pretoria: Van Schaik Publishers.

- Van Zyl, E.S. (1991). *Experience of Work and Life Circumstances Questionnaire*. Pretoria: Human Sciences Research Council.
- Wee, D.F. & Myers, D. (2002). Stress response of mental health workers following disaster: the Oklahoma City bombing. In C.R. Figley (Ed.), *Treating Compassion Fatigue*. New York: Brunner – Routledge.
- Wheaton, B. (1983). Stress, personal coping resources, and psychiatric symptoms: an investigation of interactive models. *Journal of Health and Social Behaviour*, 24, 208-229.

## CHAPTER 8

In this chapter a summary of the most significant research findings of this study is given. The limitations of the research are discussed and recommendations are made for the institution in question and for future research.

### **8.1     *Summary of Literature Review Findings***

Two literature reviews were undertaken. Firstly, a literature review was prepared in order to obtain a clear theoretical understanding of burnout and compassion fatigue. A review of previous studies underscored the fact that as a more recent construct, less is presently known about compassion fatigue in comparison with burnout, which is well researched and well developed from a theoretical perspective (Rodrigo, 2002; Schaufeli & Enzmann, 1998). One noteworthy finding was that in human service occupations the risk factors for burnout and compassion fatigue overlap somewhat (Collins & Long, 2003; Rodrigo, 2002). This finding is commonly attributed to the fact that human service workers are confronted with both the organisational and work-related stressors commonly encountered in modern day organisational life, as well as with the emotional and psychological demands inherent in care giving. Research findings also indicate that more general sources of job-related stress and psychological job-related strain may have a compounding effect on each other (Buunk & Schaufeli, 1993; Figley, 2002; Maslach, 1993). However, little is known about the exact underlying psychological mechanism by which this occurs (Rodrigo, 2002). Nonetheless, based on available research, the assumption can be asserted that human service workers – including health care workers - are at risk for both syndromes, in contrast to workers in other occupation groups who are not exposed to the psychological demands of care provision and therefore solely at risk for burnout (Figley, 2002). Despite this, few studies have concurrently investigated these syndromes and reported on empirical findings in this regard. This further highlights the need for more empirical research on compassion fatigue itself, as well as on how burnout and compassion fatigue can interact and manifest in human service workers suffering from both syndromes (Collins & Long, 2003).

A literature review was also undertaken in order to obtain a clearer understanding of the exact nature of the working conditions encountered by many doctors and nurses in the South African public sector. This review highlighted a number of areas of concern as well as a number of factors that have contributed to the current status of the health system. Specifically, it was found that the implementation of reform measures and the transformation of the health sector have inadvertently resulted in a number of challenges such as inadequate facilities, critical shortages of health care workers, and severe shortages of basic medicines and equipment (Benatar, 2004; Van Rensburg, 2004). These challenges, together with the HIV/AIDS pandemic, were considered within the Job-Person model of burnout, which holds that certain demands and stressors in the working environment potentially lead to six areas of job-person mismatch (Maslach, Leiter & Schaufeli, 2001). Given the negative outcomes associated with burnout and compassion fatigue and the prevalence of numerous risk factors within the public health sector, this review highlights an urgent need for role players to investigate the prevalence of burnout and compassion fatigue, as well as the specific causes.

## **8.2     *Summary of Empirical Research Findings***

A broad objective of this study was to gather baseline data regarding levels of burnout and compassion fatigue among doctors and nurses working in a public health care facility. Prior to undertaking this portion of the study, a review of recent research findings found that some questions had been raised regarding the Professional Quality of Life Scale (ProQOL) (Stamm, 2005) as an accurate measure of compassion fatigue (Jenkins & Baird, 2002). Based on these findings it was decided to perform a factor analysis of the ProQOL.

An exploratory factor analysis by principal axis factoring with oblique rotation and Kaiser Normalisation was performed on the 30 items of the ProQOL. A second order analysis yielded a two factor solution with Factor I representing an internally consistent and theoretically sound construct of compassion satisfaction. In contrast, the items that loaded on Factor II were a combination of secondary trauma symptoms from the original compassion fatigue subscale and burnout-like symptoms from the original risk for burnout scale. This finding suggests that the ProQOL in its current form does not effectively differentiate between burnout-type symptoms and secondary stress symptoms. This finding also indicates

that further refinement of the ProQOL is needed in order to allow for accurate assessment of the two components of compassion fatigue (i.e. secondary trauma symptoms and secondary compassion fatigue-related burnout symptoms). In the interim, the items measuring the construct of compassion satisfaction appears to be a valid measure.

Based on the results of the factor analysis, five items (Items 9, 13, 14, 23, and 25) from the original compassion fatigue scale were used to assess the prevalence of secondary trauma symptoms among respondents. Eight items (Items 3, 4, 12, 20, 22, 24, 27, and 30) measuring compassion satisfaction were used to assess the prevalence of this construct. In keeping with one of the key aims of this research, that is the simultaneous investigation of the prevalence of the syndrome of burnout and the syndrome of compassion fatigue, it was decided to exclude items of the burnout scale of the ProQOL in this part of the analysis in order to ensure that the syndrome of compassion fatigue could be readily distinguished from Maslach's three-component conceptualisation of burnout.

Next, it was undertaken to determine the levels of burnout, compassion fatigue, and compassion satisfaction reported by respondents. In the case of burnout, 56.2% of the respondents reported high levels of emotional exhaustion, 26.2% reported high levels of depersonalisation, and 55% reported low levels of personal accomplishment. In comparison with similar South African populations, a larger percentage of the respondents in this study reported feeling extremely exhausted emotionally, as well experiencing reduced personal accomplishment (Govender, 1995; Ribeiro, 2004). The majority of respondents (46%) reported average levels of both compassion fatigue and compassion satisfaction. High levels of compassion fatigue were reported by 26.8% of the respondents, while a similar proportion (26.2%) reported high levels of compassion satisfaction. The levels of compassion fatigue are significantly higher than the 19% of crisis intervention workers in a recent North American study who reported high levels of compassion fatigue (Lepore, 2004), while the levels of compassion satisfaction are similar to those found among South African trauma counsellors (Ortlepp & Friedman, 2001).

Analyses were also performed in order to investigate any occupation-specific differences regarding the levels of burnout, compassion fatigue and compassion satisfaction reported by



the group of doctors and the levels reported by the group of nurses who participated in this study. Significant differences were found for two burnout components (emotional exhaustion and personal accomplishment) and for both compassion fatigue and compassion satisfaction. Thus, while doctors and nurses report similar (moderate) levels of depersonalisation, doctors report moderate levels of emotional exhaustion in comparison with nurses who reported high levels. Doctors reported moderate levels of personal accomplishment while nurses reported low levels. Doctors also reported lower levels of compassion fatigue and higher levels of compassion satisfaction than nurses.

Having identified the levels of burnout, compassion fatigue and compassion satisfaction, further analysis found that 42 respondents (13.4%) of respondents met the criteria for the full burnout syndrome (that is high levels of emotional exhaustion, high levels of depersonalisation, and low levels of personal accomplishment). This proportion of 13.4% is slightly higher than generally recorded in most international studies (Schaufeli, 2003; Schaufeli & Enzmann, 1998). Of these 42 respondents, 13 were found to have also reported high levels of compassion fatigue. To the researcher's knowledge the comorbidity of these syndromes has not been documented and due to this comparative analysis of this finding cannot be made at this time.

Another important research objective of this study was to identify the stressors contributing to burnout and compassion fatigue among the doctors and nurses who participated in this study. Canonical analysis was therefore used to investigate the relationships between various job-related stressors, extra-organisational sources of stress, burnout, compassion fatigue, and compassion satisfaction. The job-related stressors investigated included physical working conditions, self-regulatory activity, job insecurity (quantitative and qualitative), and working hours. Canonical analyses were performed for the total sample population as well as for the two occupation groups of doctors and nurses.

For the total sample of respondents stressors outside of the work environment, as well as quantitative and qualitative job insecurity, were associated with compassion fatigue, compassion satisfaction, and all three burnout components. This finding provides strong support for the spill-over effect between work and home life found in other studies (Demir,

Ulusoy & Ulusoy, 2003) and also provides support for previous findings linking job insecurity and burnout (Demerouti, Bakker, Nachreiner & Schaufeli; 2001). This finding also provides new information regarding the potential relationship between job insecurity and compassion fatigue (Rodrigo, 2002). Another important finding is that job insecurity also appears to negatively influence compassion satisfaction – that is how doctors and nurses experience the act of caregiving, the meaning they derive from their work, and their feelings of success as helpers.

Comparison of the two occupation groups found that among doctors, stress due to extra-organisational sources was strongly correlated with the burnout component emotional exhaustion, as well as with compassion fatigue. This finding concurs with previous studies regarding the compounding effect that excessive demands encountered in one's private life can have on job-related stress (Decker, 1997; Leiter, 1992). Further support for this was also found among nurses by way of robust correlations between stressors outside of the work setting and all three burnout components, as well as compassion fatigue, and compassion satisfaction. Among nurses, quantitative job insecurity was also found to be related to all of these aspects. This suggests that perceived uncertainty regarding continuity of the job itself is likely more stressful than insecurity regarding the continued existence of certain aspects of the job (De Witte, 2005).

It was also found that the relationships between self-regulatory activity, stressors in the physical work environment and burnout and compassion fatigue were less robust. Similarly, average number of daily working hours did not correlate significantly with burnout, compassion fatigue or compassion satisfaction. This finding is in contrast with other studies that found that longer working hours increased levels of burnout and compassion fatigue (Heyns, Venter, Esterhuyse, Bam & Odendaal, 2003; Wee & Myers, 2002). The findings in the present study may indicate that other stressors are more problematic to the doctors and nurses in this particular organisation.

This study also undertook to investigate the influence of coping on burnout, compassion fatigue and compassion satisfaction, given that an individual's mode of coping has been found to have a significant influence on the impact of stressors encountered in work and

family life (Carr, 2004). Prior to proceeding with this investigation, it was found that recent South African studies had identified a need to investigate the structural validity of the COPE scale used to measure coping strategies in this study. In view of this, an exploratory factor analysis by principal axis factoring with oblique rotation and Kaiser Normalisation was performed. A second order analysis yielded a theoretically sound four factor solution similar to the factor structure identified in other South African studies (Naudé, 2003; Raphela, 2000; Pienaar, 2002). However, a noteworthy difference was the finding that the items representing Turning to Religion loaded on the first factor together with the items representing various approach-orientated coping strategies. This is in contrast to the factor structure commonly found, where the items representing the subscale Turning to Religion load on a separate factor (Naudé, 2003; Raphela, 2000; Pienaar, 2002).

The first factor thus contained items representing Active Coping, Planning, Restraint Coping, Acceptance, Positive Reinterpretation and Growth, and Turning to Religion. This factor was subsequently labelled Approach Coping. Analysis of the second factor revealed that the items that loaded on this factor represented Behavioural Disengagement, Mental Disengagement, Denial, and Alcohol and Drug Disengagement. Despite differing with regards to whether the avoidant type behaviour is cognitive or affective in origin, all of these items are representative of avoidant and passive type coping strategies. This factor was subsequently labelled Avoidant Coping. The remaining two factors extracted contained items from the subscales Venting of Emotions and Seeking Emotional Support respectively. However, reliability analyses of these factors did not yield acceptable alpha coefficients and therefore only the factors representing approach coping and avoidance coping were utilised in further analysis.

Canonical correlation was used to investigate the relationship between approach coping, avoidance coping, burnout, compassion fatigue and compassion satisfaction. These relationships were analysed by way of canonical correlations for the groups of doctors and nurses comprising the total sample population, as well as for the two gender groups. Although the role of specialised training was also considered as an external coping resource, it was found not to play a significant role.

The most significant finding among doctors was the strong correlation between avoidance coping and compassion fatigue, suggesting that passive, less directive coping strategies render doctors more vulnerable to the effects of secondary exposure to traumatic material. This finding supports the theoretical assumption that coping mediates the influence of demands inherent in human service work in much the same way as for occupational stress reactions in general (Nkosi, 2002; Paton, 1996). Among nurses and women, approach coping was found to play a more prominent role. Approach coping yielded practically significant relationships with the burnout components of depersonalisation and personal accomplishment, as well as with compassion satisfaction. Among men, both approach and avoidance coping were related to the same constructs. These findings suggest that by using approach-orientated coping strategies, health care workers may be less likely to treat patients in a detached and cynical manner. Moreover, by using approach-orientated coping strategies for dealing with the demands they encounter, it also appears that they will be more likely to experience a greater sense of accomplishment and meaning from their work as care givers. The findings of this study therefore support previous findings that have documented a robust relationship between approach orientated coping and lower levels of burnout, and avoidance coping and higher levels of burnout (Leiter, 1992; Schaufeli & Enzmann, 1998).

A final set of analyses were also performed in order to test a model of burnout and compassion fatigue based on the JD-R Model (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001) that was extended to investigate the influence of demands encountered outside of the working environment, as well as the role of coping in burnout and compassion fatigue. Analysis by way of structural equation modelling found that the initially hypothesised relationship between job resources (self-regulatory activity and job security), burnout, compassion fatigue, and coping did not fit the data well. Subsequently it was found that adequate fit was achieved by using a revised model where only job demands (physical working conditions) and demands outside of the work-setting were considered. Thus, only partial support for the JD-R model of burnout and compassion fatigue was found. An important finding was the mediating influence of both job-related demands and extra-organisational demands with regards to burnout as well as to compassion fatigue. While this finding provides support for the well-documented relationship between work-related stressors and demands and burnout, it also provides empirical evidence for the impact of

organisational demands on the trauma-related construct of compassion fatigue (Figley, 2002). Moreover, this finding highlights the important role that coping can have in the onset of burnout and compassion fatigue. Approach coping was also found to have a direct path to the burnout components of depersonalisation and personal accomplishment, further supporting the robust relationship between approach orientated coping and lower levels of burnout (Schaufeli & Enzmann, 1998) and compassion fatigue (Nkosi, 2002).

An important finding of the structural equation analysis was the small positive correlation between burnout and compassion fatigue, given that few studies were identified that had investigated burnout and compassion fatigue simultaneously. Although both coping and work and life demands showed similar relationships with both syndromes, this finding emphasises that despite the similar impact of job-related demands, burnout and compassion fatigue are distinct syndromes and that each syndrome's unique impact on health care workers should be considered (Collins & Long, 2003).

### **8.3     *Limitations of the Research***

The use of a cross-sectional design in the present study poses a limitation on the research findings given that causality within the relationships found between the variables cannot be established. As such, these relationships could only be analysed and described. Future research should therefore include longitudinal and quasi-experimental designs in order to validate hypothesised causal relationships between the numerous antecedents of burnout and compassion fatigue.

A second limitation of the present research is the sample size, which may further limit the generalisation of the findings to the total study population. Future studies could address this limitation by utilizing a stratified random-sample design that would ensure sufficient representation of the different groups in the total population. Future studies would also benefit from including health care workers from multiple public health facilities in order to yield more comprehensive and representative research findings.

A further limitation of this study is its reliance on self-report measures. Specifically, the exclusive use of self-report measures increases the likelihood that at least part of the shared variances between measures can be attributed to common method variance (Schaufeli, Enzmann & Girault, 1993). However, despite the limitations of self-report measures, few alternative methods are available. Nonetheless, future research could benefit from including objective means of measuring job-related stressors, life demands, as well as perceptions surrounding these.

Finally, it must be noted that due to the exploratory nature of the present study and the research aim to obtain a broad, general overview of the similarities and differences between burnout and compassion fatigue, a limited number of variables were investigated. Future studies should thus aim to include more comprehensive measures of the variables pertinent to the stress and coping process.

#### **8.4     *Recommendations for the Institution***

Based on the findings of this study, both work-directed and person-directed recommendations are made. Firstly, a priority needs to be to address the poor physical working conditions and shortage of resources and supplies in the facility. It is likely that a comprehensive revitalisation program for buildings, facilities, and equipment is required. Although this recommendation is made with consideration of the budget constraints faced by the Department of Health, urgent attention to the physical working environments of health care workers is needed. The shortages of medicine, equipment and other resources are not only impacting on individual levels of burnout and compassion fatigue but are undoubtedly also hampering service delivery. A thorough audit of specific resources needed within each department may provide important information and guidelines for prioritising the allocation of resources. It will however be important that an audit be conducted by facility management in consultation with the doctors and nurses currently working in the relevant departments in order to accurately determine the greatest area of need (Van den Berg, et al., 2006).

In addition, providing a comfortable tearoom or garden courtyard where doctors and nurses can take short breaks during their shifts to escape from the emotional strain of patients' demands should be considered.

Due to the prevalence of job insecurity among respondents it is also recommended that steps be taken to address the social climate in the organisation. Addressing aspects such as management style, conflict resolution, motivation of staff members, and communication with staff, would likely prove beneficial. Moreover, increased participation of doctors and nurses in decisions that directly influence their job environment is also essential (Leiter, 1992; Van den Berg et al., 2006). Regular meetings of department heads will be needed in order to provide a platform for issues regarding staff well-being.

In addition to the aforementioned recommendations, person-directed interventions are also recommended. For example, providing training opportunities for doctors and nurses to enhance and develop their skills will improve their sense of self-efficacy and also increase their resistance to stressors. Moreover, interventions are needed that will focus on promoting effective coping and a healthy lifestyle. Workshops aimed at promoting a healthy lifestyle and facilitating the acquisition of effective coping skills have been found to empower health care workers by enabling them to deal with challenging work demands more effectively.

In conclusion, the establishment of an Employee Assistance Programme managed by staff equipped with the necessary expertise in the prevention and intervention of job stress, needs to be an urgent priority. Such a programme would need to, amongst other things, offer support services for the doctors and nurses in the facility in order to try and lessen the emotional and psychological strain associated with exposure to human suffering, death and dying.

### **8.5     *Recommendations for Future Research***

Despite the limitations of this study, the findings of this research potentially hold important considerations for future research. Firstly, more studies are needed that concurrently investigate the syndromes of burnout and compassion fatigue among human service workers,

as they are uniquely vulnerable to both (Collins & Long, 2003). Future research should focus specifically on identifying the potential antecedents in high risk occupations.

In view of the need to obtain a better theoretical understanding of compassion fatigue and its relationship with burnout, future studies will need to investigate the structural validity of the ProQOL. The findings of the present study can serve as a basis for more comprehensive investigation in this regard. Similarly, given the prominent role that coping was found to play in this study, future studies utilizing the COPE scale should undertake to further investigate the structural validity of this instrument.

An important focus of future research will also need to be on establishing clinically validated cut-off points for the MBI and the ProQOL in order to allow researchers and clinicians to distinguish between burnout, compassion fatigue and clinical conditions in South African populations. Finally, future South African studies should focus on and investigate the many problems inherent in multicultural settings. Specifically, more research is needed in order to determine equivalency and bias of the MBI and ProQOL among the various language groups in South Africa.



## REFERENCES

- Benatar, S.R. (2004). Health care reform and the crisis of HIV/AIDS in South Africa. *New England Journal of Medicine*, 351(1), 81–92.
- Buunk, B.P., & Schaufeli, W.B. (1993). Burnout: A perspective from social comparison theory. In W.B. Schaufeli, C. Maslach & T. Marek (Eds.), *Professional Burnout: Recent developments in theory and research* (pp.53-66). Washington: Taylor & Francis.
- Carr, A. (2004). *Positive psychology: The science of human happiness and human strengths*. New York: Brunner-Routledge.
- Collins, S. & Long, A. (2003). Working with the psychological effects of trauma: consequences for mental health-care workers – a literature review. *Journal of Psychiatric and Mental Health Nursing*, 10, 17-424.
- Decker, F.H. (1997). Occupational and nonoccupational factors in job satisfaction and psychological distress among nurses. *Research in Nursing and Health*, 20, 453-464.
- Demerouti, E., Bakker, A.B., Nachreiner, F. & Schaufeli, W.B. (2001). The job-demands resources model of burnout. *Journal of Applied Psychology*, 86(3), 499-512.
- Demir, A., Ulusoy, M. & Ulusoy, M.F. (2003). Investigation of factors influencing burnout levels in the professional and private lives of nurses. *International Journal of Nursing Studies*, 40, 807-827.
- De Witte, H. (2005). Job insecurity: Review of international literature on definitions, prevalence, antecedents and consequences. *South African Journal of Industrial Psychology*, 31(4), 1-6.
- Figley, C.R. (2002). Introduction. In C. R. Figley (Ed.), *Treating Compassion Fatigue* (pp.1-14). New York: Brunner-Routledge.
- Govender, K. (1995). *An investigation into the role of perceived sources of stress, perception of work environment, type of hospital ward and nurse rank in occupational distress, coping and burnout among practising nurses*. Unpublished masters dissertation. Pietermaritzburg: University of Natal.
- Heyns, P.M., Venter, J.H., Esterhuyse, K.G., Bam, R.H. & Odendaal, D.C. (2003). Nurses caring for patients with Alzheimer's disease: Their strengths and risk for burnout. *South African Journal of Psychology*, 33(2), 80-85.

- Jenkins, S.R. & Baird, S. (2002). Secondary traumatic stress and vicarious trauma: a validation study. *Journal of Traumatic Stress*, 15(5), 423-432.
- Leiter, M.P. (1992). Burnout as a crisis in professional role structures: Measurement and conceptual issues. *Anxiety, Stress and Coping*, 5, 79-93.
- Lepore, M. (2004). *Assessing the frequency and influences of secondary traumatic stress symptoms among crisis intervention workers*. Unpublished doctoral thesis. Duquesne University.
- Maslach, C. (1993). Burnout: a multidimensional perspective. In W.B.Schaufeli, C. Maslach & Marek, T. (Eds.), *Professional Burnout: Recent developments in theory and research* (pp.19-32). Washington: Taylor & Francis.
- Maslach, C., Leiter, M.P., & Schaufeli, W.B. (2001). Job burnout. *Annual Review of Psychology*, 52, 397-422.
- Naudé, J.L.P. (2003). *Occupational stress, coping, burnout and work engagement of emergency workers in Gauteng*. Unpublished doctoral thesis. Potchefstroom: Northwest University.
- Nkosi, S.N.P-C. (2002). *The relationship between compassion fatigue and coping styles in nurses working in a hospital trauma unit*. Unpublished masters dissertation. Johannesburg: University of the Witwatersrand.
- Ortlepp, K. & Friedman, M. (2001). The relationship between sense of coherence and the indicators of traumatic stress in non-professional trauma counsellors. *South African Journal of Psychology*, 31(2), 38-45.
- Paton, D. (1996). Traumatic stress in critical occupations. In D. Paton & J.M. Violanti (Eds.) *traumatic Stress in Critical Occupations: Recognition, Consequences and Treatment*, 3 – 14. Springfield: Charles C Thomas.
- Pienaar, J. (2002). *Coping, job stress and suicide ideation in the South African Police Service*. Unpublished doctoral thesis. Potchefstroom: University of the North West.
- Raphela, M.M.R. (2000). *Stress and coping in nurses who care for terminally ill patients*. Unpublished masters dissertation. University of Port Elizabeth.
- Ribeiro, J.F. (2004). *A programme to assist nurses exposed to vicarious traumatisation*. Unpublished masters dissertation. Bloemfontein: University of the Free State.

- Rodrigo, W.D. (2002). *Conceptual dimensions of compassion fatigue and vicarious trauma*. Unpublished masters dissertation. Vancouver: Simon Fraser University.
- Schaufeli, W.B. (2003). Past performance and future perspectives of burnout research. *South African Journal of Industrial Psychology*, 29(4), 1-15.
- Schaufeli, W.B. & Enzmann, D. (1998). *The burnout companion to study and practice – a critical analysis*. London: Taylor & Francis.
- Schaufeli, W.B., Enzmann, D. & Girault, N. (1993). Measurement of burnout: A review. In W.B. Schaufeli, C. Maslach, & T. Marek (Eds.), *Professional burnout: Recent developments in theory and research* (pp. 199-215). Washington: Taylor & Francis.
- Stamm, B.H. (2005). *The Professional Quality of Life Scale: Compassion satisfaction, burnout and compassion fatigue/secondary trauma scales*. Idaho University: Sidran Press.
- Van den Berg, H., Bester, C., Janse van Rensburg-Bonthuyzen, E., Engelbrecht, M., Hlophe, H., Summerton, J., Smit, J., Du Plooy, S. & Van Rensburg, D. (2006). *Burnout and compassion fatigue in professional nurses: A study in PHC facilities in the Free State, with special reference to the antiretroviral treatment program*. Bloemfontein: Centre for Health Systems Research and Development.
- Van Rensburg, H.C.J. (2004). Primary health care in South Africa. In *Health and Health Care in South Africa*, H.C.J. van Rensburg (Ed.), Pretoria: Van Schaik Publishers.
- Wee, D.F. & Myers, D. (2002). Stress response of mental health workers following disaster: the Oklahoma City bombing. In C.R. Figley (Ed.), *Treating compassion fatigue* (pp. 181-211). New York: Brunner–Routledge.