THE RELATIONSHIP BETWEEN OCCUPATIONAL STRESSORS,

OCCUPATIONAL STRESS AND BURNOUT AMONG TRAUMA UNIT

NURSING STAFF

by

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SUMMARY

THE RELATIONSHIP BETWEEN OCCUPATIONAL STRESSORS, OCCUPATIONAL STRESS AND BURNOUT AMONG TRAUMA UNIT NURSING STAFF

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Stress is an area of contemporary psychology that has probably received the most attention. Literature is in agreement that stress is a major factor affecting individuals' lives and is linked to mental health and other problems, including physical health (Hobfoll, 1989: 513). Occupational stress contributes substantially to individual, as well as financial losses annually.

Major sources of stress in the workplace have been identified and contribute to the understanding of the dynamics of occupational stress (Cartwright & Cooper, 1997: 13). Nursing occupational stressors are divided in nursing-specific demands, job demands and lack of organisational support. The impact of occupational stress on physiological and psychological well-being of employees is well documented, as well as the adverse effects of occupational stress on organisational functioning.

If unattended, occupational stress may progress to burnout.

Maslach (1998: 34.64) describes burnout as a type of response to chronic emotional and interpersonal stressors on the job and it is conceptualised as emotional exhaustion, depersonalisation and personal accomplishment. It is an individual stress experience occurring within the context of complex social relationships and involves the self conception, as well as the conception of others. As such it has been an issue particularly prominent in the human service occupations that are representative of relationships between service provider and recipient being central to the job and the provision of service, care and treatment that can be a highly emotional experience.

Nursing specifically meets these criteria. Not only are relationships with recipients emotionally charged, but solutions to their problems are often troublesome, adding to the frustration and ambiguity of the work situation. Individuals who work under these circumstances are at greater risk of developing burnout.

Generally, empirical research on burnout suggests that job factors are more strongly related to burnout than personal or biographical factors – a finding that results support. The effect of burnout is various forms of withdrawal and dissatisfaction with the implication of deterioration of quality of care to patients.

The purpose of this study was to:

- Determine the level of occupational stress in trauma unit nursing staff;
- Identify the occupational stressors;
- Determine the level of burnout in trauma unit nursing staff; and
- Determine the relationship of occupational stress with burnout in trauma unit nursing staff.

53 nurses completed a biographical questionnaire, the Nursing Stress Survey (NSS) and the Maslach Burnout Inventory (MBI). The results were analysed using the SPSS software package.

Results indicate that trauma unit nursing staff experience moderate levels of occupational stress and average levels of burnout. No significant differences in group means were found for biographical variables that support current research. Various stressors were identified that are experienced relatively severely, <u>inter</u> <u>alia</u>:

- Insufficient personal time (e.g., coffee breaks, lunch);
- Meeting deadlines;
- Inadequate salary;
- Fellow workers not doing their jobs; and
- Shortage of staff.

Emotional exhaustion is related to nursing-specific demands, job demands and lack of organisational support with large effect, indicating the importance of occupational stress in the development of burnout. Depersonalisation is related to the occupational stress subscales with medium effect, whilst personal accomplishment indicates no significant relationship with any of the NSS subscales.

It is important that management take cognizance of the relationships in order to have a pro-active approach to organisational stress management with the implementation of preventative interventions.

The study is subjected to limitations mainly with regards to convenience sampling, small sample size and differences in the number and nature of patients treated in the different trauma units that were not controlled for. In future studies it should be incorporated to illustrate the impact of trauma-specific factors.

Chapter 1

INTRODUCTION

"Health care workers are confronted everyday with stark suffering, grief and death as few other people do. Many tasks that are performed by health workers are mundane and unrewarding, and many, by normal standards, distasteful and disgusting, others are often degrading, some are simply frightening. The assumption is that they are tough and that they can handle it. The truth is however, that they cannot handle it." Hattingh (2001: 23).

1.1 Introduction

Economic, social, psychological, demographic, political and ecological changes around the world are forcing individuals to reassess the concept of work and the effects of stress and burnout on the workforce (Freudenberger, 1998: 5.15). South Africa is not exempt from this requirement. In the tenth year of democracy South Africans are in a situation that adds to the changes experienced globally and the long term effects thereof is largely unknown. There are still many unanswered questions regarding burnout in South African organisations and research is needed with regards to causes, effects and underlying processes of burnout for all occupational groups (Rothmann, 2003: 22).

1.2 Rationale

In the nursing profession, most specialty areas are widely researched with regards to occupational stress and burnout when judging the abundance of research available. Chapman (1988: 26) remarks that nurses are not a homogenous group and neither is the task they perform easily categorised, which might contribute to the amount of the research available.

However, research on occupational stress and burnout in trauma health care in South Africa is visibly absent. This could be due to the relative recent development of this specialty area locally. The growth in trauma health care could probably be ascribed to:

- Increased need for health care due to the population growth linked with concomitant increases in illness, violence and motor vehicle, industrial and domestic accidents;
- Improved service delivery with emergency assistance available 24 hours a day and 7 days a week; and
- Growing competition amongst health care service providers.

Research in the area of emergency medicine is warranted, because trauma represents a huge, multifaceted, global, socio-economic and organisational challenge. In 1990, trauma accounted for 5.1 million deaths or 10% of global mortality (Rainer & Smit, 2003: 11).

In the available literature, emergency medicine is depicted as a challenging medical specialty where chronic stress may be part of the job. Trauma units are described as demanding work areas that are stressful for doctors and nurses alike. This is due to patients that are violent, disagreeable, demanding or manipulative, severely traumatised and those with cardiac arrest that are difficult and stressful to manage. The situation is aggravated by having to make critical treatment decisions with an incomplete history of the patient while under time constraints (Goh, Cameron & Mark, 1999: 250). Circumstances, including intense interactions with people that take up considerable time, physical demanding work and continual demands for pity, sympathy and compassion, cause chronic stress.

Chronic stress can be emotionally exhausting and result in burnout (Maslach, Jackson & Leiter, 1996: 3). Effects of burnout are absence from work, being easily moved to tears and outbursts of anger (Gillespie & Melby, 2003: 843).

Quality of patient care and productivity suffers as a result and has financial and ethical implications for health care service providers. This research serves to add to the understanding of occupational stress and burnout in trauma health care in the South African context.

1.3 Objectives

According to Spielberger & Vagg (in Van der Colff, Rothmann & Rothmann, In press) the identification of major occupational stressors offers a twofold benefit for both management and employees, <u>inter</u> <u>alia</u>:

- Resultant changes in the work environment that reduce stress and increase productivity; and
- Facilitation of the development of effective interventions that could reduce the debilitating effects of occupational stress.

Considering all of the above, the aim of the study, therefore, was to:

- Determine the level of occupational stress in trauma unit nursing staff;
- Identify the occupational stressors;
- Determine the level of burnout in trauma unit nursing staff; and
- Determine the relationship of occupational stress with burnout in trauma unit nursing staff.

Chapter 2

OCCUPATIONAL STRESS

"…work, is, by its very nature about violence – to the spirit as well as to the body. It is about ulcers as well as accidents, about shouting matches as well as fistfights, about nervous breakdowns as well as kicking the dog around. It is above all (or beneath all), about daily humiliations. To survive the day is triumph enough for the walking wounded among the great many of us."
(Studs Terkel cited in Cooper, 1998: 1).

2.1 Introduction

Maslach & Leiter (1997: 1-2) confirm the opinion of Studs Terkel (in Cooper, 1998) 25 years later by expressing the view that the effort to end exploitative labour practices in nineteen-century factories creating workplaces where workers could experience some job satisfaction are now under threat. This is due to many reasons that mostly focus on changes in economic trends, technology and management philosophy.

Occupational stress seems to be more relevant today than ever before – not only for individuals, but even more so for organisations and governments (Cartwright & Cooper, 1997: 1-6; De Vries & Wilkerson, 2003: 44). De Vries & Wilkerson (2003) claim that economic loss and human suffering are consequences of the prevalence of mental disorders that hovers around 15%. This figure rises up to 40% when stress related disorders are included. Notwithstanding, governments and business communities continue to assign low priority to preventing and intervening in this situation.

Theoretically, the earliest conceptions of the Cannon-Selye tradition of what the nature of stress is, is replaced with a focus on what the causes of occupational stress are and what can be done about it.

2.2 Conceptualisation

There has been a tremendous increase in research on occupational stress. The term stress has been conceptualised in several fundamentally different ways.

2.2.1 Cannon-Selye tradition

According to Cartwright & Cooper (1997: 4), early definitions of how stress influences individuals have origins in the physics and engineering fields of load and strain. External forces (load) are seen as exerting pressure on an individual, producing strain. Although stress was initially viewed as an outside stimulus, Cannon studied the natural tendency of people to resist such forces with special reference to the "fight-or-flight"-reaction. In order to explain the process of stress-related illness, Selye described the three well known stages of alarm reaction, resistance and exhaustion. Selye was criticised as ignoring both the psychological impact of stress and the individual's ability to act in various ways to change the stressful situation.

2.2.2 Person-environment fit theory

The person-environment fit theory (P-E fit theory) is one of the earliest espoused conceptual models in the field of occupational stress. This theory has been extended and developed much further since early origins and is considered to be of significance (Cooper, 1998: 2).

According to Edwards, Caplan & Van Harrison (1998: 28-39) theories of occupational stress have long recognised the importance of both the person and environment in understanding the nature and consequences of stress. This interactive perspective indicates that behaviour, attitudes and well-being are jointly determined by the person and the environment.

The core premise of the P-E fit theory is that stress does not arise from the person or the environment separately, but from the fit or congruence with one another. Three basic distinctions are depicted in the P-E fit theory, inter alia:

- The person and the environment;
- The objective and subjective representations of the person and the environment; and
- The demand of the environment in relation to the abilities of the person and the needs of the person in relation to the supplies in the environment pertaining to the person's needs.

Considering that subjective P-E fit is critical to mental health and other dimensions of well-being, stress thus arises when:

- The environment does not provide adequate supplies to meet the person's needs; or
- The abilities of the person fall short of demands that are prerequisite to receiving supplies.

Subjective P-E misfits lead to two sets of outcomes. Firstly, the manifestation of psychological strains, physiological strains and behavioural symptoms and secondly, there is attempts to resolve the P-E misfit by means of coping and defence. Coping entails efforts to improve the objective P-E fit either by changing the objective person through adaptation or the objective environment by environmental mastery.

Defence involve efforts to enhance the subjective P-E fit through cognitive distortion of the subjective person or environment through repression or denial, without changing their objective counterparts. These P-E misfit outcomes are probably interrelated. Although the P-E fit theory describes the process by which the person and the environment jointly influence strain, it does not specify the content of the person or the environment dimensions.

2.2.3 Job demand-control model

The job demand-control model (JD-C model) was developed for occupational settings where stressors are chronic and the product of sophisticated human organisational decision making, making the controllability of the stressor very important (Karasek, 1993: 34.6).

The JD-C model is based on the psychosocial characteristics of work where decision latitude interacts with psychological demand in generating long term effects on health (Karasek, 1993; Theorell, 1998: 206). Excessively high psychological demands ("how hard you work") combined with low decision latitude (individual's ability to control own activities and skill usage, not the control of others) result in psychological strain that have adverse effects on health. These effects include fatigue, anxiety, depression and physical illness. This situation is aggravated by low social support from superiors and co-workers that can have the most adverse health consequences. When decision latitude on the job is high and psychological demands are also high, but not overwhelming, learning and psychological growth are predicted. The combination of low psychological demands and small decision latitude is associated with loss of skill and atrophy of coping skills.

Landisberger (1988: 217, 221) supports the hypothesis of the JD-C model. A study, undertaken with hospital and nursing home employees, reported job strain and burnout levels significantly higher in jobs that combine high workload demands with low decision latitude. However, other job characteristics were also associated with strain and burnout.

It is concluded that the basic JD-C model is not designed to replace more comprehensive models of occupational stress, but to make explicit the importance of control in handling job demands and the process of socialisation in coping and learning.

Fox, Dwyer & Ganster (1993: 305) tested the JD-C model at an individual level with a group of nurses using objective measures of exposure to work demands and by measuring physiological outcomes. It was found that control interacted with stressors to affect the physiological indices of blood pressure, blood cortisol and job satisfaction. Significant support for the theory was found, although it was not unambiguous.

2.2.4 Transactional theory

The transactional theory of psychological stress and coping is based on work of Lazarus and colleagues over a number of years (Folkman, Lazarus, Dunkel-Schetter, DeLongis & Gruen, 1986: 992). The interaction between the person and the environment is viewed as a transaction where two processes are identified that is critical to the immediate and long range outcomes of the transaction, inter alia:

- Cognitive appraisal, the process through which the person evaluates the relevance and the impact of a particular encounter with the environment to the well-being of the person; and
- Coping, the constantly changing cognitive and behavioural efforts to manage specific external and internal demands that are appraised as taxing or exceeding the person's resources.

Stress is now accepted as involving some sort of transaction between the individual and the environment. The importance thereof is found in the potential of the process of appraisal and coping to increase the understanding of the stress transaction (Dewe, 1989: 994).

Stress is not the result of the imbalance between objective demands and the person's response capacity, but the perception of these factors and the importance of the consequences of failure to cope (Hobfoll, 1989: 515).

2.2.5 Job demands-resources model

Schaufeli & Bakker (2004: 295-296) view any occupation from a stress perspective in terms of:

- Job demands which are physical, psychological, social or organisational aspects of the job that require sustained physical and/or psychological (cognitive or emotional) effort and are associated with physiological or psychological costs; and
- Job resources which are physical, psychological, social or organisational aspects of the job that reduce job demands and associated costs, that are functional in the achievement of work goals or that stimulate personal growth, learning and development.

Job demands are not necessarily negative, but become stressors when sustained efforts are needed to meet job demands. The conservation of resources theory of stress presented by Hobfoll (1989: 516-518) and Hobfoll & Freedy, (1993: 117) suggests that individuals strive to obtain and maintain what they value (resources). Stress occurs when certain valued resources are lost, inadequate to meet demands or do not yield the anticipated level of returns. As a result job demands become associated with negative responses in the long term, like depression, anxiety or burnout.

Theoretically, two processes are assumed by the job demands-resources model (JD-R):

- An energetic process about overexertion and exhaustion in which high job demands exhaust the individual's energy reserves; and
- A motivational process where a shortfall of resources prevents effective handling of high job demands and fosters mental withdrawal and disengagement.

This model has been successfully tested empirically by various researchers (refer to 3.4.1.1).

2.3 Assessment

According to Hurrell, Nelson & Simmons (1998: 368-378) three classes of variables related to occupational stress have been examined, <u>inter</u> <u>alia</u>:

- Job stressors, referring to a number of work-related environmental conditions (or exposures) thought to have an impact on the well-being of workers;
- Strains, referring to workers' psychological and physiological reactions to job stressors; and
- Health outcomes, referring to more enduring negative health states as a result from exposure to job stressors.

2.3.1 Self-report scales

A wide variety of self-report scales are discussed which are available to assess a wide range of specific job stressors, including temporal aspects of employment and work, work content, work-group factors, supervision and organisational conditions. The limitations of self-report instruments are discussed widely and focus on the use of self-report measures for the measurement of both job stressors and strain consequences. It is recognised, however, that objective measures of job stressors are often not easy or possible to obtain.

The choice of a particular assessment instrument is dependent on the purpose of the investigation and the theoretical orientation of the investigator. It is important to consider the changes that have occurred in the workplace during the past few decades to ensure that the instrument of choice is still relevant for current working populations.

Self-report strain measures are also discussed that are used to assess measures such as anxiety, depression, general psychological distress and burnout. The limitations of self-report strain measures are well documented and contribute to shared response bias and the possibility of conceptual overlap in measures when both the job stressors and strains are measured by self-report instruments. In addition, stressors and strains, when measured together, can affect the individuals' attribution of particular symptoms.

2.3.2 Observational measures

Observational approaches to measuring job stressors are considered to be more objective, because it does not rely on the job incumbents' perception of the working environment. Observers have to be trained to be familiar with the theory and definitions given in the manuals. Studies using observational measures showed associations between rated job stressors and psychosomatic complaints and accidents, and demonstrated inter-rater agreement between 80% and 97%.

Researchers have increasingly turned to physiological measures as indicators of strain, including cardiovascular variables, stress hormones and measures of immune response.

With regards to the controversy surrounding the role of affect in stressor-strain connection, Hurrell et al (1998) conclude that results seem to suggest that negative affect may not be as great a threat as earlier studies might have indicated.

DeFrank (1988: 54-55) is of the opinion that available scales assessing occupational stress and job satisfaction have generally adequate reliability, uncertain validity and heterogeneity in measurement styles with a tendency to focus on professional groups like teachers, nurses and physicians.

Occupational stress scales can be categorised whether the focus are on the situation that occur in the job or on the feelings that are experienced at work. These two approaches presuppose different conceptualisations in stress with a situational emphasis directed at an earlier point in the stressor-response linkage than the feelings emphasis.

Dewe (1989: 998-999) used a method to capture the transactional nature of the appraisal process and found that individuals consistently described sources of stress using different facets. In order to measure demand, it is necessary to have more than just agreement that certain events are present. In addition to measuring the presence of work stressors, other facets such as intensity and frequency of the stressful encounter should be included. The mere presence of stressors is not sufficient condition for strain, but rather the meaning that the individual give to events.

2.4 Sources and consequences

Common occupational stressors arise from social arrangements at work, are mediated through perception, appraisal and experience and include structures and processes in the total work environment that can elicit pathogenic effects. Personality, customs and attitudes are individual determinants of how individuals appraise and react to such stimuli. Individual reactions on stressors can be physiological, psychological and behavioural leading to occupational stress related mental and physical disease that decreases well-being, satisfaction and quality of life (Levi, 1998).

2.4.1 Sources of occupational stress

Research conducted during the 1980's in the field of workplace stress suggested six major sources of pressure at work.

Each of these factors are present in individuals' and organisations' stress profiles, but vary in the degree to which they are found to be causally linked to stress in particular jobs or organisations (Figure 2.1).

Figure 2.1:   Dynamics of occupational stress
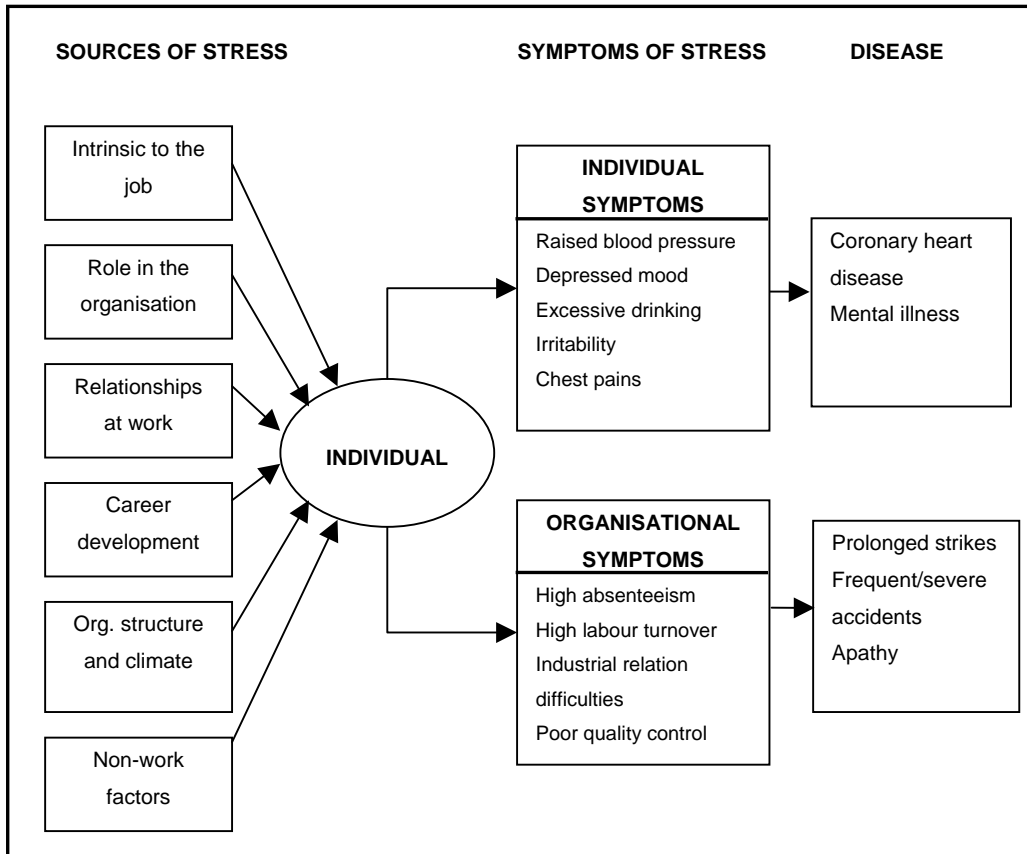
(Cartwright & Cooper, 1997: 14)

2.4.1.1 Factors intrinsic to the job

Factors contributing to the understanding of occupational stress intrinsic to the job itself include poor working conditions, shift work, long hours, travel, risk and danger, new technology and work overload/underload (quantitative and qualitative).

2.4.1.2 Role in the organisation

When a person's role in the organisation is clearly defined and understood and when the expectations placed on the person is clear and non-conflicting, stress can be minimised. Three critical factors are seen as major sources of stress, <u>inter</u> <u>alia</u>:

- Role ambiguity – unclear picture of work objectives, responsibilities and expectations leading to depressed mood, lowered self-esteem, life dissatisfaction, low motivation and intention to leave a job.
- Role conflict – conflicting job demands in doing things the person does not want to do or things not considered being part of the job, which is specifically problematic to people prone to high anxiety levels.
- Responsibility – responsibility for people and for things exist in organisations, of which the former is found to be more stressful and is associated with coronary heart disease risk.

2.4.1.3 Relationships at work

People at work can be a major source of stress or support. There are three critical relationships at work, <u>inter</u> <u>alia</u>:

- Relationships with managers – psychologically unhealthy relationships with managers often result in problems with emotional stability.
- Relationships with subordinates – managerial stress may be particularly high for managers who are "things oriented" and find relationships trivial and time-consuming. Consequently, serious relationship problems are often encountered at work.
- Relationships with colleagues – stress among co-workers can arise from competition, personality conflicts ("office politics") and abrasive personalities that can be a significant source of stress because of the amount of time spent with colleagues at work.

2.4.1.4 Career development

Potential stressors found throughout a person's working life include change of job or employer, bias in the workplace, lack of job security, fear of job loss, obsolescence or retirement, and many performance appraisals that can create pressure and strain.

2.4.1.5 Organisational structure and climate

Being part of an organisation threatens an individual's sense of freedom and autonomy. The lack of opportunities to participate in decision making and the exclusion from office communication and consultations may result in poor health, escapist drinking, depression, low self esteem, absenteeism and intention to leave may occur. Participation in decision making create a sense of belonging and improve communication creating a sense of control that seems to be vital for the well-being of employees.

2.4.1.6 Home – work pressures

Work-family conflict exists when pressure from work and family roles are mutually incompatible and may include time-based conflict (roles compete for time), strain-based conflict (strain from one role affects experiences in others) and behaviour-based conflict (work behaviour undesirable at home and vice versa) (Greenhaus, Callanan & Godshalk, 2000: 291). Continuous work-family conflict threatens the support and comfort that should be experienced at home. This is relevant for men and women alike. Life changes, including birth of a child, death or divorce, contribute to the stress experience as well as geographic career moves.

2.4.2 Consequences of occupational stress

Perceived stress can produce a number of different strain symptoms. These may become manifest in a variety of changes. The impact of occupational stress on physiological and psychological health is well documented.

Extensive occupational stress may not only prove dangerous to a person's physical health and emotional well-being, but may also produce dysfunctional consequences for the organisation (Greenhaus et al, 2000).

2.4.2.1 Individual distress

Individual distress symptoms in reaction to occupational stress according to Edwards et al, (1998: 32) and Greenhaus et al, (2000) include:

- Psychological symptoms that include dissatisfaction, anxiety, irritability, negativism, loss of ability to concentrate, insomnia or restlessness.
- Physiological symptoms that include:
  - short term – heart rate, galvanic skin response and respiration;
  - long term – heart attack, ulcers, immune system suppression, elevated blood pressure or serum cholesterol; and
  - non-specific – adrenaline and gastric acid production.
- Behavioural symptoms that include: sudden change in smoking habits and alcohol consumption, overeating, absenteeism and frequent visits to health care services.

2.4.2.2 Organisational distress

According to Quick, Quick & Nelson (1998: 248-259) the core elements of the occupational stress process are organisational demands and stressors which lead to the stress response. The stress response results in eustressful or distressful consequences. Eustressful consequences of stressful experiences or events are healthy, positive and constructive. Distressful consequences, in contrast, are negative and destructive and influence the organisation bottom line by means of increased expenditure through:

- Direct costs originating from absenteeism, employee turnover rate, counseling referrals, health care costs and compensation awards.

- Indirect costs originating from strikes, work stoppages, accidents, unscheduled downtime, overuse of materials and supplies, inventory shrinkages, quantity and quality of production and decrease in sales volume and revenue.

It is important to emphasise that stress <u>per se</u> is not necessarily harmful. Many researchers concluded that moderate levels of stress enhance performance and health. Extreme levels of stress can be distressful because of the under or over stimulation it causes. Optimal stress can be challenging and produce positive feelings and high involvement (eustress) rather than distress. Stress must thus be managed to maintain a proper balance that allows for the optimum functioning of individuals and organisations (Quick & Quick, 1984 in Greenhaus <u>et al</u>, 2000).

2.5   Relevance and interventions

2.5.1 Relevance to the organisation

Globally occupational stressors and stress-related ill-health constitute serious problems for all parties involved on the labour market. The human and economic costs of occupational stress are very high to all concerned and such costs should be reduced by preventing occupational stress (Levi, 1998). Stress is fast becoming the biggest cause of worker disability with recent surveys suggesting that 40% of job turnover is due to occupational stress and 25% of workers perceive work as the largest source of life stress (De Vries & Wilkerson, 2003: 48). Stress and depression are even considered to be such a serious public health problem as infectious diseases and AIDS.

Costs associated with mental illness are high because of long recovery times, high worker replacement costs and disability payments. The impact on productivity is immense and occupational stress is considered to be the primary driver of disability rates in the future.

Apart from costs due to health related injuries and mental stresses on a national and global level, stress experienced by individuals become a considerable organisational concern.

Important organisational outcomes such as job satisfaction and job performance are influenced, negatively affecting the survival of the organisation (Sullivan & Bhagat, 1992: 353). This effect is illustrated in health care where stress in nursing is continuing to impact on quality of care, care outcomes, nurses' well-being and work satisfaction (Fox et al, 1993: 314; Hattingh, 2001: 26; Taylor, White & Muncer, 1999: 975).

2.5.2 Interventions

Quick et al (1998) propose prevention interventions that are supported by empirical research. Occupational stress is viewed within the context of the organisational system and a preventative approach to occupational stress management is proposed. Diagnosis is viewed as an essential prerequisite to preventative interventions and is an interdisciplinary process including contributions from medicine, organisational science and psychology. Diagnostic methods include interviews, questionnaires and observation techniques that include occupational stress inventories, job content questionnaires and job stress surveys. Surveillance indicators can also be employed to provide information about organisational stressors, stress responses and signs of individual and organisational distress. Diagnostic methods should be valid, reliable and feasible to produce results that are intuitively clear and meaningful to senior management.

2.5.2.1 Primary prevention interventions

The aim of primary prevention interventions is to reduce, modify or manage the intensity, frequency and/or duration of organisational demands in order to reduce the stress response in people at work.

Greenhaus et al (2000) consider this to be the most useful strategy on the long run, but acknowledges the difficulty in implementing it because the source of the stress must be known as well as potential changes to modify the situation.

The following actions are suggested by Greenhaus et al (2000: 276):

- Eliminate burdensome parts of the job;
- Make better use of staff to relieve pressures;
- Build more challenge or responsibility into the job;
- Clarify job duties;
- Clarify career prospects;
- Provide feedback on job performance;
- Provide more flexible work schedules;
- Make use of job transfers;
- Upgrade skills through education and experience;
- Resolve conflict with supervisor, peers and subordinates; and
- Consider career change.

2.5.2.2 Secondary prevention interventions

The aim of secondary prevention interventions is to moderate individuals' stress responses to reduce the intensity, frequency, and/or duration of the individuals' experience of the stress response.

Greenhaus et al (2000) suggest that the meaning of the stressful situation to the individual must be modified by means of cognitive reappraisal when primary intervention change attempts are infeasible or unsuccessful.

2.5.2.3 Tertiary prevention interventions

The aim of tertiary prevention interventions is to minimise distress and provide therapy to shorten and improve the healing process from stressful or traumatic events encountered in the workplace.

Greenhaus et al (2000) suggest meditation, yoga, physical exercise and recreation. Various other relaxation techniques are also currently practised.

With special reference to the emergency health care environment, Hattingh (2001) defines critical incident stress as a reaction to a particularly difficult situation that might include death or serious injury of a colleague in line of duty, disasters, working on a friend/acquaintance who is seriously ill, violence at work or contact with death or severely ill or injured children. Critical incident stress debriefing is an important way of limiting the devastating effects on individuals exposed to trauma. It is a formal process to enable the individual to integrate the personal experience on an emotional and cognitive level that occurs 24 to 72 hours after the trauma was encountered.

Research has not indicated an universally effective intervention. The choice of intervention depends on the severity of the stress, the psychological and social resources of the individual and the particular circumstances of the situation (Greenhaus et al, 2000). Diagnosis and stress management should be done holistically to include all aspects of work. Fortunately some organisations no longer dismiss stress management as self-indulgent nonsense (Rothnie-Jones, 1995: 8).

"So the building contains the office, the office contains the body, the body contains the mind and finally, curled up within the mind, there is a soul." Rothnie-Jones (1995: 8)

Chapter 3

BURNOUT

"…a final flickering flame, of a charred and empty shell, of dying embers and cold, gray ashes…were once fired up about their involvement with other people – excited, full of energy, dedicated willing to give tremendously of themselves for others. And they did give…and give, and give until finally there was nothing left anymore…they had burned out." (Maslach, 1986: 3)

3.1 Introduction

Burnout is a response of individuals to chronic emotional and interpersonal stress experiences in the workplace that is defined by three dimensions, namely exhaustion, cynicism and inefficacy. The complexity of the construct has been established by the past 25 years of research and positions the individual stress experience within the larger organisational context of individuals' relationships with their job (Maslach, Schaufeli & Leiter, 2001: 397).

3.1.1 Historical development

Even before Greene's 1961 novel, A Burn-Out Case, the awareness of burnout had fictional and non-fictional origins in the description of phenomena, including extreme fatigue and the loss of idealism and passion for work. The term, burnout, captured the realities of individual's experiences at the workplace and made it important as well as controversial in the research field. Ironically, it was initially called "pop psychology" (Maslach et al, 2001: 398). Specialised databases now reveal up to 6 000 scientific publications with "burnout" in the title (Schaufeli, 2003: 1).

According to Schaufeli & Enzmann (1998: 6-8), the development of the burnout concept took place independently along two distinct lines, namely the clinical approach and the research approach.

In the initial development the clinical approach was characterised by elaborate clinical descriptions based on unstandardised observations and individual case studies. A major role player during this phase was Herbert Freudenberger, a psychiatrist. This approach emphasised the role of individual factors in burnout in a wide variety of occupational groups. Due to unstandardised descriptions and the increasing popularity of the construct, a vague and all-encompassing phenomenon resulted. The unempirical nature of the clinical approach led to the criticism from academics referred to above.

Christina Maslach and Ayala Pines, social psychologists, contributed to the research approach by introducing self-report questionnaires to assess burnout, namely the Maslach Burnout Inventory (MBI) and the Burnout Measure (BM) (Maslach et al, 1996; Pines & Aronson, 1988). The MBI is currently generally accepted as the main instrument to assess burnout and determine to a great extent the nature of the phenomenon as it is used in over 90% of all empirical articles (Schaufeli, 2003: 1). These standardised assessments made it possible to study burnout empirically. Consequently, possible causes, correlates and consequences have successfully been identified. The emphasis of the research approach was on the social-psychological aspects that focused on the interpersonal nature of burnout in all human services occupational groups. Other researchers, Cary Cherniss and Robert Golembiewski, with an organisational psychological orientation, focused on the role of the organisational environment in the development of burnout (Cherniss, 1980; Golembiewski & Munzenrider, 1988).

Since the beginning of the previous decade, burnout research entered a new phase where empirical studies are based on theory and acceptable research methodology, aimed at integration of other conceptual frameworks (Maslach & Schaufeli, 1993: 2).

3.1.2 Current situation

The world of work is currently in a crisis. Maslach & Leiter (1997: 1-9) is of the opinion that burnout is reaching epidemic proportions. The fundamental change in the workplace and the nature of jobs signify a setback in the attempt to create better work life.

De Vries & Wilkerson (2003: 44) supports this notion and states that mental health problems are "burning like wildfire" worldwide. Schaufeli & Enzmann (1998: 12) adds that in addition to work-related factors, changes in social, cultural and ideological contexts that contribute to the apparent increase in occupational stress should be considered.

The relationship between occupational stress and burnout is well established. The increase in occupational stress thus facilitates the development of burnout and the prominence of the concept in literature (Maslach et al, 2001: 397; Pines & Aronson, 1988: 9; Cherniss, 1980: 13). The aspects that impact on work life that increase occupational stress are interrelated and refer to the following:

- The short term financial focus on adequate cash flow and profitability sacrifices long term strategic thinking and negates the importance of the quality of products and the concern for individual well-being.
- Development in the transport and the communication fields feed globalisation which, in turn, place competitive pressure on individuals and organisations alike.
- Technological development of the recent past not only tend to replace jobs through mechanisation, but also increase pressure on remaining individuals to deal with the increasing complexity and workload of jobs.

- In an attempt to increase productivity, professionals and managers are required to function under strict policies, diminishing their capacity to control their work and to be responsive to local changes. Authority is weakened and causes mistrust of professionals and the organisations they represent.

- The balance of the psychological contract has shifted to the advantage of the organisation where the individual is required to invest more in terms of time and effort and to receive less in terms of intrinsic and extrinsic reward and security.

- In modern societies, social relationships have deteriorated due to the erosion of traditional communities and provide fewer coping resources, while individualisation and alienation are fostered.

- It has become more common to label problems in psychological terms. Academic research and growth in human services professions stimulate the process of psychological labeling contributing to the popularity of the concept.

- Recently the service sector has grown rapidly to the expense of agriculture and manufacturing. More individuals employed in the services sector are now particularly at risk for developing burnout because of the emotional demands of working daily with people.

In the current climate burnout is bound to become more common due to increased pressure on individuals and organisations and the growing familiarity with the concept.

3.2 Conceptualisation

Burned-out individuals compare themselves to empty batteries - a gradual process whereby more energy has been consumed than was produced over a long period of time. The dynamic equilibrium between demand and supply of energy is disrupted to cause depletion of individuals' energy reserves (Schaufeli & Enzmann, 1998: 1).

3.2.1 Symptoms and definitions

Following the clinical approach, Schaufeli & Enzmann (1998: 19-29) classify the multitude of possible burnout symptoms found in studies in clusters of psychological symptoms, <u>inter</u> <u>alia</u>:

- Affective symptoms, including depressed mood, anxiety and emotional exhaustion.
- Cognitive symptoms, including helplessness, sense of failure and poor self-esteem.
- Physical symptoms, including headaches, restlessness and muscle pains.
- Behavioural symptoms, including hyperactivity, impulsivity and over- and under eating.
- Motivational symptoms, including disillusionment, disappointment and resignation.

Although these symptoms are mainly based on uncontrolled clinical observations or interview studies and are rather indefinite, it serves to emphasise the complex and interdependent nature of human experience. In addition, it emphasises the need for a working definition of burnout.

Schaufeli & Enzmann (1998: 31-36) present a working definition that is based on a collection of state definitions that describe the most crucial elements of burnout as a negative mental condition and process definitions that emphasise particular aspects of the burnout process.

The state definitions include the multidimensional perspective of Maslach (1993: 19-32), the broader definition presented by Pines & Aronson (1988: 9-17) and a less well-known but more precise definition of Brill (1984: 15) that narrows the definition of burnout in terms of symptomatology, aetiology, contexts and groups.

The process definitions include descriptions of burnout as a three stage process (Cherniss, 1980: 17-21), burnout as disillusionment (Edelwich & Brodsky, 1980: 14) and burnout as psychological erosion (Maslach & Leiter, 1997: 17). From the process definitions can be concluded that the burnout process starts with tension resulting from frustrated expectations, ideals and daily demands. The stresses resulting from these imbalances between reality and the ideal situation develop gradually and the way that individuals cope with these stresses is crucial for the development of burnout.

Based on the aforementioned symptoms, state definitions and conclusions drawn from the process definitions, the following working definition is presented:

"Burnout is a persistent, negative, work-related state of mind in 'normal' individuals that is primarily characterised by exhaustion, which is 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 a long time by the individual involved. It results from a misfit between intensions and reality in the job. Often burnout is self-perpetuating because of inadequate coping strategies that are associated with the syndrome." (Schaufeli & Enzmann, 1998: 36)

This definition narrows down the multitude of symptoms, explains the role of frustrated intensions and coping play as precondition in the development of burnout and affirms the self-perpetuating nature thereof, whilst specifying the domain in which it occurs. Considering the often contradicting and voluminous nature of the burnout literature, this working definition contributes to the delineation of the burnout phenomenon. Delineation is important because the specificity of the burnout definition influence the ultimate utility thereof (Brill, 1984: 13).

3.2.2 Theories

In a review of the main achievements of burnout research so far, Schaufeli (2003: 1) comments that since burnout is a complex and multi-causal process that involves many factors at different levels of aggregation, there is and probably never will be a single overarching, all encompassing theory of burnout. It is suggested that the level of investigation will determine the preferred level of aggregation.

Schaufeli & Enzmann (1998: 101-142) based on burnout research of 19 approaches, distinguish four such levels of aggregation each including various theoretical approaches, namely individual approaches, interpersonal approaches, organisational approaches and societal approaches.

3.2.2.1 Individual approaches

Individual approaches are currently speculative as it is not supported by empirical evidence, but were formulated post-hoc (Schaufeli, 2003: 9). Individual approaches attempt to analyse burnout using general psychological perspectives. These perspectives include well-known psychodynamic theory, cognitive psychology and learning theory, as well as less familiar approaches, including conservation of resources theory and action theory.

3.2.2.2 Interpersonal approaches

Interpersonal approaches are in general better supported by empirical results. Empirical results indicate, however, that recipient related stressors (initially thought to be a root cause of burnout) are less strongly correlated with burnout than general job related stressors (Schaufeli, 2003). The interpersonal approaches attempt to analyse the interactions that occur at the workplace and relate their relevance to the understanding of burnout, with special reference to:

- Lack of social competence;

- Emotional overload;

- Lack of reciprocity;

- Emotional contagion; and

- Emotional labour.

3.2.2.3 Organisational approaches

Organisational approaches are usually descriptive in nature in terms of the type of organisational variables that are related to burnout. Some of these heuristic models have cross-sectional empirical support (Schaufeli, 2003). The themes underlying these approaches are:

- Burnout as "reality shock";
- Burnout as a virulent process; and
- Burnout as a mismatch between person and job.

These diverse approaches add value to the understanding of burnout by agreeing that similar organisational factors are correlates with burnout and indicate that burnout does not only have negative effects on individuals, but affects the organisation in terms of lowered efficiency and productivity and poor quality of service.

3.2.2.4 Societal approaches

Societal approaches emphasise the role of structural and cultural determinants of burnout. It should be noted that little empirical support exists for these approaches (Schaufeli, 2003). Rösing (in Schaufeli, 2003) stresses the importance of considering burnout not only as a subjective individual experience, but rooted in society and prevailing culture. The spread of burnout in the human services raise the possibility that it could be related to broader social concerns, beyond the individual experience and the particular organisation.

The sociological perspectives include burnout as:

- Alienation;
- A discrepancy between surface and latent functions of organisations; and
- A cultural product.

Common within these perspectives is the notion that individuals are not passive victims, but active role players who have, on an individual and collective level, influence on their own living and working conditions that might be related to burnout.

Schaufeli & Enzmann (1998) acknowledge that no single theory can reflect the complexity in terms of level and interactions between the many aspects covered in their review.

3.2.2.5 Integrative models of burnout

(i)   In an attempt to integrate the fragmented nature of theoretical approaches, Schaufeli & Enzmann (1998) suggest an integrative model (Figure 3.1) that builds on the following common themes:

- Strong motivation – a common element in virtually all individual and interpersonal approaches and contributor to other approaches. The crucial role of strong initial motivation is widely recognised as a necessary condition to the development of burnout.
- Unfavourable job environment – many approaches imply that burnout is likely when strongly motivated professionals' expectations stands in contrast to their work experience. This aspect refers to the person-job fit rationale that underlies many approaches.
- Inadequate coping strategies – the self-perpetuating nature of burnout is emphasised. It can be assumed that a negative or positive feedback loop exists depending on the way that individuals handle difficult situations.

When coping is successful and goals are achieved, professional efficacy is enhanced with resultant positive personal and organisational outcomes. Poor coping potentially leads to burnout and negative personal and organisational outcomes. Burnout as depicted in the integrative model below, thus not only prevents goal attainment, but also contributes to the depletion of coping resources.

Figure 3.1:   An integrative model of burnout
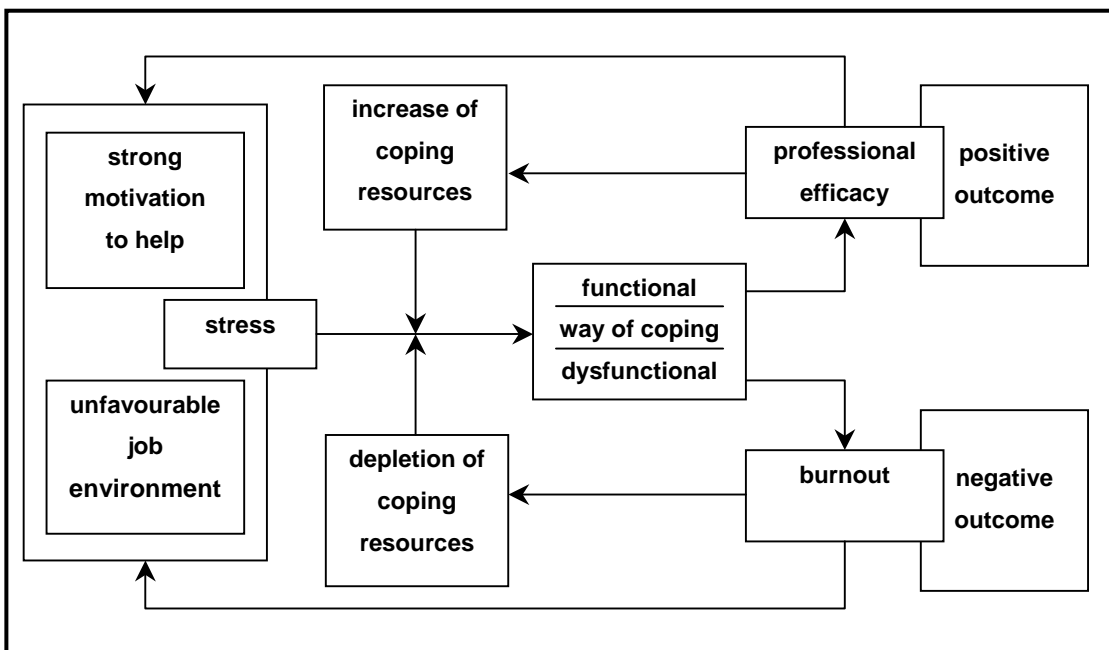
(Schaufeli & Enzmann, 1998: 142)

The heuristic model is a sequential-dynamic model of burnout. It is sequential in nature because it is based on the assumption that distress resulting from a discrepancy between strong motivation to help and an unfavourable job environment, mediated by the individual's way of coping, results either in professional efficacy or burnout. The dynamic character of the model is based on the self-perpetuating process of burnout where functional coping contributes to professional efficacy that increases coping resources. Dysfunctional coping, in contrast, contributes to burnout that depletes coping resources. Figure 3.1 is also a graphic representation of the working definition presented in 3.2.1.

Although this heuristic model contributes to the overall conceptualisation of the burnout phenomenon, the Maslach (1986) conceptualisation remains prominent in theory and research alike and needs further elaboration.

(ii)   The multi-dimensional model of Maslach (1986: 3-5) states that when individuals suffer from burnout, the point of emotional exhaustion have been reached where it is no longer possible to give of themselves to help others – a so called "compassion fatigue" is experienced. In trying to cope with the overwhelming needs and demands of others, emotionally overburdened individuals reduce or even avoid contact with people. This detachment leads to a cold indifference to other's needs and a callous disregard for their feelings (depersonalisation/cynicism). Negative feelings toward others eventually develop into negative feelings toward oneself that include guilt about not caring enough about others and a sense of personal and professional failure (reduced personal accomplishment/inefficacy).

Maslach & Leiter (1997: 9-17) expand on this theoretical framework of burnout by integrating both individual and situational factors. In this hands-on model the job-person paradigm is extended to a broader and more complex conceptualisation of the person situated within the job context. This model focuses on the degree of match, or mismatch, between individuals and six domains of the work environment. The greater the job-person mismatch, the greater the likelihood of the development of burnout. Similarly, the better the fit, the better the job engagement will be. A new focus on the continuous working relationship that individuals have with their work is prominent – much like the psychological contract. Unacceptable issues in the relationship (mismatches) leads to burnout that mediates the eventual outcomes, including dissatisfaction, job tenure or productivity. The situational correlates are grouped into six areas of work life that form a comprehensive model of organisational factors found in burnout research, inter alia:

- Workload – too many demands on limited individual resources;

- Control – inefficacy or insufficient control and/or authority over resources;

- Reward – lack of appropriate rewards;

- Community – loss of sense of positive connection with others in the workplace;

- Fairness – lack of perceived fairness ; and

- Values – conflict between personal values and organisational demands or organisational statements and actual practice.

Research on this model indicates an interaction between the six areas with values that might play a central mediating role. This is confirmed by a study by Altun (2002: 269) who found that nurses' personal and professional values play an important role in the degree of burnout they experience. Individual differences might exist in the relative weighting of the six areas intra-individually.

This conceptual framework portrays the dysfunctional aspects in the work environment that disrupt the relationships that individuals develop with their work (Maslach et al, 2001: 415-416).

3.2.3 Related concepts

Considering the criticism against burnout, it is important to focus on the discriminant validity of the concept and whether it truly is a distinctly different phenomenon from other established constructs. This matter is often approached with speculation and empirical evidence is often lacking. Schaufeli & Enzmann (1998: 37) point out that two problems become evident when trying to distinguish burnout from related concepts, inter alia:

- These related concepts are also plagued with similar conceptual ambiguities as burnout; and

- Burnout can only be distinguished from these constructs in a relative way. An absolute point can not be defined where the relationship between burnout and other constructs become so strong that it represents indices of the same underlying factor.

As such, Maslach & Schaufeli (1993: 9) concludes that a relative distinction can be made between burnout and occupational stress with respect to time and between burnout and both depression and job satisfaction with respect to domain.

3.2.3.1 Occupational stress

Often authors use stress and burnout as synonyms. Stress can cause burnout, but not all stressed individuals are burned-out. Differences in temporal aspect could explain this discrepancy (Brill, 1984: 21; Freudenberger, 1998: 5.16; Golembiewski & Munzenrider, 1988: 219). Stress causes decreased performance, dysphoria or physical discomfort that remains stable or improves with time. This effect is illustrated graphically by A and B in Figure 3.2. Burnout in contrast may lead to impaired or deterioration in functioning as the individual is unable to adapt unassisted to environmental challenges, depicted by C and D in Figure 3.2.

Figure 3.2:   Course of stress
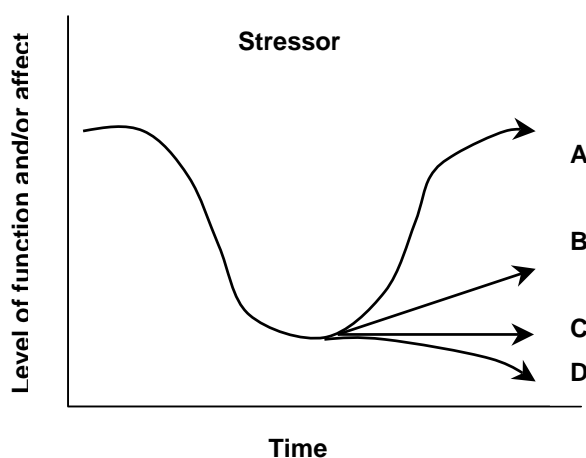
(Brill, 1984: 21)

3.2.3.2 Depression

The domain of burnout is job-related, while depression is context-free. Lasser & Kahn (1998: 5.10) list specific aspects related to occupational stress that can lead to depression, namely downsizing, mergers and acquisitions and shifting job descriptions. Although these aspects are workplace related, it is important to note that empirical studies confirm that burnout and depression are two distinct phenomena.

Schaufeli & Enzmann (1998) mention that the emotional exhaustion component is related to depression in sharing 25% of variance, with depersonalisation and personal accomplishment sharing each less than 10% of their variance. Empirical evidence thus exists for Schaufeli (2003: 5) to conclude that not only the symptoms, but also the psychological processes involved in the development of burnout and depression are different. A study of Glass, McKnight & Valdimarsdottir, (1993: 152-153) among nurses supports this conclusion by revealing that burnout leads to depression and not depression to burnout.

3.3 Assessment

Valid and reliable measurement of burnout is necessary, not only for empirical research, but also for individual measurement. Schaufeli, Enzmann & Girault, (1993: 199) conclude that the vagueness and over-inclusiveness of the burnout concept presents a problem in constructing measurement instruments.

Notwithstanding, Schaufeli & Enzmann (1998: 47-54) discuss a vast array of self-report measures that exist, albeit of uncertain validity and reliability, ranging from do-it-yourself inventories and self-assessment to questionnaires with limited application, the BM and the MBI.

Schaufeli (2003: 2-4) in a review of burnout assessment, comments that the MBI is psychometrically a good instrument for assessing burnout. Conceptually, the preponderance of the instrument in research is problematic as burnout has become what the MBI measures – emotional exhaustion, depersonalisation and personal accomplishment. The problem is that the MBI is neither grounded in theory nor in clinical observation. It was developed inductively by means of the factor-analysis of arbitrary items. It is suggested that the MBI-burnout concept is supplemented by cognitive weariness/exhaustion and distress symptoms that clinical experience has identified.

The Oldenburg Burnout Inventory (OLBI) was recently developed by Demerouti and Ebbinghaus and includes exhaustion (physical, affective and cognitive strain) and disengagement (distancing and negative attitudes towards the work object, work content and work in general) as core dimensions of burnout (Demerouti, Bakker, Nachreiner & Schaufeli, 2000: 455).

Burisch (1993: 75) suggests using questionnaire scores to operationalise burnout, but the lack and arbitrary nature of cut-off scores render them inappropriate for this purpose. The clinically validated cut-off scores for the Netherlands provide for individual assessment with the MBI, but these scores should not be applied in other countries as some variables related to burnout seem to exist which might reflect different national or cultural orientations and can lead to misinterpretations (Schaufeli, 2003: 5-6).

3.4 Causes and consequences

Although a lot is known about variables that are related to burnout, very little is known about the causes and the consequences thereof. This could be because of the relatively small number of longitudinal studies when compared to cross-sectional studies (Schaufeli, 2003: 7).

Longitudinal studies should confirm the job demands-burnout causal relationship, but in the eight studies Schaufeli & Enzmann (1998: 75-99) analysed, this relationship could not be established. The theoretical framework of burnout supports this causal relationship, consequently lack of empirical proof is due to methodological explanations, <u>inter</u> <u>alia</u>:

- Respondents tend to report negatively on self-report measures in cross-sectional studies, but not in longitudinal studies; and
- The regression approach used to establish baseline burnout scores may not be appropriate to use to study predictors of change.

The outcome of 250 studies Schaufeli & Enzmann (1998) reviewed on burnout is based on cross-sectional data and no causal conclusions could be drawn. Variables can only be assumed as possible causes and consequences - strictly speaking correlates of burnout. Of all the studies published between 1976 and 1996 that utilised the MBI, 33.8% studied the health occupational field, 37% other human services professionals and 29.2% other or administrative/management fields. The correlates of burnout can thus generally be expected to be relevant for nursing staff.

3.4.1 Possible causes of burnout

Schaufeli & Enzmann (1998) classifies possible causes as biographical, personality characteristics, work related attitudes and work and organisational characteristics. The findings are summarised in Table 3.1 with the number of plus and minus signs indicating the strength and the direction of the relationship with burnout. The criteria used for inclusion of the results are:

- The number of studies that found clear evidence of the relationship;
- The methodological quality of the studies; and
- The consistency of results across studies.

Table 3.1:   Correlates of burnout: Possible causes

Biographical characteristics	
Age	- -
Gender	+
Work experience	-
Marital status	-
Level of education	(+)
Personality characteristics	
Hardiness	- - -
External control orientation	+ +
Confronting coping style	- -
Self-esteem	- -
"feeling type"	+
Type A behaviour	+
Neuroticism (anxiety)	+ + +
Extroversion	-
Work related attitudes	
High (unrealistic) expectations	(+)
Work and organisational characteristics	
Workload	+ + +
Time pressure	+ + +
Role conflict and ambiguity	+ +
Hours worked	+
Direct client contact	+ +
Number of clients	+
Severity of clients' problems	+
Social support from colleagues or superiors	- -
Lack of feedback	+ +
Participation in decision making	- -
Autonomy	-

Note: The number of plus and minus signs indicate the strength and the direction of the relationship with burnout

(Schaufeli & Enzmann, 1998: 75)

In terms of antecedents of burnout, both job demands and a lack of key resources are particularly important. The major demands are work overload and personal conflict. The lack of resources for control coping, social support, skill use, autonomy and decision involvement seem to be especially critical (Maslach et al, 1996: 36-37).

3.4.1.1 Comparison of burnout dimensions

In a review of literature, Schaufeli & Enzmann (1998) found that the job demands of workload and time pressure are strongly related to emotional exhaustion in most studies, but are almost unrelated to personal accomplishment. A further analysis of 15 recent studies indicate that job demands (job-related stressors) correlate most strongly with emotional exhaustion and least with personal accomplishment. Personal accomplishment is found to be strongly related to job resources, namely lack of role ambiguity, feedback, participation in decision making and autonomy, and to confronting coping behaviour and self-efficacy.

Van der Colff, Rothmann & Rothmann (In press) found that depersonalisation is predicted by emotional exhaustion in South African nurses, meaning that cynical and detached attitudes develop towards recipients of service after emotional resources are depleted. This result confirms the development of the depersonalisation dimension described in the process model of burnout (Leiter, 1993: 244). Other research partly support above development of depersonalisation in nurses (Demerouti et al, 2000: 460 & Demerouti, Bakker, Nachreiner & Schaufeli, 2001: 508; Janssen, Schaufeli & Houkes, 1999: 81) and also Schaufeli & Bakker (2004: 308) confirm that job demands are primarily associated with emotional exhaustion and lack of job resources with disengagement.

3.4.1.2 *Job-related versus client-related stressors*

On empirical grounds the contention of Maslach (1986) that burnout is particularly related to emotionally charged interaction with clients, which is the case especially in the nursing profession, has to be refuted.

In comparing 16 studies, Schaufeli & Enzmann (1998) found that common job-related stressors such as workload, time pressure or role conflict correlate more highly with burnout than client-related stressors that include interaction with difficult clients, problems in interacting with clients, frequency of contact with chronically or terminally ill patients or confrontation with death and dying. Only three studies confirmed the special importance of client-related stressors in relation to burnout, namely with regards to conflict in interactions with clients, conflict in interactions with colleagues and contact with terminally ill patients.

Maslach <u>et</u> <u>al</u> (2001: 407-408) agree with the empirical findings, but maintains that new research identified additional variance in burnout over and above job stressors. Specifically Zapf, Seifert, Schmutte, Mertini & Holz (2001) investigated the relationship between emotion work, organisational stressors and resources, and their combined effect. Emotion work is defined as: "psychological processes necessary to regulate organizationally desired emotions as part of one's job" (Zapf <u>et</u> <u>al</u>, 2001: 528). Results of the study indicate that emotion work variables explain additional variance in addition to task, organisational and social stressors and resources for all burnout variables. It was found that emotional exhaustion and depersonalisation are primarily affected by stressors and personal accomplishment primarily affected by resources. Emotional dissonance (dissonance between experienced and displayed emotion) is a significant predictor of emotional exhaustion. Display of positive emotions and sensitivity requirements (to sense the emotion of the interaction partner) are important predictors of personal accomplishment. Depersonalisation is predicted by negative emotions (to display and handle negative emotions), emotional dissonance and the absence of positive emotions.

Bolton (2000: 585) confirms the effort experienced by nurses to enact professional feeling rules and present an image of the professional carer, but is of the opinion that in addition to the emotional labour nurses perform in the confines of the nursing labour process, nurses also offer extra emotion work as a gift in the form of authentic caring behaviour.

3.4.2 Possible consequences of burnout

Compared to the studies relating to causes of burnout there are only a few studies investigating the consequences. Results of these studies are classified in Table 3.2 according to consequences for the individual, effects on work orientation and attitudes and consequences for the organisation.

Of note is that job satisfaction correlates relatively high with all three burnout dimensions, with depersonalisation showing the highest correlation (27% shared variance), followed by emotional exhaustion and reduced personal accomplishment (20% and 16% shared variance, respectively). This analysis is based on cross-sectional studies and causal relationships could not be established. Organisational commitment consistently correlates negatively with emotional exhaustion and depersonalisation (16% shared variance) and somewhat weaker with personal accomplishment at 6% shared variance. Schaufeli & Enzmann (1998) considers the strength of the association of burnout with negative work orientations, attitudes and intentions to be impressive.

Burnout is also linked to personal dysfunction, primarily in terms of impaired physical and mental health, although there is some evidence for increased substance abuse as well as marital and family conflicts (Maslach et al, 1996: 4).

Table 3.2:   Correlates of burnout: Concomitants and possible consequences

Individual level	
Depression	+ + +
Psychosomatic complaints	+ + +
Health problems	(+)
Substance use	+
Spillover to private life	(+)
Work orientation and attitudes	
Job satisfaction	- - -
Organisational commitment	- -
Intention to quit	+ +
Organisational level	
Absenteeism and sick-leave	+
Job turnover	+
Performance and quality of service	(-)

Note: The number of plus and minus signs indicate the strength and the direction of the relationship with burnout

(Schaufeli & Enzmann, 1998: 86)

3.5 Relevance and interventions

3.5.1 Relevance to the organisation

Burnout is down played or dismissed by organisations as an inevitable, but manageable part of working life. Reasons for this attitude listed by Maslach & Leiter (1997: 61-65) include:

- It is a problem for individuals to address themselves by learning how to deal with the stressors on the job rather than figuring out how to get rid of them to create a stress-free environment.

- It is not the employer's responsibility as the origin lies in the individual. Only when major losses result, will the organisation feel obligated to address the problem.

- It does not have real impact on the organisation. The effect is not noticeable on the bottom line performance. Through natural regulation those employees who cannot cope will leave on their own and the rest of the problems will be dealt with within the standard performance management policy.

- There is not much the organisation can do apart from giving guidance and supplying employee assistance programmes.

The occupational bottom line in burnout is the drop in the quality and quantity of outputs. Eventually, people cannot tolerate the situation anymore and resign. This remains a painful process as it can be experienced as a personal failure of a career that once was a source of pride, prestige and personal identity (Maslach & Leiter, 1997: 19).

This opinion is confirmed by other claims that burnout is not only detrimental for individuals, but for organisations as well, as it fosters negative organisational consequences that inevitably lead to financial losses. It thus makes sense to prevent burnout in terms of employee well-being and in economical terms. Empirical evidence to support the relationship between burnout and costly employee behaviour are, however, neither consistent, nor strong, but the practical relevance of such weak relationships can be considerable in economic terms (Schaufeli, 2003: 7).

Organisations should take burnout seriously, because of the following:

- "Intangible assets", like skills, organisational structures, knowledge, and information are required for production in developed economies in addition to capital and labour.

- Not only does the market value of "human capital" in the USA exceed the market value of physical capital by far, but investment in intangible assets of companies is reflected in an increase in market value with as much as a 1:16 ratio (Brynjolfsson, Hitt & Yang, 2004). Considering that the goal of executive management is to ultimately increase share price, it appears impossible for organisations to longer negate the importance of employees' contributions and well-being.

- Recent evidence suggests that objective work characteristics that can be influenced by management (autonomy and workload) are related to burnout (Schaufeli, 2003: 7). Interventions on organisational level should then have an influence on burnout.

- Maslach & Leiter (1997: 65-74) conclude that burnout does affect the bottom line – job stress can lead to substantial financial and productivity loss. This can be illustrated through the job-person mismatch and the cost implications thereof through health benefits, disability benefits, absenteeism, errors, strikes, training and replacing employees, conflict and even sabotage. Considering the impact of these costs on the organisation, an effective investigation to understand what the nature of the person-job mismatch is, is desirable. By taking responsibility for dealing with burnout, the organisation supports engagement with work to create a more resilient workforce that is better able to respond to clients and ongoing change.

- Recent research supports the weak relationship between burnout and performance – customer satisfaction decreases as burnout increases (Schaufeli, 2003: 7). The current business climate dictates that customer satisfaction determines long term survival and demands from the organisation to prevent and manage the prevalence of burnout.

- Individuals that experience burnout can have a negative impact on colleagues, causing greater personal conflict and disrupting job tasks. Burnout can be "contagious" and perpetuate through informal contact and have a negative effect on home life as well (Burke & Greenglass in Maslach et al, 2001: 406; Demerouti et al, 2000: 460; Schaufeli & Enzmann, 1998: 123). A proactive approach to prevent a downward burnout spiral from developing is, thus, called for.

- Organisations are bound by employment legislation to ensure a work environment that is safe and without risk to the physical and psychological health of workers.

3.5.2 Interventions

Schaufeli & Enzmann (1998: 143-145) present an overview of interventions in a matrix that includes the level of intervention, including individual, organisation/individual interface and organisational level and the purpose of the intervention that includes:

- Identification;
- Primary prevention aimed at management of stressors;
- Secondary intervention aimed at individual reaction to stressors;
- Treatment; and
- Rehabilitation.

In considering the value of the abovementioned interventions, Schaufeli (2003) concludes that:

- Most interventions is general in nature and not specifically tailored at addressing burnout;
- Most interventions are focused on the individual and organisational interventions are very scarce;

- There are only a very few well documented studies that report the effectiveness of burnout interventions; and

- Studies indicate that the core of burnout, exhaustion, can be reduced by training employees coping skills, notably relaxation and cognitive restructuring. Cynicism and reduced efficacy are resistant to change through the reduction of negative arousal and should be addressed by means of changing attitudes (cynicism) or enhancing professional resources and skills (efficacy).

From more recent studies, Schaufeli (2003: 10) concludes that:

"…(1) individual, cognitive-behaviourally based interventions are successful in reducing burnout and they also seem to increase return rates to work; (2) burnout workshops for specific groups, like dentists or for heterogeneous groups of employees, are particularly successful in reducing levels of exhaustion; however it seems that employees relapse unless they are motivated to continue on their own initiative; (3) interventions that aim at improving the work situation seem to be likewise effective in reducing exhaustion levels, but again this positive result is rather short-term."

Maslach et al (2001: 419) confirm the above analysis and conclude that a job environment focus, as well as a focus on the individual within the job environment is necessary if burnout interventions are to have a desired effect. Traditional educational interventions aimed at individual skills and attitudes combined with managerial practice that focus on the six areas of work life where person-job mismatches occur, is the most effective mode of intervention. Change of either the individual or job setting in isolation is not enough – an integrated approach is necessary for effective change to occur. "The recognition of the six areas of work life expands the range of options for organisational intervention." Maslach et al (2001: 419)

The initial work done by Maslach in the area shows promise, but it's not sufficient. The fairness and equity areas of intervention shows promise in decreasing emotional exhaustion and increasing perceived equity.

The advantage of an integrated educational/managerial approach to intervention is that it promotes engagement with work. It should be noted, however, that although it is a promising approach, these interventions require a considerable investment of time, money and effort and is often complex in nature.

Van der Colff et al (In press) found that coping strategies and sense of coherence moderate the stress-emotional exhaustion relationship and are thus important areas of intervention.

Freudenberger (1998: 5.17) is of the opinion that individuals need to take control and responsibility for their own lives and that both individuals and organisations should re-examine their value systems. If dramatic shifts do not occur, burnout will continue to remain a significant problem in the future.

3.6 Engagement

Wright (2003: 438) proposes a move towards "positive psychology" in order to develop a better understanding of organisational behaviour. For too long have the negative aspects of human nature been overemphasised in the social sciences and this may have contributed to the lack of relevance and meaning of the discipline. "Positive psychology" aims to focus on building positive qualities and enhanced workplace performance.

Maslach et al (2001: 416) discuss job engagement as positive antitheses of burnout and describes it as energy, involvement and efficacy (direct opposites to the burnout dimensions).

Engagement is assessed by the opposite pattern of scores on the three MBI dimensions. Studies indicate that burnout and engagement seem to be inversely related to the six areas of work life.

Schaufeli and colleagues have defined and operationalised engagement as a concept in its own right as: "…a persistent, positive affective-motivational state of fulfillment in employees that is characterized by vigor, dedication and absorption. Vigor refers to high levels of energy and resilience, the willingness to invest effort in one's job, the ability to not be easily fatigued, and persistence in the face of difficulties. Dedication refers to a strong involvement in one's work, accompanied by feelings of enthusiasm and significance, and by a sense of pride and inspiration. Finally, absorption refers to a pleasant state of total immersion in one's work, which is characterized by time passing quickly and being unable to detach oneself from the job." (Maslach et al, 2001: 417). A self-report questionnaire, Utrecht Work Engagement Scale (UWES), was developed to assess engagement and preliminary studies' results all correlate negatively with the MBI burnout scale. Of note is that burnout is particularly related to job demands and engagement to job resources.

Findings of Van der Colff et al (In press) found low levels of burnout to be related to high levels of engagement as measured by the UWES in South African nurses. In addition, personal accomplishment constituted an element of engagement that is in line with the Maslach et al (2001) conceptualisation. Either of the two approaches seems to contribute to the understanding of employee well-being.

Chapter 4

RESEARCH METHODOLOGY

4.1 Introduction

In an attempt to gain information about behaviour, individuals turn to the field of the behavioural sciences where a great deal of information about the behaviour of organisms has been accumulated. Although a great deal is already known about human behaviour, work still needs to be done. In order to expand on our current knowledge, scientific research must be utilised. Scientific research attempt to acquire information devoid of personal beliefs, perceptions, biases, values, attitudes and emotions. The knowledge attained is dependable because it is ultimately based on objectively observed evidence (Christensen, 1994: 3-11).

4.2 Purpose

As mentioned previously, the purpose of this study was to:

- Determine the level of occupational stress in trauma unit nursing staff;
- Identify the occupational stressors;
- Determine the level of burnout in trauma unit nursing staff; and
- Determine the relationship of occupational stress with burnout in trauma unit nursing staff.

4.3 Research design

A descriptive study, specifically a cross-sectional survey, was selected. According to Churchill & Iacobucci (2002: 107,117) the purpose of descriptive research is to:

- Describe the characteristics of certain groups;
- Estimate the proportion of people in a specified population who behave in a certain way; and
- Make specific predictions.

In addition, the cross-sectional study is the best known and most important type of descriptive design using a sample of elements from the population of interest. Various characteristics of the sample members are measured at once.

The survey is a method of collecting standardised information that is applicable to a wide range of problems. Questionnaires containing closed-ended questions were utilised that required the respondent to select one of alternative answers which were given, because the dimensions of the variables are known (Christensen, 1994: 57-64).

A correlational study is incorporated in this descriptive research to describe the degree of relationship that exists between the two measured variables, occupational stress and burnout (Christensen, 1994: 52).

4.4 Measuring instruments

It was important to ensure the confidentiality of responses, because of the sensitive nature of the study for individuals and trauma units alike. This was done by anonymity and supplying envelopes for return of the completed questionnaire.

The first part of the survey consisted of the Maslach Burnout Inventory - Human Services Survey developed by Maslach et al (1996), followed by the Nursing Stress Survey developed by Van der Colff et al (In press) and a biographical questionnaire.

4.4.1 Maslach Burnout Inventory

The Maslach Burnout Inventory - Human Services Survey (MBI-HSS) was designed to assess three aspects of the burnout syndrome, namely emotional exhaustion, depersonalisation and lack of personal accomplishment. Each aspect is measured by a separate subscale and consists of 22 statements of job-related feelings experienced to be rated on a seven point scale ranging from "never" to "every day".

The three factors identified through component analyses in the initial developmental research have been replicated in various samples. Studies that have examined all 22 MBI-HSS items have consistently found cross-loadings for item 12 and item 16. Item 12, "I feel very energetic", is a personal accomplishment item that was found in these studies to load strongly on emotional exhaustion. Item 16, "Working with people directly puts too much stress on me", an emotional exhaustion item, loaded strongly on depersonalisation. The other 20 items of the MBI-HSS load consistently and exclusively on the appropriate subscale.

The reliability coefficients for the subscales were found to be 0.90 for emotional exhaustion, 0.79 for depersonalisation and 0.71 for personal accomplishment (Cronbach's coefficient alpha for N = 1 316). Substantial evidence exists to support the convergent validity of the MBI-HSS. Further evidence of the validity of the MBI-HSS was obtained by distinguishing it from measures of other psychological constructs that might be presumed to be confounded with burnout.

Concerning distortion due to social desirability response, results proved that none of the MBI-HSS subscales correlated significantly with the Social Desirability Scale at the 0.05 level.

4.4.2 Nursing Stress Survey

The Nursing Stress Survey (NSS) consists of 62 items containing typical stressors specific to nurses based on a number of research studies. Both the intensity and the frequency of stressors are addressed. Exploratory factor analysis of the NSS done by Van der Colff et al (In press) resulted in three internally consistent factors, namely lack of organisational support, demands of the job and nursing-specific demands. Structural equivalence of the NSS was found to be acceptable for Afrikaans, English and other African language groups. Internal consistencies of the factors were highly acceptable.

4.4.3 Biographical Questionnaire

A biographical questionnaire was also developed where participants were given the option of providing their names and contact details if they required feedback. Information gathered included age, gender, marital status, nursing experience and religion, all believed to be related to incidence of burnout (Pines, 1993: 34; Pines & Aronson, 1988: 113-128; Schaufeli & Enzmann, 1998: 75-99; Van der Colff et al, In press).

4.5 Study population

The study population consisted of nursing staff employed at eight Level 1 or Level 2 trauma units in Pretoria. The questionnaires were distributed to all nursing staff in the selected trauma units. The participation in the study was voluntarily resulting in a non-probability, convenience sample.

Convenience samples include subjects that are selected, because of the convenience and include individuals that are readily available. It is a less costly sampling technique and easy to administer. The disadvantage of convenience samples is that there is no way of knowing whether the sample is representative of the target population (Christensen, 1994: 65).

A total of 103 questionnaires were distributed of which 53 were returned, giving a return rate of 51.5%. This falls well within the guidelines provided by Stoker (1981) where a sample of N = 45 is sufficient for a population of N = 100.

4.6 Statistical analysis

The results of the questionnaires were analysed using the SPSS version 12 statistical package. The following statistical techniques were used:

- Descriptive statistics were used to process all the biographical information.
- In order to determine whether the mean scores obtained for different biographical variables differed statistically significantly between different groups, independent samples T-test and One-way analysis of variance (ANOVA) were used.
- Scheffe's multi-comparison technique was used to determine the degree of differences in the reported occupational stress and burnout levels for different biographical groups.
- Pearson product-moment correlation coefficient was used to measure the relationship between occupational stress and burnout.
- Cronbach alpha coefficients were calculated to assess the internal consistency of the NSS.

4.6.1 Descriptive statistics

Descriptive statistics describe the data of samples of subjects in terms of variables. The techniques include measures of central tendency and measures of variability. The aim is to organise and reduce the information to manageable proportions and to readily communicate some of the information (Howell, 1989: 33).

4.6.2 T-test and one-way ANOVA

One of the most common uses of the t-test involves testing the difference between the means of two independent groups (per demographic variable) (Howell, 1989: 188). Firstly, Levene's test for equality of variances was performed to satisfy the assumption of homogeneity of variances behind the t-test for two independent samples.

Analysis of variance (ANOVA) is a statistical technique for testing for differences in the means of several groups. One-way ANOVA is used where the groups are defined only for one independent variable (biographical variable) (Howell, 1989: 220).

Non-parametric tests that do not rely on precise distribution assumptions were also performed and, in all instances, confirmed the results obtained with parametric testing. See Appendix B for results.

4.6.3 Scheffe's multi-comparison technique

Whilst one-way ANOVA indicates significant differences between three or more groups, it does not indicate which of the groups differ significantly. Scheffe's multi-comparison technique pinpoints which of the differences between pairs of means are contributing to the overall difference.

It is a very conservative test giving the most stringent criteria for significance (Howell, 1989: 246).

4.6.4 Pearson product-moment coefficient

This is the most common correlation coefficient that indicates both the strength and direction of the relationship between variables (Howell, 1989: 100).

The results of the Pearson product-moment coefficient calculations are presented in a correlation matrix to indicate intercorrelations between the sub-scales of the two variables. The correlation matrix is a square, symmetrical matrix where each row and column represents a different variable, and the value of the intersection of each row and column is the correlation between the two variables (Tabachnick & Fiddell, 1989: 15).

Considering only statistical significance when dealing with correlation can be misleading, because the size of the correlation coefficient is linked to the sample size. A relatively small correlation can be considered significant because of a large sample size. As a result, Cohen (1988) classifies correlations as:

0.10 – 0.29   Small effect
0.30 – 0.49   Medium effect
> 0.50   Large effect

Effect size as a measure of practical significance can be an useful aid. It determines the importance of a statistically significant relationship (Steyn, 2002: 10).

4.6.5 Cronbach coefficient alpha

An appropriate way to assess the internal homogeneity of a set of items in a questionnaire is to look at all the items simultaneously using coefficient alpha. It provides a summary measure of the intercorrelations that exist among a set of items (Churchill & Iacobucci, 2002: 416).

As the internal consistencies of the three MBI-HSS scales are satisfactory, no calculations were performed for this sample (Schaufeli & Enzmann, 1998: 51).

4.7 Sample descriptive

A summary of the biographical variables of the research group are presented below.

Table 4.1:   Sample descriptive information

Biographical variable	Categories	Frequency	Percentage	Cumulative Percentage
Age	21-29	16	30.2	30.2
	30-39	29	54.7	84.9
	40-49	8	15.1	100.0
Gender	Male	4	7.5	7.5
	Female	49	92.5	100.0
Marital status	Single	21	39.6	39.6
	Married	25	47.2	86.8
	Divorced / Separated / Death	7	13.2	100.0
Qualification	Grade 12	3	5.7	5.7
	Tertiary : Diploma	28	52.8	58.5
	Tertiary : Degree	3	5.7	64.2
	Post Graduate Qualification	15	28.3	92.5
	Other	4	7.5	100.0

Biographical variable	Categories	Frequency	Percentage	Cumulative Percentage
Nursing experience	1-5 years	10	18.9	18.9
	6-10 years	13	24.5	43.4
	11-14 years	11	20.8	64.2
	15+ years	19	35.8	100.0
Trauma experience	<1 year	12	22.6	22.6
	1-5 years	25	47.2	69.8
	6-10 years	10	18.9	88.7
	11-14 years	4	7.5	96.2
	15+ years	2	3.8	100.0
Role	Supervisory	18	34.0	34.0
	Non-supervisory	35	66.0	100.0
Home language	Afrikaans	40	75.5	75.5
	English	7	13.2	88.7
	Other	6	11.3	100.0
Night shifts per month	1-5	22	41.5	41.5
	6-10	15	28.3	69.8
	11-15	5	9.4	79.2
	16+	11	20.8	100.0
Intention to leave	Yes	8	15.1	15.1
	No	45	84.9	100.0
Children	Yes	29	54.7	55.8
	No	23	43.4	100.0
	Unanswered	1	1.9	
Religious	Yes	49	92.5	94.2
	No	3	5.7	100.0
	Unanswered	1	1.9	
Employed	Full Time	47	88.7	88.7
	Part Time	6	11.3	100.0

4.8 Conclusion

The research design, including measuring instruments is discussed. The distributions of the research group are summarised through the use of a frequency table. This information is helpful to understand and interpret the data quickly in a form that does not compromise detail. More detailed discussions of the results and interpretation of the information are presented in the following chapter.

Chapter 5

RESULTS

5.1 Occupational stress

As Dewe (1989) suggested, both intensity and frequency of stressful encounters were measured with the NSS. The descriptive statistics of the intensity scores (i.e. the amount of stress experienced) and the frequency scores (i.e. the number of days the specific stressors had been experienced during the past six months) for the NSS are presented in Table 5.1.

Table 5.1:   Descriptive statistics for NSS

Occupational stressors	N	Mean	Std. Deviation	Cronbach Alpha
Intensity				
Nursing-specific demands	53	4.9827	1.80504	.879
Job demands	53	4.5501	1.58590	.950
Lack of organisational support	53	4.9298	1.67612	.942
Frequency				
Nursing-specific demands	53	3.3348	1.98596	.907
Job demands	53	4.4856	1.76622	.906
Lack of organisational support	53	3.8365	1.89154	.926

Mean scores for the amount of stress experienced by trauma unit nursing staff indicate moderate stress.

A histogram comparing the differences in mean scores of the subscales for the NSS is presented in Figure 5.1.

Figure 5.1:   Mean scores of NSS subscales
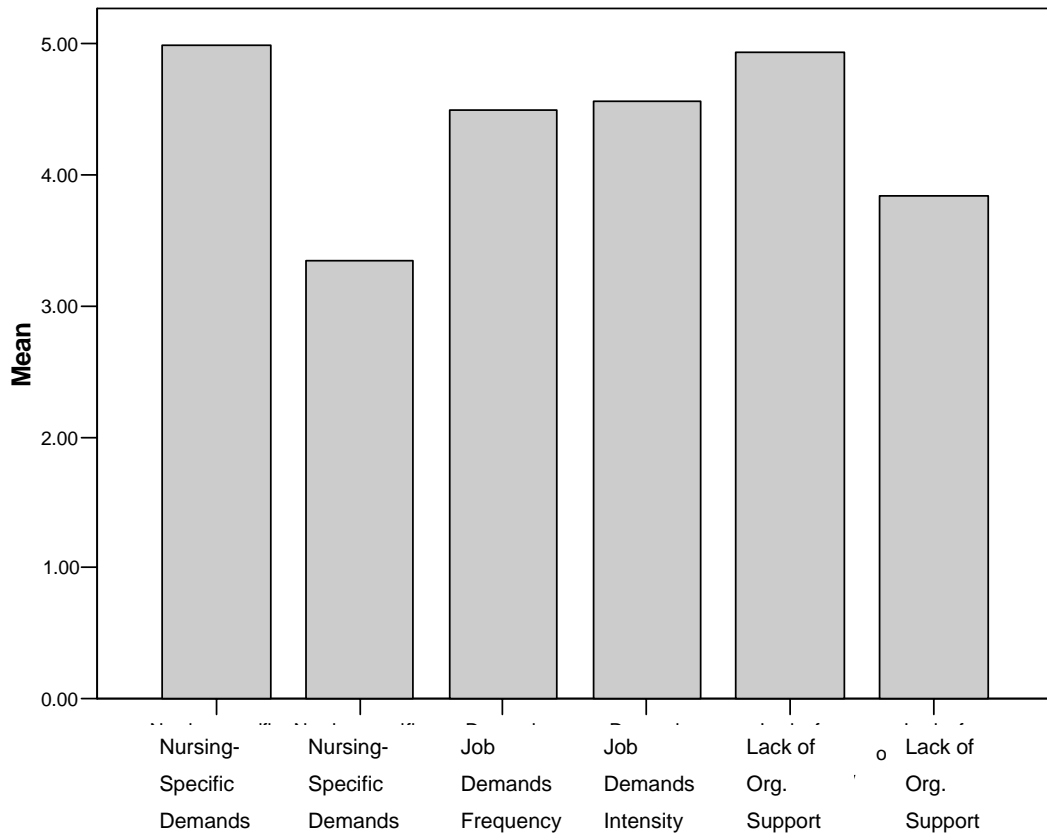
Although nursing-specific stressors are encountered least frequent of all the sub-scales, the stress experienced during these occasions are as intense as the stress experienced due to a lack of organisational support. The intensity of job demands stress experiences are less in comparison, but these are experienced most frequently.

The intensity and frequency measures were combined by multiplying the intensity score with the frequency score to obtain a severity index (Van der Colff et al, In press). The overall effect of stressful experiences is illustrated in Table 5.2 where the mean severity index for job demands and lack of organisational support exceed that of nursing-specific demands.

Table 5.2:   **Descriptive statistics for severity index of the NSS**

Occupational stressors	N	Mean	Std. Deviation
Nursing-specific demands	53	17.1561	14.58331
Job demands	53	22.2325	14.33542
Lack of organisational support	53	22.3700	14.48002

5.2 Occupational stressors

The severity index of stressors for the sub-scales of the NSS is reported in Table 5.3 to Table 5.5.

Table 5.3:   **Descriptive statistics for severity of stressors for nursing-specific demands**

Stressor	N	Mean	Std. Deviation
Performing procedures that patients experience as painful	53	29.02	21.04
Watching a patient suffer	53	24.7	25.854
Personal insult from patients or their families	53	21.81	24.013
Patients who fail to improve	53	18.94	21.399
Death of a patient	53	17.47	23.742
Inadequate information from a medical practitioner regarding the medical condition of a patient	53	15.32	17.737
Communicating with a patient about death	53	15.06	19.547
Disagreement with medical practitioner or colleague(s) concerning the treatment of a patient	53	14.64	16.619
Making a mistake when treating a patient	53	11.4	22.037
Personal insult from doctors	53	10.21	17.578
Death of a patient with whom you developed a close relationship	53	10.15	20.107

From Table 5.3 the following nursing-specific demands are experienced relatively severely by trauma unit nursing staff:

- Performing procedures that patients experience as painful;

- Watching a patient suffer; and

- Personal insult from patients or their families.

Table 5.4:   Descriptive statistics for severity of stressors for job demands

Stressor	N	Mean	Std. Deviation
Insufficient personal time (e.g., coffee breaks, lunch)	53	60.92	44.18
Meeting deadlines	53	48.28	36.268
Excessive paperwork e.g. administrative duties	53	35.64	28.356
Dealing with difficult patients	53	33.43	25.511
Dealing with difficult doctors	53	33.43	25.511
Dealing with other health care professionals (e.g. dieticians, social workers, pharmacists)	53	33.43	25.511
Adhering to the budget of the hospital/institution	53	33.43	25.511
Stock control in the ward/unit/ /institution	53	33.43	25.511
The management of staff	53	33.43	25.511
Demands of clients/patients	53	33.43	25.511
Language and communication barriers with clients/patients	53	33.43	25.511
Excessive involvement in committee meetings (e.g. Infection control)	53	33.43	25.511
Security risk posed in area where your job is located	53	33.43	25.511
Health risk posed by contact with patients (e.g. HIV/AIDS, Tuberculosis)	53	33.43	25.511
Irregular working hours	53	30.36	30.355
Dealing with crisis situations	53	27.42	21.419
Working overtime	53	25.87	25.387

Making critical on-the-spot decisions	53	25.19	23.039
Assignment of increased responsibility	53	23.36	20.871
Frequent changes from boring to demanding activities	53	23	20.444
Caring for the emotional and spiritual needs of a patient or his/her family	53	19.55	21.911
Operating specialised equipment	53	19.47	21.377
Working emergency hours	53	18.38	21.789
Assignment of new or unfamiliar duties	53	17.43	20.08
Periods of inactivity	53	14.79	16.888
Working overtime due to "Moon lightening"	53	14.62	21.277
Assignment of disagreeable duties	53	14.36	17.835
Floating to other units that are short of staff	53	9.38	18.658

From Table 5.4 the following job demands are experienced relatively severely by trauma unit nursing staff:

- Insufficient personal time (e.g., coffee breaks, lunch);

- Meeting deadlines; and

- Excessive paperwork e.g. administrative duties.

Table 5.5:   Descriptive statistics for severity of stressors for lack of organisational support

Stressor	N	Mean	Std. Deviation
Inadequate salary	53	47.06	31.217
Fellow workers not doing their job	53	39.64	28.359
Shortage of staff	53	38.92	32.38
Insufficient personnel to handle workload	53	34.75	30.443
Poorly motivated co-workers	53	32.57	25.701
Covering work for another employee	53	31.02	28.319
Conflicts with other departments/divisions	53	25.79	25.332
Experiencing negative attitudes toward the organisation	53	23.94	25.3
Frequent interruptions	53	22.94	22.891
Lack of recognition for good work	53	22.17	25.242

Performing tasks not in job description	53	21.6	22.687
Insufficient time to perform tasks	53	19.28	22.118
Inadequate support by supervisor/manager	53	18.64	24.331
Lack of support from colleagues	53	17.75	19.822
Lack of a opportunity to talk openly with other staff members	53	15.94	21.077
Criticism by a supervisor/manager	53	14.06	20.648
Difficulty getting along with supervisor/manager	53	14	23.687
Lack of opportunity for advancement	53	13.75	18.078
Lack of participation in policy-making decisions	53	13.57	18.777
Inadequate or poor quality equipment	53	13.53	18.893
Competition for advancement	53	11.38	16.669
Conflict with a supervisor / manager	53	11.21	18.336
Poor or inadequate supervision/management	53	10.98	16.742

From Table 5.5 the following lack of organisational support are experienced relatively severely by trauma unit nursing staff:

- Inadequate salary;

- Fellow workers not doing their job;

- Shortage of staff;

- Insufficient personnel to handle workload;

- Poorly motivated co-workers; and

- Covering work for another employee.

5.3 Burnout

The descriptive statistics of the sub-scales for the MBI are presented in Table 5.6.

Table 5.6:   Descriptive statistics for the MBI

Dimensions	N	Mean	Std. Deviation
Emotional exhaustion	53	16.53	11.463
Depersonalisation	53	8.87	5.913
Personal accomplishment	53	33.42	7.948

Compared to the norms supplied by Maslach et al (1996: 6) for the medicine occupational subgroup (N = 1 104), the nursing staff of the eight trauma units display an average degree of burnout with average scores reflected on depersonalisation and personal accomplishment and a low score on emotional exhaustion. Burnout is considered to be high when high scores are obtained for emotional exhaustion and depersonalisation and low scores for personal accomplishment. It is of note that the standard deviation reported for the emotional exhaustion scale of the normative sample is 9.53 that is lower than reported for this study. The standard deviations for depersonalisation and personal accomplishment compare favorably with 5.22 and 7.34 respectively.

Differences in sub-scale scores for the MBI for different biographical groups are presented below. Inferential statistics were not calculated for differences between groups for gender, home language, intention to leave, religion and terms of employment due to small group numbers. Only descriptive statistics are thus reported in Table 5.7 to Table 5.11.

Table 5.7:   Descriptive statistics for gender: MBI

Gender	Dimensions	N	Mean	Std. Deviation
Male	Emotional exhaustion	4	21.75	10.69
	Depersonalisation	4	11	7.165
	Personal accomplishment	4	34.75	9.251
Female	Emotional exhaustion	49	16.1	11.52
	Depersonalisation	49	8.694	5.853
	Personal accomplishment	49	33.31	7.933

Table 5.8:   Descriptive statistics for home language: MBI

Home language	Dimensions	N	Mean	Std. Deviation
Afrikaans	Emotional exhaustion	40	16.88	11.601
	Depersonalisation	40	9.50	6.072
	Personal accomplishment	40	31.90	7.854
English	Emotional exhaustion	7	11.71	10.275
	Depersonalisation	7	6.86	5.956
	Personal accomplishment	7	37.86	8.474
Other	Emotional exhaustion	6	19.83	11.990
	Depersonalisation	6	7.00	4.517
	Personal accomplishment	6	38.33	3.830

Table 5.9:   Descriptive statistics for intention to leave: MBI

Intention to leave	Dimensions	N	Mean	Std. Deviation
Yes	Emotional exhaustion	8	27.13	7.298
	Depersonalisation	8	10.50	6.071
	Personal accomplishment	8	32.25	5.523
No	Emotional exhaustion	45	14.64	11.081
	Depersonalisation	45	8.58	5.906
	Personal accomplishment	45	33.62	8.337

Table 5.10:   Descriptive statistics for religion: MBI

Religious	Dimensions	N	Mean	Std. Deviation
Yes	Emotional exhaustion	49	16.29	10.640
	Depersonalisation	49	8.76	5.865
	Personal accomplishment	49	33.53	8.003
No	Emotional exhaustion	3	26.00	20.664
	Depersonalisation	3	13.67	3.055
	Personal accomplishment	3	28.67	5.859

Table 5.11:   Descriptive statistics for terms of employment: MBI

Employment	Dimensions	N	Mean	Std. Deviation
Full Time	Emotional exhaustion	47	17.36	11.462
	Depersonalisation	47	8.98	6.177
	Personal accomplishment	47	33.26	7.895
Part Time	Emotional exhaustion	6	10.00	10.020
	Depersonalisation	6	8.00	3.406
	Personal accomplishment	6	34.67	9.026

The descriptive and parametric test results for age, marital status, qualification, nursing experience, trauma experience, role, night shifts and children are reported. The results for non-parametric tests confirmed parametric results throughout (Appendix B).

No significant differences were found between the group means for age, marital status or qualification reported in Table 5.12 to Table 5.17.

Table 5.12: Descriptive statistics for age: MBI

Dimensions	Categories	N	Mean	Std. Deviation
Emotional exhaustion	21-29	16	12.69	8.300
	30-39	29	19.41	12.313
	40-49	8	13.75	12.045
	Total	53		
Depersonalisation	21-29	16	7.87	6.109
	30-39	29	9.38	5.906
	40-49	8	9.00	6.071
	Total	53		
Personal accomplishment	21-29	16	33.94	8.346
	30-39	29	32.79	8.055
	40-49	8	34.63	7.520
	Total	53		

Table 5.13: ANOVA for age: MBI

Dimensions		Sum of Squares	df	Mean Square	F	Sig.
Emotional exhaustion	Between groups	539.236	2	269.618	2.142	.128
	Within groups	6293.972	50	125.879		
	Total	6833.208	52			
Depersonalisation	Between groups	23.498	2	11.749	.327	.722
	Within groups	1794.578	50	35.892		
	Total	1818.075	52			
Personal accomplishment	Between groups	27.297	2	13.648	.209	.812
	Within groups	3257.571	50	65.151		
	Total	3284.868	52			

Table 5.14:   Descriptive statistics for marital status: MBI

Dimensions	Categories	N	Mean	Std. Deviation
Emotional exhaustion	Single	16	12.69	8.300
	Married	29	19.41	12.313
	Divorced/Separated/ Death	8	13.75	12.045
	Total	53		
Depersonalisation	Single	16	7.87	6.109
	Married	29	9.38	5.906
	Divorced/Separated/ Death	8	9.00	6.071
	Total	53		
Personal accomplishment	Single	16	33.94	8.346
	Married	29	32.79	8.055
	Divorced/Separated/ Death	8	34.63	7.520
	Total	53		

Table 5.15:   ANOVA for marital status: MBI

Dimensions		Sum of Squares	df	Mean Square	F	Sig.
Emotional exhaustion	Between groups	174.922	2	87.461	.657	.523
	Within groups	6658.286	50	133.166		
	Total	6833.208	52			
Depersonalisation	Between groups	31.504	2	15.752	.441	.646
	Within groups	1786.571	50	35.731		
	Total	1818.075	52			
Personal accomplishment	Between groups	122.228	2	61.114	.966	.388
	Within groups	3162.640	50	63.253		
	Total	3284.868	52			

Table 5.16:   Descriptive statistics for qualification: MBI

Dimensions	Categories	N	Mean	Std. Deviation
Emotional exhaustion	Grade 12	3	15.00	9.165
	Tertiary: Diploma	28	17.11	12.518
	Tertiary: Degree	3	17.00	16.462
	Post Graduate Qualification	15	15.53	10.260
	Other	4	17.00	11.343
	Total	53		
Depersonalisation	Grade 12	3	6.67	6.028
	Tertiary: Diploma	28	9.71	5.931
	Tertiary: Degree	3	8.33	9.238
	Post Graduate Qualification	15	7.33	6.102
	Other	4	10.75	2.500
	Total	53		
Personal accomplishment	Grade 12	3	26.00	1.732
	Tertiary: Diploma	28	33.32	8.358
	Tertiary: Degree	3	39.33	4.726
	Post Graduate Qualification	15	33.60	7.462
	Other	4	34.50	9.883
	Total	53		

The groups for Grade 12, Tertiary: Degree and Other were very small. As reflected in Table 5.17, independent samples test was only performed on Tertiary: Diploma and Post Graduate Qualification.

Table 5.17:   Independent samples test for qualification: MBI

Dimensions		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean Diffe-rence
Emotional exhaustion	Equal variances assumed	.487	.489	.417	41	.679	1.574
	Equal variances not assumed			.443	34.015	.660	1.574
Depersonalisation	Equal variances assumed	.208	.650	1.242	41	.221	2.381
	Equal variances not assumed			1.231	28.032	.228	2.381
Personal accomplishment	Equal variances assumed	1.176	.285	-.108	41	.915	-.279
	Equal variances not assumed			-.112	31.713	.912	-.279

Group means for nursing experience show statistically significant differences for emotional exhaustion as reflected in Tables 5.18 to 5.20 (Sig.(3) = 0.024, $p < 0.05$).

Table 5.18:   Descriptive statistics for nursing experience: MBI

Dimensions	Categories	N	Mean	Std. Deviation
Emotional exhaustion	1-5 years	10	14.40	9.395
	6-10 years	13	14.85	12.714
	11-14 years	**11**	**25.73**	**11.611**
	15+ years	**19**	**13.47**	**9.312**
	Total	53	16.53	11.463
Depersonalisation	1-5 years	10	8.00	6.307
	6-10 years	13	9.23	5.215
	11-14 years	11	10.45	6.424
	15+ years	19	8.16	6.122
	Total	53	8.87	5.913
Personal accomplishment	1-5 years	10	34.70	7.631
	6-10 years	13	33.31	8.014
	11-14 years	11	32.55	8.779
	15+ years	19	33.32	8.145
	Total	53	33.42	7.948

Table 5.19:   ANOVA for nursing experience: MBI

Dimensions		Sum of Squares	df	Mean Square	F	Sig.
Emotional exhaustion	**Between groups**	**1190.197**	**3**	**396.732**	**3.445**	**.024**
	Within groups	5643.011	49	115.163		
	Total	6833.208	52			
Depersonalisation	Between groups	46.514	3	15.505	.429	.733
	Within groups	1771.561	49	36.154		
	Total	1818.075	52			
Personal accomplishment	Between groups	25.166	3	8.389	.126	.944
	Within groups	3259.702	49	66.525		
	Total	3284.868	52			

Table 5.20: Scheffe's multiple comparison for nursing experience: MBI

Dependent Variable: Emotional Exhaustion

(I) Nursing Experience	(J) Nursing Experience	Mean Difference (I-J)	Std. Error	Sig.
1-5 years	6-10 years	-.446	4.514	1.000
	11-14 years	-11.327	4.689	.135
	15+ years	.926	4.193	.997
6-10 years	1-5 years	.446	4.514	1.000
	11-14 years	-10.881	4.396	.120
	15+ years	1.372	3.863	.988
11-14 years	1-5 years	11.327	4.689	.135
	6-10 years	10.881	4.396	.120
	15+ years	**12.254(*)**	**4.066**	**.038**
15+ years	1-5 years	-.926	4.193	.997
	6-10 years	-1.372	3.863	.988
	11-14 years	**-12.254(*)**	**4.066**	**.038**

* The mean difference is significant at p < 0.05.

For trauma experience the groups for 11 – 14 years and 15+ years were very small and were grouped together. Table 5.21 contains descriptive statistics and Table 5.22 indicates a statistically significant difference between group means for depersonalisation (Sig.(3) = 0.044, p < 0.05).

Table 5.21: Descriptive statistics for trauma experience: MBI

Dimensions	Categories	N	Mean	Std. Deviation
Emotional exhaustion	< 1 year	12	11.50	9.959
	1-5 years	25	19.88	12.843
	6-10 years	10	13.00	9.522
	11+ years	6	18.50	6.863
	Total	53	16.53	11.463
Depersonalisation	< 1 year	12	5.50	4.123
	1-5 years	25	10.92	6.089
	6-10 years	10	7.20	6.680
	11+ years	6	9.83	3.601
	Total	53	8.87	5.913
Personal accomplishment	< 1 year	12	34.42	9.949
	1-5 years	25	32.48	6.856
	6-10 years	10	33.20	9.920
	11+ years	6	35.67	4.844
	Total	53	33.42	7.948

Table 5.22:   ANOVA for trauma experience: MBI

Dimensions		Sum of Squares	df	Mean Square	F	Sig.
Emotional exhaustion	Between groups	732.068	3	244.023	1.960	.132
	Within groups	6101.140	49	124.513		
	Total	6833.208	52			
Depersonalisation	**Between groups**	**274.802**	**3**	**91.601**	**2.908**	**.044**
	Within groups	1543.273	49	31.495		
	Total	1818.075	52			
Personal accomplishment	Between groups	64.778	3	21.593	.329	.805
	Within groups	3220.090	49	65.716		
	Total	3284.868	52			

This finding is not duplicated in the post hoc analysis. Scheffe's multiple comparisons in Table 5.23 indicate no significant differences between group means for depersonalisation.

Table 5.23:   Scheffe's multiple comparison for trauma experience: MBI

Dependent Variable: Depersonalisation

(I) Nursing Experience	(J) Nursing Experience	Mean Difference (I-J)	Std. Error	Sig.
< 1 year	1-5 years	-5.420	1.971	.069
	6 -10 years	-1.700	2.403	.918
	11+ years	-4.333	2.806	.503
1-5 years	< 1 year	5.420	1.971	.069
	6-10 years	3.720	2.100	.381
	11+ years	1.087	2.551	.980
6-10 years	< 1 year	1.700	2.403	.918
	1-5 years	-3.720	2.100	.381
	11+ years	-2.633	2.898	.843
11+ years	< 1 year	4.333	2.806	.503
	1-5 years	-1.087	2.551	.980
	6-10 years	2.633	2.898	.843

No significant differences were found between the group means for role, night shifts or children as indicated in Tables 5.24 to 5.29.

Table 5.24:   Descriptive statistics for role: MBI

Dimensions	Categories	N	Mean	Std. Deviation
Emotional exhaustion	Supervisory	18	18.39	10.998
	Non-supervisory	35	15.57	11.736
Depersonalisation	Supervisory	18	10.28	6.623
	Non-supervisory	35	8.14	5.473
Personal accomplishment	Supervisory	18	33.94	7.981
	Non-supervisory	35	33.14	8.034

Table 5.25:   Independent samples test for role: MBI

Dimensions		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean Diffe-rence
Emotional exhaustion	Equal variances assumed	.244	.623	.845	51	.402	2.817
	Equal variances not assumed			.863	36.484	.394	2.817
Depersonalisation	Equal variances assumed	1.336	.253	1.252	51	.216	2.135
	Equal variances not assumed			1.177	29.234	.249	2.135
Personal accomplishment	Equal variances assumed	.621	.434	.345	51	.732	.802
	Equal variances not assumed			.345	34.630	.732	.802

Table 5.26:   Descriptive statistics for night shifts: MBI

Dimensions	Categories	N	Mean	Std. Deviation
Emotional exhaustion	1 – 5	22	15.95	9.266
	6 – 10	15	20.87	13.809
	11 – 15	5	8.60	6.107
	16+	11	15.36	12.620
	Total	53	16.53	11.463
Depersonalisation	1 – 5	22	7.14	5.064
	6 – 10	15	10.33	5.108
	11 – 15	5	7.60	6.066
	16+	11	10.91	7.842
	Total	53	8.87	5.913
Personal accomplishment	1 – 5	22	31.77	6.354
	6 – 10	15	33.40	8.322
	11 – 15	5	36.80	13.368
	16+	11	35.18	7.757
	Total	53	33.42	7.948

Table 5.27:   ANOVA for night shifts: MBI

Dimensions		Sum of Squares	df	Mean Square	F	Sig.
Emotional exhaustion	Between groups	618.774	3	206.258	1.626	.195
	Within groups	6214.433	49	126.825		
	Total	6833.208	52			
Depersonalisation	Between groups	152.042	3	50.681	1.491	.229
	Within groups	1666.033	49	34.001		
	Total	1818.075	52			
Personal accomplishment	Between groups	150.968	3	50.323	.787	.507
	Within groups	3133.900	49	63.957		
	Total	3284.868	52			

Table 5.28:   Descriptive statistics for children: MBI

Dimensions	Categories	N	Mean	Std. Deviation
Emotional exhaustion	Yes	29	17.90	13.009
	No	23	15.52	8.903
Depersonalisation	Yes	29	8.31	5.211
	No	23	9.96	6.547
Personal accomplishment	Yes	29	32.21	8.217
	No	23	34.57	7.531

Table 5.29:   Independent samples test for children: MBI

Dimensions		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
Emotional exhaustion	Equal variances assumed	3.041	.087	.747	50	.459	2.375
	Equal variances not assumed			.779	49.060	.439	2.375
Depersonalisation	Equal variances assumed	2.254	.140	-1.010	50	.317	-1.646
	Equal variances not assumed			-.984	41.440	.331	-1.646
Personal accomplishment	Equal variances assumed	.219	.642	-1.066	50	.292	-2.358
	Equal variances not assumed			-1.077	48.904	.287	-2.358

5.4 Occupational stress/burnout relationship

The intercorrelations that were calculated to establish whether a relationship exists between occupational stress and burnout subscales for trauma unit nursing staff are reported in Table 5.30.

Table 5.30: Correlations of MBI and NSS subscales

		(A)	(B)	(C)	(D)	(E)	(F)
(A) Emotional exhaustion	Pearson Correlation	1	-	-	-	.-	-
	Sig. (2-tailed)		-	-	-	.-	-
	N	53	-	-	-	.-	-
(B) Depersonalisation	Pearson Correlation	.589(**)	1	-	-	.-	-
	Sig. (2-tailed)	.000		-	-	.-	-
	N	53	53	-	-	.-	-
(C) Personal accomplishment	Pearson Correlation	-.200	-.246	1	-	.-	-
	Sig. (2-tailed)	.150	.076		-	.-	-
	N	53	53	53	-	.-	-
(D) Nursing-specific demands	Pearson Correlation	.559(**)	.350(*)	.042	1	.-	-
	Sig. (2-tailed)	.000	.010	.763		.-	-
	N	53	53	53	53	.-	-
(E) Job demands	Pearson Correlation	.548(**)	.378(**)	-.140	.733(**)	1	-
	Sig. (2-tailed)	.000	.005	.318	.000		-
	N	53	53	53	53	53	-
(F) Lack of organisational support	Pearson Correlation	.646(**)	.420(**)	-.152	.801(**)	.731(**)	1
	Sig. (2-tailed)	.000	.002	.276	.000	.000	
	N	53	53	53	53	53	53

** Correlation is significant at $p < 0.01$ (2-tailed).

* Correlation is significant at $p < 0.05$ (2-tailed).

The correlations reported in Table 5.30 represent in all statistically significant instances ($p < 0.05$) a medium to large effect size, indicating that all statistically significant relationships are of importance for this sample. Emotional exhaustion is related to depersonalisation, nursing-specific demands, job demands and lack of organisational support with large effect size. Depersonalisation is related to nursing specific demands, job demands and lack of organisational support with medium effect size. Personal accomplishment is not significantly related to any of the other sub-scales ($p < 0.05$). The sub-scales of the NSS are strongly related.

5.5 Conclusion

From the results reported here it is clear that the trauma unit nursing staff of the hospitals that was studied experiences moderate occupational stress and average burnout. Occupational stress and burnout are also strongly related. More detailed discussions and interpretation of the results are presented in the following chapter.

Chapter 6

DISCUSSION

6.1 Discussion

The objectives of this study were to determine the prevalence of occupational stress and burnout in trauma unit nursing staff and to identify the occupational stressors related to burnout.

6.1.1 Occupational stress

The nursing staff of the trauma units that were surveyed experience moderate occupational stress. Considering the comments of Goh et al, (1999), Maslach (1996: 3) and Hattingh (2001) with regards to the nature of the work performed in trauma units, higher levels of occupational stress could have been expected.

The prevalence of occupational stress is amongst others, a function of the amount of stress experienced as well as the frequency of exposure to stressors. Job demand-related stressors prove to be experienced the most severely. These include insufficient personal time, excessive paperwork and the meeting of deadlines. This result is in line with the finding of Schaufeli & Enzmann (1998) that job demands of workload and time pressure are strongly related to emotional exhaustion in most studies, but are almost unrelated to personal accomplishment.

Job demands, when compared to the other subscales, are experienced least intensely, but occur most frequently.

It is then conceivable, that because more intensely experienced stressors related to nursing-specific demands and lack of organisational support are experienced less often, occupational stress levels are moderate and not high.

Occupational stress and burnout can increase due to inadequate salaries, more staff shortages or fellow workers not doing their jobs or more contact with patients and their families that are critically ill or more patients that need painful nursing procedures. Three studies reported by Schaufeli & Enzmann (1998) confirm the special importance of client-related stressors in relation to burnout, specifically with regards to conflict in interactions with clients or colleagues and contact with terminally ill patients.

6.1.2 Burnout

The sample surveyed experience an average degree of burnout when compared to the medicine occupational subgroup.

Nursing experience is the only biographical variable that indicated a statistically significant difference in group means ($p < 0.05$) (Indicated in bold type in Figure 6.1). This result is not surprising as Maslach et al (2001: 409) are of the opinion that evidence suggests that burnout is more of a social phenomenon than an individual one. However, Maslach et al (2001) conclude that age is the one biographical variable that is consistently related to burnout. Higher levels of burnout are reported for younger employees than amongst employees over 30 or 40 years old. Age is confounded with work experience so that burnout appears to be more of a risk earlier in careers. Schaufeli & Enzmann (1998: 76) concur and find the relationship to be in line with observations that burnout is negatively related to work experience.

Results of this study are contrary to the findings of both Maslach et al (2001: 409) and Schaufeli & Enzmann (1998: 76). As illustrated in Figure 6.1, age and nursing experience vary jointly with time, but burnout appears to be highest at age 30 – 39 years and work experience 11- 14 years.

Figure 6.1: Emotional exhaustion group means
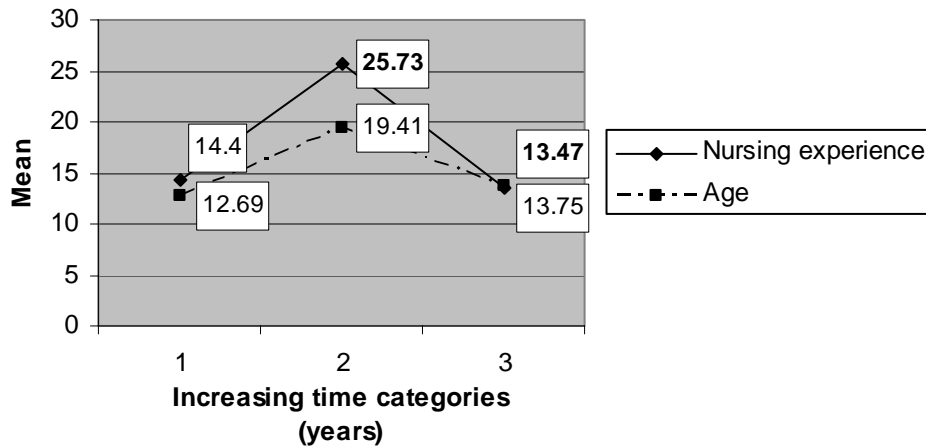
Maslach <u>et al</u> (2001) caution against the problem of survival bias that could influence results. Those who burn out early in their careers resign and the remaining survivors report lower levels of burnout. In South Africa, limited job opportunities were available in the past and still are, causing employees considering leaving their jobs to do so with caution. They probably opt to remain in their current positions with dissatisfaction until the limitations of the labour market are acknowledged. Other possible interpretations of the results could be considered as well, but the results should be interpreted with caution due to the limitations of this study.

6.1.3 Occupational stress/burnout relationship

According to the process model of burnout, diminished personal accomplishment develops in parallel with emotional exhaustion as they arise from different aspects of the work environment. Demanding aspects of the work environment aggravate exhaustion which in turn contributes to increased depersonalisation, while the presence of resources influences personal accomplishment (Leiter, 1993: 246).

Results are in agreement with the process model of Leiter (1993) and other research that support findings that job demands are most strongly related to emotional exhaustion, but contrary to findings no statistically significant relationship with personal accomplishment is indicated (Maslach, Jackson & Leiter, 1996; Schaufeli & Bakker, 2004: 30; Schaufeli & Enzmann, 1998). Contrary to findings that lack of job resources are strongly related to personal accomplishment, the results indicate that lack of organisational support is also strongly related to emotional exhaustion and indicate no statistically significant relationship with personal accomplishment.

Leiter's (1993) comments should be taken into account that demands and resources are not entirely independent; work environments perceived as overly demanding are also rated as offering insufficient resources. This seems to be the case for the sample surveyed as results report the mean severity indices for job demands and lack of organisational support as 22.23 and 22.37 respectively. This perceived correspondence in concepts could contribute to the strong relationship that both subscales display with emotional exhaustion.

To a considerable and meaningful extent, the relationship between emotional exhaustion and personal accomplishment of burnout exists external to individuals within their social context, in the provision of organisational resources, in the personal conflict among colleagues and patients and in the pressure of emotional demands (Leiter, 1993: 246).

Emotional exhaustion is indicated as having the strongest relationship with the other subscales of the MBI and NSS. The relationship with lack of organisational support is strongest with a shared variance (r^2) of 42%, followed by depersonalisation with 35%, nursing-specific demands with 31% and job demands with 30%.

Although causal relationships are not established here, the prominent role of emotional exhaustion in the development of burnout should be noted as well as the contribution of specific occupational stressors as it was identified by the results of the NSS.

6.2 Conclusion

Trauma unit nursing staff experience moderate occupational stress and average burnout. The process model of burnout is partly supported by results with subscales of the MBI and NSS, with the exception of personal accomplishment, indicating statistically significant and medium to large effect sizes with intercorrelations. Specific occupational stressors were identified that play a role in occupational stress and burnout.

6.2.1 Limitations

The study is subjected to the following methodological limitations of burnout research discussed by Schaufeli & Enzmann (1998: 73-74), inter alia:

- Only direct relationships were tested, negating moderating and mediating factors that are included in the complex theoretical models of burnout.
- Data were based exclusively on self-reports with no objective measures included.
- Convenience sampling and small sample size limit the wider application of results.
- One point in time data gathering and correlations prevented the examination of causal relationships.

In addition, no data were considered containing the number and nature of patients that was treated during the previous six months.

This information could vary considerably between the eight trauma units and could have had an influence on the occupational stress and burnout reported by the nursing staff. Future research should take these differences into account.

6.2.2 Recommendations

Change of either the individual or work environment in isolation is not enough – an integrated approach is necessary for effective change to occur.

6.2.2.1 Identification

It is essential, on an individual as well as organisational level, to determine and acknowledge the levels of occupational stress and burnout in order to manage the impact thereof and to prevent escalation of the problem, because:

- Negative feelings toward others eventually develop into negative feelings toward oneself that includes guilt about not caring enough about others and a sense of personal and professional failure (reduced personal accomplishment/inefficacy) (Maslach, 1986:3-5). The knowledge that colleagues may suffer from similar negative feelings may alleviate guilt.
- Burnout can be "contagious" and perpetuate through informal contact and have a negative effect on home life as well (Burke & Greenglass in Maslach et al, 2001: 406; Demerouti et al, 2000: 460; Schaufeli & Enzmann, 1998: 123). A proactive approach to prevent a downward burnout spiral from developing is thus called for.

Self-knowledge through self-monitoring and stress/burnout audits provides input to determine further action. Results of the information that was gathered should be discussed and verified with all the involved parties.

There should be agreement on the choice of interventions and detailed action planning should be performed prior to commencing.

6.2.2.2 Primary intervention

The aim of these interventions is to reduce, modify or manage the intensity, frequency and/or duration of organisational demands in order to reduce the stress response in people at work.

The lack of organisational support-related stressors that were identified is related and focuses on motivation, reward and adequate staffing. Job demand-related stressors that were identified focus strongly on time management and excessive paperwork that appear to be related as well. Management and nursing staff have some control over these stressors. Dissatisfaction with salaries often includes dissatisfaction with other issues as well. After internal and external parity of remuneration structures are established, motivation and staffing issues should be addressed.

The root causes of dissatisfaction should be determined collaboratively. The approach of Maslach et al (2001) that focus on the six areas of work life where person-job mismatches occur can be of value. Educational intervention in the form of stress - and time management training can be beneficial, as well as ensuring adequate competency levels for performing administrative and other tasks.

Nursing-specific demand-related stressors that were identified focus on patient suffering and personal insult from patients or their families. Management and nursing staff have little control over these stressors. Because of the limits to eliminate stressors, intervention should be aimed at limiting frequency and duration of exposure to these stressors by means of alternating job duties or managing the number of hours worked.

The consequences of exposure to unavoidable stressors will determine whether concerted remedial intervention is needed. The relationship of exposure to nursing-specific demands with emotional exhaustion had been established ($r = 0.559$, $p < 0.05$) indicating that secondary intervention should be considered.

6.2.2.3 Secondary intervention

The aim of these interventions is to moderate individuals' stress responses to reduce the intensity, frequency, and/or duration of the individuals' experience of the stress response when primary intervention is unsuccessful or infeasible.

Interventions include attempts to change the meaning of the stressful situation to the individual by means of cognitive reappraisal, various relaxation techniques, teaching employees coping skills, support groups or change in management practices with regards to conflict management, communication and decision making. Participation in management creates a feeling of control over the work environment that facilitates problem-orientated coping that counters the effect of occupational stress and the development of burnout.

6.2.2.4 Tertiary intervention

The aim of these interventions is to minimise distress and provide therapy to shorten and improve the healing process from stressful or traumatic events encountered in the workplace. Typical interventions include critical stress debriefing and employee assistance programmes that should be considered in extreme cases of either exposure to traumatic events or individuals appearing to be overburdened.

6.2.3 Management implications

Although both occupational stress levels and burnout are moderate, proactive intervention should be considered. People do not suddenly become burned out, nor are high levels of exhaustion and a diminished sense of accomplishment invariable aspects of some people. Instead, people move toward increased professional efficacy or toward burnout as a function of their personal reaction to persistent aspects of their work environment (Leiter, 1993: 246). Stressors were identified in the work environment that have a relationship with burnout. If these stressors are not managed it could ultimately affect patient care, employee well-being and profitability.

Trauma nursing is exposed to the multiple changes experienced currently world wide as well as to the unpredictable nature of service delivery with the number of patients to be treated and the nature of the care needed that vary considerably. The status quo can thus change without warning. By taking responsibility for dealing with burnout, health care service providers support engagement with work to create a more resilient workforce that is better able to respond to patients and ongoing change (Maslach & Leiter: 1997: 65-74).

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Appendix A

Jenny Spies
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0007

7 Junie 2004

Beste Verpleegkundige

Daar is die afgelope tyd baie artikels en boeke gepubliseer oor werkverwante stres met verwysing na die oorsake en gevolge daarvan. Nieteenstaande bly dit steeds 'n komplekse onderwerp wat spesifiek in die Suid-Afrikaanse konteks verdere ondersoek benodig.

Die meegaande opname is daarop gerig om inligting in te win oor hoe spesifiek Trauma verpleegkundiges hulle werk en die mense saam met wie hulle werk beskou. Hierdie inligting kan gebruik word om riglyne daar te stel vir die voorkoming en bestuur van werkverwante stres om sodoende dienslewering en werknemer welsyn te optimaliseer. Aangesien internasionale vraelyste gebruik word, word die opname in Engels afgeneem. Enige kommentaar kan in Afrikaans geskryf word.

Hierdie opname word onder toesig van die Departement Menslike Hulpbronbestuur, Universiteit van Pretoria gedoen. Dit is van groot belang vir die projek dat ek jou insette ontvang. Jy kan te alle tye verseker wees dat jou insette absoluut konfidensieel hanteer sal word. Indien jy individuele terugvoer verlang, kan jy jou besonderhede verskaf in die aangewese ruimte aan die einde van die opname.

Die resultate van die opname sal opgesom word in 'n verslag wat aan alle deelnemende eenheidsbestuurders verskaf sal word.

Ek beantwoord graag enige vrae wat jy mag hê en kan gekontak word by 082 7700020.

Dankie vir jou deelname.

Vriendelike groete

JENNY SPIES
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UNIVERSITEIT VAN PRETORIA

Christina Maslach • Susan E. Jackson

MBI Human Services Survey

The purpose of this survey is to discover how various persons in the human services or helping professions view their jobs and the people with whom they work closely. Because persons in a wide variety of occupations will answer this survey, it uses the term recipients to refer to the people for whom you provide your service, care, treatment, or instruction. When answering this survey please think of these people as recipients of the service you provide, even though you may use another term in your work.

On the following page there are 22 statements of job-related feelings. Please read each statement carefully and decide if you ever feel this way about your job. If you have never had this feeling, write a "0" (zero) before the statement. If you have had this feeling, indicate how often you feel it by writing the number (from 1 to 6) that best describes how frequently you feel that way. An example is shown below.

Example:

How often:	0	1	2	3	4	5	6
	Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

How often:
0 – 6   **Statements:**

_____ I feel depressed at work.

If you never feel depressed at work, you would write the number "0" (zero) under the heading, "HOW OFTEN". If you rarely feel depressed at work (a few times a year or less), you would write the number "1". If your feelings of depression are fairly frequent (a few times a week, but not daily) you would write a "5".

CPP

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MBI Human Services Survey

How often:	0	1	2	3	4	5	6
	Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

**How often
0 – 6**   **Statements:**

1. _____ I feel emotionally drained from my work.

2. _____ I feel used up at the end of the workday.

3. _____ I feel fatigued when I get up in the morning and have to face another day on the job.

4. _____ I can easily understand how my recipients feel about things.

5. _____ I feel I treat some recipients as if they are impersonal objects.

6. _____ Working with people all day is really a strain to me.

7. _____ I deal very effectively with the problems of my recipients.

8. _____ I feel burned out from my work.

9. _____ I feel I'm positively influencing other people's lives through my work.

10._____ I've become more callous toward people since I took this job.

11._____ I worry that this job is hardening me emotionally.

12._____ I feel very energetic.

13._____ I feel frustrated by my job.

14._____ I feel I'm working too hard on my job.

15._____ I don't really care what happens to some recipients.

16._____ Working with people directly puts too much stress on me.

17._____ I can easily create a relaxed atmosphere with my recipients.

18._____ I feel exhilarated after working closely with my recipients.

19._____ I have accomplished many worthwhile things in this job.

20._____ I feel like I'm at the end of my rope.

21._____ In my work, I deal with emotional problems very calmly.

22._____ I feel recipients blame me for some of their problems.

NURSING STRESS SURVEY

Job stress can have serious effects on the lives of employees and their families. The impact of stressful job events is influenced by both the **amount** of stress associated with a particular event and the **frequency** of its occurrence. This survey will determine your perception of important sources of stress in your work. The survey lists 62 job-related items that many employees find stressful. First, you will be asked to rate the amount of stress associated with each event. Then, indicate the **number of times within the last 6 months** that you have experienced each event.

In making your ratings of the amount of stress for each stressor event, use all your knowledge and experience. Consider the amount of time and energy that you would need to cope with or adjust to the event. Base your ratings on your personal experience as well as what you have seen to be the case for others. Rate the **average amount of stress** that you feel is associated with each event, rather than the extreme.

The first event, **ASSIGNMENT OF DISAGREEABLE DUTIES** *e.g. tasks assigned to you that you don't want to do*, was rated by persons in a variety of occupations as producing an average amount of stress. This event has been given a rating of "5" and will be used as the **standard** for evaluating the other events. Compare each event with this standard. Then assign a number from "1" to "9" to indicate whether you judge the event **to be less or more stressful than being assigned disagreeable duties.**

PART A – Amount of stress

*For this questionnaire, assume that the **Assignment of Disagreeable Duties e.g. tasks assigned to you that you don't want to do,** will cause an amount of stress that equals a **5** on the scale for any person including you. So think about all the statements in terms of how you would experience stress if the **Assignment of Disagreeable Duties** will be a **5** on the scale. Thus, the **Assignment of Disagreeable Duties (5)** is the standard in terms of your evaluation of the amount of stress you experience on the other statements.*

If the event listed is more stressful to you than the **ASSIGNMENT OF DISAGREEABLE DUTIES**, cross out **(X)** the appropriate number that is larger than "5". For example:

1A Assignment of disagreeable duties	1	2	3	4	X5	6	7	8	9

If the event listed is less stressful to you than the **ASSIGNMENT OF DISAGREEABLE DUTIES**, cross out **(X)** the appropriate number that is smaller than "5". For example:

1A Assignment of disagreeable duties	1	X2	3	4	5	6	7	8	9

PART B – Frequency of event

Indicate the approximate number of days during the past 6 months on which you have personally experienced the event. For example, if you have experienced the event listed on 4 days during the past six months, cross out the "4". If you have not experienced the event on any days during the past six months, cross out the "0". If you have experienced the event listed on 9 or more days during the past six months, cross out the "9+".
If you *make a mistake or change* your mind on any item, **cross out and circle the correct response.** For example:

1A Assignment of disagreeable duties	1	2	3	4	5	6	7	8	9

PART A – AMOUNT OF STRESS

Instructions: For job-related events judged to produce approximately the same amount of stress as the **ASSIGNMENT OF DISAGREEABLE DUTIES**, cross out the number "5". For those events that you feel are **more** stressful than the standard, cross out a number proportionately HIGHER than "5". If you feel an event is **less** stressful than the standard, cross out a number appropriately smaller than "5". If the event is not applicable to your situation mark **"NA" (Not Applicable).**

Stressful Job-Related Events	Low			Moderate			High			NA
1. Assignment of disagreeable duties	1	2	3	4	5	6	7	8	9+	NA
2. Working overtime due to "Moon lightening"	1	2	3	4	5	6	7	8	9+	NA
3. Working emergency hours	1	2	3	4	5	6	7	8	9+	NA
4. Working overtime	1	2	3	4	5	6	7	8	9+	NA
5. Lack of opportunity for advancement	1	2	3	4	5	6	7	8	9+	NA
6. Assignment of new or unfamiliar duties	1	2	3	4	5	6	7	8	9+	NA
7. Fellow workers not doing their job	1	2	3	4	5	6	7	8	9+	NA
8. Inadequate support by supervisor/manager	1	2	3	4	5	6	7	8	9+	NA
9. Dealing with crisis situations	1	2	3	4	5	6	7	8	9+	NA
10. Lack of recognition for good work	1	2	3	4	5	6	7	8	9+	NA
11. Performing tasks not in job description	1	2	3	4	5	6	7	8	9+	NA
12. Inadequate or poor quality equipment	1	2	3	4	5	6	7	8	9+	NA
13. Assignment of increased responsibility	1	2	3	4	5	6	7	8	9+	NA
14. Periods of inactivity	1	2	3	4	5	6	7	8	9+	NA
15. Difficulty getting along with supervisor/manager	1	2	3	4	5	6	7	8	9+	NA
16. Experiencing negative attitudes toward the organisation	1	2	3	4	5	6	7	8	9+	NA
17. Insufficient personnel to handle workload	1	2	3	4	5	6	7	8	9+	NA
18. Making critical on-the-spot decisions	1	2	3	4	5	6	7	8	9+	NA
19. Personal insult from patients or their families	1	2	3	4	5	6	7	8	9+	NA
20. Personal insult from doctors	1	2	3	4	5	6	7	8	9+	NA
21. Lack of participation in policy-making decisions	1	2	3	4	5	6	7	8	9+	NA
22. Inadequate salary	1	2	3	4	5	6	7	8	9+	NA
23. Competition for advancement	1	2	3	4	5	6	7	8	9+	NA
24. Poor or inadequate supervision/management	1	2	3	4	5	6	7	8	9+	NA
25. Frequent interruptions	1	2	3	4	5	6	7	8	9+	NA
26. Frequent changes from boring to demanding activities	1	2	3	4	5	6	7	8	9+	NA
27. Excessive paperwork e.g. administrative duties	1	2	3	4	5	6	7	8	9+	NA
28. Meeting deadlines	1	2	3	4	5	6	7	8	9+	NA
29. Insufficient personal time (e.g., coffee breaks, lunch)	1	2	3	4	5	6	7	8	9+	NA
30. Covering work for another employee	1	2	3	4	5	6	7	8	9+	NA
31. Poorly motivated co-workers	1	2	3	4	5	6	7	8	9+	NA
32. Conflicts with other departments/divisions	1	2	3	4	5	6	7	8	9+	NA
33. Dealing with difficult patients	1	2	3	4	5	6	7	8	9+	NA
34. Dealing with difficult doctors	1	2	3	4	5	6	7	8	9+	NA

Stressful Job-Related Events	Amount of Stress									
	Low				Moderate			High		
35. Dealing with other health care professionals (e.g. dieticians, social workers, pharmacists)	1	2	3	4	5	6	7	8	9+	NA
36. Adhering to the budget of the hospital/institution	1	2	3	4	5	6	7	8	9+	NA
37. Stock control in the ward/unit/institution	1	2	3	4	5	6	7	8	9+	NA
38. The management of staff	1	2	3	4	5	6	7	8	9+	NA
39. Demands of clients/patients	1	2	3	4	5	6	7	8	9+	NA
40. Language and communication barriers with clients/patients	1	2	3	4	5	6	7	8	9+	NA
41. Excessive involvement in committee meetings (e.g. Infection control)	1	2	3	4	5	6	7	8	9+	NA
42. Security risk posed in area where your job is located	1	2	3	4	5	6	7	8	9+	NA
43. Health risk posed by contact with patients (e.g. HIV/AIDS, Tuberculosis)	1	2	3	4	5	6	7	8	9+	NA
44. Performing procedures that patients experience as painful	1	2	3	4	5	6	7	8	9+	NA
45. Patients who fail to improve	1	2	3	4	5	6	7	8	9+	NA
46. Conflict with a supervisor/manager	1	2	3	4	5	6	7	8	9+	NA
47. Communicating with a patient about death	1	2	3	4	5	6	7	8	9+	NA
48. Lack of a opportunity to talk openly with other staff members	1	2	3	4	5	6	7	8	9+	NA
49. Death of a patient	1	2	3	4	5	6	7	8	9+	NA
50. Making a mistake when treating a patient	1	2	3	4	5	6	7	8	9+	NA
51. Lack of support from colleagues	1	2	3	4	5	6	7	8	9+	NA
52. Death of a patient with whom you developed a close relationship	1	2	3	4	5	6	7	8	9+	NA
53. Disagreement with medical practitioner or colleague(s) concerning the treatment of a patient	1	2	3	4	5	6	7	8	9+	NA
54. Caring for the emotional and spiritual needs of a patient or his/her family	1	2	3	4	5	6	7	8	9+	NA
55. Inadequate information from a medical practitioner regarding the medical condition of a patient	1	2	3	4	5	6	7	8	9+	NA
56. Floating to other units that are short of staff	1	2	3	4	5	6	7	8	9+	NA
57. Watching a patient suffer	1	2	3	4	5	6	7	8	9+	NA
58. Criticism by a supervisor/manager	1	2	3	4	5	6	7	8	9+	NA
59. Insufficient time to perform tasks	1	2	3	4	5	6	7	8	9+	NA
60. Operating specialised equipment	1	2	3	4	5	6	7	8	9+	NA
61. Shortage of staff	1	2	3	4	5	6	7	8	9+	NA
62. Irregular working hours	1	2	3	4	5	6	7	8	9+	NA

PART B – Frequency of event

For each of the job-related events listed, please indicate the approximate number of days during the past 6 months on which you have **personally** experienced this event. Cross out "0" if the event did not occur, cross out the number "9+" for each event you experienced personally on 9 or more days during the past 6 months.

Stressful Job-Related Events	Number of Days on Which the Event Occurred During the Past 6 Months										
63. Assignment of disagreeable duties	0	1	2	3	4	5	6	7	8	9+	NA
64. Overtime due to "Moon lightening"	0	1	2	3	4	5	6	7	8	9+	NA
65. Working emergency hours	0	1	2	3	4	5	6	7	8	9+	NA
66. Working overtime	0	1	2	3	4	5	6	7	8	9+	NA
67. Lack of opportunity for advancement	0	1	2	3	4	5	6	7	8	9+	NA
68. Assignment of new or unfamiliar duties	0	1	2	3	4	5	6	7	8	9+	NA
69. Fellow workers not doing their job	0	1	2	3	4	5	6	7	8	9+	NA
70. Inadequate support by supervisor/manager	0	1	2	3	4	5	6	7	8	9+	NA
71. Dealing with crisis situations	0	1	2	3	4	5	6	7	8	9+	NA
72. Lack of recognition for good work	0	1	2	3	4	5	6	7	8	9+	NA
73. Performing tasks not in job description	0	1	2	3	4	5	6	7	8	9+	NA
74. Inadequate or poor quality equipment	0	1	2	3	4	5	6	7	8	9+	NA
75. Assignment of increased responsibility	0	1	2	3	4	5	6	7	8	9+	NA
76. Periods of inactivity	0	1	2	3	4	5	6	7	8	9+	NA
77. Difficulty getting along with supervisor/manager	0	1	2	3	4	5	6	7	8	9+	NA
78. Experiencing negative attitudes toward the organisation	0	1	2	3	4	5	6	7	8	9+	NA
79. Insufficient personnel to handle workload	0	1	2	3	4	5	6	7	8	9+	NA
80. Making critical on-the-spot decisions	0	1	2	3	4	5	6	7	8	9+	NA
81. Personal insult from patients or their families	0	1	2	3	4	5	6	7	8	9+	NA
82. Personal insult from doctors	0	1	2	3	4	5	6	7	8	9+	NA
83. Lack of participation in policy-making decisions	0	1	2	3	4	5	6	7	8	9+	NA
84. Inadequate salary	0	1	2	3	4	5	6	7	8	9+	NA
85. Competition for advancement	0	1	2	3	4	5	6	7	8	9+	NA
86. Poor or inadequate supervision/management	0	1	2	3	4	5	6	7	8	9+	NA
87. Frequent interruptions	0	1	2	3	4	5	6	7	8	9+	NA
88. Frequent changes from boring to demanding activities	0	1	2	3	4	5	6	7	8	9+	NA
89. Excessive paperwork e.g. administrative duties	0	1	2	3	4	5	6	7	8	9+	NA
90. Meeting deadlines	0	1	2	3	4	5	6	7	8	9+	NA
91. Insufficient personal time (e.g., coffee breaks, lunch)	0	1	2	3	4	5	6	7	8	9+	NA
92. Covering work for another employee	0	1	2	3	4	5	6	7	8	9+	NA
93. Poorly motivated co-workers	0	1	2	3	4	5	6	7	8	9+	NA
94. Conflicts with other departments/divisions	0	1	2	3	4	5	6	7	8	9+	NA
95. Dealing with difficult patients	0	1	2	3	4	5	6	7	8	9+	NA

Stressful Job-Related Events	Number of Days on Which the Event Occurred During the Past 6 Months										
96. Dealing with difficult doctors	0	1	2	3	4	5	6	7	8	9+	NA
97. Dealing with other health care professionals (e.g. dieticians, social workers, pharmacists)	0	1	2	3	4	5	6	7	8	9+	NA
98. Adhering to the budget of the hospital/institution	0	1	2	3	4	5	6	7	8	9+	NA
99. Stock control in the ward/unit/institution	0	1	2	3	4	5	6	7	8	9+	NA
100. The management of staff	0	1	2	3	4	5	6	7	8	9+	NA
101. Demands of clients/patients	0	1	2	3	4	5	6	7	8	9+	NA
102. Language and communication barriers with clients/patients	0	1	2	3	4	5	6	7	8	9+	NA
103. Excessive involvement in committee meetings (e.g. Infection control)	0	1	2	3	4	5	6	7	8	9+	NA
104. Security risk posed in area where your job is located	0	1	2	3	4	5	6	7	8	9+	NA
105. Health risk posed by contact with patients (e.g. HIV/AIDS, Tuberculosis)	0	1	2	3	4	5	6	7	8	9+	NA
106. Performing procedures that patients experience as painful	0	1	2	3	4	5	6	7	8	9+	NA
107. Patients who fail to improve	0	1	2	3	4	5	6	7	8	9+	NA
108. Conflict with a supervisor/manager	0	1	2	3	4	5	6	7	8	9+	NA
109. Communicating with a patient about death	0	1	2	3	4	5	6	7	8	9+	NA
110. Lack of a opportunity to talk openly with other staff members	0	1	2	3	4	5	6	7	8	9+	NA
111. Death of a patient	0	1	2	3	4	5	6	7	8	9+	NA
112. Making a mistake when treating a patient	0	1	2	3	4	5	6	7	8	9+	NA
113. Lack of support from colleagues	0	1	2	3	4	5	6	7	8	9+	NA
114. Death of a patient with whom you developed a close relationship	0	1	2	3	4	5	6	7	8	9+	NA
115. Disagreement with medical practitioner or colleague(s) concerning the treatment of a patient	0	1	2	3	4	5	6	7	8	9+	NA
116. Caring for the emotional and spiritual needs of a patient or his/her family	0	1	2	3	4	5	6	7	8	9+	NA
117. Inadequate information from a medical practitioner regarding the medical condition of a patient	0	1	2	3	4	5	6	7	8	9+	NA
118. Floating to other units that are short of staff	0	1	2	3	4	5	6	7	8	9+	NA
119. Watching a patient suffer	0	1	2	3	4	5	6	7	8	9+	NA
120. Criticism by a supervisor/manager	0	1	2	3	4	5	6	7	8	9+	NA
121. Insufficient time to perform tasks	0	1	2	3	4	5	6	7	8	9+	NA
122. Operating specialised equipment	0	1	2	3	4	5	6	7	8	9+	NA
123. Shortage of staff	0	1	2	3	4	5	6	7	8	9+	NA
124. Irregular working hours	0	1	2	3	4	5	6	7	8	9+	NA

Biographic Questionnaire

Instructions: Please indicate your response to the following questions by circling the appropriate number.

1	What is your *age*?	
	< 21 years	**1**
	21 – 29 years	**2**
	30 – 39 years	**3**
	40 – 49 years	**4**
	50 – 59 years	**5**
	60+ years	**6**

6	How long have you been working in a level 1 or 2 Trauma unit?	
	< 1 year	**1**
	1 – 5 years	**2**
	6 – 10 years	**3**
	11 – 14 years	**4**
	15 + years	**5**

2	What is your *gender*?	
	Male	**1**
	Female	**2**

7	What is your *role* in the Trauma unit?	
	Supervisory	**1**
	Non-supervisory	**2**

3	What is your *marital status*?	
	Single	**1**
	Married	**2**
	Divorced/Separated/Death	**3**

8	What is your *home language*?	
	Afrikaans	**1**
	English	**2**
	Other	**3**

4	What is your *highest qualification*?	
	Grade 12	**1**
	Tertiary education: Diploma	**2**
	Tertiary education: Degree	**3**
	Post graduate qualification	**4**
	Other – Please specify:	**5**

9	How many *night shifts* do you usually work per month?	
	1 – 5	**1**
	6 – 10	**2**
	11 – 15	**3**
	16 +	**4**

5	How much *nursing experience* do you have?	
	< 1 year	**1**
	1 – 5 years	**2**
	6 – 10 years	**3**
	11 – 14 years	**4**
	15 + years	**5**

10	Do you intend to *leave the nursing profession* within the next 6 months?	
	Yes	**1**
	No	**2**

11	Do you have any *children*?	
	Yes	**1**
	No	**2**

12	Are you *religious*?	
	Yes	**1**
	No	**2**

13	How are you *employed* at the Trauma unit?	
	Full time	**1**
	Part time	**2**

14	Why did you choose trauma *nursing as a career*?

If you have any comments you would like to make about this survey or any information that could contribute to the understanding of occupational stress of emergency nursing staff, please write them on this page. *Supply your details here if you would like individual feedback on the survey.*

Your contribution to this survey is greatly appreciated. *Please return your questionnaire in the envelope provided to your unit manager.*

Appendix B

Non-parametric tests for MBI

Age

Ranks

	Age	N	Mean Rank
Emotional exhaustion	21-29	16	22.47
	30-39	29	30.69
	40-49	8	22.69
	Total	53	
Depersonalisation	21-29	16	23.59
	30-39	29	28.69
	40-49	8	27.69
	Total	53	
Personal accomplishment	21-29	16	28.28
	30-39	29	25.60
	40-49	8	29.50
	Total	53	

Test Statistics (a,b)

	Emotional exhaustion	Depersonalisation	Personal accomplishment
Chi-Square	3.663	1.147	.558
df	2	2	2
Asymp. Sig.	.160	.564	.756

a Kruskal Wallis Test

b Grouping Variable: Age

Marital status

Ranks

	Marital status	N	Mean Rank
Emotional exhaustion	Single	21	27.31
	Married	25	28.44
	Divorced / Separated / Death	7	20.93
	Total	53	
Depersonalisation	Single	21	26.55
	Married	25	28.98
	Divorced / Separated / Death	7	21.29
	Total	53	
Personal accomplishment	Single	21	30.69
	Married	25	24.40
	Divorced / Separated / Death	7	25.21
	Total	53	

Test Statistics (a,b)

	Emotional exhaustion	Depersonalisation	Personal accomplishment
Chi-Square	1.310	1.394	2.006
df	2	2	2
Asymp. Sig.	.519	.498	.367

a Kruskal Wallis Test

b Grouping Variable: Marital status

Qualification

Ranks

	Qualification	N	Mean Rank
Emotional exhaustion	Tertiary: Diploma	28	22.21
	Post Graduate Qualification	15	21.60
	Total	43	
Depersonalisation	Tertiary: Diploma	28	23.88
	Post Graduate Qualification	15	18.50
	Total	43	
Personal accomplishment	Tertiary: Diploma	28	22.14
	Post Graduate Qualification	15	21.73
	Total	43	

Test Statistics (a)

	Emotional exhaustion	Depersonalisation	Personal accomplishment
Mann-Whitney U	204.000	157.500	206.000
Wilcoxon W	324.000	277.500	326.000
Z	-.153	-1.341	-.102
Asymp. Sig. (2-tailed)	.878	.180	.919

a Grouping Variable: Qualification

Nursing experience

Ranks

	Nursing Experience	N	Mean Rank
Emotional exhaustion	1-5 years	10	25.10
	6-10 years	13	23.62
	11-14 years	11	38.91
	15+ years	19	23.42
	Total	53	
Depersonalisation	1-5 years	10	24.35
	6-10 years	13	28.00
	11-14 years	11	31.18
	15+ years	19	25.29
	Total	53	
Personal accomplishment	1-5 years	10	29.70
	6-10 years	13	27.19
	11-14 years	11	25.45
	15+ years	19	26.34
	Total	53	

Test Statistics(a,b)

	Emotional exhaustion	Depersonalisation	Personal accomplishment
Chi-Square	8.352	1.396	.453
df	3	3	3
Asymp. Sig.	.039	.707	.929

a Kruskal Wallis Test

b Grouping Variable: Nursing Experience

Trauma experience

11-14 years en 15+ years combined because of small group numbers.

Ranks

	Trauma Experience (recoded)	N	Mean Rank
Emotional exhaustion	1.00 (< 1 year)	12	19.71
	2.00 (1 – 5 years)	25	30.82
	3.00 (6 – 10 years)	10	22.85
	4.00 (11-15+ years)	6	32.58
	Total	53	
Depersonalisation	1.00	12	18.29
	2.00	25	32.10
	3.00	10	22.20
	4.00	6	31.17
	Total	53	
Personal accomplishment	1.00	12	28.58
	2.00	25	25.42
	3.00	10	25.95
	4.00	6	32.17
	Total	53	

Test Statistics(a,b)

	Emotional exhaustion	Depersonalisation	Personal accomplishment
Chi-Square	5.721	7.985	1.108
df	3	3	3
Asymp. Sig.	.126	.046	.775

a Kruskal Wallis Test

b Grouping Variable: Trauma Experience (recoded)

Role

Ranks

	Role	N	Mean Rank
Emotional exhaustion	Supervisory	18	30.06
	Non-supervisory	35	25.43
	Total	53	
Depersonalisation	Supervisory	18	30.14
	Non-supervisory	35	25.39
	Total	53	
Personal accomplishment	Supervisory	18	27.25
	Non-supervisory	35	26.87
	Total	53	

Test Statistics(a)

	Emotional exhaustion	Depersonalisation	Personal accomplishment
Mann-Whitney U	260.000	258.500	310.500
Wilcoxon W	890.000	888.500	940.500
Z	-1.034	-1.064	-.085
Asymp. Sig. (2-tailed)	.301	.287	.933

a Grouping Variable: Role

Night shifts

Ranks

	Night shifts per month	N	Mean Rank
Emotional exhaustion	1-5	22	27.27
	6-10	15	32.07
	11-15	5	14.80
	16+	11	25.09
	Total	53	
Depersonalisation	1-5	22	22.84
	6-10	15	31.37
	11-15	5	23.80
	16+	11	30.82
	Total	53	
Personal accomplishment	1-5	22	23.93
	6-10	15	27.53
	11-15	5	31.00
	16+	11	30.59
	Total	53	

Test Statistics(a,b)

	Emotional exhaustion	Depersonalisation	Personal accomplishment
Chi-Square	4.918	3.701	1.821
df	3	3	3
Asymp. Sig.	.178	.296	.610

a Kruskal Wallis Test

b Grouping Variable: Night shifts per month

Children

Ranks

	Children	N	Mean Rank
Emotional exhaustion	Yes	29	27.07
	No	23	25.78
	Total	52	
Depersonalisation	Yes	29	25.24
	No	23	28.09
	Total	52	
Personal accomplishment	Yes	29	24.53
	No	23	28.98
	Total	52	

Test Statistics(a)

	Emotional Exhaustion	Depersonalisation	Personal accomplishment
Mann-Whitney U	317.000	297.000	276.500
Wilcoxon W	593.000	732.000	711.500
Z	-.304	-.674	-1.052
Asymp. Sig. (2-tailed)	.761	.500	.293

a Grouping Variable: Children