

**AN EXPLORATION OF THE RELATIONSHIP BETWEEN BURNOUT,  
OCCUPATIONAL STRESS AND EMOTIONAL INTELLIGENCE IN THE NURSING  
INDUSTRY**

**by**

**Támari Brand**



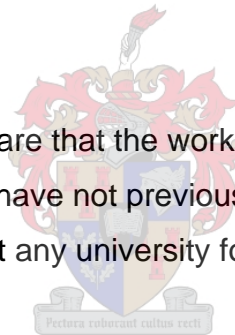
**THESIS PRESENTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS  
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**SUPERVISOR: GINA EKERMANS**

**March 2007**

## DECLARATION

I, the undersigned, hereby declare that the work contained in this thesis is my own original work and that I have not previously, in its entirety or in part, submitted it at any university for a degree.



SIGNATURE: .....

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**ABSTRACT**

Támari Brand, MA (University of Stellenbosch)

**AN EXPLORATION OF THE RELATIONSHIP BETWEEN BURNOUT, OCCUPATIONAL STRESS AND EMOTIONAL INTELLIGENCE IN THE NURSING INDUSTRY**

Supervisor: Ms G Ekermans, M Comm (Industrial Psychology)

The aim of this study was to explore the relationship between burnout, occupational stress and emotional intelligence (EI) in the nursing industry and to determine whether emotional intelligence is a moderator in the occupational stress and burnout relationship. The existence of these relationships was explored through a non-experimental controlled inquiry. The constructs were defined as follows: burnout, as a syndrome consisting of three components: Emotional Exhaustion, Depersonalisation and a Reduced sense of Personal Accomplishment (Maslach & Jackson, 1986); EI, as the capacity to effectively perceive, express, understand and manage emotions in a professional and effective manner at work (Palmer & Stough, 2001); and Occupational Stress, as an interaction of variables, which involve the relationship between a person and the environment, which is appraised by the individual as taxing or exceeding coping resources and threatening well-being (Schlebusch, 1998). A sample of 220 individuals was randomly selected from a specialist employment agency (in the medical industry) and consisted of two groups, overtime and contract staff, which included those that are contracted to a private hospital group through the employment agency or alternatively, individuals who are permanently employed by the hospital group, but work additional overtime through the agency (contract workers and overtime workers). Three levels were included (1) Registered Nurses, (2) Enrolled Nurses and (3) Auxiliary Nurses. The Maslach Burnout Inventory – Human Services Survey, the Sources of Work Stress Inventory and Swinburne University Emotional Intelligence Test were administered. A hundred and twenty two (122) respondents completed and returned the questionnaires.

The results showed that significant positive relationships exist between occupational stress and two dimensions of burnout, Emotional Exhaustion and Depersonalisation. Significant negative relationships were reported for Emotional Exhaustion (as dimension of burnout) and two dimensions of EI, Emotional Management and Emotional Control and between Depersonalisation (as dimension of burnout) and Emotional Management and Emotional Control (as dimensions of EI). Personal Accomplishment, as the third dimension of burnout, showed significant positive relationships with four of the five dimensions of EI. Significant relationships were found between Depersonalisation and Emotional Exhaustion (as dimensions of burnout). Furthermore, the sources of stress found to be the strongest predictors for the three dimensions of burnout include: Workload and Work/Home interface (as sources of stress) for Emotional Exhaustion and Work/Home interface for Depersonalisation. The EI dimensions which predicted the greatest variance in the dimensions of burnout included: Emotional Management and Understanding Emotions External in Emotional Exhaustion; Emotional Management for Depersonalisation and Understanding Emotions External for Personal Accomplishment. Understanding Emotions External, Emotional Management and Emotional Control were all significant contributors to variance in occupational stress. Lastly, high EI very slightly seem to moderate the effects of occupational stress on Emotional Exhaustion and Depersonalisation versus low EI in this regard. No moderating effect of EI was found on occupational stress and Personal Accomplishment. The limitations of the study and recommendations for future research were discussed.

## OPSOMMING

Támari Brand, MA (Universiteit van Stellenbosch)

### **'N ONDERSOEK NA DIE VERWANTSKAP TUSSEN UITBRANDING, WERKSTRES EN EMOTIONELE INTELLIGENSIE BINNE DIE VERPLEGINSINDUSTRIE.**

Studieleier: Me G Ekermans, M Comm (Bedryfsielkunde)

Die doel van die studie was om die verhouding tussen uitbranding, werkstres en Emosionele Intelligensie (EI) binne die verplegingsindustrie te ondersoek ten einde te bepaal of EI 'n modererende effek binne die stress en uitbranding verwantskap sal hê. Daar is 'n gebruik gemaak van 'n nie-eksperimentele gekontroleer ondersoek ten einde die verhoudings tussen die drie konstrakte en hul sub-dimensies te bepaal. Die konstrakte is soos volg gedefinieer: Uitbranding, as 'n sindroom wat bestaan uit drie komponente: Emosionele Uitbranding (Emotional Exhaustion), Depersonalisasie (Depersonalisation) and verminderde gevoel van Persoonlike Bekwaamheid (Reduced Sense of Personal Accomplishment) (Maslach & Jackson, 1986); EI as die individu se kapasiteit om emosies binne die werksomgewing effektief waar te neem, uit te druk, te verstaan en op 'n professionele en effektiewe wyse te bestuur (Palmer & Stough, 2001); en werkstres, as die interaksie tussen veranderlikes, wat die verhouding tussen die persoon en sy omgewing insluit, wat deur die individu as veeleisend beskou word en hanteringsmeganismes oorskry, wat gevolglik lei tot die bedreiging van die individu se welstand. 'n Ewekansige steekproef van 'n 220 individue is uit 'n databasis van 'n gespesialiseerde werknemers agentskap (in die mediese bedryf) getrek en het bestaan uit 2 groepe: (1) kontrakwerkers, wat persone insluit wat permanent aan 'n privaat hospitaal groep gekontrakteer is deur die agentskap, en (2) oortyd werkers, wat permanente werknemers van die hospitaalgroep is, maar addisionele oortyd deur die agentskap werk. Die steekproef het bestaan uit drie groepe: (1) Geregistreerde Verpleegkundiges, (2) Ingeskrewe Verpleegsters en (3) Hulp Verpleegsters. Die respondente het drie

vraelyste voltooi, naamlik, (1) Maslach Uitbranding Vraelys (Maslach Burnout Inventory), (2) Bronne van Werkstres Vraelys (Sources of Work Stress Inventory), en (3) Swinburne Universiteit Emosionele Intelligensie Toets (Swinburne University Emotional Intelligensie Test).

Die bevindinge toon 'n positiewe verwantskap tussen werkstres en twee van die dimensies van uitbranding, nl. Emosionele Uitputting en Depersonalisasie. Beduidende negatiewe verwantskappe is ook gevind tussen Emosionele Uitputting (as dimensie van uitbranding) en Emosionele Bestuur en Emosionele Beheer (as EI dimensies) en tweedens tussen Depersonalisasie (as dimensie van uitbranding) en Emosionele Bestuur en Emosionele Beheer (as EI dimensies). Die derde dimensie van uitbranding, Persoonlike Bekwaamheid, het verwantskappe met vier van die vyf EI dimensies getoon. 'n Sterk beduidende verwantskap is ook tussen Emosionele Uitputting en Depersonalisasie gevind. Die bronne van werkstres wat die drie dimensies van uitbranding die sterkste voorspel het, is soos volg: Werkslading (Workload) en Werk/Huis interaksievlak (Work/Home interface) as voorspeller vir Emosionele Uitputting en Werk/Huis skeidingsvlak, vir Depersonalisasie. Die EI dimensies wat die grootste variansie in die dimensies van uitbranding voorspel, sluit in: Emosionele Bestuur en Begrip van Eksterne Emosies (as dimensies van EI) vir Emosionele Uitputting; Emosionele Bestuur vir Depersonalisasie en Begrip van Eksterne Emosies vir Persoonlike Bekwaamheid. Emosionele Beheer, Emosionele Bestuur en Begrip van Eksterne Emosie (as dimensies van EI) is almal as beduidende voorspellers in die werkstres proses bevind. Ten slotte, die resultate het getoon dat EI as 'n moderator binne die werkstres en Emosionele Uitbranding proses, sowel as werkstres en Depersonalisasie proses optree. Geen effek is vir die werkstres en Persoonlike Bekwaamheid verwantskap gevind nie. Die studie se beperkings en moontlike voorstelle vir toekomstige navorsing is bespreek.

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Támari Brand  
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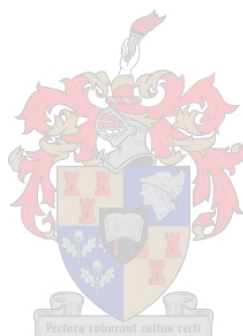
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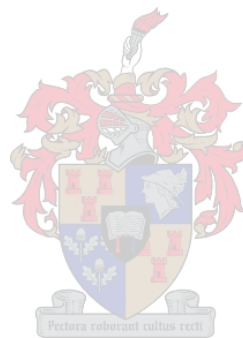
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## **CHAPTER 1: INTRODUCTION**

### **1.1 INTRODUCTION**

In recent years, the pace of work within organisations has increased rapidly. This increase can be attributed to many factors, which include technological advancement, the need to be globally competitive, continually changing economies as well as changes in organisational structures. Consequently, the demands placed on individuals employed in organisations have also increased. In addition to the technical and economic factors impacting on organisations, employees face a number of other challenges, for example greater work load, increasing job insecurity, and lack of role clarity, to name a few (Johnson, Cooper, Cartwright, Donald, Taylor & Millet, 2005). Occupational stressors are aspects of the work environment that cause strains, poor psychological health or well-being of the individual (Beehr, 1995; Kahn & Byosiere, 1992). The increasing demands in the workplace as well as the overall increasing demands in lives of individuals (dual career families, family pressures, advanced technologies, job insecurity); all contribute to increased levels of stress experienced by individuals. According to Cooper, Dewe and O'Driscoll (2001), it is now generally accepted that prolonged or intense stress can have a negative impact on the individual's mental and physical health. Physical and psychological symptoms of stress are known to include coronary heart disease, ulcers, substance abuse and anxiety, which all significantly impact on the lives of individuals and their families. Apart from the fact that prolonged stress imposes a propensity to develop these abovementioned physical and psychological effects on individuals, it often represents an added cost for organisations in terms of staff turnover, increased absenteeism and poor work performance. Furthermore, stressed individuals are more likely to indulge in adverse lifestyle behaviours such as excessive alcohol drinking, cigarette smoking and poor dietary habits (Faragher, Cooper & Cartwright, 2004). Ultimately, excessive exposure to stressors could result in the development of burnout (Maslach & Goldberg, 1998). Burnout refers to a, "prolonged response to chronic emotional and interpersonal stressors on the job" (Maslach, Schaufeli & Leiter, 2001, p. 397).

In the past, the effects and consequences of job stress and burnout was not seen as a prominent workplace problem, however, in recent days more and more organisations realise the impact that these conditions have on the cost of employee health and the bottom-line (Faragher et al., 2004). The presence of workplace stressors does not automatically result in the negative impact on individuals, such as stress or burnout. For

instance, aspects like personality characteristics and various coping mechanisms could have a moderating effect on the level of occupational stress that is experienced by the individual (Dewe & Trenberth, 2004; Edwards, Baglioni & Cooper, 1990). Henceforth, it could be argued that the ability of individuals to manage their emotions could have a potential impact on relationships with colleagues and clients, which could reflect in the work quality they deliver and subsequently influence the profitability of the organisation. It is therefore vital for organisations to develop systems and policies which will enable them to identify possible workplace stressors and the effectively deal with these stressors. In addition, it is important to also identify possible factors that might moderate the effect of stress and consequently the development of burnout on an individual in the workplace.

## **1.2 EMOTIONAL INTELLIGENCE**

In recent years Emotional Intelligence (EI) has become of great interest in psychological research. EI has been described as an individual's ability to appraise, express and regulate emotion in oneself and in others and to utilise these emotions in the thought processes (Salovey & Mayer, 1990). An increasing body of research seems to suggest that EI contributes to success at work (Weisinger, 2000), and many studies have investigated the link of EI with other constructs such as occupational stress, (Gardner & Stough, 2003; Nikolaou & Tsaousis, 2002) and life satisfaction (Palmer, Donaldson & Stough, 2002), whilst Cooper and Sawaf (1997) have argued that EI plays an important role in leadership behaviours. Recently, businesses and behavioural scientists have more frequently turned their focus to researching EI in the workplace (Cherniss, 2000).

It has been suggested through a growing body of research (Goleman, 1999; Nikolaou & Tsaousis, 2002; Oginska – Bulik, 2005; Slaski & Cartwright, 2003) that a person's ability to perceive, identify and manage emotions provides the basis for the kinds of social and emotional competencies that might be a critical factor contributing to success in most jobs. Furthermore, as the pace of change increases and the world of work make ever greater demands on an employee's cognitive, emotional and physical resources, this particular set of abilities might become increasingly important through enabling employees to cope with the demands of the modern day world of work.

Nikolaou and Tsaousis (2002) argue that since stress is perceived mainly as an emotional reaction to various environmental stimuli (Selye, 1956, cited in Nikolaou & Tsaousis, 2002, p. 328), EI could be used as a framework within which the individual could learn how to



cope with and control strong emotions. Recent studies have debated the impact of EI on stress and various researchers have argued that EI provide the mechanisms to respond appropriately to different stressors. For example, Oginska-Bulik (2005) postulated that individuals with a high level of EI will perceive their work environment as less stressful and that they will experience less negative health consequences. Similarly, in a study by Slaski and Cartwright (2003), it was argued that EI could serve as a moderator in the stress process. In a study by Chan (2006) on Chinese high school teachers results suggested that Emotional Exhaustion (as a dimension of burnout; Maslach & Jackson, 1986) could be positively influenced by Emotional Appraisal and Positive Recognition (two dimensions of the Schutte, Malouff, Hall, Haggerty, Cooper, Golden, Dornheim, 1998, EI scale) and that Personal Accomplishment (dimension of the burnout as defined by Maslach & Jackson (1986) could develop independently from other dimensions of burnout, through the positive utilisation of emotions (Chan, 2006). In addition, Gerits, Derksen, Verbruggen and Katzko (2005) reported that female nurses with a reasonably high level of EI, reported the smallest number of burnout symptoms and that their male counterparts with higher problem-solving and stress-tolerance skills also reported lower levels of burnout. In the light of these findings, the question of whether the experience of stress and the development of burnout could be positively influenced by the various dimensions of EI is raised.

The ability to manage and deal with occupational stress is a basic requirement of today's world of work. Job roles are less defined, more demanding and individuals are faced with numerous challenges with often little direction or guidance from managers or superiors about what is being expected of them. As previously mentioned, the nature of the relationship between stress and EI has been studied by various researchers (Lusch & Serpkenci, 1990; Slaski & Cartwright, 2002). According to Slaski & Cartwright (2003) the relation between EI and stress stems from the fact that negative emotions and stress is the results of some dysfunctional relationship between the environment and certain aspects of the self. They propose that the ability to understand emotions in the self and others, incidently also a well documented dimension of EI namely Understanding Emotions in Others, could then be viewed as a possible moderator in the stress process. Organisations are continuously faced with the challenge to recruit and retain valuable staff members amidst the drive to also grow their business and profits. Henceforth, as the ability to manage one's emotions might possibly influence the way in which stress is perceived, managed and projected, it is consequently logical to propose that the ability to effectively

manage occupational stress, and in extreme cases burnout, might be influenced by the individual's level of EI (which encompasses a range of abilities related to the managing and understanding of emotional information).

### **1.3 STRESS AND BURNOUT IN THE WORKPLACE**

Stress is a multidimensional construct. Work by Cooper et al. (2001) indicate that the amount of stress a person experience at work is likely to be a result of the interaction of a number of factors such as the type of work they are doing (their occupation), the presence of work stressors, the amount of support they receive both at work and at home and the coping mechanisms they use to deal with stress. Stress manifests itself in increased absence through sickness, premature labour turnover, early retirement due to ill health, lost production quantity and value, and employee litigation against individual companies (Cooper et al., 2001). If individuals are exposed to prolonged periods of stress it is possible that they could develop ill health and show symptoms of amongst others, depression, anxiety or even coronary heart disease. It is also possible that increased levels of stress could lead to inappropriate coping mechanisms such as excessive alcohol and drug abuse. Furthermore, stress in the workplace represents a potential loss of talent for organisations as top performers disengage from work where occupational stress, its causes, symptoms and consequences are prevalent (Cartwright & Boyes, 2000; De Croon, Sluiter, Blonk, Broersen & Frings-Dresen, 2004). When individuals are faced with stressful situations at work and are furthermore unable to understand these situations, it could lead to unrealistic expectations regarding their own potential and what the work environment requires. This might increase the experience of work stress which will then influence the individual and company performance in various ways. This could in turn lead to higher staff turnover and a lack of return on investment in human capital; which in the end could have a direct impact on the success and profitability of the company. Prolonged exposure to stress could possibly also result in the development of burnout.

Many researchers have attempted to study the relationship between stress and burnout (Barnett, Brennan & Garies, 1999; Pines & Keinan, 2005; Schaufeli, 2003). However, as is often the case with psychological constructs, no standardised definition of the stress construct emerged when the current literature was reviewed. This has serious implications for the conceptualisation and measurement of the construct. The majority of research on burnout focus on the theoretical perspective of Maslach and Jackson (1986), in which burnout is defined as a condition of Emotional Exhaustion, Depersonalisation and

Reduced Personal Accomplishment. Maslach (1982) pointed out that if work is unchallenging, unrewarding as well as lacking in positive feedback and recognition, burnout could develop. It has further been argued that when individuals can no longer tolerate occupational stress, they are likely to reach a break point and experience burnout which, in turn, may change their attitude and behaviour towards their job and most likely will result in a higher percentage of staff turnover (Jenkins & Elliot, 2004; Schaufeli, 2003) Research has shown that workers in human service organisations such as nurses, police officers, social workers and teachers, are more vulnerable to high degrees of burnout (Coffey & Coleman, 2001). This is often aggravated through aspects such as inadequate salaries, staff shortages and intolerable working environments (Weisberg, 1994).

However, research evidence suggests that stress tolerance can be learned (Cooper & Sawaf, 1997; Stein & Book, 2001). Once it has been learned it offers relief and improved health in both the short and long term. This could in turn allow the individual to become more flexible and adaptive when they are faced with more demanding challenges. For example, Lauzon (1991), in a study conducted on nurses, found that individuals who coped with difficult situations through avoidance or confrontation were more likely to develop burnout. Furthermore, planned problem-solving and positive re-appraisal as coping mechanisms, were negatively related to burnout. Similarly, it was found by Duquette, Kerouac, Sandhu, Ducharme and Saulnier (1995), that nurses who responded to stressors using avoidance strategies or actions such as blaming other, are more prone to develop symptoms of burnout. On the contrary, individuals responding to stressful events through positive appraisal and object analysis of these events are less likely to develop burnout. Henceforth, the development of relevant coping mechanisms could be one way of increasing stress tolerance (Stein & Book, 2001). Lazarus and Folkman (1984) defined coping as an individual's efforts to master demands (conditions of harm, threat, or challenge) that are appraised (or perceived) as exceeding or taxing his or her resources. Effective coping mechanisms would not necessarily eliminate stress from situations, but it will reduce it to manageable levels (Greenhaus & Callanan, 1994). It is therefore necessary for organisations to be able to identify the sources of stress in the workplace to enable individuals to find suitable ways to deal with these stressors, before it results in destructive behaviours or actions.

An abundance of literature has documented the high levels of stress associated with the environment in which nurses generally work (Coffey & Coleman, 2001; Firth & Britton,

1987; Hare, Pratt & Andrews, 1988; McGrath, Reid & Boore, 2003; Moore & Cooper, 1996; Pines & Maslach, 1978; Snelgrove, 1998; Whittington & Wykes, 1992). Humpel, Caputi and Martin (2001) point out that there is generally a strong focus on ensuring technical and intellectual proficiency when training nurses, whilst social and emotional competencies, which are also vital for success and effective performance in this occupation, receives little attention. Various research results have indicated that numerous sources of stress are present in the working environment of healthcare professionals. For example, McGrath et al., (2003, p.560) in a study on occupational stress in nursing, found that 67% of the respondents reported stress as a result of, "...experiencing too little time to perform duties to their satisfaction". In addition, 54% reported a "...lack of services and resources..." as a key source of stress. The results also showed differences between nurses in a community-based setting and nurses in a hospital setting. Community-based nurses reported high levels of stress as a result of direct contact with patients and the emotional demands that these patients place on nurses, whilst hospital nurses attributed high stress levels to contact with other professionals and the enforcing of strict control which limits the patient's autonomy (McGrath, et al., 2003). The prevalence of these sources of stress were confirmed by Coffey and Coleman (2001), who found that 31.2 % of their sample (which consisted of 104 forensic community mental health nurses) exhibited some degree of psychiatric distress, attributed to aspects such as perceived job security and the attitudes of their senior managers. These sources of stress, if not attended to, could lead to increased levels of occupational stress experienced by the individuals. Consequently, it is possible to argue that exposure to excessive occupational stress over long periods of time, without the necessary and relevant coping mechanisms, might lead to higher incidences of burnout in the individual (Duquette et al., 1995; Lauzon, 1991). Henceforth, it was therefore decided to focus this study on the nursing profession.

The purpose of this study is therefore to examine the relationship between EI, occupational stress and burnout within the nursing profession. This study will aim to investigate whether a relationship exists between stress that is experienced and the individual's level of EI. Furthermore the relationship between EI, occupational stress and burnout will be explored.

An understanding of how EI impacts on perceived occupational stress and burnout and hence the ability to manage occupational stress might assist organisations in highlighting new areas of organisational development and training related to combating stress and

burnout. Insight into the relationship between occupational stress and burnout will furthermore enable employers in the healthcare profession to proactively identify potential sources of stress and symptoms of burnout in the behaviour of nurses, which could ultimately result in actions to alleviate or illuminate these stressors. Henceforth, the research results could provide insight into the dynamics of the constructs that are being studied which could be utilised to effectively plan change interventions and training initiatives to further develop necessary skills and coping mechanisms to deal with stress and burnout. In addition, the results could be used in planning and executing more successful recruitment practices which should result in lower staff turnover, higher levels of productivity and a happier and healthier workforce.

This thesis is structured to firstly present (in chapter two) the theoretical framework with reference to burnout, occupational stress and EI, upon which the study is grounded. The aim of this chapter is to define the constructs and present a well reasoned argument to substantiate the need and importance of this study. The literature study incorporates relevant research related to the constructs, whilst guiding the reader to view the research aim of the study within the current frame of existing literature. Chapter three will present the research methodology and the measurement instruments utilised to conduct the research. It will report on the research aim, the hypotheses, as well as the sample and data collection methods. In chapter four the data analysis and results will be presented followed by a discussion on the findings, reported in Chapter 5.

#### **1.4 CHAPTER SUMMARY**

The purpose of this chapter was to provide an overview of this study. The main constructs, burnout, occupational stress and EI were introduced and the motivation for and purpose of the study was clarified. Furthermore, the environment within which this study will focus, the nursing industry, was introduced. The next chapter will provide a detailed overview of the constructs already introduced in this chapter and specific reference will be made to important literature and previous research involving these constructs.

## **CHAPTER 2: THEORETICAL FRAMEWORK**

### **2.1 DEFINING THE CONCEPTS**

In the following section the theoretical framework that underlies the rationale for the study is presented. The discussion incorporates relevant literature and current research related to the burnout, occupational stress and EI constructs.

#### **2.1.1 The Burnout construct**

The phenomenon of burnout was first identified by Bradley (1969) and was further elaborated upon by Freudenberger (1974). Being a practicing psychiatrist, Freudenberger took a clinical approach and considered “burnout syndrome” as a mental disorder which, according to his theory or viewpoint, is mainly a result of personal characteristics such as intra-personal conflicts, dysfunctional personality traits and ineffective coping mechanisms (Schaufeli, 2003). He used the term to describe a specific type of occupational exhaustion that was observed in professions related to medical care and workers in other human services professions such as police officers, social workers and schoolteachers. At approximately the same time as Freudenberger, a second approach to burnout was developed by Christina Maslach. As a social psychological researcher, she employed a scientific approach towards defining the construct, regarding the root-causes of burnout to be related to interpersonal, social and organisational factors (Maslach, et al, 2001).

In recent years, burnout has become one of the major areas of concern in various professional fields in relation to the rapidly developing research regarding stress and its harmful consequences both in personal, as well as career life. Three types of consequences of burnout can be distinguished, namely, (a) mental and physical health, (b) personal relationships and (c) professional behaviour and performance (Kondylis, Pandelis, Sfakianakis & Prokopiou, 2004). Burnout must be distinguished from occupational stress, as it is considered to be a chronic type of stress at work that exceeds the limits of the person’s ability to control or cope with stressors and as a result, lead to burnout (Schaufeli, 2003).

Consequently, burnout is defined as an extreme case of chronic stress (Cooper et al., 2001). Chronic stress is mostly caused by constant emotional pressure which the individual cannot control. Burnout is considered to be a condition that occurs over time and

is characterised by Emotional Exhaustion and negative attitudes that include boredom, discontent, cynicism, inadequacy and failure. It usually occurs when a person experiences physical, psychological and/or spiritual fatigue and can no longer cope (Crampton, Hodge, Mishra & Pricis, 1995). According to Freudenberger (1980) burnout is described in terms of chronic fatigue, depression and frustration that results from situations where an individual's ambition or expected rewards are not realised. Some authors criticise this definition by pointing out that it confounds the construct with other phenomena which are normally different from burnout, e.g. depression and chronic fatigue (Burke & Richardsen, 1993). Others have described burnout as a specific type of stress which is commonly experienced by professionals employed in occupations which require a great deal of interpersonal contact (Cordes and Dougherty, 1993); whilst Schaufeli and Enzman (1998, p.36) have defined the construct as, "...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...". Other researchers have defined burnout as an exhaustion of physical and mental resources (Freudenberger, 1980; Lamb, 1979), spiritual collapse (Storlie, 1979), and loss of positive energy, flexibility and resourcefulness (Seiderman, 1978).

According to Maslach and Jackson (1981) burnout is defined as a syndrome consisting of three components: Emotional Exhaustion, Depersonalisation and a Reduced sense of Personal Accomplishment. Emotional Exhaustion is characterised as a depletion of emotional energy and a feeling that one's emotional resources are inadequate to deal with the situation at hand. Depersonalisation refers to the treatment of other individuals in the work setting (clients, patients or even co-workers) as objects rather than people. Lastly, a diminished feeling of personal accomplishment refers to a tendency to evaluate one's own behaviour and performance in a negative way, resulting in a feeling of incompetence on the job and an inability to achieve performance goals (Cooper et al., 2001). Due to the popularity of the Maslach Burnout Inventory (Maslach & Jackson, 1986) as a psychometric measure of the construct, the concept of burnout has mostly been associated with the Maslach definition of burnout (Schaufeli, 2003). Inherent to this is the advantage that it creates a standardised classification through which research results over various studies can easily be compared and integrated. This presents some benefit in the sense that a common standard exists which allows for uncomplicated comparisons across different studies. However, this also reduces the concept of burnout to a somewhat narrow view

(Schaufeli, 2003), including only the three dimensions as defined by Maslach and Jackson (1981).

Recently, Pines and Keinen (2005) questioned the suitability of the recurrence with which burnout is defined within the framework of stress research. They argue that the problem with defining burnout within the stress framework is that as with the construct of burnout, ambiguity exists regarding a clear definition of stress. Pines and Keinen (2005) suggested that even though both burnout and strain are seen as adverse responses to stressors, they seem to have different antecedents, correlates and consequences. They report that job stressors correlated higher with strain ( $r = .65, p < .001, n = 1182$ ) than with burnout ( $r = .54, p < .001, n = 1182$ ) and that job importance had a higher correlation with burnout ( $r = -.15, p < .01$ ) than with strain ( $r = .07, p < .05, n = 1182$ ). This study further suggested that interventions in burnout and stress should differ, where interventions for burnout should aim to focus on enhancing people's sense of importance and significance rather than reducing job stress. In support of the latter, Pines (1993), Yiu-kee and Tang (1995) argued that burnout originates from employee's need to believe that their lives are meaningful and adding value and hence the use of such interventions should produce significant results in combating the condition.

Schaufeli (2003) argues that emotional (and cognitive) exhaustion and depersonalisation (mental distancing or cynicism) could be viewed as the core components of burnout and that this view is similar to Meijman and Schaufeli's (1996) description of the construct of occupational fatigue. Schaufeli (2003) continues to explain that the concept of Emotional Exhaustion refers to the fact that an employee can no longer perform what is required, due to the fact that all physical and mental energy has been drained. Mental distancing, or depersonalisation, is the psychological withdrawal from the task, which according to him, should be viewed as a coping mechanism to deal with the excessive demand of work and the consequential feelings of exhaustion.

From this discussion, it is clear that a significant amount of divergence exist regarding a standardised definition of burnout. What, however, is acknowledged by most researchers who study the construct, is that it includes both cognitive and emotional dimensions. More specifically, Emotional Exhaustion is most often included into basic definitions of burnout pointing towards the importance of acknowledging the emotive component of the construct. This insight raises the question of whether EI could have a possible moderating



effect on the development of burnout when the individual is experiencing high levels of stress.

Furthermore, despite the variety of definitions of burnout, it is also generally agreed that it involves an internal process, of a psychological nature involving aspects such as attitudes, feelings, motives and expectations which is experienced as negative due to the consequential feelings of distress, discomfort and dysfunction. According to Barad (1979) and Cherniss (1980), the development of burnout during the first year of employment, could be indicative of a lack of development of coping mechanisms to cope with emotional stressors of a job.

### **2.1.1.1 Causes and Consequences of Burnout**

Causes of burnout have been attributed to the individual, the workplace, as well as the interaction between the two. Sullivan (1989) differentiated between job dimensions (skills variety, task significance, autonomy, feedback, and role overload), organisational dimensions (role clarity, leadership and efficiency) as well as interpersonal dimensions and social support (co-workers and supervisors) as causes of burnout. Similar to Sullivan (1989), Hare et al., (1988) argued that burnout can be the result of both organisational and personal factors.

However, it has also been proposed by Muldary (1983) that burnout might only be one of many possible responses to excessive workplace stressors. Critics often point out that the argument, that excessive pressure will result in burnout, is oversimplified. What has not been considered as often is that some employees, when exposed to the same environment and circumstances as their colleagues, develop burnout whilst others don't. It is therefore also possible that burnout is not merely the result of excessive direct occupational related pressure or workload (i.e. stress), but that it could be affected by other non-work pressures such as relationships, ineffective social support or maladaptive coping strategies (Muldary, 1983; Cox, 1993). Henceforth, it might be logical to assume that an individual's level of EI and other individual differences in characteristics (such as coping mechanisms, personality, personal circumstances), might impact on the development of burnout and consequently moderate the level and frequency of burnout experienced.

Schaufeli (2003), in a recent review on the burnout construct, observed that even though many studies have reported variables that are related to burnout, little is known about what causes it. Limited longitudinal studies have been conducted to measure burnout at specific points in time and also control for previous levels of burnout. Although it is argued that the causal relationship between job demands and burnout should be confirmed by longitudinal studies, in the eight studies analysed by Schaufeli and Enzmann (1998), however, this could not be established. Schaufeli (2003) attributes the lack of empirical evidence to methodological constraints relating to, amongst other factors, the stability of the burnout construct over time. After reviewing 250 cross-sectional studies on burnout, no causal relationships could be found between job burnout and other variables. Possible causes or correlates of burnout have been identified as biographical characteristics such as age (negative), work experience (negative) and level of education (positive); personality characteristics such as hardiness (negative), external control orientation (positive), confront coping style (negative), self-esteem (negative), Type A behaviour (positive), neuroticism (positive), extroversion (negative); work related attitudes such as high or unrealistic expectations (positive) and work and organisational characteristics such as workload (positive), direct client contact (positive), social support from colleagues or superiors (negative) and lack of feedback (positive) (Schaufeli & Enzmann, 1998).

Similarly, in studying the consequences of burnout, limited longitudinal studies have been performed. Cross-sectional studies show that burnout is related to ill-health indicators such as depression, psychosomatic complaints, distress and physical health problems (Schaufeli, 2003). According to Schaufeli (2003) it is debatable whether these ill-health symptoms are consequences of concomitants of burnout. The question of whether depression is a cause or consequence of burnout was addressed in study by McKnight and Glass (1995) who did not manage to provide a clear answer and rather proposed that depression can be both a cause and a consequence of burnout. A similar finding was reported with regards to burnout and distress (McManus, Winder & Gordon, 2002). Possible consequences of burnout have been classified by Schaufeli and Enzmann (1998) in three categories: individual level (depression, psychosomatic complaints, health problems, substance abuse and spill over to private life); work orientation and attitudes (job satisfaction, organisational commitment, intention to quit) and organisational level (absenteeism and sick leave, job turnover, performance and quality of service). In addition, organisational commitment correlates negatively with Emotional Exhaustion and Depersonalisation (16% shared variance) and Personal Accomplishment (6% shared

variance), whilst job satisfaction shows strong negative correlations with all three dimensions of burnout (Schaufeli & Enzmann, 1998).

Research findings have linked burnout in nurses to several specific work environment factors. The most common source of stress found to be inherent to the nursing role including factors such as high work load, poor collegial support, role conflict and role ambiguity (Levert, Lucas & Ortlepp, 2000). Levert et al. (2000) in their study on psychiatric nurses, aimed to determine the levels of burnout in psychiatric nurses according to Maslach's three dimensions. It was found that more than half of the nursing staff experienced high levels of Emotional Exhaustion and Depersonalisation, whereas 93.4% of the sample reported little sense of personal accomplishment. This implies that serious interventions and preventative training should be taken to address these high levels of burnout in this specific sample (Levert et al., 2000).

Moreover, it has also been claimed that burnout is not only detrimental to the individual, but that it also has a far-reaching impact on organisations (Angerer, 2003; Schaufeli, 2003). Increased absenteeism, job turnover, poor performance and loss of productivity and inefficiency, all eventually result in financial losses for organisations. When individuals affected by burnout take leave, organisations are required to pay for the sick leave, but also needs to incur costs to fund replacement labour. Furthermore, when employees decide to leave the organisation (turnover), the replacement cost and training as well as the loss of immediate productivity, results in an additional cost for the employer. However, research evidence suggests that some of the possible causes of burnout relate to objective work characteristics (Rupert & Morgan, 2005; Simonis & Paterson, 1997; Taylor & Barling, 2004). These aspects could potentially be adapted or eliminated by organisations. This provides some opportunities for organisations to impact and intervene proactively to prevent burnout related to these causes.

### **2.1.1.2 Models of Burnout**

In recent days, an increasing number of research initiatives focus on the burnout construct, however, a comprehensive theoretical framework has yet to be developed. Schaufeli and Buunk (2002) suggest that the complexity of the phenomenon makes it highly unlikely that a single universal theory of burnout would be developed and agreed upon. Four

development models will be discussed, which ultimately builds up to the three-level model of Maslach & Jackson (Cooper et al., 2001).

#### *Process Model of Burnout: Cherniss (1980)*

Cherniss (1980) suggested a process model of burnout where aspects of the work environment and the characteristics of the individual are both viewed as sources of strain. Individuals choose to deal with these aspects in different ways, which could include negative attitudes towards the situation e.g. reducing work load, taking less responsibility for work outcomes, or becoming detached from work (Cooper et al., 2001). These negative attitudes form the basis of Cherniss's definition of burnout. The "over inclusiveness" of this theory, in that burnout is linked to negative attitudes, has been cited as a possible limitation, in that *negative attitudes* incorporates a wide range of variables under the concept of burnout. It has therefore been argued (Cooper et al., 2001) that this model of burnout is possibly too broad and does not allow for differentiation between burnout and job strain.

#### *Multi-dimensional model of job burnout: Maslach (1986)*

The development of the Maslach burnout model (Maslach & Jackson, 1986), started through extensive interviews with individuals employed in human service occupations. In developing the model the aim was to go beyond traditional research and literature on job stress, by extending the scope beyond the experience of stress (exhaustion), to include a person's response to the job (cynicism/depersonalisation) and the response in the person self (feelings of inefficacy/personal accomplishment) (Maslach, 2003). The dimension of *exhaustion* embodies the basic stress response, as referred to in other stress-related research, which shows positive correlations with aspects such as role overload and stress related health problems. The *depersonalisation* dimension refers to the detached, negative feelings felt towards aspects of the job and other people, as a response to the stress experienced. This dimension is not commonly found in other stress models and according to Maslach (2003) represents the key feature of the burnout phenomenon. The way in which the third dimension, feelings of *inefficacy* or a "lack of personal accomplishment" relates to the other two dimensions in the model, is dependent on the situation and can either be viewed as a consequence of *exhaustion* or *cynicism* or in some cases these feelings seem to develop sequentially. Maslach (2003) further explicates the construct by arguing that the way in which the three dimensions of burnout relate to the various workplace variables within the organisational setting (e.g. lack of resources and information, working relationship, insufficient time, heavy work demands) differ. Research

seems to suggest that exhaustion and cynicism mostly manifests as a result of work overload and interpersonal conflict, whereas *a sense of inefficacy* most likely results from a lack of resources or support (Maslach, 2003). Consequently, the variation in the manifestation of these dimensions will result in different patterns of the appearance of burnout.

The majority of research on burnout focuses on situational variables as possible causes for burnout, such as work load and demands, role overload, lack of support from colleagues and many studies have confirmed the impact of various job characteristics on burnout (Schaufeli & Enzmann, 1998). Maslach, et al. (2001) recently attempted to provide a theoretical framework for burnout and stress research, by analysing the former in terms of six key fields, namely: work overload, lack of control, insufficient reward, breakdown of community, absence of fairness and conflicting values (Angerer, 2003). This framework is presented as a person-job fit framework where emphasis is placed on the compatibility between the six domains of the job environment and the employee.

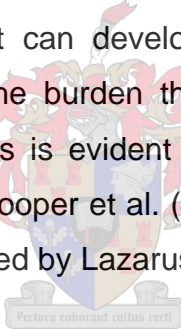
#### *Phase Model: Golembiewski (1984)*

Golembiewski and Munzenrider (1984, 1988) developed a model similar to Maslach's burnout model, but proposed that the second component in the Maslach model, depersonalisation, should be the first phase in the model. It is argued that depersonalisation constitutes the manifestation of burnout and consequently impairs performance. As a result, the individual's sense of personal accomplishment is then reduced which therefore constitutes the second phase in Golembiewski's model. Golembiewski further argued that Depersonalisation and Lack of Personal Accomplishment will exceed the individual's coping ability and then result in Emotional Exhaustion. Emotional Exhaustion would then represent the most powerful stage in the development of burnout (Cooper et al., 2001). Golembiewski's phase model in total constitutes eight phases of burnout. Individuals are rated from low to high on each of the three dimensions of burnout and then assigned to one of the eight phases. The phase model inherently suggests that burnout becomes more evident as the individual moves through Depersonalisation to reduced sense of Personal Accomplishment to Emotional Exhaustion. Therefore, the development of Emotional Exhaustion is strongly related to the progression of burnout. Hence, individuals in the more advanced phases will experience more severe symptoms and consequences than those in the earlier phases. Even though the model constitutes of various developmental phases, Golembiewski, Scherb and

Boudreau (1993) note that it is not expected that each individual will progress through all eight phases. This model has been criticised in terms of the consistency of the developmental process (Cooper et al., 2001) and the centrality of Emotional Exhaustion (Leiter, 1993). Burke (1989) questioned the necessity of the eight phases and proposed that a three or a four phase model would probably be more effective in resolving the question of the progressive nature of burnout.

#### *Conservation of Resources Theory: Hobfoll (1989)*

Hobfoll's theory covers a general perspective of stress with relevance to burnout in organisations (Cooper et al., 2001). The conservation of resources theory (COR theory) suggests that individuals have access to four main categories of resources: objects (e.g. houses, cars, and furniture), conditions (e.g. relationships, steady jobs), personal characteristics (e.g. self-esteem) and forms of energy (money, favours). It is argued that the potential loss of these resources, the loss of resources or failure to regain resources following resources investment, threaten individuals and subsequently result in stress. The theory further proposes that burnout can develop, when resources are lost or when resources are inadequate to meet the burden the individual faces. Burnout will result where a continuous loss of resources is evident and not as a result of a single event (Cooper et al., 2001). According to Cooper et al. (2001) the theory is well-matched to the transactional model of stress, developed by Lazarus and Folkman (1984).



#### **2.1.1.3 Measuring Burnout**

Two questionnaires prominently stand out as most frequently used in research, as a measure of burnout. They are the Maslach Burnout Inventory (MBI; Maslach & Jackson, 1981; 1986; Maslach, Jackson & Leiter, 1996) and the Burnout Measure (BM; Pines, Aronson & Kafry, 1981).

#### *Burnout Inventory: Maslach (1981)*

The most widely used instrument to measure burnout in recent years is the Maslach Burnout Inventory, which was initially developed to assess levels of burnout among human service professionals. This instrument was later adapted for use in a broader spectrum of occupations. The MBI consists of three scales: Emotional Exhaustion, Personal Accomplishment and Depersonalisation. The construct's, convergent and discriminant validity have been supported by exploratory factor analysis of the three scales (Burke & Richardsen, 1993; Cordes & Dougherty, 1993). However, Walkey and Green (1992)

detected that Emotional Exhaustion and Depersonalisation might collapse into a single factor. Confirmatory factor analysis raised questions regarding the factor structure of the MBI and more specifically the reliability of certain items. In a study by Evans and Fischer (1993) on a sample of teachers, three clear factors were found; however in a similar study on computer company employees, *Depersonalisation* did not form a meaningful factor. Similarly, in studies by Byrne (1991) and Yadama and Drake (1995) no support was found for the three factor model of the MBI could be found. They explored possible re-specifications of the model which resulted in some items being removed. Overall, Emotional Exhaustion seems the strongest of the three MBI factors (Cooper et al., 2001). The MBI is available in three versions, (1) The Human Services Survey (HSS), (2) the Educators Survey (ES) and (3) the General Survey (GS). The MBI – HSS and the MBI – ES both contain the three scales and are virtually identical except for the fact that the word *recipient* is replaced by *student*. The MBI-GS is suitable for more generic occupations and include the following subscales: Emotional Exhaustion, Cynicism and Professional Efficacy. The MBI will be discussed in greater detail in chapter three, as the MBI – HSS was used to assess burnout in this study.

#### *Burnout Measure: Pines and Aronson (1988)*

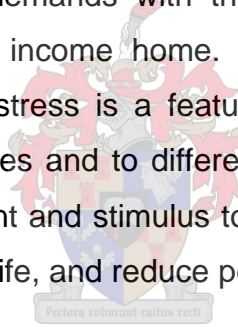
The Burnout Measure (BM) is used in approximately 5% of all studies on burnout (Schaufeli & Enzmann, 1998). Pines and Aronson (1988, p. 9) defined burnout as, "...the state of physical, emotional and mental exhaustion caused by long-term involvement in emotionally demanding situations...", however in the development of the BM, Pines and Aronson (1988) moved towards a more empirical definition and defined burnout where burnout was described as a sequence of symptoms which consisted of overall feelings of hopelessness and helplessness characterised by a lack of enthusiasm, irritability and a lowered self esteem. Even though burnout is defined by Pines and Aronson (1988) as a three-dimensional model, the instrument consists of a one-dimensional questionnaire which results in a single composite burnout score. The discriminant validity of the BM in relation to depression, anxiety and self-esteem, has been questioned (Shirom & Ezrachi, 2003) and this has caused researchers to describe the BM as a general index of psychological distress which includes physical fatigue, emotional exhaustion, depression, anxiety and reduced self-esteem. Overall, the overlap between the items used to determine burnout by the BM and depression or anxiety is substantial and it would therefore be irrelevant to determine the relationship between burnout and these indicators of mental health (Shirom & Ezrachi, 2003). The BM is a self-report measure. Items are

rated on a 7-point frequency scale and assess the person's level of physical, emotional and mental exhaustion.

## **2.1.2 Occupational Stress**

### **2.1.2.1 The implications of occupational stress**

Employees working in modern organisations are frequently required to deliver services and execute their functions in an increasingly complex, rapidly changing, and often competitive environment. Together with the increased national and international competitiveness, companies are constantly faced with shifting political, social and economic conditions as well as rapid technological developments and growing volumes of information. Quite often the warning signs of increasingly stressful work environments include for example workloads that ignore workers' skills and often leave individuals with little sense of control, a lack of participation in decision-making and too much responsibility. Together with this, the employees' stress is often further compounded by the challenge of balancing work demands with the pressures of personal and family obligations, especially in the dual income home. According to Berridge, Cooper and Highley-Marchington (1997), work stress is a feature of current economic activity from which most individuals suffer at times and to different extents. In a positive sense, work stress can be a source of excitement and stimulus to achievement. In a negative sense it can seriously impair quality of work life, and reduce personal and job effectiveness.



Stress negatively affects sleeping patterns, communication effectiveness, the ability to focus, overall mental clarity and decision-making ability (Cartwright & Cooper, 1997; Jex, 1998; Rees & Redfern, 2000). Research has shown that the inability to manage stress can compromise a person's immune function to the point of increasing vulnerability to a variety of diseases (Bourey & Miller, 2001).

There are a number of studies which aimed to explore the relationship between occupational stress and EI (Bar-on, Brown, Kirkcaldy & Thorne, 2000; Gardner & Stough, 2003; Slaski & Cartwright, 2002). In the study of Salovey and Mayer 1990) EI refers to the ability to be aware of one's own feelings, to be aware of others' feelings to differentiate among them and to use the information to guide one's own thinking and behaviour which indicated that EI could have an impact on the perceived job stress and also the consequences of experienced job stress. Furthermore, Palmer, et al., (2002) examined the relationship between EI and life satisfaction, and found support for the notion that EI



explains individual differences in life satisfaction. Henceforth, it is proposed that individuals with a higher level of EI might not only be more effective in managing stress but are also more likely to remain physically healthy and lead a high quality life.

#### **2.1.2.2 Stress defined**

The word stress is derived from the Latin word *strinere*, meaning to draw tight, and was used in the 17<sup>th</sup> century to describe adversity or suffering. During the late 18<sup>th</sup> century, stress denoted force, pressure, strain and strong effort, referring primarily to an individual's organs or mental powers (Hinkle, 1973). Early definitions of strain and load used in physics and engineering eventually came to influence the concept of how stress affects individuals. Under the meaning of this concept, external forces (load) are viewed as exerting pressure on an individual, producing strain. Proponents of this view claim the stress to which an individual is subjected can be measured in the same way that physical strain can be measured on a machine or bridge or any physical object (Cartwright & Cooper, 1997).

Most researchers agree that when studying stress models it is important to distinguish between three closely related terms: stressors, stress and strain (Francis & Barling, 2005). Stressors are defined as the external events such as difficult relationships in the workplace or a heavy workload that contribute to the experience of stress (Sauter, Murphy & Hurrell, 1990). Stress is considered to be an individual's internal response to stressors and is characterised by arousal and displeasure. Strain, on the other hand, describes the long-term effect of stress and includes physiological outcomes such as cancer, gastrointestinal disease, cardiovascular disease and psychological symptoms, including anxiety and depression (Francis & Barling, 2005). Typically, strains are classified as psychological, physical, or behavioural entities. Psychological strains can include aspects such as job dissatisfaction, anxiety and depressed mood. De Croon, et al., (2004) defined psychological job strain as aversive and potentially harmful psychological reactions of the individual to stressful work. Physical strain is viewed to include aspects such as headaches, upset stomachs and coronary heart disease, whilst behavioural strains included behavioural responses such as absenteeism, poor performance and turnover (Jex, 1998).

Newer and more comprehensive theories of stress emphasize the importance of the interaction and fit between a person and his or her environment. In the 1950's researchers

described stress as a reaction to internal or external processes which reach those threshold levels that strain an individual's physical and psychological capacity to, or beyond their personal limit (Cartwright & Cooper, 1997). By viewing stress as a result of a misfit between an individual and his or her particular environment, insight can be gained into why one person seems to thrive in a certain setting, whereas another suffers. Stress is therefore seen as a force that puts a psychological or physical function beyond its range of stability, producing a strain within the individual.

Knowledge that stress is likely to occur constitutes a threat to the individual. A threat can cause a strain because of what it signifies to the person (Cartwright & Cooper, 1997). Previous research shows that in different settings individuals might perceive certain stressors differently. Occupational stress is therefore quite subjective and dependent on an individual's perception of a situation. Studies conducted in the nursing industry have shown that the major stressors for psychiatric nurses included violent incidents, potential suicide and observation, work overload, interpersonal contact and unclear goals and direction of organisations (Sullivan, 1993). On the other hand, Tyler & Ellison (1994) found that haematology and oncology nurses identified workload as a major stressor whilst surgical nurses identified death and dying as major stressors. Other sources of stress that have been identified include insufficient time to complete work during scheduled hours and work schedules (community health nurses) (Coffey & Coleman, 2001); high workload, experiences of death and dying, and inadequate preparation (public and private sector nurses) (Lee & Wang, 2002).

Similar to burnout, little consensus exist regarding a single definition of stress. Stress has been defined as, "...the negative changes in personal behaviours which results from an imbalance between pressure and people's current ability to cope with it" (The Industrial Society, 1995. p.3). Other researchers define stress as, "...complex patterns of emotional states, physiological reactions, and related thoughts in response to external demands" (Greenberg & Baron, 2000, p.226); "...any force that puts a psychological or physical factor beyond its range of stability, producing strain within the individual" (Earnshaw & Cooper, 1996, p.7) or, "...a consequence of or a general response to an action or situation that places special physical or psychological demands, or both on a person..." (Hellriegel, Slocum & Woodman, 1992, pp. 280-290).

### 2.1.2.3 Occupational Stress

There have been many attempts by researchers in a number of publications, to accurately define occupational stress but yet there seem to be no generally accepted definition thereof. This, however, does not reduce the importance of recognising and managing occupational stress in the workplace. Rees and Redfern (2000) have suggested that due to the lack of clarity related to the construct definition of occupational stress, it could easily occur that employers and employees are misguided by their own perceptions of the nature and causes of occupational stress, when involved in stress-related issues. As a result, intervention strategies to stress-related problems could be misdirected.

In occupational stress research, stress is generally defined in one of three ways (Jex, 1998). Firstly, stress can be defined as a stimulus, which implies that it refers to the stimuli in the environment that may require some adaptive response on the part of an employee, e.g. when a person experiences a lot of stress in his job. Secondly, stress can be defined as a response. This refers to the feelings that an individual could experience when the demands of the job exceeds the individual's ability to cope, e.g. when a person feel a lot of stress due to aspects such as unrealistic deadlines. A third option would be to define stress as a stimulus-response, which implies that stress refer to the overall process by which job demands impact on employees. When stress is defined as stimulus-response, the term stressor is used to indicate the job or organisational conditions and strain is used to refer to a multitude of negative ways an employee may respond when faced with different stressors. If an employee responds to a stressor in a positive manner, such a response would not be perceived as a strain (Jex, 1998)

Contrary to the definitions cited above, Cooper, Sloan and Williams (1988) describe stress as a response to a situation in which individuals are unable to meet the demands placed on them, resulting in a negative outcome. They argue that this definition acknowledges that the sources of stress and its effects are multiple and not just limited to a particular situation. Henceforth, stress is viewed not just as a function of being under pressure in an occupational sense, but as a function of an individual's whole life situation. It includes aspects intrinsic to the job; relationships at work; organisational structure and climate; role ambiguity and conflict; opportunities for career development and progression as well as the home-work interface (Cooper, 1996). Taking into consideration the nursing industry and the demands placed on these employees, this definition of stress seems appropriate in the sense that the demands placed on nurses not only stems from their immediate work

environment, but include a vast range of factors such as patients' families, their own families and general work relationships.

Cooper and Marshall (1976) has identified the following seven main categories of stressors which could impact on occupational stress, namely intrinsic factors of work (working environment, repetitive tasks, job overload); role in organisation (role conflict, management support); relationships at work; career development; organisational structure & climate; external sources (family, life crises & financial issues); as well as individual characteristics (personality, levels of motivation, family support). Other causes of occupational stress, which indicate an overlap with the categories identified by Cooper and Marshall (1976) include: organisational stressors (insufficient administrative support, long hours, poor salary, procedures & policies, uncertainty and safety, organisation type); work-related stressors (role conflict, role ambiguity, role confusion, overload, unrealistic job demands, limited input in decision making, supervisors, colleagues, lack of variety, poor communication, poor leadership, technology, interpersonal conflict); and task-related stressors (responsibilities, clients & subordinates, unclear tasks) (Strydom, 2000). Similarly, Jex (1998) identified work place stressors such as role stressors, workload, interpersonal conflict, situational constraints, perceived control and traumatic job stressors.

According to Edwards et al., (1990) Type A behaviours are often elicited by environmental stressors or challenges. Type A personality refers to the overall style of behaviour that is observed in people who are excessively time-conscious, aggressive, competitive, ambitious and hard-driving. All characteristics which have, however, been found to be significant predictors of success. Stehle (1981), in a review of findings on stress in a critical care environment, found that many of the stressors identified were related to interpersonal relationships between e.g. doctor and nurse or other health care staff. Professional relationships have on many occasions also been identified as a source of stress; this includes lack of effective direction and guidance from senior personnel in organisations. For example, Firth and Britton (1987) report that ambiguity regarding supervisor expectations; have been associated with higher levels of burnout and professional depression in employees.

In a study conducted by Oginska-Bulik (2005), it was argued that individuals with a high level of EI will possess the ability to effectively deal with stress and would display lower levels of perceived occupational stress (Oginska-Bulik, 2005). Subsequently, it might

therefore be logical to assume that such individuals could possess a higher level of stress tolerance. Stress tolerance can be defined as the ability to withstand adverse events and stressful situations without falling apart by actively and positively coping with stress (Stein & Book, 2001). This ability is based on (1) a capacity to choose courses of action for dealing with stress (being resourceful and effective, being able to come up with sustainable methods, knowing what to do and how to do it); (2) an optimistic disposition toward new experiences and change in general and toward your own ability to successfully overcome a problem at hand; and (3) a feeling that you can control or influence the stressful situation by staying calm and maintaining control (Stein & Book, 2001). Stress tolerance includes having a series of suitable responses to stressful situations. It is associated with the capacity to be relaxed and composed and to calmly face difficulties without getting carried away by strong emotions. People who have a high level of stress tolerance tend to face crises and problems rather than giving in to feelings of helplessness and hopelessness. Anxiety is commonly known to manifest as a result of inadequate stress tolerance. This could have a negative effect on general performance as it is known to contribute to poor concentration, difficulty in making decisions and somatic problems such as sleep disturbance (Stein & Book, 2001). According to Jex (1998) there are three key elements that will contribute to coping with occupational stress. These include the capability to plan a course of positive action to limit and contain stress; the ability to maintain an optimistic attitude in the face of sudden change and negative experience; and the capacity to feel that you have control or at least influence over stress-inducing events.

A considerable body of research provide evidence that client-centred professions are intrinsically stressful. The literature include studies in occupational groups such as police officers (Maslach & Jackson, 1979), school teachers (Schwab, 1986), psychologists (Cushway, 1992), as well as the nursing profession (Snelgrove, 1998). It was found that factors such as job security (Fagin, Brown, Bartlett, Leary, & Carson, 1995), sickness absence (Rix, 1997), age (Moore & Cooper, 1996), perceived managerial support (Firth, McIntee, McKeown & Britton, 1986) and violence or threats of violence by a patient (Whittington & Wykes, 1992) were all important variables in predicting occupational stress in individuals employed in people-centred professions.

In a study conducted by Nikolaou and Tsaousis (2002) on healthcare professionals in a mental health institution, it was found that the job type (e.g. medical, psychological, paraprofessional, administration personnel) affected the overall stress levels experienced

by individuals in these occupations. Furthermore, Nikolaou and Tsaousis (2002) reported that job type had a moderating effect between EI and occupational stress as it was found that medical and psychological staff scored significantly higher in EI and lower in occupational stress, than other occupations in the mental health context (e.g. paraprofessional and administration personnel). It was suggested that EI could serve as a moderator in the stress process and henceforth that it could be included as part of an organised stress management programme. This could contribute to maintain and increase work-life balance for employees. It was further suggested that an EI measure be included in an assessment battery used at recruitment and selection, in order to identify EI levels, which could either be utilised to select individuals with a high level of EI for highly stressful positions or to identify development areas, should the individual report a lower level of EI.

#### **2.1.2.4 Models and theories of Occupational Stress**

Kahn and Byosiere (1992) argued that all models of stress consists of a basic pattern or process, in that it include a stimulus that actives a psychological response, which in turn determine a number of complex consequences in the individual's well-being. Although numerous models, that attempt to capture the dynamics of the stress construct exist, only the following theories of Occupational Stress will be discussed: Person-Environment (P-E) fit theory (French, Caplan, & Harrison, 1982), Lazarus' Transactional Model (Lazarus & Folkman, 1984), Karasek's Demand Control model (Karasek, 1979), Role Stress Theory (Kahn, Wolfe, Quinn, Snoeck & Rosenthal, 1964), Stress Cycle Model (McGrath, 1976), Facet Model (Beehr & Newman, 1978) and Edwards' Cybernetic Model (Edwards, 1992).

##### *Person-Environment Fit Model: French (1982)*

The Person-Environment Fit (P-E Fit) model has its origin in the work of Kurt Lewin and his viewpoint of interactional psychology, which argues that behaviour is a function of the interaction between the person and the situation, where one aspect of this interaction is the degree to which the person fits the situation (Jex, 1988). According to his theory, if there is not an accurate fit between the person and the environment, strain will occur (French et al., 1982). The P-E Fit model presented by French et al. (1982) hypothesize that objective characteristics of the person (abilities and goals) and the environment (job demands and supplies) influence the employee's perceptions of those characteristics. If these perceptions indicate subjective misfit between the person's abilities and goals and the corresponding job demands and supplies, psychological, physiological and behavioural strains will result. If the above (perceptions & strain) is expressed in terms of the demands and abilities, it would mean that as demands exceed the ability of an individual, stress is

likely to increase. However when demands reduce below the individual's ability to deliver, stress may decrease. Theoretically, the P-E fit model predicts that the degree of strain experienced by an individual is proportional to the extent of the misfit between the individual and their occupation (Pithers & Soden, 1999). The experience of strain is dependent on whether or not environmental demands go down to a level that could cause boredom (Maslow, 1943). As a result, behavioural strains initiate coping behaviours and defence mechanisms, with coping behaviours being directed toward the subjective person and environment.

The P-E Fit Model consists of four basic concepts: (1) organisational stress, (2) strain, (3) coping and (4) social support. In this model emphasis is placed on the cognitive approach towards stress (Edwards, 1992). Physiological stress symptoms could include raised blood pressure and lowered immunity whilst psychological symptoms typically constitute of sleep disturbances, panic attacks, anxiety and restlessness. According to the theory these symptoms, could result in behavioural changes such as increased absenteeism and staff turnover. Research on occupational stress, incorporating the P-E Fit model includes studies investigating organisational demands, job duties and requirements, employee skills and abilities and job satisfaction. It was found by Kahn and Byosiere (1992) that excessive or conflicting demands on the individual in the work environment could increase the lack of fit and contribute to aspects such as workload, role ambiguity and role conflict. This was also investigated in studies by Fisher and Gitelson (1983) and Keenan and Newton (1984).

The P-E fit model have been criticised for a lack of specific focus (Chemers, Hays, Rhodewalt & Wysocki, 1985) as well as the fact that it gives inadequate consideration to specific sources of stress in the workplace (Edwards & Cooper, 1990). Furthermore, it has been argued that insufficient clarity and differentiation between the different forms and types of fit exist (Edwards & Cooper, 1990; Ganster, Fusilier & Mayes, 1986).

#### *Transactional Model of Stress: Lazarus (1984)*

Lazarus and Folkman (1984) in their Transactional Model of Stress proposed that person variables (e.g. beliefs, goals, values, commitments) interact with environmental variables (e.g. demands, constraints, resources) through a cognitive process termed primary appraisal. According to the theory, if the environment is appraised as demanding or exceeding the person's resources and endangering his or her well-being, coping is activated. Coping firstly involves an evaluation of what can be done to eliminate or balance

the demanding factors or source of stress (i.e. secondary appraisal) and, secondly, attempting to alter the distressed person-environment relationship (i.e. problem-focused coping) and/or to regulate emotional distress (i.e. emotion-focused coping). As this is an ongoing process, the situation is then re-appraised and the process continues. If the source of stress is successfully resolved, coping ceases and positive effect results. If this is not the case, negative affect and physiological disturbances persist, ultimately damaging adaptational outcomes (i.e. psychological well-being, somatic health, social functioning). Lazarus and Folkman (1984) also emphasized that appraisal and coping occur across multiple dimensions and that successfully resolving an encounter on one dimension depends on the degree of conflict created on other dimensions.

Dewe and Trenberth (2004) considered work stress and coping in the light of the transactional model of Lazarus and argued that it is essential to start thinking along the transactional way when trying to understand the nature of the stress and coping response. They pointed out that researchers need to accept that one of the most influential frameworks for understanding coping is through appraisal and appraising. It is argued that by employing such a focus, some light could be shed on the causal relationships that have to date been an elusive aspect in stress research. It is argued that traditional methods or approaches to stress are not necessarily wrong, but that the focus falls primarily on the components of stress in artificial isolation (stimulus, response and interaction between the two) and little or no attention is given to the relational aspect between the environment and the person and the constant interaction between them (Lazarus, 1990 cited in Dewe & Trenberth, 2004). More relevant to this study, Dewe and Trenberth (2004) recently suggested that the study into the transactional approach (with an appraisal focus) on future research of work stress and coping cannot be conducted without considering the role emotions play in the stress process. They argue that a lack of attention has been given to the role that emotions play in the experience of stress other than, "being under stress" when in reality, "stress generates emotions" (Lazarus & Cohen-Charash, 2001, p.52). According to Lazarus and Cohen-Charash (2001, p.53) if appraisals become, "...the conceptual key to our emotions, it both shapes and reflects the way we cope with our emotions and the life conditions that bring emotions about".

A further application of this model was done by Gardner, Rose, Mason, Tyler and Cushway (2005) in a study on cognitive therapy and behavioural coping in the management of work-related stress. Due to the fact that the transactional model of stress



emphasise the role of cognitive appraisal of potential stressors in determining a suitable stress response, it was assumed that primary and secondary appraisal could be modified by the use of techniques normally associated with cognitive therapy (Gardner et al, 2005). The aim of the study was to determine whether the teaching of new behavioural coping strategies could modify the role of dysfunctional cognitions in work-related effects of stress through stress management training. It was found, through pre-and post measures with three-month intervals, that cognitive therapy was an effective intervention as a stress management technique (Gardner et al., 2005).

*Job Demand-Control-Support model: Karasek (1979)*

The demand-control-model (also referred to as the decision latitude model) have been influential in occupational stress research (Bliese & Castro, 2000). This model of occupational stress emphasises the role of work content as the major sources of stress. In developing the theory, Karasek (1979) divided job content into two components, (a) employee perceptions regarding tasks that need to be completed in performing the job and (b) employee perceptions about the degree of control or discretion they have in performing the job tasks (job control). According to Karasek (1979) the two components interact with each other resulting in the amount of strain (i.e. mental and physical) that is experienced by employees. According to the model proposed psychological strain results from the collective effects of the demands of a work situation and the scope of decision-making discretion available to the employee, facing those demands (Karasek, 1979). The highest level of strain, and therefore the greatest levels of occupational stress, is expected to occur in situations where there are extremely high job demands, but very low control.

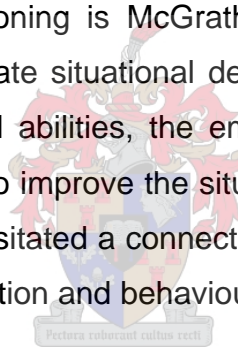
Even though this model is generally viewed as being highly influential, it has been criticised for being too simplistic, by excluding factors which could be related to strain (Baker, 1985; Schaubroeck & Merritt, 1997). For example, it has been argued that one of the factors which has been frequently shown to be related to strain, social support, was not included in the model. Henceforth, in the 1980's a support dimension was added to the model, resulting in the Job Demand-Control-Support model (JD-CS, Johnson & Hall, 1988; Johnson, Hall, Stewart, Fredlund & Thorerell, 1989). The model specifically proposes that the moderating effects of control on the demand-strain relationship will only be evident if support is high. This was confirmed in a study by Johnson and Hall (1988) who found that the interactive relationship between work control and job demands was only evident when social support from colleagues were present. In addition, Bliese and Castro (2000) found

that high role clarity improved the effects of high work overload. However, this was found only in groups where supportive leadership was present. This finding implicates two important aspects, firstly, that role clarity and control may share theoretical and conceptual similarities and secondly, that contextual variables play an important, but often ignored, role in occupational stress research.

### *Other theories and models*

The Role Stress Theory of Kahn et al., (1964) was the first influential stress theory. In this theory, Kahn et al. (1964) argued that occupational stress centres on role expectations, which can be translated into role pressures. These role pressures will then interact with certain aspects such as the individual's personality, job overload, role conflict and role ambiguity, which then results in pressure being experienced by the individual. Such pressure often results in the activation of defence mechanisms and coping responses.

Another stress model worth mentioning is McGrath's Stress Cycle (1976), where it is argued that an individual will evaluate situational demands against his or her abilities. If these demands threaten to exceed abilities, the employee will select and implement a behavioural response that will aim to improve the situation. McGrath (1976) reasoned that effective coping mechanisms necessitated a connection between the situational demands, perceived demands, response selection and behaviours.



Beehr Newman's Facet model (1978) on the other hand suggests that the characteristics of the person and the environment are filtered through psychological and physical processes. These processes influence employee health and organisational effectiveness, which in turn, generate adaptive responses directed toward the person and the environment. Seven facets were identified in order to conceptualise the major dimensions (facets) of job stress. The seven facets are as follows: (1) environmental facet (job demands and task characteristics, role demands or expectation, organisational characteristics and conditions, organisation's as well as the external demands and conditions); (2) personal facet (psychological condition, physical condition, life-stage characteristics, demographics); (3) process facets (psychological and physical processes which may link personal and environmental facets to each other); (4) human consequences facet (psychological health consequences, physical health consequences); (5) organisational consequences facet (profits, earnings, quality of work life); (6) adaptive response facet (adaptive responses by the individual, adaptive responses by the

organisation, adaptive responses by third parties); and (7) a time facet (runs through all other facets and implies that all facets require the passage of time; e.g. elements of the personal facet such as the development of needs and personality characteristics require a passage of time, similarly, elements of the environmental facet require time to exhibit their effects). In 1979, Beehr and Newman presented an improved version of the model in which personal and situational characteristics moderate each relationship between components of the model and in which coping responses may have additional direct effects on employee health and organisational effectiveness, thus bypassing the person and environment (Beehr & Newman, 1978). This model differs from the one presented by Kahn et al (1964) in that it defines the stages within the stress model in different facets, but also includes a time facet, emphasising that each facet or stage in the model incorporates the effect of the passage of time.

Edwards' Cybernetic Theory (1992) describes stress as a discrepancy between an employee's perceived and desired state of well-being, provided that the presence of this discrepancy is considered important by the employee. In this theory it is hypothesised that stress influence two types of outcomes i.e. (1) employee well being composed through psychological and physical health and (2) coping, defined as the, "...efforts to prevent or reduce the negative effects of stress on well-being" (Edwards, 1992, p.245). Edwards (1992) therefore identified stress, coping and well-being as the critical components of a negative feedback loop in the stress process which suggests that stress negatively affects an individual's well-being and then activates coping, which, in turn, influences well-being both directly and indirectly through the determinants of stress. The essence of the Cybernetic theory concerns the functioning of a self-regulating system which has at its core the negative feedback loop. The Cybernetic theory presents an integrated theory of stress, coping and well-being in organisations, which, according to Edwards (1992) highlight the fact that stress not only negatively affects health, but also encourages coping which then influences the determinants of stress.

It has been argued by Slaski and Cartwright (2003) that the various contemporary theories of stress such as the cybernetic theory (Edwards, Caplan & Harrison, 1998), ethological theory (Schabracq, Winnubst & Cooper, 1996) and equilibrium theory (Hart, Griffin, Wearing & Cooper, 1996) position emotions and self regulation at the core of a dynamic stress process. The emotions then highlight issues which in some way pose a threat (physical, social or psychological) to the individual's well-being. Furthermore, emotions are

then considered to be adaptive, acting as a mechanism to protect the individual from physical harm and to facilitate maintenance of self-identity in social settings which guides the individual towards the achievement of tasks and goals. In this context the experience of stress is considered to be an expression of negative emotions elicited by danger, threat or challenge and which signal to the body the need to prepare for actions of defence and protection (Slaski & Cartwright, 2003). Central to all behaviour is the principal drive towards diminishing negative emotional experiences and stress which are viewed to have an adverse effect on the self and to protect and preserve an integrated “self” (Damasio, 1994 in Slaski & Cartwright, 2003, p.234).

#### **2.1.2.5 The relationship between Occupational Stress and Burnout**

According to Schaufeli and Enzmann (1998) burnout and stress should be viewed as two separate constructs. According to these authors, stress could be seen as a temporary process which requires short-term adjustment and is accompanied by mental and physical symptoms (Brill, 1984). Burnout, on the other hand, can be viewed as a particular kind of prolonged job stress and can also refer to a breakdown in adaptation, accompanied by chronic malfunctioning at work (Schaufeli and Enzmann, 1998). Researchers have frequently conceptualised burnout within a stress research framework (Cooper et al., 2001; Farber, 1983; Maslach et al, 2001). However, the problem, according Schaufeli and Enzmann (1998) is that with both stress and burnout, extensive ambiguity exists regarding the definitions of the constructs. It has therefore been argued that not much will be gained by categorising burnout within the conceptual framework of stress. The terms burnout and stress are both familiar and understood by professionals and layman, however little consensus exist in terms of a more precise and scientifically defined definition (Pines & Keinan, 2005).

Furthermore, there has been evidence that suggest that burnout does not always develop as a result of stress (Pines, 2000). Burnout can also develop when individuals perceive their lives as being insignificant or useless. This notion is somewhat supported by the fact that studies have shown a negative correlation between burnout and a sense of significance at work (Pines, 2000, 2002).

However, considerable evidence exist which suggest that certain work stressors influence burnout (Burke, 1994). In a study on local government services, Rothmann, Jackson and Kruger (2003) found that a significant relationship exist between occupational stress

(measured by the Job Stress Indicator; Spielberger & Vagg, 1999) and Emotional Exhaustion (measured by the MBI – GS; Maslach, 1996) ( $r = .5, p < .01, n = 270$ ), indicating that the higher the level of occupational stress (as a result of job demands and a lack of organisational support), the higher the level of Emotional Exhaustion. Furthermore, it was found that the higher the sense of coherence (measured by The Orientation to Life Questionnaire; Antonovsky, 1987) the lower the level of exhaustion. This suggested that sense of coherence could have a possible moderating effect on occupational stress. In another study by Mostert and Joubert (2005) in the South African police service, it was found that occupational stress, as a result of job demands ( $r = .96, p < .01, n = 340$ ) and lack of resources ( $r = .74, p < .01, n = 340$ ) resulted in burnout ( $r = .54, p < .01, n = 340$ ). Similarly, in a study by Wiese, Rothmann and Storm (2003) conducted in the South African police service in Kwazulu-Natal, a positive correlation ( $r = .52, p < .05, n = 257$ ) was found between stress as a result of job demands and the Emotional Exhaustion component of burnout.

More recently, Oginska-Bulik (2006) investigated occupational stress and its consequences with a focus on Type D personalities in health care professions (refers to individuals who “...simultaneously experience negative emotions and inhibit self-expression in social interactions...”, p. 114). It was found that these health care workers reported high levels of experienced stress at work as well as high levels of burnout. Following a linear regression analysis, it was found that work overload and negative affectivity predicted Emotional Exhaustion and was responsible for 62% of the total variance of the dependent variable. This implies that the higher the stress related to work overload, the higher the tendency to experience negative emotions, and hence the higher the level of Emotional Exhaustion. Furthermore, two factors related to occupational stress, lack of rewards and physical burdens, were found to be predictors of depersonalisation and made up 42% of the total variance of this dependent variable. Unpleasant working conditions, negative affectivity, interpersonal interaction of profession, gender and work experience were predictors of personal accomplishment and jointly made up 26% of the variance of the dependent variable. In a qualitative study conducted on mental health nurses in Australia, results were very much in line with international research reports and reported that stress and burnout arise from employment insecurity, issues with management, problems with the nature of the work, inadequate resources and services, to name a few (Taylor & Barling, 2004).

### 2.1.3 Emotional Intelligence

#### *The origin of the EI construct*

EI has its origin in the concept of Social Intelligence (Salovey & Mayer, 1990) which was first defined by Thorndike in 1920, where he distinguished Social Intelligence from other forms of intelligence and defined it as, "...the ability to understand men and women, boys and girls – to act wisely in human relations..." (Walker & Foley, 1973, p.840). In essence Thorndike defined social intelligence as the ability to perceive one's own and others' internal states, motives and behaviours, and act toward them optimally on the basis of that information (Salovey & Mayer, 1990). Several years later, Gardner (1983) suggested that human beings have a number of intelligences relating to different parts of the brain and differentiated between seven types of intelligence, namely: (1) spatial, (2) physical, (3) musical, (4) linguistic, (5) logical-mathematical, (6) interpersonal and (7) intrapersonal intelligence. This became known as the Theory of Multiple Intelligences, within which he proposed the existence of the personal intelligences, which included interpersonal intelligence (relating to one's intelligence in dealing with others, more specifically, it refers to the ability to notice and differentiate between emotions of others, including their moods, temperaments, as well as motivations and intentions) and intrapersonal intelligence (relating to one's intelligence in dealing with oneself). Although Gardner did not refer to the above as EI, his concepts of inter- and intrapersonal intelligence provided a foundation for later models of EI (Schutte, Malouff, Hall, Haggerty, Cooper, Golden & Dornheim, 1998).

#### *Defining EI*

According to Salovey and Mayer (1990) EI focuses on the recognition and use of one's own and other's emotional states to solve problems and to regulate behaviour. This definition was further refined by Caruso and Salovey (2004) as the ability to perceive and express emotion, assimilate emotion in thought, understand and reason with emotion, as well as regulate emotion in the self and others. In contrast, Goleman (1999) refers to EI as the capacity to recognise feelings in oneself and others, as well as the capacity to motivate others and manage emotions within one and subsequent relationships. Another well known author of EI, Bar-On (1997) defined the EI construct as a multi-factorial range of interrelated emotional, personal and social abilities that influence our overall ability to actively and effectively cope with demands and pressures. According to Bar-On these abilities should be conceptualised more as a type of emotional competence rather than an inherent intelligence. Bar-on (1997) furthermore classifies EI in the context of personality

theory, referring to the construct as an umbrella term including non-cognitive capabilities, competencies and skills that influence a person's ability to cope with environmental demands and pressures.

Apart from the Bar-on (1997) and Mayer and Salovey (1990) definitions of EI, various other researchers have attempted to conceptualise and measure the construct. For example, Palmer and Stough (2001) define EI as the capacity to deal effectively with one's own and others' emotions, which involve the capacity to effectively perceive, express, understand and manage emotions in a professional and effective manner at work.

### **2.1.3.1 Models and Theories of Emotional Intelligence**

A number of theories and models of EI have been reported and researched, which forms the basis that underlies various measurement instruments such as the Multifactor Emotional Intelligence Scale (MEIS,1997), Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT; Mayer, Salovey & Caruso, 1999), Schutte Emotional Intelligence Scale (Schutte, et al.,1998), Bar-on EQ-I (Bar-On, 1997) and the Swinburne University Emotional Intelligence Test (SUEIT; Palmer & Stough, 2001). These models and theories have been clustered into ability and trait theories and models of EI. Mayer, Salovey and Caruso (1999), differentiated between mixed and ability models whilst Petrides and Furnham (2001) proposed a differentiation between trait and ability EI. Petrides and Furnham (2000) furthermore suggested that the nature of the EI model will be determined by its type of measurement rather than the theory underlying the model. Henceforth, it is therefore imperative for a researcher working with a specific model to explore the classification of EI or the theory underlying the model used to define EI, as well as how this have impacted on the development of different measurement instruments for the construct Henceforth, the various models and approaches to EI will now be discussed in greater detail. However, it is important to note that the different approaches to EI do not necessarily contradict each other; they should rather be viewed as each presenting a different perspective on the nature of EI.

#### *El as an Ability Model*

Ability models cluster EI in the domain of intelligence, where it is viewed in a similar light than spatial and verbal intelligence, with the exception that it interacts with or within emotional content (Caruso, Mayer & Salovey, 2002). Ability EI (also referred to as

information processing EI) refers to actual cognitive abilities, which should therefore be studied with respect to psychometric intelligence (Petrides & Furnham, 2001). Information-processing EI is focused on the respective elements of EI and their relationship to traditional intelligence. Researchers agree that ability EI are best assessed through measures of maximum performance rather than self-report. The only example of such a model to date is the Mayer and Salovey's Ability Model, MEIS (1997) which was later adapted and is now known as the Mayer, Salovey and Caruso Ability model, MSCEIT (2000).

Salovey and Mayer (1990), who were the first researchers to coin the term EI, defined EI in terms of three mental processes: (1) the appraisal and expression of emotions in oneself and others; (2) the recognition of emotion in oneself and others; and (3) the utilisation of emotions to facilitate thought. According to their theory, these three processes are further divided into various subcomponents. For example, the appraisal and expression of emotion is considered to be divided into processes dealing with oneself and processes related to others. The appraisal of self is then subdivided into verbal and non verbal expressions of emotions whilst appraisals dealing with others constitute non-verbal perception and empathy. The second process referring to the regulation of emotion is similarly subdivided into the regulation of self and the regulation of others. Utilisation of emotion, as the third process, included aspects such as motivation and redirected attention (Mayer & Geher, 1996; Salovey & Mayer, 1990; Mayer & Salovey, 1993, 1995). Mayer and Salovey (1997) later refined their model and argued that EI involves, "...abilities to perceive, appraise, and express emotion; to access and/or generate feelings when they facilitate thought; to understand emotion and emotional knowledge; and to regulate emotions to promote emotional and intellectual growth..." (Mayer & Salovey, 1997, p.10). From this definition, Mayer and Salovey derived and clustered four different abilities, which they refer to as "branches" and which forms part of their four-branch model (Mayer et al., 1999). The first branch, Identifying Emotions, includes several proficiencies such as the ability to identify feelings, express emotions accurately and differentiate between real and fake emotional expressions. The second branch focuses on utilising emotions to achieve various outcomes, such as redirecting attention, to facilitate decision-making or to use emotions to generate various approaches to problem-solving. Understanding Emotions, the third branch, addresses the ability to understand complex emotions and emotional sequences such as the behaviour or reasoning that underlies an emotional expression or reaction, as well as the relationship between various emotions (Caruso et al, 2002). The



fourth branch, Managing Emotions, incorporates the awareness of own emotions, the ability to distinguish between clear and typical emotions and the capability to solve emotionally-laden problems.

Within the ability model, EI is defined as the ability to solve emotional problems, which involves problem solving with and about emotions and as previously mentioned, in this approach EI is measured through objective, ability based indicators. According to Mayer, Caruso and Salovey (1999, 2000; Mayer & Salovey, 1997; Mayer, et al, 2000) ability testing should measure the actual capacity to perform well and not only the belief about one's capacity. Therefore, the capacity should be measure by having a person solve a problem (e.g. identify emotion on a person's face, story or painting) and subsequently these answers should be evaluated against a set criteria (Roberts, Zeidner & Matthews, 2001). However, extensive difficulty is known to surround the scoring of responses with emotional content. As a result of this the proponents of EI ability models endorse three scoring procedures: consensus scoring, expert scoring and target scoring (Mayer et al, 1999). Consensus scoring is where a respondent receives credit for endorsing responses that the group endorses. This approach assumes that the observations of a larger group can be pooled and serves as a reliable measure. Expert scoring, involve experts in the field, e.g. psychologist, psychiatrists, philosophers. These experts would then study certain stimuli (e.g. facial expression, pictures) and determine the emotion expressed by the respondents. The reasoning behind using this scoring method is that these experts bring professional know-how and a history of behavioural knowledge which is incorporated into the assessment of the individual's capabilities. The respondent will earn credits if their answers correspond to those provided by the experts. Lastly, target scoring, involves that the test taker (the judge) assesses what a target is portraying. The target can be, for example, a photographer, an artist or a musician who are involved in some emotional activity. A series of emotion rating-scales are then used to match the emotions conveyed to those reported by the target (Roberts et al, 2001).

#### *EI as a trait or mixed model approach*

Trait models of EI are distinguished by the inclusion of a wide range of personality variables and self-perceived abilities and should according to Zeidner, Matthews & Roberts (2004) be primarily investigated within a personality framework. The model of Baron (1997) is classified within the Trait EI approach, concerned with consistencies in

behaviour, which manifest in specific traits or behaviours such as empathy, optimism and assertiveness. Bar-On's model of EI proposed five broad areas of skills and competencies which were further broken down into more specific skills that are considered to contribute to success in life. These include intra-personal skills, interpersonal skills, adaptability, stress management and general mood (happiness and optimism). The measurement of trait EI differs from other models as it is measured through self-report inventories which measures typical behaviour. It focuses strongly on personality variables, but could also include vague constructs such as motivation, self-awareness and happiness, which are classified as potential correlates. Self-report inventories of EI have been criticised due to the fact that these measures rely on the respondent's self-perception which is not necessarily indicative of the individual's actual level of EI (Roberts et al., 2001). These authors also argued that responses to items could be significantly affected by social desirability and impression management.

The trait EI approach is often also referred to as mixed models of EI, where the construct is defined as a combination of competencies and general dispositions. It includes aspects such as emotional and interpersonal knowledge and functioning which are related to emotion encompassing motivation, personality traits, temperament, character and social skills. Measurement predominantly consists of self-report, Likert-type scales. Examples of measurement instruments are the Bar-On EQ-i (Bar-On, 1997, 2000), Schutte's EI scale (Schutte et al., 1998), Boyatzis and Goleman's Emotional Competence Inventory (Boyatzis, Goleman & Rhee, 2000) and the Swinburne University Emotional Intelligence Test (SUEIT, Palmer & Stough, 2001). It has been noted in research that possible parallels can be drawn between EI models and competency models. Definitions of EI focus on the individual traits, values and behaviours of individuals, whereas competencies are defined by Boyatzis (1982, p.13) as, "...an underlying characteristic of a person in that it may be a motive, trait, skill, aspects of one's self image or social role, or a body of knowledge which he or she uses..." Dulewicz and Higgs (2000) proposed that this link between EI and competencies could be attributed to the requirement of researchers and organisations to utilise EI in an organisational context. Relationships between EI and organisational success have been reported (Goleman, 1996; Dulewicz & Herbert, 1996, 1999) and a number of competency frameworks include or draw parallels to the fundamentals of EI (Cockerill, 1989; Dulewicz, 1994).

Goleman (1996, 1998) built on the work of Mayer and Salovey (1997) and proposed an EI model consisting of five critical competencies. These include (1) self awareness, (2) self-regulation, (3) self-motivation, (4) social awareness (empathy) and (5) social skills. Goleman suggests that these five pillars could have a great impact on the way that an individual perceives and reacts to organisational situations or events (Rozell, Pettijohn & Parker, 2001). Goleman's model of EI (Goleman, 1998) is classified as a mixed model and involves 20 competencies that distinguish individual differences in the workplace and according to Gardner and Stough (2002), is specifically designed for workplace applications. Goleman has been criticised by Gardner (2003) for broadening the definition of EI to such an extent that it not longer has any scientific utility and can therefore provide no clear prediction of life outcomes such as organisational performance and leadership. Overall, findings and research by Goleman have been criticised for lacking strong empirical foundation and unnecessary popularisation of the EI construct (Gardner, 2003).

When it comes to the measurement of mixed model approaches to EI, it is often said that a number of problems have been reported with the self-report measures typically used to measure mixed model approaches to EI. These problems stem from the fact that self-report scales are dependent on the respondent's self-knowledge (Dulewicz & Higgs, 2000). Henceforth, it is argued that if the respondent's self-understanding is inaccurate and the self-report is subsequently flawed, the results will provide only an indication of the respondent's self-perception, rather than the actual EI ability. Responses and results would further also be susceptible to impression management and social desirability. Other problems include low reliability, low or no criterion validity, limited construct validity and the fact that they are easily faked (Barret, Miguel, Tan & Hurd, 2001).

### *Measuring EI*

Various researchers have commented that concerns exist regarding the feasibility of the measurement of EI (Austin, Saklofske & Egan, 2004; Dulewicz & Higgs, 2000; Roberts et al, 2001; Zeidner et al, 2004). It has been argued that the complex nature of EI will most probably benefit more from non-paper-and-pencil tests where a greater understanding of an individual's level of EI will be gained through focussed feedback from management and colleagues (Goleman, 1996; Martinez, 1997). Researchers who classify EI as an ability (involving cognitive processing of emotional information) argue that EI is best measured by performance tests. Alternatively, those classifying EI as a trait or a disposition, argue that EI is best measured through self-report questionnaires. Other measurement problems

include questions regarding the extent to which self-report EI relates to actual emotional skills as well as the significant correlations found between trait EI measures and personality (Austin et al., 2005). The various measurement approaches can be divided into (1) Ability scales (e.g. MEIS); (2) Self-report scales (e.g. Bar-on EQ-I; Bar-On, 1997 and the EQ-map; Cooper & Sawaf, 1997) and (3) Observer-rating scales (e.g. the Emotional Competence Inventory).

A brief overview of the key EI measurement instruments is presented next. This include the Multifactor Emotional Intelligence Scale (MEIS) (Mayer & Salovey, 1997); Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) (Mayer et al, 1999); Schutte Emotional Intelligence Scale (Schutte et al, 1998); Bar-on EQ-I (Bar-on, 1997) and the Swinburne University Emotional Intelligence Test (SUEIT) (Palmer & Stough, 2001).

The MEIS is a multi-task ability measure, based on the four-branch model of Mayer et al. (1999). It includes tasks where respondents are required to identify emotional expressions from facial expressions and designs; define complex emotions and to generate and reason with emotion, to name a few. The MEIS is a paper-and-pencil test which provides an overall EI score as well as four sub scores which are mapped onto the four branches of the ability model as well as twelve scores for the 12 individual subtests (Mayer & Salovey, 1997). The Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) has been developed to improve on the Multi-factor Emotional Intelligence Scale (MEIS) in terms of scoring, reliability and factor structure (Mayer et al, 2000).

Schutte et al. (1998) developed a 33-item self-report Emotional Intelligence Scale (EIS), which have been used in a number of studies (Ciarrochi, Chan & Bajgar, 2001; Petrides & Furnham, 2000; Saklofske, Austin & Minski, 2003; Schutte et al., 2001). The scale was based on the original EI model of Salovey and Mayer (1990) and aimed to provide a basis from where an individual's current level of EI could be assessed (Schutte et al., 1998). The Schutte Scale attracted attention, mainly due to the relative brevity of the questionnaire, compared to other EI assessment instruments. Results from studies on the EIS indicate that it provides a valid and reliable trait EI measure where test-retest and internal reliabilities are good and group differences in scores and correlations with other measure have generally been found to be in accordance with theoretical expectations (Ciarrochi et al., 2001; Saklofske et al., 2003; Schutte et al., 1998, 2001). This scale has however been

criticised for a lack of reverse-keyed items (Petrides & Furnham, 2000; Saklofske et al., 2003).

The Bar-on Emotional Quotient Inventory (Bar-on EQ-i) is a 133-item self-report questionnaire which consists of 15 subscales. It utilises a 5-point Likert scale ranging from “very seldom or not true of me” to “very often true of me or true of me”. The EQ - i provides an overall EQ score as well as five composite scores calculated from 15 subscale scores. These five composite scales are (1) Intrapersonal EQ (which includes emotional self-awareness, assertiveness, self-regard, self-actualisation, independence), (2) Interpersonal EQ (where the linked subscales are empathy, interpersonal relationships, social responsibility), (3) Stress Management EQ (comprising stress tolerance and impulse control), (4) Adaptability EQ (involving problem solving, reality testing, flexibility); and finally (5) General Mood EQ (which includes happiness and optimism). The inventory further includes four validity indicators: Omission Rate, Inconsistency Index, Positive Impression and Negative Impression. Positive and Negative impression scores are adjusted through an automatic built-in correction factor, which aims to minimise the distorting effect of social response bias, which thereby increase the accuracy of the results obtained. (Bar-on, 2000). The Bar-on EQ-i was initially developed to provide an indication of an individual’s emotional and social intelligence and not personality traits or cognitive capacity (Dawda & Hart, 2000; Derksen, Kramer & Katzko, 1999). The EQ-i has been translated in 22 languages, with data that has been collected in over 15 countries (Bar-on & Parker, 2000).

A recently developed measure of EI, the Swinburne University Emotional Intelligence Test (SUEIT) will be discussed next, as this test was utilised to measure the EI construct in this study. The SUEIT was developed to find an answer as to what the most definite dimensions of the EI construct could be. It was based on the different models and measures of emotional intelligence that already existed. According to Palmer and Stough (2001) the Trait Meta Mood Scale (Salovey, Mayer, Goldman, Turvey & Palfai, 1995), for example, measures only some components of EI, whilst the Bar-on EQ-i (Bar-On, 1997, measures an excessive number of components. The aim was to develop a self-report index that would assess the way in people think, feel and act with emotions at work. A large factor analytic study was conducted in order to determine which elements of the construct were most prominent (Palmer et al., 2003). This factor analytical study involved the six predominant measures that were available at the time. These included the:

MSCEIT (Mayer et al., 1999); Bar-On EQ-i, (Bar-On,1997); TMMS (Salovey et al., 1995); TAS – 20 (Bagby, Taylor & Parker, 1994); EIS scale by Schutte et al., (1998); and the scale by Tett, Wang, Thomas, Griebler & Linkovich (1997).

Each of the scales was factor-analysed in isolation. The resulting component score coefficients were then utilised to produce factor-based scores for each of the dimensions identified in each of the individual measures. Thereafter a large principle component analysis was conducted whereby the dimensions identified for each individual measure served as “items” (Palmer et al., 2003). It was found that five factors explained up to 58% of the variance. The following five factors were identified and formed the basis from which the SUEIT was developed: (1) Emotional Recognition and Expression (in oneself); (2) Understanding of Emotions (external); (3) Emotions Direct Cognition; (4) Emotional Management and (5) Emotional Control.

Two sets of normative data were collected with; (1) general workplace normative data, comprising individuals who work in varying industries in both the private and public sector, but who are not involved in management or leadership of others and (2) executive normative data, including individuals who are in senior management or leadership positions across Australia. The SUEIT is available as a self-report questionnaire as well as in a 360-degree rater format. The psychometric properties of the SUEIT will be addressed at a later stage.

Other measures of EI worth mentioning include the Trait Meta Mood Scale (TMMS; Salovey et al., 1995); the Twenty-Item Toronto Alexithymia Scale (TAS-20; Bagby, et al., 1994) and the Emotional Competence Inventory (ECI; Boyatzis et al., 1999).

### **2.1.3.2 The value of emotional intelligence**

The utility of the EI construct has been demonstrated to a great extent with extensive research conducted in different organisational settings and with relation to different constructs. Goleman (1995) argued that EI possibly accounts for more than 85% of outstanding performance in organisations. Furthermore, it has been argued that individuals with high levels of EI are motivated, self-disciplined individuals who aspire to excellence and continually seek to improve themselves (Goleman, 1996, 1998, 2000; Mayer & Salovey, 1997). Although the work of Goleman seems appealing, his views have been

widely criticised for lack scientific substance. This does not mean that the work of Goleman is insignificant; however caution should be applied when interpreting his work.

In addition, others have argued that individuals high in EI possesses mental alertness which is considered to sustain long-term business development and thus contribute towards organisational culture of high morale, whilst minimising loss of talent and skills (Wallace & Rijamampianina, 2005). Slaski and Cartwright (2003) found that training EI resulted in increased EI as well as improved health and well-being of employees. In another study conducted by Bar-On, Brown, Krickaldy and Thorne (2000), police officers scored significantly higher in terms of positive affect and emotional stability than a combined group of care workers practitioners group. According to the authors, results indicate that the group of police officers showed greater self awareness and would to a greater extent be able to cope with stressful demands. According to Salovey and Mayer (1990), EI abilities can also positively influence problem-solving skills. They argue that positive emotion and moods could change the way in which an individual approach a problem, organise thoughts, process information, apply creative thinking and fulfil other life tasks. Vakola, Tsaousis and Nikolaou (2003) furthermore, found that EI contributed significantly to attitudes to change in organisation, suggesting that the use of an EI measure can add significant value within organisations.

Large amounts of research on EI focus on the relationship between EI and leadership. Effective leadership skills have been described as being dependent on the ability to understand emotions (Cooper & Sawaf, 1997; Goleman, 1998). In a study by Palmer, Walls, Burgess and Stough (2001) significant correlations were found between some dimensions of transactional leadership measured by the multifactor leadership questionnaire (MLQ; Avolio, Bass & Jung, 1995) and EI, as measured by the TMMS (Salovey, et al., 1995). Inspirational motivation moderately correlated with emotional monitoring ( $r = .42, p < .01, n = 43$ ) and emotional management ( $r = .37, p < .05, n = 43$ ). Likewise, individualised consideration correlated with emotional monitoring ( $r = .55, p < .01, n = 43$ ) and emotional management ( $r = .35, p < .05$ ) (Palmer et al, 2001). Research have suggested that when leaders are capable of understanding the emotions of others they will be able to influence the feelings and thinking of subordinates, in a way that which will contribute to enthusiasm and increased productivity in the workplace (George, 2000; Gardner & Stough, 2002). Furthermore, Barling, Slater and Kelloway (2000) noted that transformational leadership behaviours are more likely to be demonstrated by leaders high

in EI. It was found that characteristics associated with EI are very much related to aspects of Bass and Avolio's (1995) leadership model such as idealised influence, inspirational motivation and individualised consideration. In a study by Gardner & Stough (2002) the results suggested that emotionally intelligent leaders are thought to be happier and more committed to their organisations and will achieve greater success in the workplace. They found a strong relationship between EI (measured by the SUEIT, Palmer & Stough, 2001) and transformational leadership (measured by the Multifactor Leadership Questionnaire, Bass & Avolio, 2000) and a negative relationship between laissez-faire leadership and EI.

In another study, Gardner and Stough (2005), utilising the SUIET (Palmer & Stough, 2001) to measure dimensions of EI, found that all the EI dimensions of the SUEIT (except emotion direct cognition) related to the occupational stress and health, of which significant correlations were also found with organisational commitment. Based on these results, the authors confirmed that EI and stress were related. The sample in this study consisted of 320 individuals employed in a variety of organisation in Australia. Respondents were required to complete a battery of questionnaire including measurements of EI, stress, psychological health, physical health, job satisfaction, organisational commitment and work/family conflicts (Gardner, 2006).

In view of these research results it can be argued that the link between EI and stress could possibly be based on the assumption that negative emotions and subsequent stress are the result of some dysfunctional relationship between the individual and the environment. Within this argument, EI is therefore not just about emotions as such but more about the way in which individuals effectively integrate emotions with thoughts and behaviour in order to act to reduce negative emotional experiences. (Mayer et al., 2000). It is within this context that previous research should be viewed for the purpose of this study as there is evidence to suggest that EI most likely does have an impact on perceived job stress and the consequences of experienced stress and burnout (Gardner, 2006; Oginska – Bulik, 2005).



## **2.2 EMOTIONAL INTELLIGENCE, OCCUPATIONAL STRESS AND BURNOUT IN THE NURSING INDUSTRY**

Individuals employed in healthcare professions are in general exposed to highly stressful working environments. Employees are required to work long hours, often when most other people are relaxing, causing stress on both an occupational and personal level.

In comparisons made with other professional groups, nurses (specifically mental health nurses) have been identified as one of the professional groups with the highest scores of stress (Coffey & Coleman, 2001; Oginska-Bulik, 2005). Reasons reported for experiencing stress include organisational and administrative concerns, client-related issues, heavy workload, interpersonal conflict and professional self-doubt (Rees & Smith, 1991). In a study by the Nuffield Trust (1998) it was found that health care professionals in the UK have a higher absenteeism and sickness rate than staff in other professions. In addition to the various studies done in the nursing industry, it has further been argued that employees working in certain fields of specialisation within the nursing profession, experience greater levels of stress than others.

For example, Bennett, Michie and Kippax (1991) compared nurses working in HIV/AIDS wards to nurses working in oncology wards and found that even though there were no difference in the frequency of burnout, the intensity of the burnout experienced by HIV/AIDS nurses were much greater. In another study, Kleiber, Enzman and Guzy (1993) found that even though no differences were reported in the burnout levels of HIV/AIDS nurses and nurses employed in geriatrics and oncology, it was noted that the HIV/AIDS nurses had been in their positions for shorter periods of time. The latter suggests that the burnout experienced by the AIDS care providers may have occurred more rapidly (Gueritault-Chalvin, Kalichman, Demi & Peterson, 2000).

In another study (Jenkins & Elliot, 2004) conducted on nurses in acute mental health settings, it was found that a lack of adequate staffing was the main stressor reported by qualified staff members; while dealing with physically threatening, difficult or demanding patients, was the most stressful aspect for unqualified staff members. These nurses furthermore reported a 50% burnout figure on the Emotional Exhaustion scale of the Maslach Burnout Inventory (Maslach, 1986). Even though qualified and unqualified nurses differed in terms of the individual stressors in their work environment; there were consistent evidence to suggest that burnout developed in response to work-related

stressors such as lack of adequate staffing, workload and dealing with physically threatening and demanding patients (Jenkins & Elliot, 2004). In addition, according to most theories on stress, it would seem that the way in which an individual interprets a situation, is a key element in determining whether a situation is stressful or not. Sources of stress such as workload, patient care, interpersonal relationships with colleagues, to name a few, can be perceived as a sources stress, but depending on the context and the individual's perception, it can also be experienced as a source of satisfaction (McGrath, 2003). Gentry, Foster & Froehling (1972) conducted a study on nurses in two different departments (coronary heart disease and surgical wards) that were similar in terms of key aspects such as duties, patient care and physical surrounding. The research results revealed that nurses working in the coronary heart disease division reported a greater level of hostility, depression, anxiousness and general unhappiness with their environment, than the group working in the surgical ward. On close inspection of the results it emerged that aspects such as lack of adequate resources and help to care for patients, lack of opportunities for continuous education and lack of deliberate effort to instil pride and team spirit, contributed to the one division reporting greater levels of stress and dissatisfaction (Gentry et al., 1972)

The management of emotions, which include the recognition, control and adequate expression of emotion, are considered to be a central part of the work of any health care professional. The interaction with patients, clients and especially children demands empathy and emotional involvement which many employees experience as increasingly difficult as the demand on them to deal with these emotional pressures increase (Cooper, 1996). Historically, it would seem that educational institutions have focused on the intellectual competence of health practitioners through the use of assessments and academic results as prerequisite to entering the profession. Unfortunately it would seem that the emotional competencies of such individuals are being ignored (Freshwater & Stickley, 2004). For example, Freshwater (2004, p.15) pointed out that "...integrating EI into the curriculum provides nurses with a greater opportunity to understand themselves and the way in which they create relationships with others..." In addition, Cadman and Brewer (2001) questioned whether sufficient role models exist within the nursing profession for student nurses to observe high level therapeutic skills such as empathy, effective conflict resolution and effective communication skills and suggested that students should be assessed at the recruitment phase for the these skills or at least the ability to attain these. Similarly, Freshwater (2004) stated that EI needs to be placed at the centre of

any health-related training, however, she cautioned that for such an initiative to be successful, a greater effort needed to be put towards the support of stressed and discouraged teachers, who need to train these student teachers and finds them in an equally uncaring environment.

According to Molter (2001), the desired emotional behaviours in nursing consist of displaying a genuine caring character, expressing empathy for patients and their loved ones (e.g. appropriate emotional expression) and showing an understanding for patients in pain (e.g. understanding emotions). Thus, it could be reasoned that if the emotional expressions required to be expressed by nurses when interacting with patients are not inherent to the nurse's personality or perhaps leads to the generation of overwhelming emotions, which the nurses might not be able to control or manage, the individual (nurse) risks suffering from burnout, psychosomatic illnesses, increased absenteeism, drug and alcohol abuse, withdrawal and depression (Perrewe & Gangster, 2002). This aspect of emotional expression relates to the dimension of *emotional recognition and expression* of the SUEIT. Where, *emotional recognition and expression* refers to the ability to identify one's own feelings and emotional states and the ability to express those inner feelings to others (Palmer & Stough, 2001). This is but one example of how enhancing nurses's EI related abilities could have positive consequences in the nursing industry.

The quality of the interactions between employees and clients in occupations such as flight attendants, nurses and teachers often involves what is referred to as emotional labour (Lee & Ashworth, 1996). Emotional labour is defined as the process of regulating feelings and expressions to achieve organisational goals and expectations (Vitello – Cicciu, 2002). Hochschild (1983) defined emotional labour as the induction or suppression of feeling to sustain the outer appearance which results in others feeling cared, even though the emotion is not genuinely felt by the individual involved in the emotional labour. More recently, Brotheridge and Lee (2003, p.365) defined emotional labour as the efforts involved when employees, "...regulate their emotional display in an attempt to meet organisationally based expectations, specific to their role". In the nursing profession, according to Vitello-Cicciu (2003), the required emotions include the display of genuine caring behaviour, expressing empathy and showing an understanding. As is evident from the nature of a nursing professional's job, nursing involves a large percentage of interpersonal contact therefore making it fairly obvious that such employees should be competent in dealing with their own and other's emotions, emotional reactions and

emotional information. Such professionals should be equipped to respond with empathy and warmth and be able to communicate genuine concern. Often, employees are required or intend to express emotions in a certain manner, as a result of caring for patients or clients. However, on many occasions, it is likely that the emotions that are genuinely felt do not correspond with the required emotions. Mann and Cowburn (2005, p. 154) refer to this as *emotional dissonance* and motivate that this experience of *emotional dissonance* leads to emotional labour. McQueen (2003) argue that it is evident from definitions of EI and Emotional Labour, that there are clear similarities in the mental processes involved in the two constructs. Emotional labour also seems to have some correlation with stress. In a study by Mann and Cowburn (2005) on emotional labour and stress within mental health nursing, it was found that emotional labour correlate positively with *interaction stress* and *daily stress levels*. *Interaction stress* refers to the level of stressfulness of a specific interaction or situation whilst *daily stress* refers to overall general stress levels.

The question of how emotional labour and EI differs should then be raised. EI requires that emotions are acknowledged and expressed and provides an understanding of how the emotions that individuals experience affect the individual's work and the team's work (Druskat & Wolff, 2001). In nursing, a certain level of technical and cognitive skills are required, however more frequently, a greater emphasis is placed on inter- and intrapersonal skills. It has further been acknowledged (Smith, 1992) that emotional work is involved and required in direct patient care. McQueen (2003) therefore argues that the emotional work referred to here, require the application of skills that falls within the scope of EI. These skills include the abilities to understand other people, to work well in collaboration with them and to demonstrate a sense of self-awareness. According to Mayer and Kilpatrick (1994), emotional intelligent individuals would be more likely to cope with the stresses of clinical nursing practice. Cadman and Brewer noted (2001, p. 323) that, "...the hallmark of EI, empathy in particular, represent the very fabric of quality in both clinical and academic nursing but their acquisition during pre-registration education is increasingly compromised...".

Individuals employed in health care professions have jobs that require responsibility to care for people, and it is inevitable that the stressors multiply as the needs of the clients or patients increase. With the challenge to work with people, comes the need for effective coping strategies or mechanisms, such as the emotional skills that emotional intelligent people display. Humpel, Caputi & Martin (2001) examined the relationship between

emotional competency and work stress in mental health nurses and found that male individuals with more experience in mental health nursing experienced less personal self-doubt about their nursing abilities and had moderately higher levels of emotional competence ( $r = .39, p < .05, n = 43$ ). Emotional Competence was defined in terms of the Salovey and Mayer EI model (1990) as the ability to monitor one's own and others' feelings and emotions and to use this information to guide one's thinking and behaviour.

According to Pines and Maslach (1978), burnout (as measured by the Maslach Burnout Inventory, 1981), is often higher in health care professionals and has been found to be a major factor in low morale, absenteeism, high job turnover and other indices of stress. Naude and Rothmann (2006) found in their study on emergency workers, that occupational stress (measured with the Emergency Workers Stress Inventory, EWSI, Naude & Rothmann, 2003), as a result of job demands and a lack of job resources, contributed to Emotional Exhaustion and depersonalisation as sub-dimensions of burnout. It was further found that stress as a result of a lack of job resources (lack of opportunity for advancement, colleagues not doing their job, inadequate support) was the best predictor of both Emotional Exhaustion ( $r = .40, p < .01, n = 323$ ) and depersonalisation ( $r = .32, p < .01, n = 323$ ). Furthermore, studies of stress and burnout frequently advocate the need for improved support of nurses (training interventions, counselling, etc.) within their work (Firth et al., 1986; Fagin et al. 1995). It could therefore be argued that if individuals employed in nursing professions are prepared for, and equipped with the necessary skills to cope with the emotional challenges they are faced with on a daily basis, this could reduce the experience of stress in the workplace and therefore minimise the prevalence of burnout.

According to Zapft, Seifert, Schmutte, Mertini and Holz (2001) the proneness to develop burnout is an indication of an individual's growing inability to adequately manage their emotions when dealing with other individuals, employees, colleagues, patients and clients. This provides a strong argument and support for the part that EI could play in the development of burnout, due to the fact that individuals, who are high on EI, should possess the ability to effectively deal with their own and other's emotions. Previous research on job stress and burnout has focused mainly on how it is linked to organisation and social variables as predictors of burnout (Lee & Ashforth, 1996, Zapft et al, 2001). Only recently the focus has shifted to emotional labour or emotional work (Zapft et al, 2001).

In South Africa, individuals employed in the nursing industry are increasingly exposed to greater levels of stress which is due to, amongst others, the immigration of fellow skilled professionals, poor remuneration packages, lack of government support, risks of HIV/AIDS and the overall working conditions in hospitals (Pelzer, Mashego & Mabeba, 2003). The nature of the job requires that dealing with challenging and stressful events become part of the daily lives of individuals employed in the nursing industry. They are exposed to serious illnesses, terminal patients and grieving families, which in addition to the stressors in their personal lives could result in an extremely stressful lifestyle, which could easily lead to burnout should the necessary skills (for example, EI) to deal with these experiences, not be present.

### **2.3 CHAPTER SUMMARY**

In this chapter the Burnout, Occupational Stress and EI were discussed in detail, with the aim to provide some historical perspective and theoretical foundation to the constructs. Reference was made to the different definitions, models and measurements of these constructs. In addition, the problem relating to stress and burnout, specifically within the nursing industry has been highlighted. The next chapter will focus on the methodology employed to conduct the study. The sample selection, data collection as well as the measurement instruments utilised to measure constructs will be discussed. Furthermore, information regarding the reliability of these measurements will be provided.

## **CHAPTER 3: RESEARCH METHODOLOGY**

### **3.1 INTRODUCTION**

The purpose of this study was to explore the relationships between burnout, occupational stress and EI. In the sections below, the rationale and aim for the research will be discussed in detail and the respective research questions will be highlighted. Information on the three measurement instruments and research related to the use of these instruments will also be presented.

### **3.2 RATIONALE FOR THE RESEARCH**

The working environment of nurses, as well as the stress induced by their work, has been researched and documented for many years. In South Africa, it is acknowledged that hospitals in general have limited resources (staff and material) and that employees are required to deal with heavy workloads without sufficient access to the necessary resources. In recent years, the burnout construct has received increased research attention and has specifically been linked to individuals employed in the nursing industry. For example, a study on psychiatric nurses in South Africa revealed that they experience higher levels of burnout than their overseas counterparts (Levert et al., 2000). The phenomenon of burnout has been proved to result in excessive absenteeism and high staff turnover which costs organisations a tremendous amount of money and it is known, specifically in nursing environment, that burnout leads to a deterioration of the quality of health care (Barnett et al., 1999). Furthermore, research has indicated that extreme and chronic stress could probably lead to the development of burnout.

Lately, the EI construct has also gained significant popularity in organisational research, specifically with regards to leadership and work satisfaction (Gardner & Stough, 2002; Snelgrove, 1998). As noted in the previous chapter, EI refers to the capacity to deal effectively with one's own and others' emotions and involves the capacity to effectively perceive, express, understand and manage emotions in a professional and effective manner at work (Palmer & Stough, 2001). Due to the fact the stress and burnout is often linked to an emotional reaction (as is evident from the fact that Emotional Exhaustion is a dimension of burnout; Maslach & Jackson, 1986) or has been argued to possibly develop as a result of engaging in high levels of emotional labour (Brotheridge & Grandey, 2002), it is proposed that EI could have a possible moderating role in the stress and burnout

relationship. Hence, the knowledge about the role of EI in the development of both stress and burnout separately, as well as whether EI moderates the stress/burnout relationship, will empower organisations to intervene appropriately to lower stress or burnout of their employees (i.e. with appropriate EI development programmes) should EI be proven to minimise the development of burnout and impact on the way in which individuals perceive or experience occupational stress. Therefore, the rationale for the current study is to explore the relationships between EI, burnout and occupational stress and to determine whether EI could play a moderating role between occupational stress and burnout. Furthermore, the study aims to determine which of the sources of occupational stress (as measured by the Sources of Workplace Stress Inventory, SWSI, De Bruin & Taylor, 2005), will be the greatest predictor for the development of burnout.

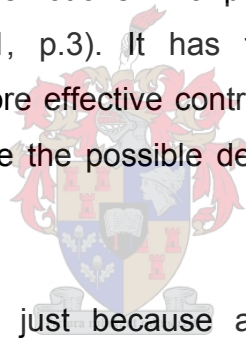
### **3.3 RESEARCH PROBLEM AND AIM**

It is a well-known and frequently acknowledged fact that the human resources component of businesses is in general the most costly and unpredictable aspect, probably due to the fact that human beings cannot be controlled or programmed like other material aspects of business. Research has shown that the effectiveness and productivity of employees directly impacts on the profitability of the business (Slaski & Cartwright, 2002). High burnout incidences in the nursing industry have been cited worldwide (Burke & Richardsen, 2003; Chan, 2006; Duran & Extremera, 2004; Duquette et al., 1995) and the cost to employers include aspects such as higher staff turnover, excessive sick leave, reduced productivity and efficiency (Barnett, et al., 1999). In South Africa, a study by Swanepoel (2001) showed that the occurrence of burnout amongst South African nursing professionals is in general higher than in the rest of the world. It has been suggested that reasons for this higher prevalence of burnout could most likely be attributed to the increasing pressure on the maintenance of the public hospital infrastructure and more specifically the healthcare system in South Africa, which has a direct effect on the working conditions that nursing professionals are exposed to (Gibson, 2004). Therefore, it is noted that overall working conditions in state hospitals in South Africa are generally of an unacceptable and highly unsatisfactory level (Swanepoel, 2001).

As previously mentioned, burnout is generally viewed as a form of prolonged stress or the consequence of chronic stress. It tends to be job related or situation specific. Maslach (1982) and Maslach and Jackson (1986) suggested that Emotional Exhaustion forms the core of burnout in that individuals who experienced high levels of Emotional Exhaustion,



reported excessive feelings of emotional strain, irritability, frustration and feelings of overall fatigue. However, not surprisingly, research indicates that emotions form part of the overall reaction to stress and burnout (Humpel & Caputi, 2001). For example, emotional labour (the regulation or suppression of emotions to make others feel cared for even though the emotions are not genuine) has also been noted to be central to specifically human services occupations such as nurses, police officers and teachers. The implication of emotional labour for individuals employed in these caring professions (such as nurses, police officers and teachers) are that they experience greater levels of stress and possibly burnout (Brotheridge & Grandey, 2002). The regulation of emotions, which forms part of the way in which emotional labour is defined, could be indicative of something similar to the dimension of EI, Emotional Control (in the SUEIT), which refers to the ability to regulate and control strong emotions experienced at work (Palmer & Stough, 2001). EI also refers to the individual's, "...capacity to deal effectively with one's own and others' emotions. When applied to the workplace, EI involves the capacity to effectively perceive, express, understand and manage emotions in a professional and effective manner at work..." (Palmer & Stough, 2001, p.3). It has therefore been proposed that the development of EI could lead to more effective control and regulation of emotions, which thereby might moderate or minimise the possible development of stress and henceforth burnout.



Goleman (1999) pointed out that just because an employee might be high in EI competencies, it would not necessarily suggest that the employee would have learned the appropriate and effective emotional competencies required in terms of the particular task and roles related to their occupations that they perform. However, if a high incidence of these competencies is found it might represent an excellent potential for learning them. For example, research by Slaski and Cartwright (2003) has revealed that through increased self-awareness (a dimension in the Goleman, 1997, EI model) individuals are more able to detach themselves from events and regulate their emotions in order to prevent them from becoming overly emotional or carried away by their emotional reactions (Slaski & Cartwright, 2003). In a study by Gardner (2006), it was found that a five week EI training programme reduced the levels of occupational stress experienced by a group of Australian teachers. Therefore, developmental EI training may be a potentially effective technique for improving individual stress resilience (Slaski, 2003) and hence the need to understand the symptoms and the side effects of occupational stress as well as the impact that EI could have on the individual's ability to deal with occupational stress (and

subsequent burnout) should be investigated. It has been noted that excessive or continuous exposure to occupational stress, could lead to the development of burnout and hence the question of whether EI could play a role in minimising the development and prevention of stress and burnout should be explored.

Therefore, the aim of this study is to explore the various relationships between the three variables namely, occupational stress, burnout and EI. The main objective of this study is to determine if EI is a moderator in the stress and burnout relationship. It was thus hypothesised that,

**Hypothesis 1:** A significant negative relationship will exist between the five dimensions of EI (Emotional Recognition and Expression; Understanding Emotions External; Emotional Management; Emotional Control and Emotion Direct Cognition) and the level of occupational stress (as measured by the General Work Stress Scale) experienced by individuals employed in the nursing profession.

**Hypothesis 2:** A significant negative relationship will exist between occupational stress (as measured by the General Work Stress scale) and total EI (composite score).

**Hypothesis 3:** A significant positive relationship will exist between occupational stress (as measured by the General Work Stress scale) and Emotional Exhaustion (as a dimension of burnout).

**Hypothesis 4:** A significant positive relationship will exist between occupational stress (as measured by the General Work Stress scale) and Depersonalisation (as a dimension of burnout).

**Hypothesis 5:** A significant negative relationship will exist between occupational stress (as measured by the General Work Stress scale) and Personal Accomplishment (as a dimension of burnout).

**Hypothesis 6:** A significant negative relationship will exist between Emotional Exhaustion (as a dimension of burnout) and the dimensions of EI (Emotional Recognition and Expression; Understanding Emotions External; Emotional Management; Emotional Control and Emotion Direct Cognition).

**Hypothesis 7:** A significant negative relationship will exist between Depersonalisation (as dimensions of burnout) and the dimensions of EI (Emotional Recognition and Expression; Understanding Emotions External; Emotional Management; Emotional Control and Emotion Direct Cognition).

**Hypothesis 8:** A significant positive relationship will exist between Personal Accomplishment (as a dimension of burnout) and the dimensions of EI (Emotional Recognition and Expression; Understanding Emotions External; Emotional Management; Emotional Control and Emotion Direct Cognition).

**Hypothesis 9:** A significant negative relationship will exist between Emotional Exhaustion (as a dimension of burnout) and total EI.

**Hypothesis 10:** A significant negative relationship will exist between Depersonalisation (as dimensions of burnout) and total EI.

**Hypothesis 11:** A significant positive relationship will exist between Personal Accomplishment (as a dimension of burnout) and total EI.

The second objective was to determine which of the sources of stress (e.g. Role Ambiguity, Relationships, Tools and Equipment, Work/Home interface, workload) as measured by the Sources of Work Stress Inventory (SWSI, De Bruin & Taylor, 2005), contributed most to the development of occupational stress and burnout. With reference to the research cited earlier, it is expected that Work/Home interface and Workload could possibly have the greater influence, due to aspects such as a lack of access to own transport, single parenting and staff shortages resulting in work overload. In addition, the extent to which variance in stress and burnout is explained by the different EI dimensions of the SUEIT (e.g. Understanding Emotions External, Emotional Management) will also be investigated. It was therefore hypothesised that,

**Hypothesis 12:** Sources of work stress scores (Role Ambiguity, Relationships, Tools and Equipment, Job Security, Career Advancement, Lack of Autonomy, Work/Home Interface, and Workload) can be used to predict Emotional Exhaustion (as a dimension of burnout).

**Hypothesis 13:** Sources of work stress scores (Role Ambiguity, Relationships, Tools and Equipment, Job Security, Career Advancement, Lack of Autonomy, Work/Home Interface, and Workload) can be used to predict Depersonalisation (as a dimension of burnout).

**Hypothesis 14:** Sources of work stress scores (Role Ambiguity, Relationships, Tools and Equipment, Job Security, Career Advancement, Lack of Autonomy, Work/Home interface, and Workload) can be used to predict Personal Accomplishment (as a dimension of burnout).

**Hypothesis 15:** The different EI dimensions (Emotional Recognition and Expression; Understanding Emotions External; Emotional Management; Emotional Control and Emotion Direct Cognition and Total EI) can be used to predict Emotional Exhaustion (as a dimension of burnout).

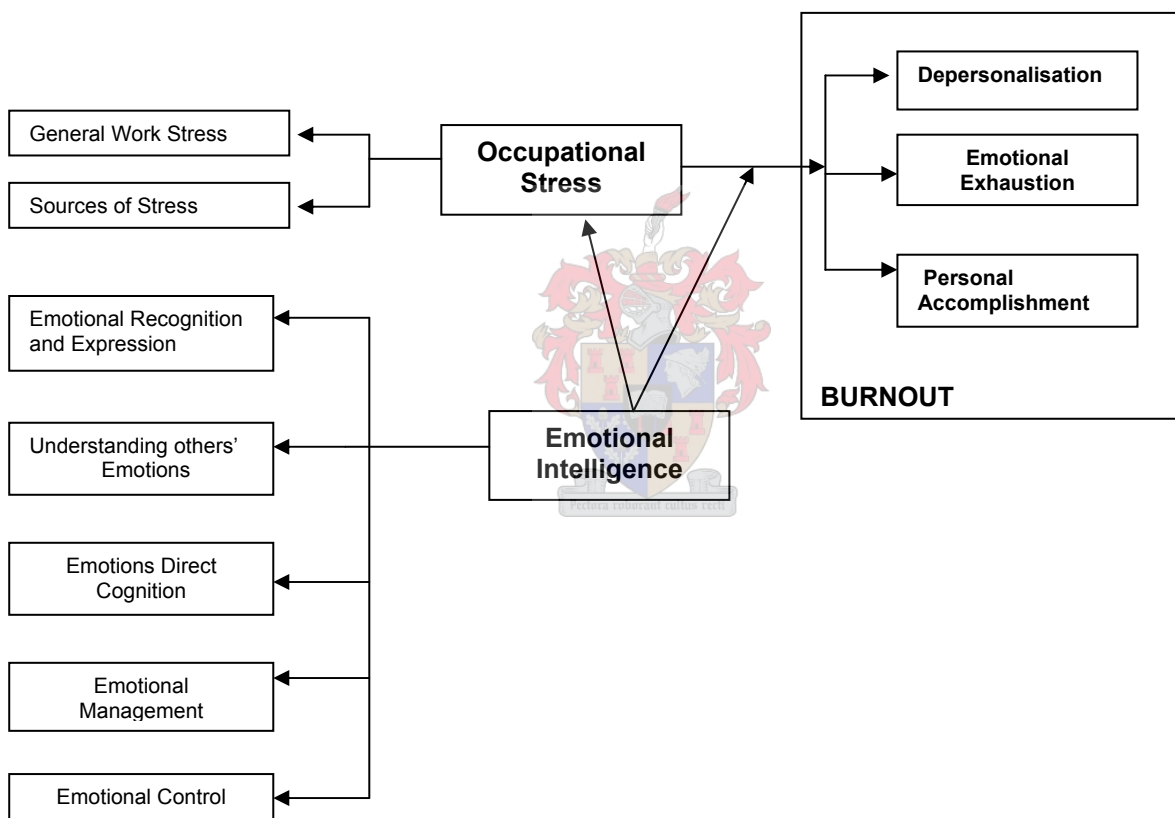
**Hypothesis 16:** The different EI dimensions (Emotional Recognition and Expression; Understanding Emotions External; Emotional Management; Emotional Control and Emotion Direct Cognition and Total EI) can be used to predict Depersonalisation (as a dimension of burnout).

**Hypothesis 17:** The different EI dimensions (Emotional Recognition and Expression; Understanding Emotions External; Emotional Management; Emotional Control and Emotion Direct Cognition and Total EI) can be used to predict Personal Accomplishment (as a dimension of burnout).

**Hypothesis 18:** The different EI dimensions (Emotional Recognition and Expression; Understanding Emotions External; Emotional Management; Emotional Control and Emotion Direct Cognition and Total EI) can be used to predict Occupational Stress (as a measured the General Work Stress scale of the Sources of Work Stress Inventory).

The research model (fig. 3.1) provides clarity on the constructs and the relationships between constructs which have been explored within this study. It is proposed that there will be a relationship between occupational stress and the dimensions of burnout in that increased levels of occupational stress might possibly be associated with increased levels of Emotional Exhaustion, Depersonalisation and Personal Accomplishment as dimensions of burnout. Furthermore it is suggested that EI will display relationships with the level of

occupational stress experienced as well as the occurrence of burnout in the specific sample of the study. In addition it was argued that EI might act as a moderating variable when individuals experience occupational stress in that the presence or absence of different levels of EI in the individual might result in higher or lower levels of occupational stress that is experienced by the individual, which might henceforth (depending on the empirical support found regarding the relationship between stress and burnout) have subsequent positive or negative effects in terms of the levels of burnout experienced by the individual.



**Figure 3.1: Research model**

### 3.4 RESEARCH DESIGN

In order to explore the relationships between EI, occupational stress and burnout, a controlled inquiry of non-experimental kind was followed. Non-experimental research is a process of systematic empirical inquiry in which the direct control of independent variables does not exist, because they are inherently not manipulable, such as the constructs measured in this study (Kerlinger, 2000). Henceforth, inferences about relations among

variables are made, without direct intervention, from concomitant variation of independent and dependent variables (Kerlinger & Lee, 2000). Relational research attempts to determine how two or more variables are related to each other (Elmes, Kantowitz & Roediger, 1999). Typically, relational research does not involve manipulation of variables, as do experiments, so the data that are related are often called *ex post facto* data. Kerlinger and Lee (2000) noted the three main weaknesses of non-experimental research as (1) the inability to manipulate independent variables, (2) the lack of power to randomise and (3) the risk of improper interpretation. However, given these weaknesses, it was further noted that within the fields of psychology, sociology and education, non-experimental research designs is required, due to the fact that many of the research problems within these fields do not lend themselves to experimental enquiry. Research in these fields predominantly lends themselves to a controlled enquiry of a non-experimental kind (Kerlinger & Lee, 2000). For the purpose of this study, correlational and multivariate research as a type of relational research was employed, as it allows the researcher to simultaneously determine the degree and direction of the relationship between the dependent and independent variables. Correlational research aims to establish the indirect relationship in data and allows the researcher to objectively establish which variables are closely associated and influences one another.

Some of the advantages of correlational research include the fact that it can be used to explore questions that cannot be examined with experimental procedures. Furthermore, it allows the researcher to determine the degree of the relationship between the variables being studied. The main disadvantage of correlational research is that it cannot be used to demonstrate cause-and-effect relationships between variables (Tabachnik & Fidell, 1996). Multivariate research is a general term that comprises multiple regression, multivariate analysis of variance, canonical correlation, discriminant analysis, factor analysis, and analysis of covariance structures (Kerlinger & Lee, 2000).

### **3.5 SAMPLE AND DATA COLLECTION**

After ethical clearance was obtained from the Stellenbosch University Ethical Committee in order to conduct the project (see Appendix 1), a sample of nurses was drawn from the database of an employment agency (that agreed to take part in the study), which specialises in providing contract health professionals to a hospital group in the Western Cape of South Africa. The sample consisted of two distinct groups, overtime and contract staff, which included those that are contracted to a private hospital group through the employment agency or alternatively, individuals who are permanently employed by the

hospital group, but work additional overtime through the agency (contract workers and overtime workers). Individuals contracted to the agency, whether as overtime or contract staff, are deployed to various hospitals and therefore rotate between different hospitals for random durations. An initial sample of 220 individuals was randomly selected to be representative of overtime and contract staff members employed across the various levels within the nursing profession in the Western Cape, contracted to the employment agency. These levels included: (1) Registered Nurses, (individuals who have completed a four year diploma or degree in nursing and in some occasions also a post-basic one year diploma in a specialist areas such as ICU, theatre or trauma), (2) Enrolled Nurses (individuals who have obtained a two year certificate in nursing) and (3) Auxiliary Nurses (which constitutes the lowest qualified level and refers to individuals who have completed a one year certificate in nursing). The selected individuals were then contacted by the employment agency's personnel, who informed them of the nature and purpose of the study. Aspects related to confidentiality were also addressed in this conversation. The potential participants were then given the opportunity to voice any concerns or questions after which they were given the opportunity to indicate whether they wanted to participate in the study. Two hundred and ten questionnaires were distributed to the participants who agreed to take part in the study. The questionnaires were personally addressed to each participant and hand delivered to a designated person at each of the hospitals, who then distributed it to the selected individuals. Following the delivery to the hospitals, a short message service (sms) was sent to each participant notifying them to collect their questionnaire pack at the designated person of each hospital. One hundred and forty three questionnaires were completed and returned, resulting in a response rate of 68%. The race distribution, reported in table 3.1 was 39.3% white, 35.2% coloured and 21.3% African. According to table 3.2 and 3.3 the majority of the participants were female (89.3%), a registered nurse (41.8%), employed in the General Ward (47.5%), married (47.5%), in possession of a Grade 12 / Std 10 qualification (34.4%) and made use of their own transport (47.5%). Descriptive statistics for the sample group is presented in table 3.1 – table 3.3 below.

**Table 3.1: Race distribution**

		Frequency	Percent	Valid Percent	Cumulative Percent
<b>Valid</b>	<b>WHITE</b>	48	39.3	41.0	41.0
	<b>COLOURED</b>	43	35.2	36.8	77.8
	<b>AFRICAN</b>	26	21.3	22.2	100.0
	<b>Total</b>	117	95.9	100.0	
<b>Missing Total</b>	<b>System</b>	5	4.1		
		122	100.0		

		Frequency	Percent	Valid Percent	Cumulative percent
Valid	MALE	11	9.0	9.1	9.1
	FEMALE	109	89.3	90.1	99.2
	Total	121	99.2	100	
Missing	System	1	.8		
Total		122	100.0		

Table 3.2: Gender distribution

Table 3.3: Descriptive statistics

Item	Category	n	Percentage
Rank	Registered Nurse	51	41.8
	Auxiliary Nurse	49	40.2
	Enrolled Nurse	17	13.9
	Other	3	2.5
Department	General Ward	58	47.5
	ICU	28	23.0
	Other	20	16.4
Marital Status	Single	35	28.7
	Married	58	47.5
	Divorced	10	8.2
	Widowed	5	4.1
	Co-habiting	3	2.5
Level of Education	Grade 10/Std 8 or below	15	12.3
	Grade 12/Std 10	42	34.4
	Post matric certificate	17	13.9
	Undergraduate degree/3 year diploma	22	18.0
	Post graduate qualification	11	9.0
Transport	Own transport	58	47.5
	Public transport	45	36.9
Employer	First Employer	51	41.8
	Second Employer (Overtime)	59	48.3



Participants received a composite questionnaire (see appendix 2) consisting of the following: a cover letter, a demographic questionnaire and the three measurement instruments: (1) Swinburne University Emotional Intelligence Test (SUIET; Palmer & Stough, 2001); (2) Sources of Work Stress Inventory (SWSI; De Bruin & Taylor, 2005) and (3) the Maslach Burnout Inventory (MBI; Maslach et al., 1981). The cover letter explained the reason for the research, how that data will be utilised, who will have access to the data and procedures for completion and return. The demographic questionnaire contained items relating to the respondents' age, gender, race, level of education, number of dependents in household, level of income and marital status. The demographic questionnaire also included an option where respondents were required to indicate whether they made use of public transport or whether they had their own transport. This option was included as it was felt that respondents who are forced to use public transport (as opposed to having access to their own transport), might experience higher levels of stress. Due to the current state of the public transport system in South Africa, with reference to aspects such as violence, safety and reliability, it could be a possible source of stress for individuals who have no other means of transport. Information regarding their level of professional qualification (rank), number of years in profession and division employed in, were also obtained. The randomly selected respondents were contacted telephonically in the 2 weeks prior to the distribution of the questionnaires. On the day of distribution a sms was sent via cellphone to all respondents reminding them of the return date. The respondents had two weeks to complete the questionnaires. Two days prior to the return deadline, a reminder sms was sent to all participants. Respondents were required to "post" the questionnaires in post boxes provided at all of the participating hospitals. These post-boxes were personally collected from the hospitals.

### **3.6 MEASUREMENT INSTRUMENTS**

The constructs of burnout, occupational stress and EI was measured with the MBI, SWSI and SUEIT respectively. These three instruments are all classified as self-report measures. The use of self-report assessment measures has been widely criticised. More specifically, with reference to EI, some problems have been reported (Ciarrochi et al., 2002). Davies, Stankov and Roberts (1998) noted that self-report EI measures generally present problems in terms of poor reliabilities and correlations with certain personality dimensions such as extraversion, agreeableness, openness and neuroticism leading them to suggest that self-report EI measures merely constitute another measure of personality

(Roberts et al, 2001). Palmer and Stough (2001) examined the relationship between scores on the SUEIT and three of the five main dimensions of personality: neuroticism, extraversion and openness. It was found that the SUEIT showed discriminant validity on these three dimensions, indicating some uniqueness in the aspects measured by the SUEIT. Furthermore, it has been argued that much like personality questionnaires, the items contained in EI self report measures contain high face validity, which could result in easy understanding of the items, leading to socially desirable responses (“faking good”). Socially desirable responses have been defined as a response pattern where test-takers systematically represent themselves with an excessive positive bias (Zerbe & Paulhus, 1987). It has been known that socially desirable responses contaminate responses on personality measures (McFarland & Ryan, 2000; Peebles & Moore, 1998; Zerbe & Paulhus, 1987). Given the similarities between personality testing and self-report EI testing it may be reasonable to ask whether socially desirable responding has the capacity to contaminate responses on self-report EI measures. Benson and Findlay (2006) in a study on EI and burnout on the Australian surgeons and surgical trainees attempted to control for response bias and included social desirability in the first stage of the regression analysis. It was found that social desirability explained 5.1% of the variance in Personal Burnout (as measured by the Copenhagen Burnout Inventory, CBI; Kristensen, Borritz, Villadsen, & Christensen, 2005) scores, which was significant ( $p < .05$ ,  $N = 126$ ). However, once the five dimensions of EI were included in the model it was found that social desirability did not significantly predict Personal Burnout (as measured by the Copenhagen Burnout Inventory) and EI significantly predicted 20.3% of the variance in Personal Burnout ( $p < .001$ ). Similar results were found for the other scales of the CBI, Work Burnout and Personal Burnout (Benson & Findlay, 2006). The measurement instruments utilised in this study will now be discussed.

### **3.6.1 Emotional Intelligence: The SUIET**

In this study, EI was measured with the Swinburne University Emotional Intelligence Test (SUEIT; Palmer & Stough, 2001) developed by the Organisational Psychology Research Unit at the Swinburne University of Technology, in Melbourne Australia. In recent years, a number of tests have been developed with the purpose of measuring EI, such as the Bar-on EQ-i (Bar-On, 1997) and the MSCEIT (Mayer, Salovey & Caruso, 1999). However, there seem to be little consensus amongst researchers regarding how best to conceptualise and measure the EI construct (Palmer & Stough, 2001).

The SUIET was developed as a result of the search for answers to what the most definitive dimensions of the EI construct could be, based on the different models and measures of EI. Most of the current available measures of EI were included in the development of the SUIET. The scales included: (1) Mayer, Salovey, Caruso Emotional Intelligence Test (MSCEIT; Mayer, et al., 1999); (2) Bar-On Emotional Quotient Inventory (Bar-On, 1997); (3) Trait Meta-Mood Scale (Salovey et al., 1995); (4) Twenty-item Toronto Alexithymia Scale – II (TAS – 20; Bagby, Taylor & Parker, 1994); (5) the scale by Schutte et al (1998) and (6) the scale by Tett et al. (1997). Each scale was analysed separately. The component score coefficients were used to form factor-based scores for each of the dimensions identified for each test. These dimensions were then used as “items” for the principle component analysis. This resulted in five factors having eigenvalues greater than one, explaining 58% of the total variance. The following five factors were identified from the items: (1) emotional recognition and expression, (2) understanding others’ emotions, (3) emotions direct cognition, (4) emotional management and (5) emotional control. This empirically-based model of EI (consisting of 64 items) is uni-dimensional, which means that the factors represent a set of related abilities concerned with how effectively emotions are dealt with in the workplace. In the technical manual the overall scale reliability (the standardised Cronbach Alpha) of the questionnaire is reported to be 0.88 while the Cronbach Alphas for subscales were found to be: (1) emotional recognition and expression,  $\alpha = 0.73$ ; (2) understanding of emotions external:  $\alpha = 0.83$ ; (3) emotions direct cognition:  $\alpha = 0.63$ ; (4) emotional management:  $\alpha = 0.72$  and (5) emotional control:  $\alpha = 0.72$ . The full-scale reliability and most subscales are high with the exception of the emotions directs cognition sub-scale (Palmer & Stough, 2001). According to Nunnally (cited in Pallant, 2001, p.6) a minimum reliability level .7 is required, however, even though the Cronbach alpha reported for the Emotions Direct Cognition scale is somewhat less than  $\alpha = 0.7$  ( $\alpha = 0.63$ ), it is still regarded as an acceptable level.

Research has also indicated that the SUIET has good test retest reliability. Results reported in the technical manual for test-retest studies over a one-month period are as follows: Total EI score,  $r = .945$ ; Emotional Recognition and Expression,  $r = .823$ ; Understanding Emotions External,  $r = .920$ ; Emotions Direct Cognition,  $r = .863$ ; Emotional Management,  $r = .825$ ; Emotional Control,  $r = .865$ . These correlations were all significant at  $p < .001$ ,  $n = 36$ . The current study’s means, standard deviations and reliability statistics are presented in table 3.4 below.

**Table 3.4: The current study's means, standard deviations and reliability statistics for the SUEIT**

SUEIT dimensions	Means	Standard Deviations	N of Items	Cronbach's Alpha
Emotional Recognition and Expression	31.76	5.95	11	.677
Understanding Emotions External	62.79	8.82	20	.771
Emotions Direct Cognition	39.43	6.55	12	.664
Emotional Management	36.85	5.31	12	.554
Emotional Control	27.01	4.88	9	.590

The SUEIT has been utilised in a number of studies as a measurement of EI. Gardner and Stough (2005) conducted a study on EI and occupational stress and found that the dimensions of EI (emotional recognition and expression, understanding emotions, emotional management and emotional control, as measured by the SUEIT; Palmer & Stough, 2001) related to stress and general health. Furthermore, it was found that the dimensions of EI had significant relationships with work satisfaction, organisational commitment and work/family conflict (Gardner & Stough, 2005). Some other studies utilising the SUEIT as a measurement of EI, include a study by Downey, Papageorgiou and Stough (2005), who examined the relationship between leadership, EI and intuition in senior managers, Gardner and Stough (2002) exploring the relationship between leadership and EI in senior level managers and Palmer et al. (2002) examining the relationship between EI and life satisfaction.

### **3.6.2 Occupational Stress: The SWSI**

The Sources of Work Stress Inventory (SWSI) (De Bruin & Taylor, 2005) is an instrument, developed in South Africa, to provide a measure of occupational stress that not only indicates a general level of stress, but also draw attention to possible triggers or sources of stress (De Bruin & Taylor, 2005). The information obtained through the questionnaire can be utilised to recognise sources of stress and to address these areas of concern, which could eventually lead to a more health working environment. The SWSI consists of a two parts: the General Work Stress scale, which forms the first part of the questionnaire as well as a Sources of Stress Scale, which forms the second part. The General Work Scale contains Likert-type scale statements aimed to assess the level of stress caused by work, whilst the Sources of stress scales, contains statements referring to aspects of work that

may cause stress. Respondents are required to answer on a five-point Likert-type scale, where they need to indicate how often they experience a certain feeling. The response categories include (1) Never, (2) Rarely, (3) Sometimes, (4) Often, and (5) Always. The Sources of Work Stress scale includes 8 possible sources of stress: (1) Role Ambiguity, (2) Relationships, (3) Tools and Equipment, (4) Job Security, (5) Career Advancement, (6) Lack of Autonomy, (7) Work/Home Interface, and (8) Workload. The scale consists of 50 statements regarding situations at work and respondents are required to report on the extent to which each source of stress contributes to their level of stress at work. A five-point Likert-scale is also utilised and responses range from: (1) none at all, (2) very little, (3) some, (4) quite a lot, to (5) very much. The questionnaire consists of a total of 59 items and takes approximately 20 – 30 minutes to complete (De Bruin & Taylor, 2005)

### *Development of the SWSI*

As part of the development of the SWSI, sources of stress were identified from current stress literature. In addition, interviews were also conducted with various individuals employed at a university in order to identify aspects in the workplace which are perceived to cause stress. For each source of stress, items were drawn up which were then subjected to an item-sort with the use of index cards. *Judges* were required to sort the cards with reference to predefined definitions of the various sources of stress. Ambiguous and easily understandable items were modified or removed. Based on the results of the process, items measuring eight different sources of stress were included in the instrument. These include (De Bruin & Taylor, 2005):

- *Role Ambiguity* refers to the amount of stress that an individual experience as a result of frequent or constant change and unclear requirements regarding the expectations, duties and constraints that define the individual's job.
- *Relationships* refer to the impact that poor interpersonal relationships with colleagues and superiors have on the level of stress experienced by the individual. It also refers to being subjected to interpersonal abuse.
- *Tools and Equipment* refers to the stress experienced due to a lack of appropriate tools and equipment required to do a job properly and includes working with inappropriate, broken or complex machinery.
- *Career Advancement*, as a source of stress, refers to the perception an individual has regarding a lack of opportunity to further his or her career prospects within the organisation for which he or she works, which then leads to stress.

- *Job Security* is aimed at uncertainty about an individual's future in the current workplace.
- *Lack of Autonomy* refers to Karasek's (1979) model of occupational stress and more specifically job control or job decision latitude, where an individual experiences stress due to a lack of empowerment in the workplace. It could also be seen as job control or job decision latitude as referred to in Karasek's (1979) model of occupational stress.
- *Work/Home Interface* refers to the stress experienced as a result of a lack of social support (family & friends) and work-non-work additivity, which refer to spill-over and conflict with regard to stress within and outside the workplace.
- *Workload* refers to an individual's experience of stress as a result of the perception that they are unable to cope or be productive with the amount of work allocated to them (De Bruin & Taylor, 2005).

The SWSI is suitable for individual assessment and provides important information about the individual's level of work stress as well as assist in identifying the sources of stress which could be useful for counselling purposes. It can also be utilised for organisational assessment which will allow an organisation to identify problem areas in the workplace and to plan and implement interventions to improve employee well-being. In addition to this, the SWSI can be used to evaluate the efficacy of individual or organisational intervention programmes (De Bruin & Taylor, 2005).



In a study conducted by De Bruin and Taylor (2005) on employees of a South African University that was about to enter a restructuring process, in order to determine the levels of stress experienced by them. The cronbach alpha coefficients for the various Sources of Stress scales and the General Work Scale were calculated. They were as follows: (1) Role ambiguity ;  $\alpha = 0.89$ ; (2) Relationship:  $\alpha = 0.93$ ; (3) Tools and Equipment:  $\alpha = 0.91$ ; (4) Job security:  $\alpha = 0.93$ ; (5) Career Advancement:  $\alpha = 0.90$ ; (6) Bureaucracy/Autonomy:  $\alpha = 0.95$ ; (7) Work/Home interface:  $\alpha = 0.86$ ; (8) Workload:  $\alpha = 0.93$ ; and (9) General Work Stress:  $\alpha = 0.92$  (De Bruin & Taylor, 2005). These reported Cronbach alphas seems very high, however similar high alphas were found in the current study. The reliability statistics for the SWSI in the current study is documented below in table 3.5.

**Table 3.5: The current study's means, standard deviations and reliability statistics for the SWSI**

SWSI dimensions	Means	Standard Deviations	N of Items	Cronbach's Alpha
Role ambiguity	14.03	5.08	7	.79
Relationships	16.69	7.76	8	.92
Tools & Equipment	10.45	5.08	5	.94
Career Advancement	11.54	5.40	5	.84
Job Security	8.50	3.92	4	.85
Lack of Authority	15.50	6.13	7	.85
Work/Home interface	13.91	5.24	7	.79
Workload	15.71	5.94	7	.78
General Work Stress	16.13	5.87	9	.87

In the study by De Bruin and Taylor (2005), multiple regression confirmed a strong relationship between the difference sources of work stress and the experience of stress in the workplace. The zero-order correlation between the General Work Stress scale and the Sources of stress were: Role ambiguity;  $r = .48$ ; Relationship:  $r = 0.37$ ; Tools and Equipment:  $r = .20$ ; Job security:  $r = .35$ ; Career Advancement:  $r = .37$ ; Bureaucracy/Autonomy:  $r = .42$ ; Work/Home interface:  $r = .42$ ; Workload:  $r = .57$ ; and General Work Stress:  $r = 0.92$  (De Bruin & Taylor, 2005). Furthermore, meaningful partial correlations were found between Workload and General work stress and Role Ambiguity and General Work Stress, suggesting that these two scales could possibly be the best predictors of General work stress (De Bruin & Taylor, 2005). It should be noted that the SWSI is a measure that was recently developed in South Africa and that no validation studies have been done against other existing measures of work stress. Furthermore, the only documented research was conducted in an academic environment and this study by De Bruin and Taylor (2005) formed part of the development process of the SWSI (De Bruin & Taylor, 2005).

### **3.6.3 Burnout: The MBI**

Burnout was measured with the Maslach Burnout Inventory Human Service Survey (MBI – HSS, MBI, 1996). The MBI - HSS is a 22-item questionnaire designed to measure the three elements of burnout, namely Emotional Exhaustion (the extent to which emotional resources are depleted), Depersonalisation (negative, cynical attitudes and feelings towards clients) and Personal Accomplishment (tendency to evaluate one's work with

clients negatively). More specifically, this version of the inventory was developed to identify levels of burnout in health care staff (Maslach & Jackson, 1986). The items are written in the form of statements about personal feelings or attitudes (e.g. *I feel emotionally drained from my work, I worry that this job is hardening me emotionally*). The frequency with which a respondent experiences a certain feeling is assessed by linking items to a six-point scale ranging from *never* to *every day*. The MBI is a self-administered questionnaire which takes approximately 10-15 minutes to complete. The questionnaire consists of 9 items that assess the Emotional Exhaustion subscale, five items that measure the Depersonalisation subscale and eight items that measure the Reduced Personal Accomplishment scale. Higher mean scores on the Emotional Exhaustion and Depersonalisation scales correspond to higher degrees of experienced burnout. Some of the component items of both Emotional Exhaustion and Depersonalisation, have low loadings on each other which indicates that a moderate correlation exist between these two subscales. This is in agreement with the theoretical expectations which suggest that the two subscales are separate but related aspects of burnout. In contrast, lower mean scores on the Personal Accomplishment scale corresponds to higher degrees of experienced burnout. The subscale of Personal Accomplishment does not load on any of the other two subscales and can therefore not be assumed as the opposite of Emotional Exhaustion or Depersonalisation. Each of the subscales is scored separately and scores are not combined into a single score. Scores can be related to cut-off points which will indicate a low, medium or high level on each scale, which is useful for feedback purposes. This instrument can be used to assess the degree of burnout in a variety of job settings for clinical, counselling or research purposes (Maslach et al., 1997).

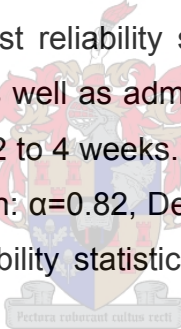
#### *Development of the MBI-HSS*

In the development of the MBI, an initial questionnaire was constructed consisting of 47 items. This questionnaire was administered to a sample of 605 individuals. The sample consisted of 56% male and 44% female respondents from a variety of health and service occupations. Respondents were selected from individuals employed in occupations where they are required to deal with people and their problems, which could possibly lead to the presence of strong emotional feelings in the work environment. These strong emotional feelings are believed to lead to a type of chronic emotional stress that is believed to provoke symptoms of burnout (Maslach et al., 1997). A factor analysis was done on the data and results indicated that 10 of the 47 items accounted for three quarters of the variance. A set of selection criteria were then applied and items that met all of the criteria



were retained. The criteria included, "...items with a factor loading greater than .40 on only one of the factors, a large range of subject responses, a relatively low percentage of subjects checking the "never" response, and a high item-total correlation" (Maslach et al, 1997, p. 197). By applying these criteria, the total number of items was reduced from 47 to 25. The reduced 25-item questionnaire was then administered on a new sample of 420 people, of which 31% were male and 69% female. The results obtained from the second factor analysis were found to be very similar to that of the first and the two samples were combined to form a sample of 1025 individuals. A factor analysis of the combined sample was done and yielded a four-factor solution of which the three with the greater eigenvalues constitute the three subscales of the MBI - HSS (Maslach et al., 1997).

Reliability coefficients for the subscales were found to be as follows (Maslach & Jackson, 1986) (1) Emotional Exhaustion:  $\alpha = 0.90$ , (2) Depersonalisation:  $\alpha = 0.79$ , and (3) Personal Accomplishment:  $\alpha = 0.71$ . The standard error of measurement for each subscale was: 3.80 for Emotional Exhaustion, 3.16 for Depersonalisation and 3.73 for Personal Accomplishment. Test-retest reliability studies were reported for a sample of graduate students in social welfare as well as administrators in a health agency. Intervals between test sessions were between 2 to 4 weeks. The test-retest coefficients were found to be as follows: Emotional Exhaustion:  $\alpha=0.82$ , Depersonalisation:  $\alpha = 0.60$  and Personal Accomplishment:  $\alpha = 0.80$ . The reliability statistics for the MBI in the current study are presented in table 3.6 below:



**Table 3.6: The current study's reliability statistics for the MBI**

MBI dimensions	Means	Standard Deviations	N of Items	Cronbach's Alpha
Emotional Exhaustion	13.55	11.00	9	.89
Depersonalisation	6.58	5.29	5	.53
Personal Accomplishment	34.12	9.89	8	.79

Originally, the MBI was designed to measure burnout in human service occupations. In recent years, alternate versions have been developed to measure burnout in other industries, such as teaching and general occupations. These alternate forms are referred to as Maslach Burnout Inventory – Human Service Survey (MBI- HSS), Maslach Burnout Inventory – Educators Survey (MBI – ES), Maslach Burnout Inventory – General Survey

(MBI – GS). The MBI is predominantly used in the original English version; however, individual researchers have translated the MBI into languages such as Spanish, Swedish and Polish. These translations were mainly for research purposes and no certified translated version of the MBI is yet commercially available (Maslach, Jackson & Leiter, cited in Zalaquett & Wood, 1997, p. 212).

### **3.7 CHAPTER SUMMARY**

An increasing number of studies have indicated a link between occupational stress and burnout; however few have confirmed a definite correlation. In addition, the stress and the burnout experienced by individuals employed in the nursing industry have also frequently been documented; whilst EI, as a construct has received increasing support in relation to other constructs such as life satisfaction and leadership. Furthermore, the importance of EI in the nursing environment has also been noted. This chapter aimed to review the methodology utilised in this study and state the research questions and hypothesis. Details regarding the sample selection, data collection and the analysis of data were also discussed. The results of the research will be presented in the next chapter.



## CHAPTER 4: RESULTS

### 4.1 INTRODUCTION

The aim of this study was to explore the relationship between occupational stress, burnout and EI and to determine whether EI possibly might be a moderating variable in the stress and burnout relationship. In addition, a further objective was to explore which of the dimensions of occupational stress and EI accounts for the greatest variance in burnout. Hypotheses were proposed per construct and the relevant data analysis techniques, as discussed in chapter three, were employed. A number of analysis were done with regards to demographic variables such as access to own transport, level of education and income group, to determine whether any significant differences exist between groups regarding the various variables. The results of the data analysis will be reported next.

### 4.2 CORRELATION RESULTS

The first objective was to determine whether relationships exist between the three constructs: occupational stress (as measured by the General Work Stress scale of the SWSI), dimensions of burnout (as measured by the MBI) and the dimensions of EI (as measured by die SUEIT).

#### 4.2.1 The relationship between EI and Occupational Stress

To determine the relationship between EI and Occupational Stress, it was proposed that,

**Hypothesis 1:** A significant negative relationship will exist between the five dimensions of EI (Emotional Recognition and Expression; Understanding Emotions External; Emotional Management; Emotional Control and Emotion Direct Cognition) and the level of occupational stress (as measured by the General Work Stress Scale) experienced by individuals employed in the nursing profession.

**Hypothesis 2:** A significant negative relationship will exist between occupational stress (as measured by the General Work Stress scale) and total EI (composite score).

The relationship between the different variables was investigated through the calculation of the Pearson product-moment coefficient. The correlation between General Work Stress and the total EI score were also calculated. The results are presented in table 4.1. The results partly confirm the hypothesis and indicate that a moderate, but significant

relationship exist between Occupational Stress and Emotional Management [ $r = -.329, n = 122, p < .01$ ] and a moderate, significant negative relationship also exist between Occupational Stress and Emotional Control [ $r = -.412, n = 122, p < .01$ ]. These results indicate that where respondents report lower levels of Emotional Control and Emotional Management it is more than likely that they will report higher levels of occupational stress. These results suggest that an increase in the ability to manage positive and negative emotions as well as an increase in the ability to control strong emotions could have an impact on the level of reported stress. No significant relationship was found between Total EI and occupational Stress (as measured by the General Work Stress scale) and therefore hypothesis 2 is rejected.

**Table 4.1 Correlations between General Work Stress (SWSI) and EI dimensions (SUEIT)**

Measure	Sub-dimensions	GWS	EREXP	UEX	EM	EC	EDC	Tot EI
SWSI	GWS	-	-.230	.121	-.329**	-.412**	.009	-.156
EI	EREXP		-	.523**	.475**	.225*	-.87	.722**
	UEX			-	.521**	.352**	-.105	.828**
	EM				-	.591**	-.258**	.770**
	EC					-	-.145	.622**
	EDC						-	.063
	Tot EI							-

N = 122; \*\* Correlation is significant at the .01 level (two tailed); \* Correlation is significant at the .05 level (two tailed)

EREXP = Emotional Recognition and Expression; UEX = Understanding Emotions Externally; EM = Emotional Management; EC = Emotional Control; EDC = Emotions Direct Cognition; Total EI = Tot EI; GWS = General Work Stress

#### 4.2.2 The relationship between the dimensions of burnout and occupational stress

In order to explore the relationships between the burnout dimensions and occupational stress the following hypotheses were formulated.

**Hypothesis 3:** A significant positive relationship will exist between occupational stress (as measured by the General Work Stress scale) and Emotional Exhaustion (as a dimension of burnout).

**Hypothesis 4:** A significant positive relationship will exist between occupational stress (as measured by the General Work Stress scale) and Depersonalisation (as a dimension of burnout).

**Hypothesis 5:** A significant negative relationship will exist between occupational stress (as measured by the General Work Stress scale) and Personal Accomplishment (as a dimension of burnout).

To investigate the hypotheses, Pearson correlation coefficients were calculated. The results of these correlations are summarised in table 4.2. There was quite a strong, significant statistical relationship between the Emotional Exhaustion dimension of burnout and General Work Stress [ $r = .679, n = 122, p < .01$ ]. This suggests that respondents, who reported a high level of Emotional Exhaustion, are likely to report a high level of general work stress. These results are in line with those reported by Pelzer et al. (2003) in their study exploring occupational stress and burnout in medical practitioners in South Africa, who found that occupational stress strongly predicted Emotional Exhaustion. Furthermore, a significant moderate correlation was found between Depersonalisation (as a dimension of Burnout) and General Work Stress [ $r = .354, n = 122, p < .01$ ], suggesting that individuals who report higher scores on depersonalisation would be most likely to report higher scores on occupational stress in this study. Previous research have indicated strong correlations between the Emotional Exhaustion and Depersonalisation as dimensions of burnout (Maslach et al., 1997), thus, the above could imply that individuals who report high levels of work stress would then also be likely to experience negative feelings of detachment to other people, which could possibly develop as a response to Emotional Exhaustion. The results of this study confirmed the notion that Emotional Exhaustion and Depersonalisation are strongly related as 30% of the variance was shared,

[ $r = .550, n = 122, p < .01$ ], indicating that respondents reporting high levels of emotional exhaustion, would most likely also report high levels of depersonalisation. Hypotheses 3 and 4 are therefore accepted.

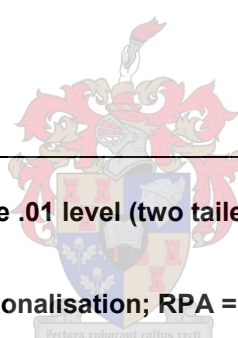
It was hypothesised that a significant negative relationship will exist between the General Work Stress scale and the third dimension of burnout, Personal Accomplishment. The results indicated that a relationship existed, but it was not found to be statistically significant. The hypothesis 5 is therefore rejected.

**TABLE 4.2 Correlations between Burnout dimensions (MBI) and General Work Stress (SWSI)**

Measure	Sub - dimensions	EE	DP	PA	GWS
Burnout	EE	-	.550**	.201	.679**
	DP		-	.116*	.354**
	PA			-	.141
Occupational Stress	GWS				-

N = 122; \*\* Correlation is significant at the .01 level (two tailed); \* Correlation is significant at the .05 level (two tailed)

EE = Emotional Exhaustion; DP = Depersonalisation; RPA = Personal Accomplishment; GWS – General Work Stress



### 4.2.3 The relationship between the dimensions of burnout and the dimensions of EI

In this section the results of the hypotheses proposed in terms of the relationship between the Burnout and EI sub - dimensions is presented. It was hypothesised that,

**Hypothesis 6:** A significant negative relationship will exist between Emotional Exhaustion (as a dimension of burnout) and the dimensions of EI (Emotional Recognition and Expression; Understanding Emotions External; Emotional Management; Emotional Control and Emotion Direct Cognition).

**Hypothesis 7:** A significant negative relationship will exist between Depersonalisation (as dimension of burnout) and the dimensions of EI (Emotional Recognition and Expression;

Understanding Emotions External; Emotional Management; Emotional Control and Emotion Direct Cognition).

The relationships between the three dimensions of burnout and the five dimensions of EI were investigated by calculating the Pearson correlation coefficients. The results obtained are presented in table 4.3.

Firstly, it was found that a moderate, but statistically significant negative relationship existed between Emotional Exhaustion and Emotional Management [ $r = -.307$ ,  $n = 122$ ,  $p < .01$ ]. These results suggest that individuals that generally report lower levels of Emotional Exhaustion would report higher levels of Emotional Management. Henceforth, these results imply that individuals with higher reported levels of emotional management will possess a greater ability to manage positive and negative emotions within themselves and in others, which could possibly impact on the ability to deal with aspects related to emotion exhaustion such as experiencing a depletion of emotional resources. Within the nursing industry, this would be extremely relevant due to the fact that nurses are continuously confronted with the emotional (often negative) state of their patients and would possibly attempt to generate an overall optimistic and positive approach in terms of their patients' physical state, even though they might know otherwise. Similarly, a small but significant negative relationship was found between Emotional Control and Emotional Exhaustion [ $r = -.283$ ,  $n = 122$ ,  $p < .01$ ]. This result suggests that individuals, who report higher levels of Emotional Control, would most likely report lower levels of Emotional Exhaustion, implicating that the ability to effectively control strong emotions such as anger, stress and anxiety could result in lower levels of Emotional Exhaustion. The relationships between emotional exhaustion and the other dimensions of EI were not found to be significant in this study. Henceforth, only partial support for hypotheses 6 was found.

Secondly, the results of the correlations between Depersonalisation and the various dimensions of EI revealed a moderate but statistically significant negative relationship between Depersonalisation and Emotional Management [ $r = -.322$ ,  $n = 122$ ,  $p < .01$ ]. This suggests that the respondents, who reported higher levels of Depersonalisation, would more likely report lower levels of Emotional Management. This result could indicate that individuals who possess the ability to manage positive and negative emotions would generally report experiencing lower levels of Depersonalisation. Depersonalisation refers to the manner of conduct with other individuals in the workplace. It is argued that where an

employee reports higher levels of Depersonalisation, they are more likely to treat others as objects. Emotional Management measures the extent to which an individual is able to repair negative moods and emotions and to maintain beneficial positive moods and emotions both within the self and others at work (Palmer & Stough, 2001). According to Palmer and Stough (2001) the ability to foster positive moods and emotions in oneself and others is an important leadership attribute. It is also an important underlying attribute of effective stress management and adaptability. High scores tend to those who are able to consistently maintain a positive disposition at work and who easily foster positive moods and emotions amongst others. This has significant relevance in the nursing industry, given that where nurses report high scores on Emotional Management, it will directly impact on the work performance in terms of their interaction with patients as well as their ability to deal with difficult (and often emotionally demanding) and stressful situations. High scores on Emotional Management not only indicates that these nurses will be equipped to keep perspective and remain positive in difficult and stressful situations, but they will, through the projection of these positive emotions, impact on the emotional state of their patients and colleagues. Low scores tend to reflect those who find it more difficult to effectively manage emotion at work and who are prone to show negative and pessimistic moods and behaviours in the workplace. These results are therefore important within the nursing environment, given that nurses who have the ability to manage emotions in themselves and others; should find it easier to manage and prevent feelings of depersonalisation and which should subsequently result in better care for patients. Furthermore, a small but significant negative relationship was found between Depersonalisation and Emotional Control [ $r = -.236, n = 122, p < .01$ ] indicating that respondents reporting higher levels of Emotions Control, report lower levels of Depersonalisation. Lastly, a small, but significant negative relationship was found between depersonalisation and the total EI score [ $r = -.220, n = 122, p < .05$ ]. The relationships between Depersonalisation and the other dimensions of EI (Understanding Emotions Externally, Emotional Recognition and Expression and Emotion Direct Cognition) were not found to be significant in this study. Given the results, hypothesis 7 is only partially confirmed.

In terms of investigating the relationship between Personal Accomplishment (as a dimension of burnout) and the dimensions of EI, it was hypothesised that,

**Hypothesis 8:** A significant positive relationship will exist between Personal Accomplishment (as a dimension of burnout) and the dimensions of EI (Emotional



Recognition and Expression; Understanding Emotions External; Emotional Management; Emotional Control and Emotion Direct Cognition).

The results revealed that moderate significant correlations were found between Personal Accomplishment and four of the dimensions of EI. The results were as follows: Emotional Recognition and Expression [ $r = .269, n = 122, p < .01$ ], Understanding Emotions External [ $r = .458, n = 122, p < .01$ ], Emotional Management [ $r = .319, n = 122, p < .01$ ], Emotional Control [ $r = .30, n = 122, p < .01$ ] and total EI [ $r = .409, n = 122, p < .01$ ]. These results suggest that high levels reported on these EI dimensions will most probably result in a higher level of personal accomplishment, which supports the notion that high EI leads to a variety of positive work related outcomes like, for example work success (Weisinger, 2000). Hypothesis 8 is therefore partially accepted. Next, the relationships between total EI and the dimensions of burnout were explored through the following hypotheses:

**Hypothesis 9:** A significant negative relationship will exist between Emotional Exhaustion (as a dimension of burnout) and total EI.

**Hypothesis 10:** A significant negative relationship will exist between Depersonalisation (as dimensions of burnout) and total EI.

**Hypothesis 11:** A significant positive relationship will exist between Personal Accomplishment (as a dimension of burnout) and total EI.

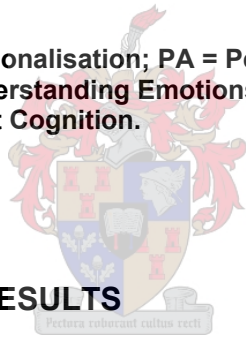
Surprisingly, the Pearson correlation results revealed that no significant relationship emerged between Emotional Exhaustion and Total EI. A small negative significant relationship emerged between Depersonalisation and Total EI [ $r = -.220, n = 122, p < .05$ ] and a moderate positive significant relationship was found between Personal Accomplishment and Total EI [ $r = .409, n = 122, p < .01$ ]. Therefore, hypothesis 9 is rejected, whilst hypotheses 10 and 11 is accepted. Henceforth, it is evident that respondents reporting higher levels of total EI are more likely to report lower levels of Depersonalisation and higher levels of Personal Accomplishment.

**TABLE 4.3 Inter-correlations between EI dimensions (SUEIT) and Burnout dimensions (MBI)**

Construct	Measurement Scale sub-dimensions	EE	DP	PA	EREXP	UEX	EM	EC	EDC	TOTAL EI
<b>Burnout</b>	<b>EE</b>	-	.550**	.201	.011	.130	-.307**	-.283**	-.010	-.107
	<b>DP</b>		-	.116*	.170	.110	-.322**	-.236**	.153	-.220*
	<b>PA</b>			-	.269**	.458**	.319**	.300**	-.145	.409**
<b>EI</b>	<b>EREXP</b>				-	.523**	.475**	.225*	-.087	.722**
	<b>UEX</b>					-	.521**	.352**	-.105	.828**
	<b>EM</b>						-	.591**	-.258	.770**
	<b>EC</b>							-	-.145	.622**
	<b>EDC</b>								-	.630
	<b>TOTAL EI</b>									-

N = 122; \*\* Correlation is significant at the 0.01 level (two tailed); \* Correlation is significant at the 0.05 level (two tailed)

EE = Emotional Exhaustion; DP = Depersonalisation; PA = Personal Accomplishment; EREXP = Emotional Recognition and Expression; UEX = Understanding Emotions Externally; EM = Emotional Management; EC = Emotional Control, EDC – Emotion Direct Cognition.



### 4.3 MULTIPLE REGRESSION RESULTS

The second objective of this study was to determine which of the sources of work stress as measured by the SWSI, explained most of the variance in the dimensions of burnout (Emotional Exhaustion, Depersonalisation and Personal Accomplishment), as measured by the MBI (Maslach & Jackson, 1986). To this end a series of regression analyses were conducted to gain information on the amount of variance in the burnout dimensions explained by the various sources of stress that is measured by the SWSI. The R square value is reported for the regression results. In addition, further analyses were conducted to investigate the amount of variance in the burnout dimensions that is explained by the various EI dimensions (as measured by the SUEIT).

More specifically, a series of best subsets regression analyses were conducted with occupational stress (Sources of Stress) and the dimensions of EI as independent variables and the dimensions of burnout as dependent variable, to determine which of the Sources of Stress predicts the greatest amount of variance in burnout. Best subset regression

refers to a method utilised to determine which of the independent variables would best predict the dependent variable and should therefore be included in a multiple regression model. This method involves examining all of the models created from all possible combination of predictor variables. Best Subsets Regression uses R square to determine the best model. The process starts by initially including only the models that have one predictor variable. The two models with the highest R square are then selected. Then all models that have only two predictor variables included are checked and the two models with the highest R square are chosen again. This process continues until all combinations of all predictors variables have been taken into account. An advantage of best subset regression, is that it allows the researcher to investigate various subsets in order to identify key variables (Christensen, 1996, Dunn & Clark, 1987). Standard regressions were conducted between the dimensions of EI as well as occupational stress and the dimensions of burnout to determine which of the dimensions of EI and stress predicts the greatest variance in burnout.

#### **4.3.1 Best Subsets Regression: Sources of Stress and Burnout**

The various sources of stress and the dimensions of burnout were explored through best subset regression analysis, to determine which of the sources of stress would best predict the respective dimensions of burnout. In line with the cited research (Mostert & Joubert, 2005; Naude & Rothmann, 2006), it was expected that Workload, Tools and Equipment (Resources) and Work/Home interface would explain the greatest amount of variance in the dimensions of burnout. However, it was hypothesised that,

**Hypothesis 12:** Sources of work stress scores (Role Ambiguity, Relationships, Tools and Equipment, Job Security, Career Advancement, Lack of Autonomy, Work/Home Interface and Workload) can be used to predict Emotional Exhaustion (as a dimension of burnout).

A best-subset regression was conducted with the burnout dimension, Emotional Exhaustion, as dependent variable, to determine which of the Sources of Stress, as measured by the SWSI, would explain the greatest variance in Emotional Exhaustion. It was found that the combined model of sources of work stress, explained 29% of the variance in Emotional Exhaustion. Work Load and Work/Home interface, were the strongest predictors of Emotional Exhaustion and accounted for 29% of the variance in Emotional Exhaustion. These results were significant for Workload [ $\beta = .547$ ;  $F(2,119) = 22.071$ ,  $p < .005$ ]. Even though the results for Work/Home interface [ $\beta = .420$ ;  $F(2,119) =$

22.071,  $p = .08$ ] did not indicate a significant relationship, it is worth noting that it leaned towards the significant level ( $p < .05$ ). Hypothesis 12 is therefore accepted. Table 4.4 presents the model summary and the standardised coefficients are presented in table 4.5.

**Table 4.4 Model summary: Emotional Exhaustion and the Sources of Work Stress**

Model	Multiple R	Multiple R square	Adjusted R Square	Std Error of the Estimate	F	Sig.
Sources of stress	.545	.297	.26	9.959	6,115	.0000

**Table 4.5 Coefficients obtained from the regression between Emotional Exhaustion and the Sources of Work Stress correlates**

Model		Standardised Coefficients		
		Beta	t	Sig.
1	Work/Home Interface	.420	1.72	.0879
2	Workload	.547	2.65	.0009

a. Dependent Variable: EMOTIONAL EXHAUSTION

Next, a best subset regression was executed to identify the sources of stress that explained the greatest amount of variance in Depersonalisation, as a dimension of Burnout. Henceforth, it was hypothesised that,

**Hypothesis 13:** Sources of work stress scores (Role Ambiguity, Relationships, Tools and Equipment, Job Security, Career Advancement/Job Security, Lack of Autonomy, Work/Home Interface, Workload and Bureaucracy) can be used to predict Depersonalisation (as a dimension of burnout).

The results of the best subsets regression analysis, presented in table 4.6 and 4.7, revealed that Relationships and Work/Home Interface as sources of stress explained 6% of the variance in Depersonalisation. Work/Home interface [ $\beta = .296$ ;  $F(2, 119) = 4.2488$ ,  $p < .005$ ] made the largest and only significant unique contribution to explaining the variance in Depersonalisation. Interestingly, in the regression analysis with Emotional Exhaustion, Work/Home interface did not emerge as a significant predictor, although leaning towards the  $p < .05$  significant level. However, in this analysis with

Depersonalisation, it emerged as a significant predictor of burnout. Thus, results indicate that Work/Home interface should be noted as an important and significant contributor to the development of burnout in the current sample. Hypothesis 13 is therefore partially accepted.

**Table 4.6 Model summary: Depersonalisation and the Sources of Work Stress correlates**

Model	Multiple R	Multiple R square	Adjusted R Square	Std Error of the Estimate	F	Sig.
Sources of stress	.258	.066	.050	5.201	2,119	.0000

**Table 4.7 Coefficients obtained from the regression between Depersonalisation and the Sources of Work Stress correlates**

Model		Standardised Coefficients		
		Beta	t	Sig
1	Relationships	-.095	-1.361	.175
2	Work/Home interface	.296	2.913	.004

a. Dependent Variable: DEPERSONALISATION

The final best subset regression for burnout was conducted for the burnout dimension, Personal Accomplishment. Henceforth, it was hypothesised that,

**Hypothesis 14:** Sources of work stress scores (Role Ambiguity, Relationships, Tools and Equipment, Job Security, Career Advancement/Job Security, Lack of Autonomy, Work/Home Interface, Workload and Bureaucracy) can be used to predict Personal Accomplishment (as a dimension of burnout).

These results, presented in table 4.8 and 4.9 below, indicated that role ambiguity, job security and work/home interface contributed 4% of the variance in personal accomplishment. None of the contributions made by the various Sources of Work Stress on Personal Accomplishment were significant. Therefore, hypothesis 14 is rejected.

**Table 4.8 Model summary: Personal Accomplishment and Sources of Work Stress**

Model	Multiple R	Multiple R square	Adjusted R Square	Std Error of the Estimate	F	Sig.
Sources of stress	.217	.047	.023	9.94	3,118	.013

**Table 4.9 Coefficients obtained from the regression between Personal Accomplishment and the Sources of Work Stress correlates**

Model		Standardised Coefficients		
		Beta	t	Sig.
	Intercept	28.36	9.40	.000
1	Role Ambiguity	.340	1.635	.105
2	Job Security	-.241	-.964	.337
3	Work/Home Interface	.190	.925	.356



**4.3.2 Standard regression: Burnout and EI dimensions**

In order to determine which of the EI dimensions predicts the greatest variance in the burnout dimensions, a series of standard regressions analyses were performed between the dimensions of burnout (Emotional Exhaustion, Depersonalisation, and Personal Accomplishment) respectively as dependent variables and the various EI dimensions as independent variables. The results are presented in table 4.10 and 4.11 below. The following hypotheses were investigated.

**Hypothesis 15:** The different EI dimensions (Emotional Recognition and Expression; Understanding Emotions External; Emotional Management; Emotional Control, Emotion Direct Cognition and Total EI) can be used to predict Emotional Exhaustion (as a dimension of burnout).

The results of the standard regression indicate that the model was significant ( $p < .000$ ) and that it explained 24% of the variance in Emotional Exhaustion. Only two of the independent variables entered into the regression model made a significant unique

contribution to explaining the variance in Emotional Exhaustion scores. Emotional Management ( $\beta = -.461, p < .000$ ) made the strongest, unique significant contribution to the equation, followed by a significant unique contribution by the Understanding Emotions External ( $\beta = .391, p < .000$ ) EI dimension. The  $R$  for regression was significantly different from zero,  $F(5,116) = 7.479, p < .005$ . Hypothesis 15 is therefore accepted.

**Table 4.10 Model summary: Emotional Exhaustion and correlates of EI**

Model	Multiple R	Multiple R square	Adjusted R Square	Std Error of the Estimate	F	Sig.
1	.494	.244	.211	10.283	7.479	.000

- a. Predictors: (Constant), Emotional Control, Emotions Direct Cognition, Emotional Recognition/Expression, Understanding Emotions External, Emotional Management  
 b. Dependent Variable: Emotional Exhaustion

**Table 4.11 Coefficients obtained from the regression between Emotional Exhaustion and dimensions of EI**

Model		Standardised Coefficients		
		Beta	t	Sig.
EI	(Constant)		2.667	.009
	Emotional Recognition and Expression	.056	.564	.574
	Understanding Emotions External	.391	3.828	.000
	Emotions Direct Cognition	-.109	-1.301	.196
	Emotional Management	-.461	-3.920	.000
	Emotional Control	-.176	-1.744	.084

- a. Dependent Variable: EMOTIONAL EXHAUSTION

Similarly, a standard regression was performed with Depersonalisation (as a dimension of burnout) as dependent variable and the EI dimensions as independent variables. The results are presented in table 4.12 and 4.13. Here it was hypothesised that,

**Hypothesis 16:** The different EI dimensions (Emotional Recognition and Expression; Understanding Emotions External; Emotional Management; Emotional Control, Emotion Direct Cognition and Total EI) can be used to predict Depersonalisation (as a dimension of burnout).

The results from the standard regression indicate that the model was significant ( $p = .01$ ) and 12% of the variance in Depersonalisation is explained by the various independent variables entered into the model. Emotional Management ( $\beta = -.277$ ,  $p < .05$ ) again emerged as a strong predictor of burnout, explaining unique variance in Depersonalisation scores. Hypothesis 16 is therefore accepted. The  $R$  for regression was significantly different from zero,  $F(5,116) = 3.193$ ,  $p < .01$ ).

**Table 4.12 Model summary: Depersonalisation and correlates of EI**

Model	Multiple R	Multiple R square	Adjusted R Square	Std Error of the Estimate	F	Sig.
1	.348	.121	.083	5.112	3.193	.010

- a) Predictors: (Constant), Emotional Control, Emotions Direct Cognition, Emotional Recognition/Expression, Understanding Emotions External, Emotional Management  
 b) Dependent Variable: Depersonalisation

**Table 4.13 Coefficients obtained from the regression between Depersonalisation and dimensions of EI**

Model		Standardised Coefficients		
		Beta	t	Sig.
EI	(Constant)		2.369	.020
	Emotional Recognition and Expression	-.073	-.685	.494
	Understanding Emotions External	.114	1.034	.303
	Emotions Direct Cognition	.075	.835	.405
	Emotional Management	-.277	-2.182	.031
	Emotional Control	-.085	-.778	.438

a. Dependent Variable: DEPERSONALISATION



Next, a standard regression was conducted with Personal Accomplishment (as dimension of burnout) as dependent variable and the EI dimensions as independent variables, to determine which of the EI dimensions explained the greatest amount of variance in Personal Accomplishment scores. The results are presented in table 4.14 and table 4.15 below. It was therefore hypothesised that,

**Hypothesis 17:** The different EI dimensions (Emotional Recognition and Expression; Understanding Emotions External; Emotional Management; Emotional Control and Emotion Direct Cognition) can be used to predict Personal Accomplishment (as a dimension of burnout).

The results from the standard regression analysis, presented in Table 4.14 and 4.15, indicate that the model was significant ( $p < .000$ ) and that it explains 21% of the variance in Personal Accomplishment scores. Understanding Emotions External made the strongest prediction, this time to the experience of Personal Accomplishment. It was found that Understanding Emotions External made a significant unique contribution to the equation ( $\beta = .330$   $p < .005$ ). The  $R$  for regression was significantly different from zero,  $F(5,116) = 6.359$ ,  $p < .000$ . The hypothesis is therefore confirmed.

**Table 4.14 Model summary: Personal Accomplishment and correlates of EI**

Model	Multiple R	Multiple R square	Adjusted R Square	Std Error of the Estimate	F	Sig.
1	.464	.215	.181	9.098	6.359	.000

a. Predictors: (Constant), Emotional Control, Emotions Direct Cognition, Emotional Recognition/Expression, Understanding Emotions External, Emotional Management

b. Dependent Variable: Personal Accomplishment

**Table 4.15 Coefficients obtained from the regression between Personal Accomplishment and dimensions of EI**

Model		Standardised Coefficients		
		Beta	t	Sig.
EI	(Constant)		-.409	.683
	Emotional Recognition and Expression	.050	.491	.624
	Understanding Emotions External	.330	3.171	.002
	Emotions Direct Cognition	-.080	-.940	.349
	Emotional Management	.011	.092	.927
	Emotional Control	.155	1.504	.135

a. Dependent Variable: PERSONAL ACCOMPLISHMENT

### 4.3.3 Predicting General Work Stress through the dimensions of EI

In order to determine whether certain dimensions of EI accounts for variance in the scores of General Work Stress, a standard regression was performed with General Work Stress as dependent variable. Therefore, it was hypothesised that,

**Hypothesis 18:** The different EI dimensions (Emotional Recognition and Expression; Understanding Emotions External; Emotional Management; Emotional Control and Emotion Direct Cognition) can be used to predict Occupational Stress (as a measured the General Work Stress scale of the Sources of Work Stress Inventory).

The results from the standard regression analysis, presented in table 4.16, indicate that the model was significant ( $p < .000$ ) and that it explains 31% of the variance in occupational stress (as measured by the General Work Stress scale). The standardised coefficients presented in table 4.17 indicate that Understanding Emotions External ( $\beta = .427, p < .000$ ) made the largest unique significant contribution to explaining the variance in occupational stress, followed by, in order of contribution, Emotional Management ( $\beta = -.362, p < .005$ ) and Emotional Control ( $\beta = -.361, p < .000$ ). The  $R$  for regression was significantly different from zero,  $F(5,116) = 10.865, p < .000$ . Hypothesis 18 is therefore confirmed.

**Table 4.16 Model Summary: General Work Stress and Correlates of EI**

Model	Multiple R	Multiple R square	Adjusted R Square	Std Error of the Estimate	F	Sig.
1	.565	.319	.290	5.00275	10.865	.000

- a. Predictors: (Constant), total EI, Emotions Direct Cognition, Emotional Control, Emotional Recognition/Expression, Emotional Management
- b. Dependent Variable: General Work Stress

**Table 4.17 Coefficients obtained from the regression between General Work Stress and dimensions of EI**

Model		Standardised Coefficients		
		Beta	t	Sig.
EI	(Constant)		4.751	.000
	Emotional Recognition and Expression	-.001	-.012	.991
	Understanding Emotions External	.427	4.404	.000
	Emotions Direct Cognition	-.092	-1.156	.250
	Emotional Management	-.361	-3.235	.002
	Emotional Control	-.362	-3.780	.000

- a. Dependent Variable: GENERAL WORK STRESS

#### 4.4 RESULTS OF BETWEEN GROUPS ANALYSIS

A series of between group comparisons, by means of Bonferroni *post-hoc* comparisons and a series of one way analysis of variance (ANOVA), were done to explore differences between race groups (White, Coloured and African) as well as departmental groups (General Ward, ICU, Theatre and Other) in terms of scores reported on the dimensions of burnout and occupational stress.

#### 4.4.1 Between group comparisons for the dimensions of Burnout

Between group comparisons were conducted to explore differences in the reported mean scores on the dimensions of burnout and the three different race groups involved in this study. This was done to determine whether any significant differences existed between the groups and to then conduct further analysis to explore what the causes of these differences could be. The unfortunate political history in South Africa, which resulted in that individuals from different races most often did not have equal access to development, employment and educational opportunities, necessitated the exploration of the scores reported by the various race groups. This lack of access to opportunities resulted in some individuals being disadvantaged in terms of their education and experience who are therefore in general currently employed in lower level positions. A large percentage of the sample (over 56%) was drawn from previously disadvantaged groups and it was felt that the effects of the political history might still have an impact on the reported scores. The one-way analysis of variance (ANOVA) between Emotional Exhaustion and Race groups revealed significant differences between White and African [ $F(2, 114) = 9.193, p < .005$ ] and White and Coloured nurses [ $F(2, 114) = 9.193, p < .005$ ]. The effect size, calculated using eta squared, was .13, which according to Cohen (1988) is a large effect. Post hoc comparisons, using the Tukey HSD test indicated that the mean score for White nurses ( $M = 18.85, SD = 12.12$ ) was significantly different from African Nurses ( $M = 8.81, SD = 7.87$ ). The mean scores for White nurses ( $M = 18.85, SD = 12.12$ ) also differed significantly from the mean scores for Coloured Nurses ( $M = 11.12, SD = 11.00$ ). The results from the one-way ANOVA between Depersonalisation and Race groups indicated higher mean scores for Coloured nurses, however, no significant differences were found between the three groups. The mean scores on Personal Accomplishment revealed significant differences between White and African nurses [ $F(2, 114) = 12.597, p < .05$ ] and African and Coloured nurses [ $F(2, 114) = 12.597, p < .05$ ], with the Tukey HSD test indicating means scores for White ( $M = 36.71, SD = 8.98$ ) and Coloured nurses ( $M = 35.21, SD = 9.00$ ) to be significantly higher than those of the African nurses ( $M = 25.73, SD = 10.34$ ). The effect size using eta squared, was .18, indicating a large effect.

Next, comparisons were done between departmental groups (General Ward, ICU and Other) and the dimensions of burnout. It was expected that employees in certain departments, such as ICU, could possibly experience higher levels of burnout due to the nature of the environment that these nurses have to work in (e.g. fast paced, life/death situation, critical care required). However, the one-way ANOVA between Emotional

Exhaustion and the various departmental groups revealed no significant differences between groups. Similarly, no significant differences were found between the different groups on mean scores for Depersonalisation. Lastly, the results for the one-way ANOVA between departmental groups and mean scores on Personal Accomplishment revealed significant differences between General Ward Nurses ( $M = 30.81$ ,  $SD = 10.4$ ) and Other nurses (defined as maternity, paediatric, ER, gynaecology & theatre) with the mean scores for the Other group ( $M = 38.55$ ,  $SD = 9.55$ ) being significantly higher than General Ward nurses [ $F(3, 102) = 4.674$ ,  $p < .01$ ], indicating that nurses employed in the specialist categories defined within the “other” group, reported significantly higher levels of Personal Accomplishment. Individuals employed in these wards are more likely to have specialised or are working towards specialisation and could therefore to a greater extent strive towards achieving self-actualisation. The eta square effect sized was .08, indicating a moderate effect.

#### **4.4.2 Between group comparisons for General Work Stress**

The results for the comparisons between the race groups showed that the mean score on General Work Stress for White ( $M = 17.83$ ,  $SD = 6.13$ ) nursing professionals were significantly higher than means scores for African ( $M = 14.07$ ,  $SD = 4.93$ ) and Coloured groups ( $M = 14.79$ ,  $SD = 4.91$ ) [ $F(2, 114) = 3.379$ ,  $p < .05$ ]. This was expected, due to the strong correlations reported between occupational stress and burnout and similar results were reported between the three race groups and the dimensions of burnout. A Bonferonni *post hoc* comparison further revealed a higher mean on General Work Stress for nurses employed in ICU, however this was not at a significant level [ $F(3, 102) = 1.303$ ].

#### **4.4.3 T- tests and ANCOVAS: The impact of demographic variables on stress and burnout**

The differences in mean scores of race and departmental groups, indicated by the one way analysis of variance and the Bonferonni *post hoc* comparisons, necessitated an attempt to explore possible explanations for such differences. Henceforth, T-tests were performed between the different dimensions of burnout and EI to determine if aspects, such as access to transport and whether the individual worked for the agency as permanent employee (first employer) or utilised the agency to work over time (second employer), would contribute to a difference in mean scores. In addition one way between-group analyses of covariance (ANCOVA) were used to further explore the differences between the groups whilst statistically controlling for an additional variable. Preliminary

checks were conducted to ensure that there was no violation of the assumptions of normality, linearity, homogeneity of variances and homogeneity of regression slopes and reliable measurement of the covariate (Pallant, 2001).

#### 4.4.3.1 T - tests

Independent sample t-tests were conducted to determine whether differences existed between the mean scores obtained by the various groups on the different dimensions of burnout. These analyses were done firstly to determine whether significant differences on mean scores exist between individuals who have access to their own transport versus individuals who have to rely on public transport to commute to and from work. It was argued that individuals, who are obliged to use public transport, might report higher levels of occupational stress and burnout due to aspects such as restricted timetables, long waiting times and unreliability of the transport system. Secondly, analyses were conducted to determine whether the overtime employees (nurses who utilise the agency to work overtime) and the contract workers (nurses who are contracted to the agency) reported differences in mean scores on the dimensions of burnout. The reasoning behind these analyses is that individuals who work permanently for a particular hospital and then work additional overtime through the agency, would most probably report higher levels of occupational stress and burnout possibly due to aspects such as the extensive number hours worked and the ongoing demand on their emotional resources in a variety of settings.

#### *Results: Transport*

The independent-samples t-test which was conducted to compare scores on Emotional Exhaustion for the own transport ( $M = 18.62$ ,  $SD = 12.62$ ) versus public transport groups [ $(M = 7.91$   $SD = 7.093$ );  $t(92.8) = 5.446$ ,  $p < .000$ ] indicated that significant differences exist between these two groups. The magnitude of the differences in the means was large, with eta squared = 0.22. Similar results emerged between Personal Accomplishment and the own transport ( $M = 36.48$ ,  $SD = 8.66$ ) and public transport group [ $(M = 29.20$ ,  $SD = 11.07$ ),  $t(81.53) = 3.631$ ,  $p < .000$ ]. In addition, a similar trend was found with analysis conducted to occupational stress, which indicated significant differences between the own transport ( $M = 17.5$ ,  $SD = 5.73$ ) and the public transport group [ $(M = 13.46$ ,  $SD = 4.00$ ),  $t(100.02) = 4.197$ ,  $p < .000$ ].

#### *Results: First and Second Employer Group*

No significant results were found between the two groups for scores reported on any of the dimensions of burnout or occupational stress. This could be interpreted that the number of hours worked by an individual and the fact whether employment is of a permanent or temporary nature of employment, possibly has no impact on the stress and burnout experienced.

#### **4.4.3.2 ANCOVA: Dimensions of burnout as dependent variable**

Firstly, the three dimensions of burnout were included as the continuous dependent variables, in separate analyses of co-variance (ANCOVA), together with the independent variable, race. Demographic variables e.g. income, level of education, years in service and nursing rank were all entered in these separate analyses as continuous covariates.

#### *Level of income and department as covariates*

The results indicated that after controlling for income level, no significant differences emerged in mean scores between race groups on Emotional Exhaustion. Similar results were found for Depersonalisation. In the analysis where Personal Accomplishment was entered as dependent variable, significant differences were found between race groups [ $F(1, 95) = 4.86, p < .05, \eta^2 = .09$ ], indicating a medium effect between race and Personal Accomplishment, however, level of income did not contribute significantly to the model. Therefore, the results indicate that the respondents level of income did not significantly contribute to the variance in scores on the dimensions of burnout for the different race groups.

The same analyses were conducted as above, however, this time, department was included as independent variable. No significant results for scores on burnout were found with departmental group entered as covariate.

#### *Level of education as covariate*

In the analysis where level of education was controlled for as covariate, it was found that the scores for the various races groups on Emotional Exhaustion, were significantly different [ $F(1, 100) = 4.693, p < .05, \eta^2 = .08$ ] indicating a medium to large effect of the level of education on scores for Emotional Exhaustion for the various race

groups. Furthermore, the results are indicative of a significant relationship between Emotional Exhaustion and level of education ( $p < .05$ ). It is possible that nurses with a higher level of education, are more likely to fulfil more senior or management positions, which could possibly result in greater levels of responsibility ultimately resulting in higher levels of Emotional Exhaustion. Results for Personal Accomplishment indicated significant differences between scores on Personal Accomplishment and Race group [ $F(1,100) = 8.464, p < .000, \eta^2 = .145$ ], however the influence of the covariate, level of education, on Personal Accomplishment was not significant. No significant results were found with departmental group entered as independent variable.

#### *Years in profession as covariate*

A third group of analyses were conducted with the number of years that individual's have been in the nursing profession, entered as covariate. The results revealed that there was a significant difference in Emotional Exhaustion scores in the various race groups after controlling for the number of years in profession [ $F(1, 85) = 6.332, p < .05$ ]. It was found that 13% of the variance in Emotional Exhaustion, can be explained by race group. No significant relationship was found between the covariate, number of years in profession, and Emotional Exhaustion, while controlling for race group. Similarly, no significant results were found between race and Depersonalisation when controlling for number of years in profession. However, a significant difference in scores on Personal Accomplishment was found when controlling for number of years in profession, with race explaining 8% of the variance in scores on Personal Accomplishment. Therefore, it seems that White and Coloured nurses, who have been employed in the profession for a greater number of years, reported a higher sense of Personal Accomplishment, whilst African respondents overall reported lower levels of Personal Accomplishment.

In addition, significant differences were found between scores on Personal Accomplishment and departmental groups, with years in profession as covariate [ $F(1, 75) = 3.051, p < .05, \eta^2 = 0.10$ ]. Furthermore, it was found that a strong relationship existed between number of years in profession and Personal Accomplishment scores, with number of years contributing 16% to the variance in scores.

#### *Rank as covariate*

The results revealed that significant differences exist in terms of scores on Emotional Exhaustion for the various race groups, when controlling for nursing rank (seniority level),



with race explaining 11% of the variance in scores on Emotional Exhaustion [ $F(1, 111) = 6.960, p < .005, \eta^2 = 0.04$ ]. The covariate, nursing rank, explained 4% of the variance in Emotional Exhaustion, when controlling for race. Individuals in the White race group who reported higher scores on Emotional Exhaustion, seem to be employed in more senior positions. It is therefore possible, that respondents with a more senior rank could experience higher levels of Emotional Exhaustion, due to the greater intensity of emotional demands related to the nature of their position and responsibilities. No significant results were found for Depersonalisation. Results for Personal Accomplishment scores indicated that race group significantly contributed 16% of the variance in the scores ( $p < .005$ ). Rank, as covariate, did not make any significant contribution to Emotional Exhaustion scores.

#### **4.4.4 Interaction effect: EI on Occupational stress and Burnout**

In order to explore whether EI might act as moderator in the occupational stress and burnout relationship, a moderated multiple regression was conducted. An interaction effect will exist when the impact of one independent variable (occupational stress) depends on the value of another independent variable (EI) (Lewis – Beck, 1980). In order to execute this regression, a dichotomous variable, named EILowHigh was computed with the median as reference point. The specific type of regression employed to measure the interaction effect, involves forming a multiplicative term, in this case multiplying General Stress scores with the new dichotomous variable (EILowHigh), creating a new variable named EILowHighStress.

In the first regression analysis, Emotional Exhaustion (as dimension of burnout) was entered as dependent variable and occupational stress (as measured by the General Work Stress scale), EILowHighStress (EI as moderator) and EI LOWHIGH were entered as independent variables. The results from the regression indicate that the model was significant ( $p < .000$ ) and that it explains 59.5% of the variance in Emotional Exhaustion (as dimension of burnout). The standardised coefficients presented in table 4.19 indicate that EILowHighStress ( $\beta = -.323, p < .067$ ) made a contribution to Emotional Exhaustion that leans towards significance ( $p < .05$ ). The impact of the EI interaction (EILowHighStress) is more evident in the scatterplot presented below (Figure 4.1). It is clear that the slope of the lines significantly differ after entering the EI Interaction. The  $R$  for regression was significantly different from zero,  $F(3,118) = 57.681, p < .000$ . The regression for Depersonalisation, presented in table 4.21, indicated that the model was

significant ( $p < .000$ ) and explained 23.9% of the variance in Depersonalisation (as dimension of burnout). EI as interaction effect contributed significantly to the model ( $\beta = -.546$ ,  $p < .05$ ), indicating that EI has a significant effect in the Depersonalisation and occupational stress relationship (Figure 4.2). Therefore, from the regression analyses and scatterplots presented below, it is evident that EI has a moderating effect on the stress-burnout process.

**Table 4.18 Model Summary: Interaction Effect for Emotional Exhaustion and Occupational Stress**

Model	R	R Square	Adjusted R Square	Std Error of the Estimate	F	Sig
1	.771	.595	.584	.7465	57.681	.000

a) Predictors: (Constant), EILowHighStress, General Work Stress, EILowHigh

**Table 4.19 Coefficients: Interaction Effect for Emotional Exhaustion and Occupational Stress**

Model	Standardized Coefficients		
	Beta	T	Sig
1 (Constant)		-4.614	.000
General Work Stress	.864	10.626	.000
EI LowHigh	.272	1.590	.114
EILowHighStress	-.323	-1.846	.067

a) Dependent Variable: EMOTIONAL EXHAUSTION

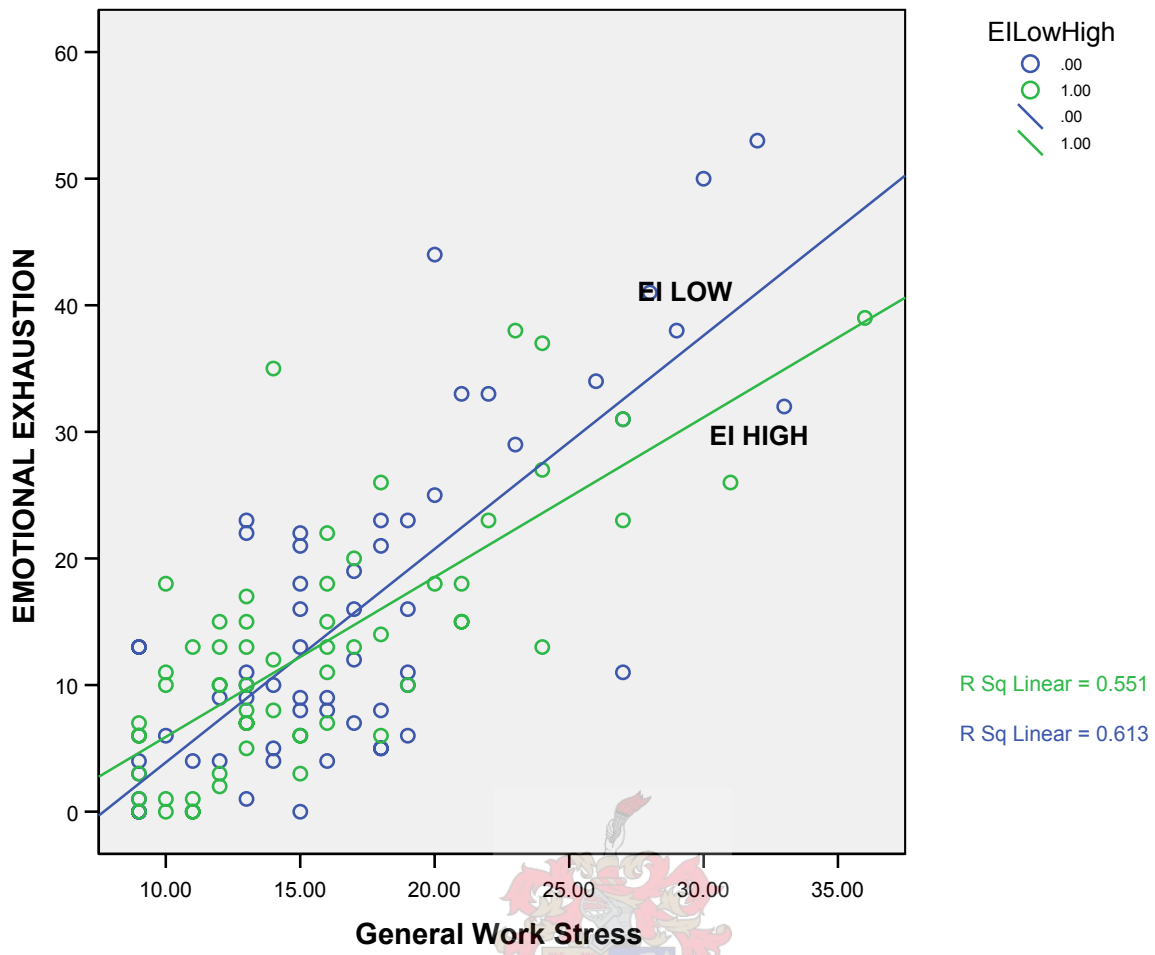


Figure 4.1. Interaction effect: Emotional Exhaustion and occupational stress

**Table 4.20 Model Summary: Interaction Effect for Emotional Exhaustion and Occupational Stress**

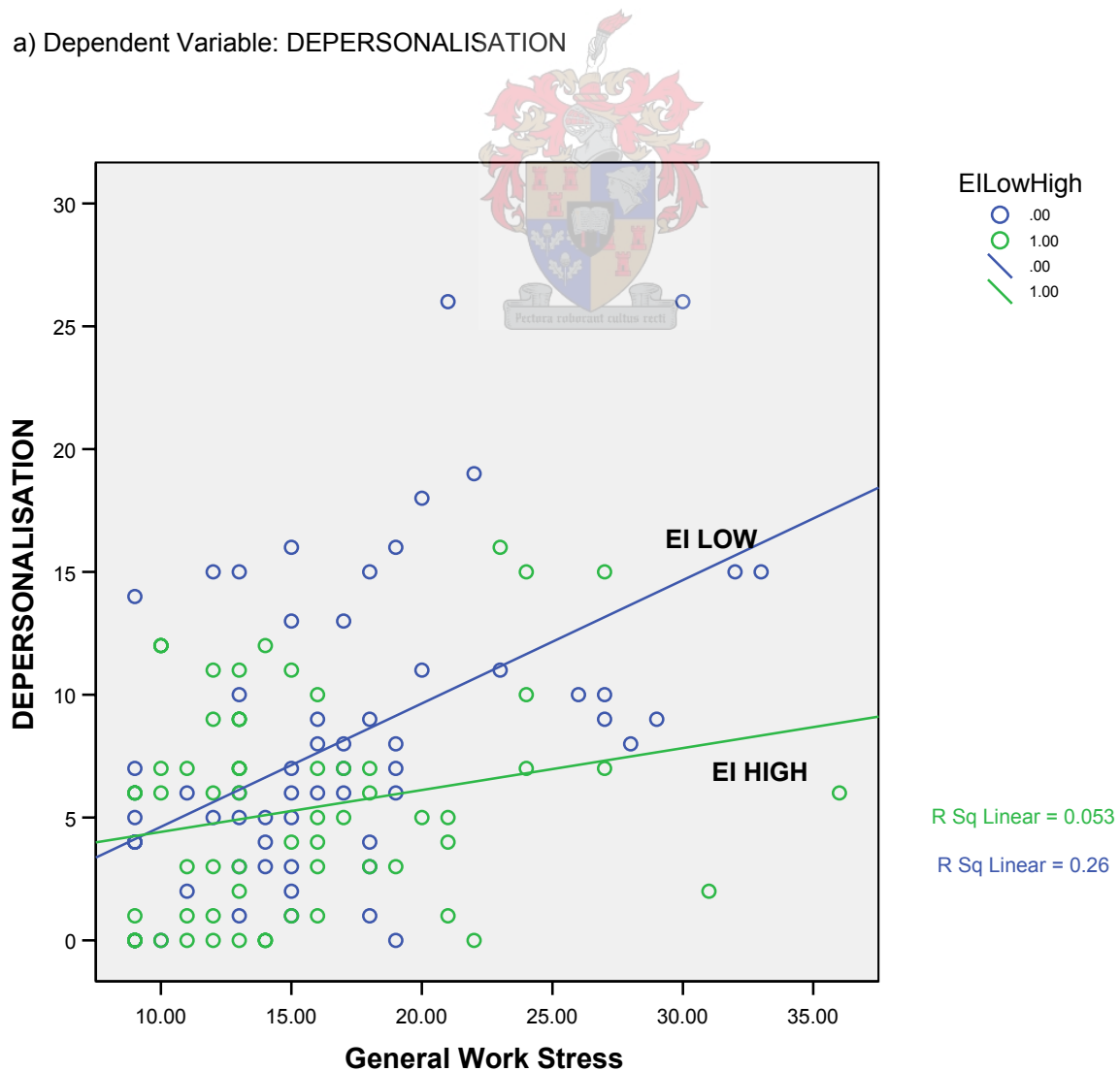
Model	R	R Square	Adjusted R Square	Std Error of the Estimate	F	Sig
1	.489	.239	.219	4.717	12.339	.000

a) Predictors: (Constant), ELOWHIGHSTRESS, General Work Stress, ELOWHIGH

**Table 4.21 Coefficients: Interaction effect for Depersonalisation and Occupational Stress**

Model	Standardized Coefficients		
	Beta	T	Sig
1 (Constant)		-.222	.825
General Work Stress	.558	5.007	.000
EILowHigh	.292	1.247	.215
EILowHighStress	-.546	-2.281	.024

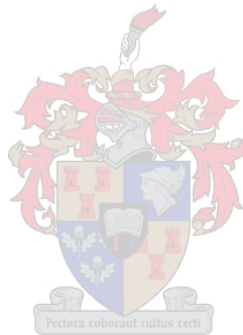
a) Dependent Variable: DEPERSONALISATION



**Figure 4.2 Interaction effect: Depersonalisation and occupational stress**

## 4.5 CHAPTER SUMMARY

In this chapter the research results were reported and interpreted. Results obtained through the various data analysis were discussed and differences between various groups have been explored and highlighted. The following chapter will focus on a discussion of the reported results with reference to the relevant literature. The limitation of this study will be highlighted and recommendations for future research will be proposed.



## **CHAPTER 5: DISCUSSION**

### **5.1 INTRODUCTION**

The problems with regards to occupational stress and burnout as highlighted in the previous chapters (specifically within the nursing industry), necessitated a study of the constructs with the focus to explore possible relationships between them, as well as to investigate whether EI might be a moderator in the stress – burnout relationship. Henceforth, the aim of this study was firstly to explore the relationships between occupational stress, burnout and EI, as well as to determine whether EI acts as a moderating variable in the stress – burnout process. Should the results provide evidence that EI does moderate the stress-burnout relationship, i.e. the presence of EI abilities would in some way buffer the development of burnout in a given individual (as opposed to someone else that does not possess the EI abilities) then it might be logical to propose that EI and the development of EI might be used to minimise the experience of occupational stress and subsequent burnout experienced by nurses. The second objective of the study was to determine whether any of the independent variables (e.g. Emotional Management, Emotional Control, Understanding Emotions External, Sources of Stress and General Work Stress) predicted significant variance in the dimensions of burnout. This chapter provides an integrated discussion of the empirical evidence obtained through the various data analysis procedures aimed at meeting the objectives of the study. References to and comparisons with the relevant literature and previous research findings will also be presented.

### **5.2 FINDINGS – RELATIONSHIP BETWEEN DIMENSIONS OF BURNOUT, OCCUPATIONAL STRESS AND EI**

#### **5.2.1 Burnout and Occupational Stress**

The results of the data analysis pertaining to the Emotional Exhaustion subscale (as a dimension of Burnout) indicated a strong relationship with Occupational Stress (as measured by the General Work Stress Scale, SWSI). The relationship proved to be strongly significant suggesting that nurses who experience high levels of stress, would also experience a sense of inadequacy with regards to the emotional resources and energy that is available to them. Similar results were found between Depersonalisation and Occupational Stress. Even though this was found to be a moderate relationship, it

indicates that where nurses experience high levels of stress, they will tend revert to treating their patients in a dehumanised manner or as objects, with limited emotional involvement. These findings are in line with the results reported by e.g. Kilfedder, Power, & Wells (2001) in a sample of psychiatric nurses where a correlation was found between stress (as measured by the Nursing Stress Scale; Gray-Toft & Anderson, 1981) and Emotional Exhaustion ( $r = .40$ ,  $n = 510$ ,  $p < .001$ ). and Depersonalisation ( $r = .30$ ,  $n = 510$ ,  $p < .001$ ); Naude and Rothmann (2003) in a study on emergency workers where a correlation was found between stress (as measured by the Job Demands scale of the Emergency Worker Stress Inventory, EWSI; Naude & Rothmann, 2003) and Emotional Exhaustion ( $r = .40$ ,  $n = 323$ ,  $p < .01$ ) and Depersonalisation ( $r = .32$ ,  $n = 323$ ,  $p < .01$ ). In addition, the results of the study also corroborate with results of a study by Jenkins and Elliot (2004) in a study on nurse in acute mental health settings who found correlations between stress (as measured by the Mental Health Professional Stress Scale, Cushway, Tyler & Nolan, 1996) and Emotional Exhaustion, ( $r = .60$ ,  $n = 93$ ,  $p < .001$ ) and Depersonalisation, ( $r = .43$ ,  $n = 93$ ,  $p < .001$ ). The research results of this study replicate previous findings in the stress-burnout research domain. The relationship between occupational stress and Emotional Exhaustion as well as Depersonalisation is confirmed. In addition a strong correlation emerged between Emotional Exhaustion and Depersonalisation, indicating some overlap between the two dimensions of Burnout which is not surprising given that Maslach (1997) reported that the two subscales are related aspects of burnout, has low loadings on each other and that correlations between the two subscales are generally found. The results revealed no significant relationship between Personal Accomplishment (as a dimension of Burnout) and Occupational Stress.

In this study, a series of multiple regression analyses were conducted to determine which of the Sources of Stress (as measured by the SWSI; De Bruin & Taylor, 2005), best predicts the development of burnout. Lee, Song, Cho, Lee and Daly (2003) in a study on Korean nurses found that Role Overload [ $\beta = .19$ ;  $p < .05$ ) and Role Conflict ( $\beta = .23$ ;  $p < .01$ ) predicted the greatest variance in Emotional Exhaustion (as a dimension of burnout). More relevant to the South African context, Naude and Rothmann (2006) in their study on emergency workers in Gauteng, indicated that a Lack of Job Resources (as measured by the Emergency Worker Stress Inventory; Naude & Rothmann, 2003) was the greatest predictor of Emotional Exhaustion ( $\beta = .12$ ;  $p < .001$ ) and Depersonalisation ( $\beta = .06$ ;  $p < .001$ ). Similar results were reported by Mostert and Joubert (2005) in a study on the South African police service where it was found that job demands and lack of resources (as

sources of stress) predicted higher levels of burnout. It was anticipated that these results would be replicated in this study, in that Workload and Tools and Equipment (as sources of stress), measuring aspects similar to Job Demands and Lack of Resources, would predict the greatest variance in burnout scores. However, the results of the regression analyses in this study indicated that Workload and Work/Home interface were the strongest predictors of Emotional Exhaustion (as a dimension of burnout) and accounted for 29% of the variance in Emotional Exhaustion. Furthermore, it was found that Relationships and Work/Home interface (as sources of work stress) best predicted Depersonalisation. Relationships and Work/Home interface (as sources of stress) both refer to the interpersonal components often linked to stressful incidents specifically within people-centred professions. More specifically, Relationships as a sources of stress, refers to poor interpersonal relationships with colleagues or superiors, which could also include interpersonal abuse. Within the nursing industry this could be particularly relevant with regards to the often demanding relationship between nurses and doctors, which has often been cited as a source of stress (Coffey & Coleman, 2001; Levert et al., 2000). The findings in this study partially replicate results reported by Coffey and Coleman (2001) in a study on forensic community nurses, where it was found that nurses who found their managers to be unsupportive, reported higher levels of work stress as well as higher levels of Emotional Exhaustion. Furthermore, it was found that respondents in the Coffey and Coleman study (2001) who reported an inability to discuss their problems with their colleagues were more likely to report higher levels of Emotional Exhaustion. Henceforth, the emergence of Relationships as a predictor of variance in Emotional Exhaustion in the present study might be interpreted to be indicative of a possible need for peer support, the absence of which, could contribute to higher levels of Emotional Exhaustion. Interestingly, Work/Home interface (as defined in the SWSI, De Bruin & Taylor, 2005), also has a strong relationships component. The dimension refers to stress experienced as a result of a lack of social support (from family and friends) and work-non-work additivity, which refer to spill-over and conflict with regard to stress within and outside the workplace. Once again, similar to what has been suggested by Coffey and Coleman (2001), based on the results of this study, it could be argued that nurses report a dependency upon others (colleagues, managers, family and friends) and provides evidence that a lack of support could be viewed as a source of stress for nurses. Therefore it could be argued that Work/Home interface as a source of stress, is a predictor of burnout for nurses. These findings by Coffey and Coleman (2001) suggest that nurses tend to seek external means of coping rather than internal mechanisms through individual attributes such as personal control and



EI. Similarly, Levert et al. (2000) found that lack of collegial support correlated positively with Emotional Exhaustion ( $r = .21, n = 89, p = <.05$ ) and Depersonalisation (as dimensions of burnout) ( $r = .23, n = 90, p = <.05$ ). In addition, Work/Home interface, as predictor of burnout in this study, could also be indicative of the dual roles fulfilled by nurses in terms of their role at home and their role at work. Taking into consideration that the majority of the sample in this study is made up of females, it is possible that the pressures experienced by nurses could be as a result of the stress in balancing these two roles and that failure to do so, could possibly contribute to the development of burnout.

Results on the between group comparisons for race group and Emotional Exhaustion revealed that white nurses scored significantly higher on this dimension than Coloured or African nurses. Similarly, scores on Personal Accomplishment showed higher mean scores for White nurses than for the other groups. Coloured nurses scored somewhat higher on Depersonalisation than the other groups, however, these were not found to be significant. These results are similar to those found by Pelzer et al. (2003) who reported higher stress levels and burnout symptoms for White doctors in comparison to respondents of colour. Possible explanations for these results could be that due to the historical situation in South Africa, white doctors have been practising in the profession for a longer period of time and that they are reporting an accumulated effect of stress and burnout. Furthermore, it could be that white nurses experience greater difficulty in adapting to the current changes within the health care system with regards to the lack of government financial support and staff shortages. However, it could also be reasoned that white nurses, who have been in the profession for longer, might be employed on more senior levels within the profession, resulting in greater responsibility and as result higher levels of stress and burnout.

In considering the sources of stress variables which predicted the greatest amount of variance in the dimensions of burnout (workload & work/home interface), it is possible to argue that, with reference to the race differences, Coloured and African nurses could possibly have stronger support networks in terms of their professional and personal relationships. This could also be explained as a result of cultural differences (like collectivism – which refers to a society in which people from birth onwards are integrated into strong, cohesive in-groups, which throughout their lifetime continue to protect them in exchange for unquestioning loyalty – versus Individualism – which stands for a society in which the ties between individuals are loose – everyone is expected to look after

him/herself and her/his immediate family). Traditionally, Coloured and African families consist of extended families often including grandparents, children and grandchildren in one household. It is possible that the support in terms of the number of individuals available to maintain the household, could impact on the lower levels of burnout reported by respondents of colour in comparison to White respondents.

### **5.2.2 Dimensions of Burnout and EI**

Apart from the results found between the dimensions of burnout and occupational stress, the relationships between the dimensions of burnout and dimensions of EI were also explored. It was found that a moderate significant relationship existed between Emotional Exhaustion (as dimension of burnout) and Emotional Management and a small significant relationship between Emotional Exhaustion and Emotional Control. These relationships were both found to be significantly negative, indicating that where nurses are capable of managing and controlling extreme emotions in themselves and in other individuals such as their colleagues and patients, feelings of emotional depletion of energy (Emotional Exhaustion) would typically decrease. A negative relationship was also found between Depersonalisation (as a dimension of burnout) and Emotional Management and Emotional Control (as dimensions of EI) suggesting that when nurses are more capable of managing and controlling their own emotions and to a certain extent the emotions of others, they would be less likely to report feeling alienated and distant from their patients. Alternatively, where individuals are not capable of controlling and managing positive or negative emotions in themselves and others, it would lead to feelings of depersonalisation. These results are noteworthy as the implications for nurses in the context of their work could be very far reaching. When feelings of depersonalisation are experienced, subsequent related behaviour would directly impact on the service delivery to patients in the sense that nurses would most probably be inclined to treat their patients in a detached and negative manner, creating the impression that the patients are not important or not worthy of being cared for in a professional manner. The significant negative relationship between the total EI score and Depersonalisation further confirms the expectation that increased levels of EI would reduce feelings of depersonalisation in the individual.

In exploring the relationships between Personal Accomplishment (as a dimension of burnout) and the respective dimensions of EI, the expected results were confirmed for four of the dimensions of EI as well as the total EI score, in that significant relationships were found between Personal Accomplishment and the Emotional Recognition and Expression,

Understanding Emotions External, Emotional Management, Emotional Control (as dimensions of EI) and Total EI scores. The strongest correlation emerged between Personal Accomplishment and Understanding Emotions External. This implies that when a nurse is able to identify and understand the emotional information within the work environment related to, for instance, relationships with colleagues, during meetings, interactions and conversations, it could have an impact on the interpretation of the appropriateness of these emotions relating to the situations, which will allow him/her to react in a suitable (emotionally intelligent) manner in the situation. This dimension of EI, clearly contributes to feelings of Personal Accomplishment, in that individuals who report higher scores on Understanding Emotions External (as a dimension of EI) will be able to assess their self-worth and effectiveness in a more realistic manner. This implies that the better individuals understand the emotions within their immediate surroundings, the more positive their feeling of competence and confidence in their ability to perform well. No previous research on these findings could be found.

In order to determine which dimensions of EI best predict variance in the three dimensions of burnout, three standard regression analyses were conducted. It was found that Emotional Management ( $\beta = -.461, p < .000$ ) and Understanding Emotions External ( $\beta = .391, p < .000$ ) significantly predicted variance in Emotional Exhaustion (as a dimension of burnout). This result indicates that the greatest cause of Emotional Exhaustion for nurses could possibly be the continuous requirement to understand the emotions (which implies constantly surveying the patients and their family and friends for experienced emotions, interpret the information and respond appropriately) of their patients and the families of these patients (Understanding Emotions External). In addition, and as a logical consequence to this, nurses are then also required to actively manage these emotions (in themselves and others) in order to create or maintain a positive disposition in themselves whilst simultaneously managing and adapting the emotions within themselves, the patients and their relatives and friends (Emotional Management). This also relates to the concept of emotional labour (Brotheridge & Lee, 2003), where individuals employed in caring professions, such as nurses, doctors and teachers, are required to generate and project positive emotions as a requirement of their job, even though they might not genuinely be experiencing these emotions. The regression results for Depersonalisation indicated that Emotional Management ( $\beta = -.277, p < .05$ ) predicted the greatest variance in Depersonalisation. These results are in line with the results found for Emotional Exhaustion and therefore the argument for Emotional Exhaustion as reasoned above also

implies for Depersonalisation. The regression results for the third dimension of burnout, Personal Accomplishment, indicated that Understanding Emotions External provided the strongest prediction of Personal Accomplishment. The results obtained for Personal Accomplishment possibly indicate that when an individual possess the ability to understand the emotional responses of others they will have a more realistic self-evaluation and an accurate belief in their own abilities and achievements.

Therefore, from the results obtained in this study, it could be argued that the extent to which nurses are able to identify and understand the emotions of others could impact how they perceive at positive emotions or feedback from e.g. patients and colleagues, which will in turn result in feelings of accomplishment and efficiency.

### **5.2.3 Occupational Stress and EI**

The results obtained in this study, relating to occupational stress (as measured by the General Work Stress Scale) of the SWSI revealed negative significant relationships between stress and the EI dimensions, Emotional Management and Emotional Control. It could therefore be argued that nurses who possess the ability to manage emotions within themselves (e.g. fear of disease, fear of dying, emotions related to the death of patient) and also manage emotions in others (e.g. patients, families of patients and colleagues), be it positive or negative, would in general experience less occupational stress. Similarly, nurses who would have the ability to control extreme emotions at work (e.g. frustrations regarding workload, inability to provide the necessary attention to patients, possible poor relationships with doctors) will also experience less occupational stress. Interestingly, no significant relationship was found between total EI and occupational stress.

In a study by Nikolaou and Tsaousis (2002) that investigated the relationship between EI and occupational stress, several negative significant correlations were found between total EI (as measured by the Emotional Intelligence Questionnaire, EIQ, Tsaousis, 2003) and occupational stress measures (measured by the Organzational Stress Screening Tool, Asset, Cartwright & Cooper, 2001) ( $r = -.59, n = 212, p < .01$ ). Furthermore, it was found that three of the four subscales of EI (perception and appraisal of emotions; control of emotions; understanding and reasoning of emotions and use of emotion for problem solving, as measured by the EIQ; Tsaousis, 2003) were reported to be significant contributors in predicting occupational stress. The study identified EI as a moderator in the stress process, which according to Nikolaou and Tsaousis (2002) could have significant

potential as a stress management technique. Similarly, Slaski and Cartwright (2002) reported significant correlations between occupational stress (measured with the GHQ; Goldberg & Williamson, 1988) and total EI (measured by the Bar-On EQ – i; Bar-On, 1997) ( $r = -.40, n = 224, p < .01$ ). The results reported in the current study, is therefore a partial replication of previous research in this domain.

In order to provide helpful information regarding possible interventions, it was necessary to investigate which of the EI dimensions would predict the greatest variance in occupational stress. The results obtained from the regression analysis indicated that Understanding Emotions External ( $\beta = .427, p < .000$ ) emerged as the strongest predictor of occupational stress. Other dimensions of EI which were found to predict variance were Emotional Management ( $\beta = -.362, p < .005$ ) and Emotional Control ( $\beta = -.361, p < .000$ ). These results indicate that when all the EI dimensions are entered into the regression model that Understanding Emotions External (the ability to recognise and understand the emotions of others in the workplace) emerges as the EI ability that mostly predicts variance in occupational stress. This suggests that the ability to, or not to, understand emotions within the nursing environment could be a predictor of stress experienced, in that where emotions are accurately perceived and understood it would possibly minimise the stress experienced (e.g. misunderstandings which lead to stressful situations, misinterpretation of doctors instructions). Furthermore, nurses who report the ability to then manage the positive and negative emotions within themselves and others (Emotional Management) will then be able to react to the various emotional situations found in hospitals in a rational and realistic manner. In addition, where Emotional Control is also present it will then result in the ability to control strong and extreme emotional reactions (such as the trauma of an injury or the death of a patient) and to deal with these emotions in a logical manner, minimising the stress and anger experienced (such as anger towards patients, families, doctors and often God), thereby also reducing the physiological impact related to stressful experiences. These results are in line with the results found by Gardner (2006) in a study on an Australian sample where it was found that four of the five dimensions of EI as measured by the SUEIT (Palmer & Stough, 2001), with the exception of Emotions Direct Cognition, was related to occupational stress.

### **5.3 IMPACT OF DEMOGRAPHIC VARIABLES ON OCCUPATIONAL STRESS AND BURNOUT**

A series of one-way between-group analyses of covariance (ANCOVA) were employed to analyse the differences between the various race groups' occupational stress and dimensions of burnout whilst statistically controlling for an additional variable. Covariates that were controlled for included: level of income, the number of years in the profession, level of education and the rank (level of seniority) that the individual is employed in.

The results of the analysis of covariates indicated that that level of income did not have an impact on the levels of reported Depersonalisation and Emotional Exhaustion between the different in race groups, however, in the analysis with Personal Accomplishment as dependent variable, level of income, with race group as independent variable, showed significant differences. These results indicate that the level of income had a moderate effect in the differences of scores reported on Personal Accomplishment for the various race groups. Based on this results it is possible to argue that a higher level of income could result in a person experiencing a greater sense of Personal Accomplishment possibly due to the fact that a higher level of income is often related to personal success or feelings of progression or advancement.

Overall, it was found that the differences reported for Emotional Exhaustion by the various race groups, could be explained by a number of variables, which include: the number of years in the profession, level of education and the rank (level of seniority) that the person is employed in.

The comparisons between departmental groups (General Ward, ICU and Other) and dimensions of burnout showed that there were no significant differences between the various groups. Lastly, the results between the departmental groups and Personal Accomplishment reported significantly higher scores for the group labelled "other". This group includes specialist areas like gynaecology, paediatrics, ER and Maternity wards. It is possible that these results could have been affected by the fact that the group is made up of small samples of these specialists and would mostly be indicative of individual scores and the interpretation of these scores should therefore be viewed with caution and not be generalised to the overall population of nurses in the specific specialist areas. Alternatively it could be reasoned that wards such as maternity, gynaecology, ER and paediatrics (which form part of the "other" group), require a more intense emotional involvement with

patients due to the nature of the work and could therefore result in greater feelings of self-worth and competence due to the fact that the impact of the involvement of the nurses are more visible. For example, the birth of a new baby in gynaecology wards, the interaction with new mothers in maternity wards, the life/death situation in ER, all require a heightened level of involvement from the nurses.

#### **5.4 EI AS MODERATOR IN THE STRESS AND BURNOUT RELATIONSHIP**

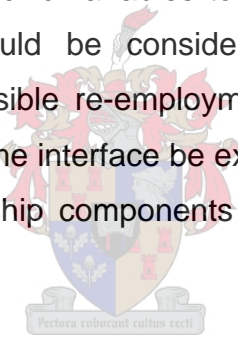
EI has been researched by various researchers as a moderating variable in for example the relations between emotional and behavioural reactions to job security (Jordan, Ashkanasy and Härtel, 2002) whilst Matthews, Emo, Funke, Zeidner, Roberts, Costa, and Schulze (2006) explored EI as moderating variable between personality and task-induced stress.

In the current study, moderated multiple regressions were conducted which indicated that EI could act as a moderator in the relationship between Emotional Exhaustion and Occupational Stress and Depersonalisation and Occupational Stress. No significant relationships were found for Personal Accomplishment. These results are meaningful and imply that where individuals experience high levels of occupational stress, EI could be a moderator in preventing the development of burnout. This implies that where individuals possess higher levels of reported EI, the capacity to behave emotionally intelligent in various situations, could assist the individual in coping better with stressful situations and henceforth buffer the development of burnout in the individual.

#### **5.5 LIMITATIONS OF THE STUDY AND FUTURE RESEARCH**

A number of limitations to the study can be identified. A first limitation worth mentioning is that the majority of the sample group consisted of nurses employed in the respective general wards of the various hospitals. Even though the working environment within the various wards (e.g. ICU, general, maternity) in which these nurses are employed are equally demanding, more effective between-group analysis would have been possible, if a greater number of participants per ward were included. A larger sample with more representation from the different wards, would have allowed for more comprehensive analyses in terms of differences in sources of the sources of stress experienced in the various departments. Cartledge (2001), in a study on turnover in ICU nurses, highlighted the necessity to differentiate between the different work environments (e.g. general ward, maternity, theatre, ICU) and it was suggested that the context in which the individual is

employed, could impact on the levels of occupational stress experienced (Goode & Rowe, 2001; Verhaeghe, Vlerick, De Backer, Van Maele & Gemmel, 2006). A second limitation of this study pertains to the fact that the measurement instrument that was used in this study to measure EI, the SUEIT, was developed in Australia and no research has yet been published regarding the cross-cultural differences with regards to the instrument, specifically to confirm suitability for use in a South African context. Furthermore, all three measures utilised in the study (MBI, Maslach, Jackson & Leiter, 1996; SUEIT, Palmer & Stough, 2001) and the SWSI (De Bruin & Taylor, 2005) are self-report measures. Criticisms related to utilising self-report measures have been highlighted in earlier chapters and refer mostly to the fact that respondents attempt to create a more favourable impression of themselves when completing such instruments. This is referred to as social desirability. In addition, with specific reference to occupational stress and burnout, researchers do not always have control over the environment in which respondents are employed or the additional home stress that they could be exposed to. The possible influence of situational and time specific variables to which the respondent is exposed at the time of the assessment should be considered, e.g. possible unstable home environment and relationships; possible re-employment in another ward. It is therefore suggested that cultural and work/home interface be explored, to provide more detail on the specific aspects within the relationship components that contribute to higher and lower reported stress and burnout.



Recommendations for future research include a replication of this study conducted with a larger sample as a follow-up study, in order to explore the effect of the development of EI on stress and burnout due to the fact that it was found that EI does, to a certain extent moderate the stress-burnout relationship. Furthermore, an investigation into moderating role of EI in the Emotional Labour and Burnout relationship is recommended. In this study, the role of Emotional Labour in service orientated occupations (e.g. nursing) was highlighted and therefore the moderating effect of EI in the Emotional Labour Burnout relationship should be investigated.

Results obtained in the regression analysis to test for the moderating effect of EI in the stress burnout relationship suggest that it would be sensible to include EI training in the curriculum of nurses. It is suggested that future research include a pre- and post test for EI, burnout and stress, with the inclusion of EI training, to assess the impact of EI on the reported levels of stress and burnout by means of an intervention study. However, suitable



consideration should be given challenges around the content selection of the training programmes, the method of training that will be utilised and other constraints pertaining to the training methodology, as this remains a challenge to effectively control and monitor. This type of research also poses a number of challenges and logistical problems. For example, such research is not only costly, but also presents a number of challenges in terms of the stability of the sample group (e.g. individuals changing employers, relocating). Lastly, it is suggested that the measuring instruments be translated into African languages to accommodate the whole South African population which will enable greater insight and depth to the results obtained through the study.

## **5.6 CONCLUSION**

This study provided evidence that confirmed the relationship between occupational stress and dimensions of burnout. In addition, the role of EI as moderator in the stress and burnout relationship was explored and partially confirmed. Interestingly, the aspects which were most significant in predicting occupational stress and burnout, was related to the relationship component, both on a professional level at work with superiors and colleagues and on a personal level with family and friends. In addition, the dimension of EI which was found to be the greatest predictor of burnout, Understanding Emotions External, also makes an indirect reference to interpersonal relationship in terms of the understanding of the emotions that others experience and express in the workplace. Therefore, it seems that in general, a focus on the development of effective interpersonal relationships and skills, combined with training on the various aspects of EI, would have a significant impact on the levels of stress and burnout reported by individuals employed in the nursing profession. Furthermore, training on EI will address aspects such as the management of positive and negative emotions and the control of extreme emotions such as anger, stress and anxiety, which in turn, would both have a positive impact on both the professional and personal relationships in that where individuals possess the ability to deal effectively with these types of emotions, it will result in less conflict within the workplace and home environment.

In closing, the empirical evidence presented in this study make it evident that occupational stress and burnout is a prevalent problem for individuals employed in the nursing industry. However, it is clear that attention to the relationship that these individuals are involved in, whether personal or professional, would significantly impact on the stress and burnout that they experience, which will have a direct effect on the level of care they are capable of

delivering to the client (i.e. patients). Therefore, interventions in terms of EI and interpersonal training would have a significant impact on stress and burnout within the nursing industry.



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- A faint watermark of a university crest is visible in the center of the page. The crest features a shield with various symbols, topped by a crown and flanked by two figures. Below the shield is a banner with the Latin motto "Pectora solvant cuncta rege".