

# EMOTION EXPERIENCE, EMOTIONAL INTELLIGENCE AND WELL-BEING IN SOUTH AFRICA

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This Ph.D is dedicated to my son, Christiaan Botma.  
One day you will understand that you were my biggest inspiration!

*"It's in Christ that we find out who we are and what we are living for. Long before we first heard of Christ, He had His eye on us, had designs on us for glorious living, part of the overall purpose He is working out in everything and everyone"*  
- Ephesians 1:11 (MSG) -

## REMARKS

The reader is reminded of the following:

- The references as well as the editorial style as prescribed by the *Publication Manual (5<sup>th</sup> edition)* of the American Psychological Association (APA) were followed in this thesis. This practice is in line with the policy of the Programme in Industrial Psychology of the North-West University to use the APA-style in all scientific documents as from January 1999.
- The thesis is submitted in the form of three research articles
- Each chapter has its own reference list.

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## SUMMARY

**Title:** Emotion experience, emotional intelligence and well-being in South Africa.

**Key words:** Emotions at work; emotion experience; affective events; South African employees; emotion work; emotional intelligence; well-being; construct validity; reliability; emotional intelligence measures; factor-structure; burnout; engagement; social support.

Employee well-being is an increasingly important subject in organisational research. Emotions form a significant part of workplace well-being, in that negative emotion experiences could have detrimental effects on employees' health and well-being. However, there is a lack of research regarding specific affective events at work leading to certain emotions, especially within a South African working context.

The extent to which employees are required to display appropriate emotions to perform effectively in their jobs is known as emotion work. This involves manipulating and controlling emotions in the performance of their jobs. When the emotions felt by the employee do not match the emotions he or she has to display, emotional dissonance occurs and this can lead to dysfunctional behaviour of the employee.

An important aspect of emotional intelligence is the ability to regulate emotions in oneself and others, and plays a note worthy role in the emotion experiences and well-being of employees. Work is usually viewed in either a negative manner (relating to negative outcomes such as burnout) or a positive manner (relating to positive outcomes such as engagement), and therefore burnout and engagement seems to be regarded as the main focus on the wellness continuum. However, certain individual attributes (emotional intelligence) and organisational factors (social support) contribute and impact on the experience of employee well-being.

In order to measure the emotional intelligence levels of employees, it is important to make use of valid and reliable emotional intelligence measures. Nevertheless, there is a lack of empirical research on validity and reliability studies in terms of emotional intelligence in a South African context. A widely used measure of emotional intelligence in South Africa is the Schutte Emotional Intelligence Scale (SEIS), but much criticism exists in terms of the measure's factorial validity, and

therefore the need exists for an alternative emotional intelligence measure that can be standardised for a multi-cultural South African population.

The objectives of this research were to investigate and determine the emotions employees experience at work, the specific events causing such emotions, and the emotion regulation mechanisms employees implement in order to regulate these emotion experiences; to test the construct validity and reliability of the Greek Emotional Intelligence Scale (GEIS) across two different culture groups; and to develop and test a structural model of wellness including burnout and engagement (well-being), emotion work, emotional intelligence and social support for professionals in a working context.

This study was conducted in three consecutive studies. In study one a qualitative design was used. The population consisted of a non-probability purposive voluntary sample ( $N=52$ ) of professionals in the mining industry in the North West and Gauteng Provinces. The interview results, together with notes from the observation periods, were analysed by using content analysis and indicated that employees experience a wide range of emotions at work including, amongst others, anger, aggression and aggravation, disappointment, and suspicion. Results also indicated that the events causing such emotions could be divided into three levels namely organisational level, group level and individual level. Some of these events were organisational culture, lack of support and appreciation, and role conflict and role incongruence. It was also found that these professionals made use of emotional intelligence, emotion work and emotional distancing and detachment to regulate their emotions.

Study two consisted of two sub-studies: Sub-study 1 was an exploratory factor analysis on a combined sample of 241 White and African professionals from a gold-mining environment. The four factors identified were caring and empathy, control of emotion, emotion expression and recognition, and use of emotion to facilitate thinking. Sub-study 2 was a confirmatory factor analysis in order to support findings from sub-study 1. In step 1 a four-factor model on a combined sample of 345 White and African professionals from a platinum- and steel production environment was tested. Several items from the emotion expression and recognition scale cross-loaded onto the other three factors and it was decided to test a three-factor model. The three-factor model indicated the best goodness-of-fit indices and showed acceptable alpha coefficients. Step 2 involved testing these three factors in a White and African sample independently. In the White sample the three factor model fitted the data after an investigation of the modification indices. However, when it was

tested in the African sample four items were found to be problematic, but after omitting these items the model did in fact fit. This could possibly be explained by cultural differences between the White and African sample.

In study three a cross-sectional survey design was utilised. An availability sample ( $N = 465$ ) was taken from human resource employees in a platinum- and steel production environment. The Oldenburg Burnout Inventory (OLBI), Utrecht Work Engagement Scale (UWES), Frankfurt Emotion Work Scale (FEWS), Greek Emotional Intelligence Scale (GEIS) and Social Support Scale were administered. The results obtained from structural equation modelling (SEM) showed that emotional intelligence and social support are negatively related to emotion work and burnout, and positively related to engagement, which means that employees with emotional intelligence and social support will be less likely to experience negative effects of emotion work and burnout and more likely to experience work engagement. Results also indicated that emotion work is positively related to burnout, meaning that emotion work leads to burnout.

Recommendations for the organisation and future research were made.

## OPSOMMING

**Titel:** Emosie-ervaring, emosionele intelligensie en welstand in Suid-Afrika.

**Sleutelwoorde:** Emosies in die werksplek; emosie-ervaringe; affektiewe gebeurtenisse; Suid-Afrikaanse werknemers; emosie-werk; emosionele intelligensie; welstand; konstruk-geldigheid; betroubaarheid; emosionele intelligensie meetinstrumente; faktor-struktuur; uitbranding; werksbegeestering; sosiale ondersteuning.

Werknemer welstand is 'n toenemende belangrike onderwerp in organisasie-navorsing. Emosies vorm 'n belangrike deel van werksplek-welstand in terme van die feit dat negatiewe emosie-ervaringe 'n moontlike destruktiewe effek op werknemers se gesondheid en welstand mag hê. Daar is egter 'n gebrek aan navorsing aangaande die spesifieke affektiewe gebeurtenisse wat aanleiding gee tot sekere emosies, veral binne die Suid-Afrikaanse werkskonteks.

Die mate waartoe werknemers verwag word om gepaste emosies uit te beeld, om sodoende hulle take effektief uit te voer, word emosie-werk genoem. Dit het betrekking tot die manipulerings en kontroliering van emosies tydens die uitvoering van hul poste. Wanneer die werklike emosies wat deur die werknemer ervaar word teenstrydig is met die emosies wat van hom of haar vereis word om uit te beeld, word emosionele dissonansie ervaar en dit kan aanleiding gee tot nie-funksionele gedrag van die werknemer.

Die belangrikste aspek van emosionele intelligensie is die vermoë om emosies in die self en ander te reguleer en dit speel 'n waardevolle rol in die emosie-ervaringe en welstand van werknemers. Werk word gewoonlik vanuit 'n negatiewe perspektief (wat betrekking het tot negatiewe gevolge soos uitbranding) of 'n positiewe perspektief (wat betrekking het tot positiewe gevolge soos werksbegeestering) beskou. Dit blyk dus asof uitbranding en werksbegeestering beskou word as die hoof-fokus areas op die welstand-kontinuum. Sekere individuele eienskappe (emosionele intelligensie) en organisatoriese faktore (sosiale ondersteuning) dra egter by tot en beïnvloed die beleving van werknemer-welstand.

Dit is belangrik om geldige en betroubare meetinstrumente te gebruik tydens die bepaling van werknemers se emosionele intelligensie vlakke. Nietemin, daar is 'n tekort aan empiriese navorsing rakende valideringsstudies in terme van emosionele intelligensie binne 'n Suid-Afrikaanse konteks.

‘n Meetinstrument wat in verskeie Suid-Afrikaanse studies aangewend word, is die Schutte Emosionele Intelligensie Skaal (SEIS), maar kritiek word gelever op grond van dié skaal se faktorgeldigheid, en daar bestaan dus ‘n behoefte aan ‘n alternatiewe emosionele intelligensie meetinstrument, wat vir ‘n multi-kulturele Suid-Afrikaanse populasie gestandaardiseer kan word.

Die doelstellings van hierdie navorsingsprojek was om die emosies wat werknemers by die werk ervaar, die spesifieke gebeurtenisse wat aanleiding gee tot hierdie emosies, asook die meganismes wat werknemers implementeer om hul emosie-ervaringe te reguleer, te ondersoek en te bepaal; om die konstruk-geldigheid en betroubaarheid van die Griekse Emosionele Intelligensie Skaal (GEIS) oor twee verskillende kultuur groepe te toets; en om ‘n strukturele model van welstand, wat uitbranding en begeestering, emosie-werk, emosionele intelligensie en sosiale ondersteuning insluit vir professionele persone in ‘n werkskonteks.

Die studie is met behulp van drie agtereenvolgende studies uitgevoer. In studie een is ‘n kwalitatiewe ontwerp toegepas. Die studie-populasie het bestaan uit ‘n vrywillige nuwenaarskynlikheid-steekproef ( $N = 52$ ) van professionele persone vanuit die mynindustrie in die Noordwes- en Gauteng Provinsies. Resultate van die ondersoek is geanaliseer deur middel van inhouds-analise en het aangedui dat werknemers ‘n verskeidenheid van emosies by die werk ervaar, ondermeer woede, aggressie en frustrasie, teleurstelling, en suspisieusheid. Resultate het ook daarop gedui dat die spesifieke gebeurtenisse wat aanleiding gee tot hierdie emosies in drie vlakke verdeel kon word naamlik organisasie-, groep- en individuele vlak. Van hierdie gebeurtenisse sluit in organisasie-kultuur, gebrek aan ondersteuning en erkenning, asook rolkonflik. Dit is ook gevind dat hierdie professionele persone van emosie-werk, emosionele intelligensie en emosionele distansiering en onttrekking gebruik maak om hul emosie-ervaringe te reguleer.

Studie twee is uitgevoer deur middel van twee substudies: Sub-studie 1 was ‘n eksploratiewe faktoranalise vir ‘n gekombineerde populasie van 241 Wit en Swart professionele persone vanuit ‘n goud-mynomgewing. Die vier faktore geïdentifiseer was omgee en empatie, kontrole van emosie, uitdrukking en herkenning van emosie, en gebruik van emosie om denke te fasiliteer. Sub-studie 2 was ‘n bevestigings-faktoranalise om die bevindinge van sub-studie 1 te ondersteun. ‘n Vier-faktor model is getoets op ‘n gekombineerde populasie van 345 Wit en Swart werknemers van ‘n platinum- en staal produksie omgewing. Verskeie items van die uitdrukking en erkenning van emosie skaal het gekruis-laai op die ander drie faktore en daar is besluit om ‘n drie-faktor model te toets. Die drie-faktor model het die beste gepas en aanvaarbare alpha koefisiënte getoon. Stap 2

het bestaan uit die toets van die drie faktore op 'n Wit en Swart populasie afsonderlik. Na ondersoeking van die modifikasie indekse het die model gepas vir die Wit populasie, maar met die toets van die drie-faktor model op die Swart populasie, was vier items problematies. Na die uitlating van dié items het die model gepas. Hierdie resultate kan moontlik toegeskryf word aan kultuur-verskille tussen die Wit en Swart kultuur groepe.

Tydens studie drie is 'n dwarssnedeopname-ontwerp gebruik. 'n Beschikbaarheidsteekproef ( $N = 465$ ) is geneem van mensehulpbron werknemers vanuit 'n platinum- en staal omgewing. Die Oldenburg Uitbranding-Vraelys (OLBI), Utrecht Werksbegeestering Skaal (UWES), Frankfurt Emosie Werk Skaal (FEWS), Griekse Emosionele Intelligensie Skaal (GEIS), en Sosiale Ondersteuning Skaal is afgeneem. Die resultate wat verkry is deur gebruik te maak van strukturele vergelykingsmodellering (SEM) het getoon dat emosionele intelligensie en sosiale ondersteuning negatief verband hou met emosie-werk en uitbranding en positief verband hou met werksbegeestering, wat beteken dat wanneer emosionele intelligensie en sosiale ondersteuning voorkom, werknemers minder geneig sal wees om negatiewe effekte van emosie werk en uitbranding te ervaar en meer geneig sal wees om werksbegeestering te ervaar. Resultate het ook daarop gedui dat emosie-werk positief verband hou met uitbranding, wat beteken dat emosie-werk aanleiding gee tot uitbranding.

Aanbevelings vir die organisasie en toekomstige navorsing is gemaak.

# CHAPTER 1

## INTRODUCTION

This thesis focuses on the emotion experiences, emotional intelligence and well-being of employees in a South African context.

Chapter 1 contains the problem statement, research objectives and research methodology employed. The chapter starts out with a problem statement, giving an overview of previous related research conducted on emotion experiences, emotional intelligence and well-being of employees, linking it to this research project and its research objectives. A discussion of the research method follows, with details regarding the empirical study, research design, study population, measuring instruments and statistical analyses. It concludes with a chapter summary giving an overview of the chapters that comprise this thesis.

### 1. PROBLEM STATEMENT

Understanding employees' workplace well-being has increasingly become a great concern to many researchers (Zammuner, Lotto, & Galli, 2003). The organisation in which employees work, has an influence on their thoughts, emotions and behaviours, just as employees' thoughts, emotions and behaviours have an influence on the workplace. Employees spend the greatest part of their days at work, and a person's job is the source of a variety of emotion-related experiences, consisting of positive as well as negative experiences (Zammuner et al., 2003). These emotion experiences may not only give an indication of the quality of an employee's work life, but also of the employee's well-being.

Only recently, interest in research regarding emotions in an organisational context has emerged (Ashkanasy, Härtel, & Zerbe, 2000; Brief & Weiss, 2002; Fisher & Ashkanasy, 2000; Grandey, Tam, & Brauburger, 2002). Emotions play a significant role in explaining human functioning (Muchinsky, 2000) and inherently exercise an impact on performance and functioning, and forms part of many activities in the organisation such as reaching goals, performance evaluations and selection interviews (Barsade & Gibson, 2007). Organisations often attempt to dominate the emotions and the way in which employees express their emotions by establishing rules of emotional display (Rafaeli & Sutton, 1987).

According to the model of Grandey (2000), certain individual attributes (emotional intelligence) and organisational factors (social support) contribute to and exercise an impact on the experience of employees' well-being. Grandey (2000) therefore suggests that the level and type of emotion work performed by an employee may be affected by the environment. Grandey's model (2000) is graphically presented in Figure 1.

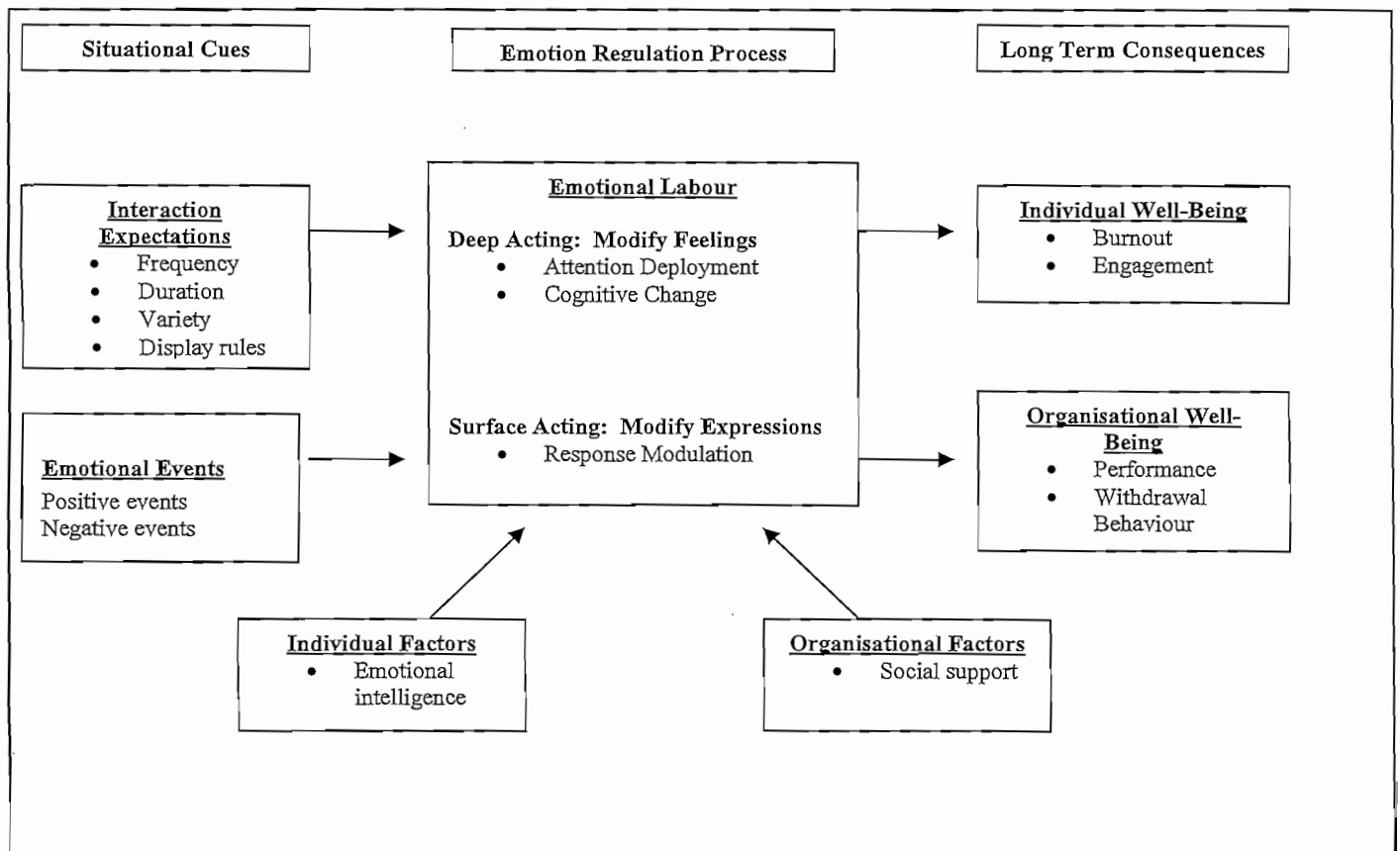


Figure 1. Proposed conceptual framework of emotion regulation performed in the work setting (Grandey, 2000)

Emotion work refers to the degree to which an employee is expected to display certain emotions in order to effectively perform on the job (Wong & Law, 2002). Various approaches to emotion work exist (Ashforth & Humphrey, 1993; Grandey, 2000; Hochschild, 1983; Morris & Feldman, 1996), and even though they define emotion work differently they share the view that emotions at work are being regulated in order to meet organisational expectations. Employees are required to display an array of emotions and have to be very selective regarding which emotions they choose to display



(Humphrey, Pollack, & Hawver, 2008), and employees will therefore either engage in surface acting or deep acting (Hochschild, 1983; Zapf, Vogt, Seiffert, Mertini, & Isisc, 1999).

Deep acting takes place when effort is extended to actually feel the emotions expected to be expressed (Hochschild, 1983). This implies that the employee needs to invoke thoughts and memories to actually display a certain feeling (Ashforth & Humphrey, 1993). This is an active attempt by the employee to align felt and displayed emotions. Surface acting is when emotions expressed, by an employee, are different from the actual emotions that the employee is experiencing (Hochschild, 1983). It entails managing the visible aspects of emotions. According to Zapf et al. (1999), during surface acting the employee pretends to experience the expected emotions, while his or her inner feelings differ from the emotions expected to be displayed.

The processes of deep acting and surface acting are very demanding on an individual, which may lead to discomfort and other unpleasant feelings (Constanti & Gibbs, 2004; Hochschild, 1983; Mann, 2005). Accordingly, surface acting and deep acting may have an influence on the well-being of the employee, and consequently on the well-being of the organisation (George, 2000; Grandey, 2000). Surface acting may lead to stressful experiences for the employee (Hochschild, 1983), in that suppressing true feelings and portraying false emotions, is a very demanding task. With regard to stress and burnout research, emotional dissonance forms an integral part of emotion work (Grandey, 2000). Due to the fact that these processes of emotion work are very demanding on an individual they may have negative emotional consequences (Constanti & Gibbs, 2004; Hochschild, 1983; Mann, 2005), as well as a negative influence on the well-being of the employee, and consequently the well-being of the organisation (George, 2000; Grandey, 2000).

When emotions expressed are incongruous with the emotions felt, emotional dissonance occurs (Abraham, 1999; Zerbe, 1998), which may lead to dysfunctional employee behaviour (Lewig & Dollard, 2003). According to Lovelock (2001) emotional dissonance can be stressful and can possibly lead to feelings of falseness and potentially burnout (Erickson & Ritter, 2001).

Emotional dissonance is a process where the emotions expressed do not match the private emotions felt (Zerbe, 1998). Emotion work can become dysfunctional when dissonance is experienced (Lewig & Dollard, 2003). Such incongruity between feeling and acting may lead to lowered self-esteem, increased depression, cynicism, and alienation from work (Guerrier & Adib, 2003). In the same way self-alienation may be experienced when one fails to recognise and experience true

emotions (Meyerson, 2000). It is also seen as a sense of strain experienced by the employee (Moore, Kelliher, & Hailey, 2004).

According to the Affective Events Theory (Weiss & Cropanzano, 1996) workplace emotions, that will either be positive or negative, are triggered by events and conditions at the workplace, leading to emotion-driven behaviours and attitudes. The theory in other words suggests that certain workplace characteristics induce certain events, causing specific emotional reactions, and in turn influence work attitudes and behaviours (Grandey et al., 2002).

Certain events give rise to specific emotions, for instance unfair treatment and disrespect (Fitness, 2000; Weiss, Suckow, & Cropanzano, 1999), job incompetence (Fitness, 2000), personal attacks and uncivilised treatment (Grandey et al., 2002), and task interferences (Grandey et al., 2002) lead to anger. Organisational change is also considered to be an event that elicits emotional responses, such as anxiety and fear (Mak & Mueller, 2001; Torkelson & Muhonen, 2003). Performance feedback and recognition of potential, and self-acknowledgement usually lead to feelings of pride (Grandey et al., 2002).

The occurrence of bullying contributes to more negative emotion experiences and some of the emotions associated with this include fear, anxiety, anxiousness and apathy (Fineman, 2003). The lack of social support also has an emotional bearing (Rhoades & Eisenberger, 2002) and wrongful decision making or judgement errors (Fineman, 2003) usually cause emotions such as regret and disappointment. Successful negotiation can lead to trust (Fineman, 2003) and co-operation, but dysfunctional negotiation can lead to scepticism, disappointment and anger. Insulting behaviour creates many negative emotions such as guilt, shame and anger (Gabriel, 1998).

Much has been written regarding the different emotions experienced at work (Ashkanasy et al., 2000; Basch & Fisher, 1998; Fineman, 2000; Fisher, 2000; Newbury-Birch & Kamali, 2001), but not much research has been conducted on the specific events leading to these emotions (Basch & Fisher, 1998; Brief & Weiss, 2002; Diefendorff, Richard, & Yang, 2008; Domagalski & Steelman, 2005), and it is therefore necessary to further explore affective events at the workplace.

Grandey (2000) explains that employees adjust their perceptions regarding events or situations in order to modify their emotional reactions, and this is done in order to express emotions appropriately at work (Grandey, 2000). The frequency of having to display emotions that are not

felt at a specific moment also has an influence on emotional dissonance (Zapf, 2002), and it is especially difficult when performed in the context of ongoing relationships (Moore et al., 2004). The frequent experience of emotional dissonance may result in the incapability to regulate one's own emotions (Ogińska-Bulik, 2005), and this ability, together with the ability to recognise the emotions of others, are defined as emotional intelligence. This is vital in various occupations (Ashforth & Humphrey, 1993; Hochschild, 1983; Morris & Feldman, 1996), because emotions provide information regarding people's thoughts and intentions, and coordinates social encounters (Keltner & Haidt, 2001). This ability to regulate emotions forms a crucial part of emotional intelligence (Gross & John, 2002; Salovey, Mayer, & Caruso, 2002).

Emotional intelligence has been a popular research topic over the past recent years (Byrne, Dominick, Smither, & Reilly, 2007). Salovey and Mayer (1990) initially proposed the concept of emotional intelligence and suggested that individuals differ in the way they deal with their emotions. They view emotional intelligence as knowing and managing one's own emotions, motivating oneself towards mastery and creativity, and recognising and dealing with emotions in others. This information can then be used to guide one's thinking and actions. Those who are able to manage their emotions effectively are said to be "emotionally intelligent" (Goleman, 1995).

However, most of the studies on emotional intelligence are directed towards leadership effectiveness (George, 2000) and development, work performance (Rosete & Ciarrochi, 2005), and stress management (Ciarrochi, Deane, & Anderson, 2002; Slaski & Cartwright, 2002), and are limited to selective populations such as leaders (Dulewicz, Higgs, & Slaski, 2003), executives (Carmeli, 2003; Gardner & Stough, 2002) and teachers (Penrose, Perry, & Ball, 2007; Salami, 2007).

The confusion regarding the significance and sphere of emotional intelligence has led to the development of more than one theoretical framework for conceptualising this concept. Two distinct models have been developed to classify the different theories and measurement tools of emotional intelligence, namely "ability" (or information-processing) and "mixed" (or trait) models.

Ability models define emotional intelligence as a collection of intellectual abilities associated with accurate processing of emotion-relevant information. Emotional intelligence is classified as the skill to monitor one's own and others' emotions, to discriminate between them, and to make the most of this information (Law, Wong, & Song, 2004; Salovey & Mayer, 1990). Mixed models

integrate both non-cognitive models (Bar-On, 1997) and competency-based models (Goleman, 1995) of emotional intelligence (Rosete & Ciarrochi, 2005). Mixed models are explained as a mix of abilities, traits, motivation, and skills (Bar-On, 1997; Byrne et al., 2007; Cooper & Sawaf, 1998; Goleman, 1995; Pérez, Petrides, & Furnham, 2005).

Only a small number of studies compare emotional intelligence in terms of gender differences (Byron, 2008), cultural differences (Ilangovan, Scroggins, & Rozell, 2007), age groups (Van Rooy, Alonso, & Viswesvaran, 2005), and different occupational groups (Reilly & Karounos, 2009). Shipper, Kincaid, Rotondo, and Hoffman (2003) states that emotional intelligence varies across cultures, and there is a need for studying the impact of cultural differences in terms of emotional intelligence.

Few studies are directed towards the validation of emotional intelligence (Austin, Saklofske, Huang, & McKenney, 2004; Cakan & Altun, 2005; Gignac, Palmer, Manocha, & Stough, 2005; Jonker & Volsloo, 2008). The Schutte Emotional Intelligence Scale - SEIS (Schutte, Malouff, Hall, Haggerty, Cooper, Golden, & Dornheim, 1998) is widely used in studies of emotional intelligence (Austin et al., 2004; Cakan & Altun, 2005; Gignac et al., 2005; Jonker & Vosloo, 2008), nonetheless this scale seems to be problematic in terms of its varying factor structure; the authors claimed that the scale is uni-dimensional, while additional studies found a four-factor structure (Gignac et al., 2005; Petrides & Furnham, 2000; Saklofske, Austin, & Minski, 2003; Sharma, Deller, Biswal, & Mandal, 2009), a three-factor structure (Austin et al., 2004), and a six factor structure was found in a South African study (Jonker & Vosloo, 2008). Due to these varied findings it is suggested that an alternative measure of emotional intelligence be sought for research purposes in South Africa. The Greek Emotional Intelligence Scale - GEIS (Tsaousis, 2007) can be presented as an alternative emotional intelligence measurement. It is a short questionnaire and is based on the theoretical model of Mayer and Salovey (1997). The GEIS, however, has not been widely used and its factorial validity and reliability has not yet been tested on a South African population.

According to Grandey's (2000) model not only individual factors, but also organisational factors have an influence on employee well-being. Research is increasingly focusing on the relationship between work-related stress and employee well-being (Daniels & Harris, 2005; Lewin & Sager, 2008). The concept of work can be seen in two different lights; the first view is associated with negative consequences in that effort is required, and the other view is associated with positive

outcomes in that it produces higher levels of energy (Rothmann, 2003). One consequence of prolonged exposure to chronic occupational stress is burnout (Lewin & Sager, 2008).

Burnout is a reaction to chronic occupational stress, which is characterised by emotional exhaustion (the draining of emotional resources), cynicism (a negative and cynical attitude towards one's job), and a lack of professional efficacy (the tendency to evaluate one's work in a negative manner) (González-Romá, Schaufeli, Bakker, & Lloret, 2006). Demerouti, Bakker, Vardakou, and Kantas (2003) provides another definition of burnout and describe it is a condition of negative work-related encounters that includes feelings of exhaustion and disengagement from work. Professional efficacy is not included in their definition seeing that it does not constitute a core dimension of burnout (Bakker, Demerouti, & Verbeke, 2004). Exhaustion is defined as a result of severe physical, emotional and cognitive strain (Demerouti et al., 2003), and disengagement according to Demerouti et al. (2003) refers to distancing oneself from one's work. Burnout is a condition which is not anchored to a specific point in time, but rather a condition that occurs over time (Buelens, Van den Broeck, Vanderheyden, Kreitner, & Kinicki, 2006).

Engagement has been defined by Kahn (1990) as simultaneously employing and expressing one's preferred self in task behaviours, which will promote connections to work and to others, personal presence on a physical, cognitive and emotional level, and active, full performances. According to Schaufeli, Salanova, González-Romá, and Bakker (2002), engagement is defined as a motivational construct. They define it as a positive, fulfilling, work-related state of mind characterised by vigour, dedication and absorption. Vigour can be explained as high energy levels together with mental resilience while working, the willingness and ability to invest in one's work, and persevering even in times of difficulty (Demerouti et al., 2003; Schaufeli et al., 2002). Dedication is characterised by a sense of significance, enthusiasm, pride, inspiration and viewing one's work as a challenge (Salanova, Agut, & Peiró, 2005). The last leg of engagement is absorption and can be described as being fully concentrated, happy and deeply engrossed in one's work, whereby time passes quickly, and it is difficult to detach oneself from one's work (Salanova et al., 2005). However, vigour (high energy) and dedication (strong identification) are seen as the core of engagement (Schaufeli et al., 2002) and absorption plays a less central role in the work engagement concept (Schaufeli, 2003) and this subscale is therefore omitted from various studies (Naudé, 2003; Storm, 2002).

A job resource that has been studied extensively by burnout and well-being researchers is support (Rafnsdottir, Gunnarsdottir, & Tomasson, 2004). Social support has been defined as the mix of social relationships and transactions, in order to complete the personal resources to allow adaptive coping in stressful situations (Sarason & Duck, 2001).

Evidence shows that a lack of support has a negative effect on the employee's well-being and health (Kahn, Hessling, & Russell, 2003; Rafnsdottir et al., 2004;). According to Searle, Bright, and Bochner (2001), lack of support from supervisors is especially significant in this regard. Research has also revealed that social support is important in coping with stress and preventing emotional exhaustion (Maslach, Schaufeli, & Leiter, 2001).

Hogan, Linden, and Najarian (2002) and Rhodes (2004) are of the opinion that individuals with more social support from families and friends have higher levels of well-being and recover faster from setbacks than individuals who are less integrated on a social level. Social support enhances health and well-being irrespective of the individual's stress level (Eisenberger, Fasalo, & Davis-LaMastro, 1990). Wills and Fegan (2001) suggested that social support exerts influence on well-being both directly and indirectly through cognitive mechanisms, coping strategies and health behaviours. The rate of burnout is also higher among employees working in an environment with other negative factors, such as a lack of feedback or recognition (Lewig & Dollard, 2003). The relationship between job stress and burnout is greater in individuals with low levels of social support (Greenglass, Fiksenbaum, & Burke, 1994).

In most studies social support was researched as a mediating variable (Karamedas, 2006). Albar-Marín and García-Ramírez (2005) and Maslach et al. (2001) stated that social support limits the negative effects of stressors, due to the fact that it decreases the intensity of the stressor.

It can therefore be concluded that certain emotions are experienced due to specific events or situations that occur at the workplace, and employees manage or control their emotion experiences by making use of different regulation mechanisms. Emotion work involves manipulating and controlling emotions in order to express appropriate organisationally desired emotions. This process of emotion regulation is associated with emotional intelligence, and has been linked to stress and burnout due to the fact that it involves regulatory effort and leads to emotional dissonance quite frequently. Social support has been studied extensively, as an organisational resource which plays a buffering role in terms of the negative effects of job stress and burnout.

This study will take place in three consecutive studies. The following research questions can be formulated based on the above-mentioned description of the research problem. The research questions for each study will be stated below the heading of each particular article.

#### **Article 1: The emotion experiences of professionals in a work setting**

- How are emotion events, emotion experiences and emotion regulation mechanisms conceptualised based on a literature review?
- What are the emotions that professionals experience in a work setting?
- Which affective events and situations do employees experience?
- How do employees regulate or manage their emotions?

#### **Article 2: The construct validity and reliability of an emotional intelligence measurement: An exploratory and confirmatory factor analysis approach**

- How is emotional intelligence conceptualised based on a literature review?
- Can factorial validity and internal consistency of the GEIS be proved by means of an exploratory factor analysis approach?
- Can the factors of the GEIS that were determined by exploratory factor analysis, be supported by a confirmatory factor analysis approach?
- Will emotional intelligence factors of the confirmatory factor analysis remain constant across cultures (White and African groups)?
- Can the GEIS be recommended as a more promising measure of emotional intelligence than the SEIS in South African studies?

#### **Article 3: A model of work wellness for human resource employees in a platinum and steel production environment**

- How are burnout, engagement, emotion work, emotional intelligence and social support conceptualised based on a literature review?
- Are emotional intelligence and social support negatively related to emotion work?
- Is emotion work positively related to burnout?
- Is social support positively related to engagement and negatively related to burnout?
- Is emotional intelligence positively related to engagement and negatively related to burnout?

In order to answer the above research questions, the following research objectives are set.

## **2. RESEARCH OBJECTIVES**

The research objectives are divided into general and specific objectives.

### **2.1 General objective**

The general objective of this study is to determine the relationship between interaction expectations, emotion events, emotion work, individual and organisational factors and well-being, and to determine which of these factors influence well-being.

### **2.2 Specific objectives**

The specific objectives of this research will be stated below the heading of each particular study.

#### **Article 1: The emotion experiences of professionals in a work setting**

- To conceptualise emotion events, emotion experiences and emotion regulation mechanisms by means of a literature review.
- To determine what the emotions are that professionals experience in a work setting.
- To determine which affective events and situations employees experience.
- To determine how employees regulate or manage their emotions.

#### **Article 2: The construct validity and reliability of an emotional intelligence measurement: An exploratory and confirmatory factor analysis approach**

- To conceptualise emotional intelligence by means of a literature review.
- To determine the factorial validity and internal consistency of the GEIS through an exploratory factor analysis approach.
- To determine whether the factors of the GEIS that were determined by exploratory factor analysis can be supported by a confirmatory factor analysis approach.
- To determine whether the emotional intelligence factors of the confirmatory factor analysis will remain constant across cultures (White and African groups).



- To make recommendations on the use of the GEIS as opposed to the SEIS in South Africa.

### **Article 3: A model of work wellness for human resource employees in a platinum and steel production environment**

- To conceptualise burnout, engagement, emotion work, emotional intelligence and social support by means of a literature review.
- To determine whether emotional intelligence and social support are negatively related to emotion work.
- To determine whether emotion work is positively related to burnout.
- To determine whether social support is positively related to engagement and negatively related to burnout.
- To determine whether emotional intelligence is positively related to engagement and negatively related to burnout.

## **3. PARADIGM PERSPECTIVE OF THE RESEARCH**

A certain paradigm perspective that includes the intellectual climate and the market of intellectual resources (Mouton & Marais, 1996) directs the research.

### **3.1 Intellectual climate**

The intellectual climate refers to the convictions, assumptions and values, which do not form part of the empirical goals of scientific research practices. The intellectual climate also consists of the range of postulates held by a particular discipline (Mouton & Marais, 1996). Therefore in social science research the intellectual climate includes beliefs related to the nature of social reality (Mouton & Marais, 1996).

### **3.2 Discipline**

This research falls within the boundaries of the behavioural sciences and more specifically industrial psychology. Industrial psychology is described by Schultz and Schultz (1986) as the application of methods, facts and principles of psychology to people at work.

It can also be defined as the application of knowledge, gained during the scientific study of human behaviour, within a work(ing) context in order to address work-related problems. Career psychology, personnel psychology, organisational psychology, psychometrics, consumer behaviour and ergonomics are all components of the industrial psychology discipline.

The sub-disciplines of industrial psychology that are focused on in this research are personnel psychology and organisational psychology. Personnel psychology is the study of an employee's psychological traits, with reference to his job tasks and co-workers (Plug, Louw, Gouws, & Meyer, 1997). Organisational psychology is the study of human behaviour, attitudes and performance within an organisation, drawing theory, methods and principles from disciplines such as psychology in order to learn about individual perceptions, values and learning capacities (Gibson, Ivancevich, & Donnelly, 1991).

This research study will flow over into these sub-disciplines in terms of determining the emotional and psychological well-being of professionals in a South African mining environment.

### **3.3 Meta-theoretical assumptions**

Five paradigms are relevant to this research. Firstly, the literature review is done within the humanistic paradigm and systems theory, and secondly the empirical study is done within the behaviouristic, positivistic and functionalistic paradigms.

#### **3.3.1 Literature review**

According to Bohart and Greening (2001) the humanistic paradigm is a school of thought that emerged in the 1950s in reaction to both behaviourism and psychoanalysis. It is explicitly concerned with the human dimension of psychology and the human context for the development of psychological theory. The following basic assumptions are relevant in this regard (Bugental, 1964):

- Human beings cannot be reduced to components;
- Human beings have a uniquely human context;
- Human consciousness includes an awareness of oneself in the context of other people;
- Human beings have choices and responsibilities; and

- Human beings are intentional and they seek meaning, value and creativity.

The systems theory, in its trans-disciplinary role, brings together theoretical principles and concepts from ontology and philosophy of science amongst others (Bausch, 2001). According to Bausch (2001) a social entity, for example an organisation or a whole society, can be viewed as an organism. The systems theory emphasises that social systems are made up of parts, each of which contributes to the functioning of the whole. In most cases this whole has properties that cannot be found in the constituent elements.

### **3.3.2 Empirical study**

The behaviouristic paradigm is an approach to psychology based on the proposition that behaviour can be studied and explained scientifically without recourse to internal mental states. Within this paradigm, there are different emphases (Staddon, 2001). Some argue that the observation of behaviour is the best way of investigating psychological and mental processes. Others believe that behaviour itself is the only appropriate subject of psychology, and those aspects, such as beliefs and objectives, only refer to behaviour (Staddon, 2001).

The positivistic paradigm is based on the assumption that knowledge gained through understanding the laws of human behaviour, with the use of quantitative methods and hypotheses testing, can be utilised for the purpose of making improvements and predictions (Neuman, 1997). According to Neuman (1997) the nature of social reality is real and has order within the positivistic approach. Human beings are seen as rational, and probabilistic causal laws are used to explain human events.

Functionalism is a sociological perspective that focuses on the ways in which social institutions fill social needs, especially social stability. The functionalistic paradigm assumes that units of psychological phenomena can be explained in terms of relationships which in turn serve to enhance human adaptation and survival (Holmwood, 2005).

### **3.4 Market of intellectual resources**

The market of intellectual resources refers to the collection of convictions that lend epistemic status or scientific statements to research (Mouton & Marais, 1996). Two types can be identified: theoretical beliefs and methodological beliefs.

### 3.4.1 Theoretical beliefs

Theoretical beliefs can be described as assertions regarding the descriptive and interpretative aspects of human behaviour (Mouton & Marais, 1996). Such beliefs therefore include all statements forming part of hypotheses, typologies, models or theories.

The elements of theoretical beliefs will be discussed in terms of the concepts, theories and models applied within this research study.

#### A. Conceptual definitions

The relevant conceptual definitions are given below:

- **Emotion work:** A process which involves managing one's emotions in order to create an observable display of the face and body. Emotional labour is the effort, planning and control that are needed to express emotions, desired by the organisation, during interpersonal interactions (Morris & Feldman, 1996).
- **Deep acting:** A process where one consciously modifies feelings in order to express desired emotions (Hochschild, 1983).
- **Surface acting:** A process where emotional expressions are managed (Hochschild, 1983)
- **Burnout:** Burnout is a reaction to chronic occupational stress, which is characterised by emotional exhaustion (the draining of emotional resources), cynicism (a negative and cynical attitude towards one's job), and a lack of professional efficacy (the tendency to evaluate one's work in a negative manner) (González-Romá et al., 2006).
- **Engagement:** Schaufeli et al. (2002) defined engagement as a positive, fulfilling, work-related state of mind characterised by vigour, dedication and absorption.
- **Emotional intelligence:** Salovey and Mayer (1990) view emotional intelligence as knowing and managing one's own emotions, motivating oneself towards mastery and creativity, and recognising and dealing with emotions in others.
- **Emotional dissonance:** Emotional dissonance is a process in which the emotions expressed are different from the actual emotions felt (Hochschild, 1983).
- **Well-being:** Wellness may be defined as the state of being free of illness, injury and disease (Browne, 2005). According to Browne (2005) psychological wellbeing has four specific

characteristics, namely: (1) subjective and emotional, (2) a state as opposed to a continuous part of who we are, (3) a product of personal endeavour, and (4) more than the absence of negative affect and personal conflict, but comes from moving towards desired life goals.

- **Social support:** Social support has been defined as the mix of social relationships and transactions, in order to complete the personal resources to allow adaptive coping in stressful situations (Sarason & Duck, 2001).

## **B. Models and theories**

A model is aimed at classifying and proposing relationships (Mouton & Marais, 1996). A theory specifies the relationship between variables in an effort to explain human behaviour in a specific population (Huysamen, 1993).

The following theories and models are relevant in this research project:

- *The theory of emotion regulation or emotion work* (Gross, 1998). The sociologist Arlie Russel Hochschild's work stemmed from the dramaturgical perspective of customer interactions (Grandey, 2000). This perspective views the customer as being the audience, the employee as the actor and the work environment as the stage (Goffman, 1959). Hochschild (1983) described the term emotional labour as managing of feelings in order to create a facial and bodily display which is publicly observable. This means that managing emotions is one way for employees to achieve organisational goals; for example, if an employee expressed mood or anger towards a customer or colleague, it would ruin the performance (Grandey, 2000). Two main ways are offered through which emotions can be managed, namely surface acting and deep acting. Surface acting refers to the regulation of emotional expressions, while deep acting refers to the conscious modifying of feelings in order to express the desired emotion (Grandey, 2000). In cases where organisations control something as personal as emotions, it is experienced as being unpleasant to the employee (Grandey, 2000), and is therefore proposed to relate to burnout and job stress (Hochschild, 1983).
- *The emotional intelligence theory.* Mayer and Salovey (1993) define emotional intelligence as the capacity to understand emotional information and to reason with

emotions. Emotionally intelligent people are defined in part as those who regulate their emotions according to a logically consistent model of emotional functioning (Mayer & Salovey, 1995). The four-branch model of skills involved in emotional intelligence was introduced by Mayer and Salovey (1993). This model includes the following four areas of emotional intelligence abilities:

1. The capacity to accurately perceive emotions.
  2. The capacity to use emotions to facilitate thinking.
  3. The capacity to understand emotional meanings.
  4. The capacity to manage emotions.
- *A conceptual model of emotion work* (Grandey, 2000). A proposed conceptual model of emotion regulation performed in the work setting will be used as the context in which emotion work takes place. The model proposes that situational variables contribute to the emotion work process, relating to employee as well as organisational well-being (Grandey, 2000). It has not yet been researched within a mining environment, and therefore testing it in this research population will be of great value. The model includes individual differences (such as emotional intelligence) as well as organisational factors (such as supervisory support), and is developed through the process of reorganising and integrating previous models of emotional labour (Grandey, 2000).

### **3.4.2 Methodological beliefs**

Methodological beliefs can be defined as the beliefs concerning the nature of social science as well as scientific research. Examples include traditions within the philosophy of the social sciences, such as positivism or phenomenology, as well as methodological models, such as the quantitative or qualitative models (Mouton & Marais, 1996).

The empirical study is presented within the behaviouristic, functionalistic and positivistic frameworks.

The research makes use of a quantitative approach and is therefore accompanied by statistical analyses that include references to means, standard deviations, internal consistency, reliability, validity, practical significance, correlation coefficients and regression analysis (Neuman, 1997).

The research methodology followed within this study is described below.

#### **4. RESEARCH METHOD**

The research method consists of a literature review and empirical study. The results of this study are presented in the form of three research articles. For the purpose of each article, a literature review is therefore done. The literature reviews focus on previous research on emotion events, emotion experiences, emotion work, emotion regulation, burnout, engagement, social support, emotional intelligence and well-being. Because this study is conducted in three phases the empirical study is discussed below according to these three phases.

##### **4.1 STUDY 1**

Phase one of this research focuses on determining the emotions experienced by professionals in the mining environment, the events or situations that typically lead to these emotions, and the emotion regulation mechanisms these employees implement.

###### **4.1.1. Empirical study**

The empirical study consists of the research design, participants, data collection, data analysis and ethical aspects that should be considered.

###### **A. Research design**

For the purposes of article 1, a qualitative design from a phenomenological approach is used. Qualitative research makes it possible to determine the subjective experiences of professionals in a mining environment of the North West and Gauteng Provinces. Qualitative research is defined as the study of people in their natural environments as they go about their daily lives (Bailey, 1994). Despite the negativity surrounding the use of qualitative research, Woods and Catanzaro (1988) indicated that the validity of qualitative research is one of its biggest advantages. It also enables the researcher to understand and represent personal points of view, which are often concealed or neglected (Hammersley, 1998). The objective of this research design is to analyse the types of emotions that are experienced by professionals in a work setting, which events in the working environment leads to emotion experiences and how employees regulate these emotion events. In

this approach, the researcher is interested in the meaning employees attribute to their experiences of reality, their world and their relationships.

Therefore, the first phase consists of semi-structured interviews with a group of professionals.. These interviews enable the researcher to obtain a thorough understanding of the specific emotions professionals experience within the mining environment, the typical events or situations that give rise to these emotions, and how they regulate their emotion experiences.

## **B. Participants**

A non-probability purposive voluntary sample of professionals within the mining environment is used to reach the objective of this first phase of this study. It is clear from Woods and Catanzaro (1988) that small samples can provide reliable research data and are therefore acceptable for phenomenology studies. The population consists of voluntary professionals in the mining environment in the North West and Gauteng Provinces.

The following selection criteria is used to determine which participants are included in the sample:

- Professionals are employees occupying office positions in supervisory or managerial roles.
- Professionals are from the mining environment within the North West and Gauteng Provinces.
- Professionals are willing to participate in the research after having been informed about the purpose and procedures of the research.
- Professionals are prepared to have a tape-recorded interview with the researcher.
- Professionals are willing to be observed during the performance of their daily work-related activities.

The number of willing and accessible participants determines the size of the samples in the research. Data is collected until data saturation is reached.

## **C. Data collection**

The measuring instrument used in this phase of the research is semi-structured interviews, based on the phenomenological paradigm, as well as observation periods. The researcher studies the



phenomenon without predetermined expectations of categories and tries to understand the data from the perspective of the participant. The interviews are conducted where it best suits the participant. In order to ensure a relaxed environment, attention is given to the climate or atmosphere of the room. A 'do not disturb' sign is put outside the door to ensure that the interview is not interrupted. The researcher introduces herself in a friendly and warm manner in order to ensure that the participant is at ease. The researcher then explains the context of the interview, and with the permission of the participant, tape-recorders are used. The participants are informed that the tapes will be erased after the research is completed and that they will remain anonymous. It is emphasised that the participant can withdraw from the study at any time. All participants are asked the following standard question: *"Imagine I was an actor preparing to play your role, describe to me how I would have to act and feel in order to portray you accurately as an employee in your work setting?"*

The researcher faces the participant squarely in a relaxed way; has an open body posture and leans slightly forward to ensure that the participant is comfortable during the whole interview. The researcher also maintains eye contact with the participants at all times. Non-directive dialogue techniques like minimal verbal responses (e.g. "mm-mm, yes, I see"), paraphrasing (stating the participant's words in another form with the same meaning), clarification (e.g. "Can you tell me more about..." "You seem to be saying..."), reflection (e.g. "So, you believe that..."), reflective summary ("So what you're saying...") and silence are used to assist the participants to share their experiences.

### **Pilot study**

A pilot study is a prerequisite for the successful execution and completion of a research project. It allows a researcher to acquire thorough background knowledge about a specific problem that the researcher intends to investigate. The purpose of the pilot study is to improve the success and effectiveness of the investigation (De Vos, Strydom, Fouche, Poggenpoel, & Schurink, 1998). In this study, the researcher intends to use a preliminary pilot to identify the possible unforeseen problems, which can emerge during the main investigation. The pilot consists of two interviews of professionals from a mining environment in the North West or Gauteng Provinces. The pilot study is a valuable means to gain practical knowledge of, and insight into the problem. A pilot study assists the researcher in making necessary modifications of the data-gathering instruments. The appropriateness of the interview schedule is evaluated before the main investigation proceeds.

## **Field notes**

Immediately after each interview, the field notes are transcribed. Field notes are a written account of the things the researcher hears, observes, experiences and thinks during the course of the interview. The field notes include both the empirical observation and interpretations.

## **Trustworthiness**

Trustworthiness can be described as a measure to ensure reliability and validity in qualitative research. To ensure trustworthiness in this first phase of this research credibility, applicability, consistency and neutrality are applied. The researcher makes use of specific techniques including paraphrasing, reflecting, probing and summary. Confidentiality and anonymity is ensured by not revealing the identity of participants or mines where data is collected.

## **D. Data analysis**

For the purpose of this study, the results of the interviews are analysed by using content analysis. Content analysis is a research technique used to make replicable and valid conclusions (White & Marsh, 2006). In qualitative research, content analysis focuses on and attends to content or contextual meaning of the text (Hsieh & Shannon, 2005) and is therefore applicable to this study. Guba and Lincoln (1994) argue that qualitative data, unlike quantitative approaches, can overcome the issue of ignoring influential information from the context. Qualitative data can also provide rich insight into human behaviour. It can help to avoid ambiguities associated with certain data (Guba & Lincoln, 1994). The content analysis consists of four steps (Giorgi, 1985; Kerlinger, 1986). The first step is to universalise the context that needs to be analysed (for example the entire set of verbal answers of the participants), to be defined and to be categorised. Secondly, the sub-units of the analysis, namely words and themes are determined, where the researcher reads the notes of response in order to form an overall picture. The words that are used by the participant is the smallest analysis that can be made. A sub-theme is usually a sentence and is more difficult but also more useful to analyse. Sub-themes are combined in order to determine the themes. The analyses of the information are continued until repeated themes are identified. The third step is to free the data from unnecessary information and to determine the meaning of the rest of the subunits by linking it to the whole picture. Finally, the concrete language of the participants is converted into scientific

language and concepts. The precise words of the participants are used in support, based on gained insights, integration and synthesis.

The trustworthiness of the content analysis is promoted by the coding that is done by the researcher, and other industrial psychologists with a thorough background and training in content analysis. A literature-control is done to investigate relevant research in order to determine the comparativeness and uniqueness of the current research (Krefting, 1991). Validity is promoted by spending enough time with the participant in order to establish rapport.

#### **E. Ethical aspects**

Conducting research is an ethical enterprise. Research ethics provide researchers with a code of moral guidelines on how to conduct research in a morally acceptable way. The following is applicable at all times to retain an ethical climate (Struwig & Stead, 2001):

- The researcher is honest, fair and respectful towards the participants and does not attempt to mislead or deceive the research participants.
- The researcher respects the rights and dignity of others. This includes respecting the privacy, confidentiality and autonomy of the research participants. The researcher is also sensitive to individual differences among people, such as age, ethnicity, religion, language and socio-economic status. The researcher does not knowingly discriminate against people on the basis of such factors.
- The welfare of others is of major concern. The researcher endeavours to avoid or minimise any harm from befalling the research participants because of interaction with them.

## **4.2 STUDY 2**

The aim of this study will be to determine the construct and factorial validity and reliability of the Greek Emotional Intelligence Scale (GEIS) in a South African population.

### **4.2.1 Empirical study**

The empirical study consists of the research design, procedure, participants, measuring battery and the statistical analysis.

#### **A. Research design**

The research objectives of article 2 are achieved by employing a survey design. The specific design selected is the cross-sectional design. In this design, information is collected from the sample population at a given point in time (Shaugnessy & Zechmeister, 1997). The information garnered is used to describe the population at that point in time. The cross-sectional design is used to examine groups of subjects in various stages of development simultaneously, while the survey describes the technique of data collection in which questionnaires are used to gather data about an identified population (Burns & Grove, 1993). The design can also be used to assess interrelationships. According to Shaugnessy and Zechmeister (1997), the design is ideal to address the descriptive functions with correlation research.

#### **B. Procedure**

The study consists of two sub-studies. Sub-study 1 makes use of exploratory factor analysis to test the factor structure of the GEIS on a sample of professionals in a gold-mining environment. This is done to determine whether the factors of the GEIS can be replicated on a South African population. In sub-study 2 the results of the exploratory factor analysis are supported with confirmatory factory analysis. For the purpose of sub-study 2 an availability sample of professionals from a platinum- and steel production environment is used. This sub-study consists of two steps: Step 1 is a confirmatory factor analysis on the total population; Step 2 involves splitting the data according to ethnicity (White and African) to determine whether the factor structure remains stable across these two cultural groups.

#### **C. Participants**

The study population of sub-study 1 can be defined as an availability sample of professionals in a gold-mining environment. A population of professionals ( $N = 241$ ) from a gold-mining environment of the North West and Gauteng Provinces is targeted. The study population of sub-

study 2 can be defined as an availability sample of professionals in a platinum- and steel production environment. A population of professionals ( $N = 345$ ) from a platinum- and steel production environment in the North West Province is targeted.

#### **D. Measuring battery**

The following measuring instrument is used:

The *Greek Emotional Intelligence Scale* (GEIS; Tsaousis, 2007) measures four basic emotional skills, namely: 1) expression and recognition of emotion - relates to the ability of the individual to express and recognise accurately their own emotional reactions (*"I am unable to explain my emotional state to others"*; *"I find it difficult to express my emotions to others"*); 2) control of emotions - relates to the ability of the individual to control and regulate emotions in themselves and others (*"When I am under pressure I snap"*; *"I often get angry and afterwards I find my anger inexcusable"*); 3) use of emotions to facilitate thinking - relates to the ability of the individual to harness their own emotions in order to solve problems through optimism and self-assurance, two emotional states that facilitate inductive reasoning and creativity (*"I deal with my problems in a positive way by trusting myself"*; *"I think of the positive side of things"*); and 4) caring and empathy - relates to the willingness of the individual to help other people and his or her ability to comprehend another's feelings, and to re-experience them (*"I am always willing to help someone who is confronted with personal problems"*; *"I like to talk with others about their problems"*). The fifty-two-item instrument demonstrated acceptable psychometric properties, which justifies its use as a reliable and valid measure of emotional intelligence (Tsaousis, 2007). More specifically, the factor analytic data suggest a four-factor solution, which bears a close resemblance to Mayer and Salovey's (1997) theoretical framework. The Cronbach alpha coefficients for the four factors range between 0,80 and 0,92. All scales demonstrated high internal consistency, indicating that they are homogeneous in their measurements. Furthermore, test-re-test data covering a four-week period indicates the temporal reliability of the GEIS in that correlation coefficients ranged between 0,79 and 0,91 (Tsaousis, 2007). Also according to Tsaousis (2007), data from five different studies provide support for good convergent and discriminant validity of the GEIS scales, suggesting that the test taps a fairly broad range of related emotional constructs, such as positive correlation with empathy, social skills, emotional expressiveness, and well-being, as well as negative correlation with locus of control, negative affect, low physical and psychological well-being, and work stress.

These findings justify the concurrent validation of the newly developed instrument and the GEIS is, therefore, used in this study.

### **E. Statistical analysis**

The data analysis is carried out with the SPSS programme (SPSS, 2003). The dataset is studied to identify bivariate and multivariate outliers. To identify bivariate outliers, the data is standardised (to z-scores). Values higher than 2,58 are inspected to decide whether they should be deleted from the dataset. An inspection is also made of the anti-image scores of the different items. Items with scores lower than 0,60 are problematic and are therefore excluded from the rest of the statistical analysis.

Furthermore, missing values are analysed and replaced where possible. Principal factor extraction with oblique rotation is performed on the measuring instrument to determine the factor structure. Principal component analysis is used prior to principal factor extraction to estimate the number of factors, presence of outliers and factorability of the correlation matrices. The eigen values and scree plot are studied to determine the number of factors underlying the specific measuring instrument.

Covariance analysis or structural equation modeling (SEM) methods, as implemented by AMOS (Arbuckle, 1997), is used to construct and test a four-factor model of emotional intelligence. Hypothesised relationships are tested empirically for goodness-of-fit with the sample data. The  $X^2$  and several other goodness-of-fit indices summarise the degree of correspondence between the implied and observed covariance matrices.

The Goodness-of-Fit Index (GFI) indicates the relative amount of variance and co-variance in the sample predicted by the estimates of the population. It usually varies between 0 and 1, and a result of 0,90 or above indicates a good model fit. The Adjusted Goodness-of-Fit Index (AGFI) is a measure of the relative amount of variance accounted for by the model, corrected for the degrees of freedom in the model relative to the number of variables. Both these values are classified as absolute values, because they compare the hypothesised model with no model at all (Hu & Bentler, 1995). The Parsimony Goodness-of-Fit Index (PGFI) addresses the issue of parsimony in SEM (Mulaik et al., 1989). Although this index generally demonstrates lower levels in comparison to the

other fit indices at the 0,50 level in comparison to values higher than 0,90, values >0,80 are considered to be more appropriate (Byrne, 2001).

The Normed Fit Index (NFI) is used to measure global fit. The NFI represents the point at which the model being evaluated fall on a scale running from a null model to a perfect fit. This index is normed to fall on a 0 to 1 continuum and tends to over estimate fit in smaller samples. The Comparative Fit Index (CFI) also compares the hypothesised and independent models, but takes sample size into account. The Tucker-Lewis Index (TLI) is a relative measure of covariation explained by the hypothesised model which has been specifically designed for the assessment of factor models (Tucker & Lewis, 1973). Critical values for good model fit have been recommended for the NFI, CFI and TLI to be acceptable above the 0,90 level (Bentler, 1992), although Hu and Bentler (1999) recommended a cut-off value of 0,95. The Root Mean Square Error of Approximation (RMSEA) estimates the overall amount of error; it is a function of the fitting function value relative to the degrees of freedom (Brown & Cudeck, 1993). Hu and Bentler (1999) suggested a value of 0,06 to indicate acceptable fit, whereas MacCullum, Browne, and Sugawara (1996) suggested that values between 0,08 and 1,00 indicate mediocre fit and values above 1,00 poor fit.

In accordance with Hu and Bentler (1999), a combination approach is used to evaluate model fit. Specifically an absolute close-fit indice (RMSEA) and two incremental close-fit indices are chosen (TLI and CFI) because it has been argued that they provide more stable and accurate estimates than several other fit indices (Hu & Bentler, 1999) and the mentioned three indices have been used in other confirmatory factor analysis studies of emotional intelligence (Gignac et al., 2005). Other fit indices are included as support to the TLI, GFI and RMSEA as they were used in other studies for evaluation of psychological tests (Parker, Taylor, & Bagby, 2003) and provide easy comparisons to the other data sets. Although there is no gold standard for accepting or rejecting a plausible model, the model is considered to have an adequate fit when the CFI > 0,90 and the RMSEA shows a coefficient of 0,05 or lower, which is necessary for unequivocal evidence of a good fit (Parker et al., 2003).

### **4.3 STUDY 3**

Study three focuses on developing and testing a structural model of work wellness for human resource employees in a platinum- and steel production environment in the South African context.

#### **4.3.1 Empirical study**

The empirical study consists of the research design, participants, measuring battery and data analysis.

##### **A. Research design**

A cross-sectional survey design is used. Cross sectional designs are appropriate where groups of subjects at various stages of development are studied simultaneously, whereas the survey technique of data collection gathers information from the target population by means of questionnaires (Burns & Grove, 1993). A cross-sectional design draws a sample from a population at one specific time (Shaughnessy & Zechmeister, 1997). Information collected is used to describe the population at that time. The design can also be used to assess interrelationships between variables within the population. According to Shaughnessy and Zechmeister (1997) this design is ideal to address the descriptive and predictive functions associated with correlation research.

##### **B. Participants**

The study population can be defined as an availability sample of professionals in a platinum- and steel production environment. A population of human resources employees ( $N = 465$ ) in a platinum- and steel production environment will be targeted.

##### **C. Measuring battery**

The measuring battery consists of questionnaires to test the emotional regulation process and includes measures of emotion work, well-being (burnout and engagement), individual (emotional intelligence), and organisational (social support) factors. The following measuring instruments are used in the empirical study:

The *Greek Emotional Intelligence Scale* (GEIS; Tsaousis, 2007) measures four basic emotional skills, namely: 1) expression and recognition of emotion - relates to the ability of the individual to express and recognise accurately their own emotional reactions ("*I am unable to explain my emotional state to others*"; "*I find it difficult to express my emotions to others*"; 2) control of emotions - relates to the ability of the individual to control and regulate emotions in themselves and



others (*"When I am under pressure I snap"*; *"I often get angry and afterwards I find my anger inexcusable"*); 3) use of emotions to facilitate thinking - relates to the ability of the individual to harness their own emotions in order to solve problems through optimism and self-assurance, two emotional states that facilitate inductive reasoning and creativity (*"I deal with my problems in a positive way by trusting myself"*; *"I think of the positive side of things"*); and 4) caring and empathy - relates to the willingness of the individual to help other people and his or her ability to comprehend another's feelings, and to re-experience them (*"I am always willing to help someone who is confronted with personal problems"*; *"I like to talk with others about their problems"*). The fifty-three-item instrument demonstrated acceptable psychometric properties, which justifies its use as a reliable and valid measure of emotional intelligence (Tsaousis, 2007). More specifically, the factor analytic data suggest a four-factor solution, which bears a close resemblance to Mayer and Salovey's (1997) theoretical framework. The Cronbach alpha coefficients for the four factors range between 0,80 and 0,92. All scales demonstrated high internal consistency, indicating that they are homogeneous in their measurements. Furthermore, test-re-test data covering a four-week period indicates the temporal reliability of the GEIS in that correlation coefficients ranged between 0,79 and 0,91 (Tsaousis, 2007). Also according to Tsaousis (2007), data from five different studies provide support for good convergent and discriminant validity of the GEIS scales, suggesting that the test taps a fairly broad range of related emotional constructs, such as positive correlation with empathy, social skills, emotional expressiveness, and well-being, as well as negative correlation with locus of control, negative affect, low physical and psychological well-being, and work stress. These findings justify the concurrent validation of the newly developed instrument and are, therefore, used in this study.

The *Frankfurt Emotion Work Scale* (FEWS) (Zapf et al., 1999) is based on the existing literature on emotion work, action theory and emotional regulation requirements. The subscales include: The requirement to express positive emotions, the requirements to express and handle negative emotions, the requirement to be sensitive to clients' emotions, and the requirement to show sympathy, emotional regulation possibilities (control), and emotional regulation problems (emotional dissonance). Scales showed satisfactory reliabilities. Exploratory and confirmatory factor analysis revealed minor problems with discriminant validity of the scales within samples of a handicapped children's home ( $N = 83$ ), in the hotel business ( $N = 175$ ) and employees working in call-centres ( $N = 250$ ). Construct validation showed that Emotion Work scales were both positively and negatively related with psychological health (Zapf et al., 1999). Scales that indicate the requirement to express positive (*"How often in your job do you have to display, according to the*

situation, differing positive emotions towards clients (i.e. friendliness, enthusiasm, hope etc.)?”), negative (“How often do you yourself have to come across as being in a negative mood when dealing with clients (i.e. angry)?”), and neutral (“How often are you required to display neither positive nor negative emotions towards clients (i.e. showing impartiality)?”) emotions as emotion work, and emotional dissonance are administered in this study.

The *Utrecht Work Engagement Scale* (UWES; Schaufeli et al., 2002) is used to measure the levels of work engagement of the participants. The UWES includes three dimensions, namely: 1) vigour (“I am bursting with energy in my work”); 2) dedication (“I find my work full of meaning and purpose”); and 3) absorption (“Time flies when I am working”), which are conceptually seen as the opposite of burnout and scored on a seven-point, frequency-rating scale, varying from 0 (‘never’) to 6 (‘every day’). The questionnaire consists of seventeen questions. The alpha coefficients for the three sub-scales varied between 0,80 and 0,91. The alpha coefficient could be improved ( $\alpha$  varies between 0,78 and 0,89 for the three sub-scales) by eliminating a few items without substantially decreasing the scale’s internal consistency. Rothmann and Storm (2003) obtained the following alpha coefficients for the shortened version of the UWES in a sample of 2396 members of the South African Police Service: vigour, 0,78; dedication, 0,89; and absorption, 0,78. Coetzer (2004) obtained, among a sample of employees in an insurance company, the following alpha coefficients: vigour, 0,80; dedication, 0,87; and absorption, 0,69. The short version of the UWES — Afrikaans and English forms — is used in this study.

The *Oldenburg Burnout Inventory* (OLBI, the English version) is used to measure burnout. Demerouti et al. (2003) developed and offer initial construct validity and evidence for the OLBI. The OLBI is based on a model similar to that of the Maslach Burnout Inventory; however, it features two scales, namely: 1) exhaustion (“There are days when I feel tired before I arrive at work”); and 2) disengagement (“It happens more and more often that I talk about my work in a negative way”). The most current version of the OLBI features questions that have balanced positive and negative wording (Bakker et al., 2004). The OLBI also features questions designed to assess cognitive and physical components of exhaustion (Halbesleben & Demerouti, 2005). Internal consistency of the OLBI is acceptable, with Cronbach’s alpha scores ranging from 0,74 to 0,87; scores are all above 0,70. Test-re-test reliability showed significant correlations from time one to two. Factorial validity indicated a two-factor model (disengagement and exhaustion).

The *Social Support Scale* is used to measure the construct, social support, with a ten-item questionnaire based on the work of Caplan, Cobb, French, Van Harrison, and Pinneau (1975), which examined the relation between job demands and worker health. It measures three different sources of social support, namely: 1) social support co-workers (*"I usually receive help from my co-worker when something needs to be done quickly"*); 2) social support supervisor (*"When I encounter problems at work, I can always ask my manager for advice"*); and 3) social support family (*"I can receive support from those who are close to me when it comes to problems at work"*). In their findings, they state that social support appears to be of major importance to the psychological well-being of the employees. Low support from supervisors and from others at work is associated not only with job dissatisfaction, but also with depression (with a correlation of or above 0,30). The items in the questionnaire cover the extent to which people around the employee provide support by being good listeners or by being persons he or she can rely on when help is needed.

#### **D. Statistical analysis**

The data analysis is carried out with the SPSS programme (SPSS, 2003). The dataset is studied to identify bivariate and multivariate outliers. To identify bivariate outliers, the data is standardised (to z-scores). Values higher than 2,58 are inspected to decide whether they should be deleted from the dataset. An inspection is also made of the anti-image scores of the different items. Items with scores lower than 0,60 are problematic and are therefore be excluded from the rest of the statistical analysis.

Furthermore, missing values are analysed and replaced where possible. Principal factor extraction with oblique rotation is performed on the measuring instrument to determine the factor structure. Principal component analysis is used prior to principal factor extraction to estimate the number of factors, presence of outliers and factorability of the correlation matrices. The eigen values and scree plot are studied to determine the number of factors underlying the specific measuring instrument.

Covariance analysis or structural equation modeling (SEM) methods, as implemented by AMOS (Arbuckle, 1997), is used to construct and test the model of work wellness. Hypothesised relationships are tested empirically for goodness-of-fit with the sample data. The  $X^2$  and several

other goodness-of-fit indices summarise the degree of correspondence between the implied and observed covariance matrices.

The Goodness-of-Fit Index (GFI) indicates the relative amount of variance and co-variance in the sample predicted by the estimates of the population. It usually varies between 0 and 1, and a result of 0,90 or above indicates a good model fit. The Adjusted Goodness-of-Fit Index (AGFI) is a measure of the relative amount of variance accounted for by the model, corrected for the degrees of freedom in the model relative to the number of variables. Both these values are classified as absolute values, because they compare the hypothesised model with no model at all (Hu & Bentler, 1995). The Parsimony Goodness-of-Fit Index (PGFI) addresses the issue of parsimony in SEM (Mulaik et al., 1989). Although this index generally demonstrates lower levels in comparison to the other fit indices at the 0,50 level in comparison to values higher than 0,90, values >0,80 are considered to be more appropriate (Byrne, 2001).

The Normed Fit Index (NFI) is used to measure global fit. The NFI represents the point at which the model being evaluated fall on a scale running from a null model to a perfect fit. This index is normed to fall on a 0 to 1 continuum and tends to over estimate fit in smaller samples. The Comparative Fit Index (CFI) also compares the hypothesised and independent models, but takes sample size into account. The Tucker-Lewis Index (TLI) is a relative measure of covariation explained by the hypothesised model which has been specifically designed for the assessment of factor models (Tucker & Lewis, 1973). Critical values for good model fit have been recommended for the NFI, CFI and TLI to be acceptable above the 0,90 level (Bentler, 1992), although Hu and bentler (1999) recommended a cut-off value of 0,95. The Root Mean Square Error of Approximation (RMSEA) estimates the overall amount of error; it is a function of the fitting function value relative to the degrees of freedom (Brown & Cudeck, 1993). Hu and Bentler (1999) suggested a value of 0,06 to indicate acceptable fit, whereas MacCullum et al. (1996) suggested that values between 0,08 and 1,00 indicate mediocre fit and values above 1,00 poor fit.

In accordance with Hu and Bentler (1999), a combination approach is used to evaluate model fit. Specifically an absolute close-fit index (RMSEA) and two incremental close-fit indices are chosen (TLI and CFI) because it has been argued that they provide more stable and accurate estimates than several other fit indices (Hu & Bentler, 1999) and has been used in other confirmatory factor analysis studies of emotional intelligence (Gignac et al., 2005). Other fit indices are included as support to the TLI, CFI and RMSEA as they were used in other studies for evaluation of

psychological tests (Parker et al., 2003) and provide easy comparisons to the other data sets. Although there is no gold standard for accepting or rejecting a plausible model, the model is considered to have an adequate fit when the CFI > 0,90 (Newcomb, 1994) and the RMSEA shows a coefficient of 0,05 or lower, which is necessary for unequivocal evidence of a good fit (Parker et al., 2003).

## **5. CHAPTER DIVISION**

The chapters in this thesis (of which the first three is in the form of research articles) are presented as follows:

- Chapter 1: Introduction
- Chapter 2: The emotion experiences of professionals in a work setting
- Chapter 3: The construct validity and reliability of an emotional intelligence measurement: An exploratory and confirmatory factor analysis approach
- Chapter 4: A model of work wellness for human resource employees in a platinum- and steel production environment
- Chapter 5: Conclusions, limitations and recommendations

## **6. CHAPTER SUMMARY**

In this chapter the problem statement and motivation for the research was discussed. The purpose of the research was formulated, the methodology of the research outlined, and the methods used for statistical analysis are described.

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

- This study will provide an explanation of the emotions that employees experience, the typical events or situations in the workplace that lead to these emotions, and the manner in which employees regulate their emotions.
- This study will provide data on a factorial validity investigation of the Greek Emotional Intelligence Scale (GEIS), a newly developed emotional intelligence scale which has not been utilised within a South African sample before.

- This study will also provide information on whether the GEIS shows consistency across two different cultures (White and African).
- This study will develop and test a structural model of work wellness, and will provide information on the factors influencing burnout and engagement.

## References

- Abraham, R. (1999). Emotional intelligence in organizations: A conceptualization. *Genetic, Social and General Psychology Monographs*, 125, 209-224.
- Albar Marín, M. J., & García-Ramírez, M. (2005). Social support and emotional exhaustion among hospital nursing staff. *European Journal of Psychiatry*, 19(2), 96-106.
- Arbuckle, J. L. (1997). *AMOS user's guide version 3.6*. Chicago, IL: Smallwaters.
- Ashforth, B. E., & Humphrey, R. H. (1993). Emotional labor in service roles: The influence of identity. *Academy of Management Review*, 18(1), 88-115.
- Ashkanasy, N. M., Härtel, C. E. J., & Zerbe, W. J. (2000). *Emotions in the workplace: Theory, research, and practice*. Westport, CT: Quorum Books.
- Austin, E. J., Saklofske, D. H., Huang, S. H. S., & McKenny, D. (2004). Measurement of trait emotional intelligence: Testing and cross-validating a modified version of Schutte et al.'s (1998) measure. *Personality and Individual Differences*, 36, 555-562.
- Bailey, K. D. (1994). *Methods of social research* (4th ed.). New York: Free Press.
- Bakker, A. B., Demerouti, E., & Verbeke, W. (2004). Using the Job Demands-Resources Model to predict burnout and performance. *Human Resource Management*, 43(1), 83-104.
- Bar-On, R. (1997). *Bar-On Emotional Quotient Inventory*. Toronto: Multi-Health Systems.
- Barsade, S. G., & Gibson, D. E. (2007). Why does affect matter in organizations? *Academy of Management Perspectives*, 21, 36-59.
- Basch, J., & Fisher, C. D. (1998). Affective events – emotion matrix: A classification of work events and associated emotions. *School of Business Discussion paper*, 65, 2-16.
- Bausch, K. C. (2001). *The emerging consensus in Social Systems Theory*. New York: Kluwer Academic.
- Bentler, P. M. (1992). On the fit of models to covariances and methodology to the Bulletin. *Psychological Bulletin*, 112, 400-404.
- Bohart, A., & Greening, T. (2001). Comment: Humanistic psychology and positive psychology. *American Psychologist*, 56, 81-82.
- Brief, A. P., & Weiss, H. M. (2002). Organizational behavior: Affect in the workplace. *Annual Review of Psychology*, 53, 279-307.
- Browne, N. (2005). Health, safety and wellness: Where are we now? *People Dynamics*, 23(4), 25-26.

- Brown, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen, & J. S. Long (Eds.), *Testing structural equation models* (pp. 445-455). Newbury Park, CA: Sage Publications.
- Buelens, M., Van den Broeck, H., Vanderheyden, K., Kreitner, R., & Kinicki, A. (2006). *Organisational Behaviour*. London: McGraw-Hill.
- Bugental, J. F. T. (1964). The third force in psychology. *Journal of Humanistic Psychology*, 4(1), 19-25.
- Burns, N., & Grove, S. K. (1993). *The practice of nursing research, conduct, critique, and utilization* (2nd ed.). Philadelphia: W.B. Saunders.
- Byrne, B. M. (2001). *Structural equation modeling with AMOS: Basic concepts, applications and programming*. Mahwah, NJ: Erlbaum.
- Byrne, J. C., Dominick, P. G., Smither, J. W., & Reilly, R. R. (2007). Examination of the discriminant, convergent, and criterion-related validity of self-ratings on the Emotional Competence Inventory. *International Journal of Selection and Assessment*, 15, 341-353.
- Byron, K. (2008). Differential effects of male and female managers' non-verbal emotional skills on employees' ratings. *Journal of Managerial Psychology*, 23, 118-134.
- Cakan, M., & Altun, S. A. (2005). Adaptation of an emotional intelligence scale for Turkish educators. *International Educational Journal*, 6, 367-372.
- Caplan, R. D., Cobb, S., French, J. R. P., Jr., Van Harrison, R., & Pinneau, S. R., Jr. (1975). *Job demands and worker health*. Washington, D. C.: U.S. Department of Health, Education and Welfare.
- Carmeli, A. (2003). The relationship between emotional intelligence work attitudes, behaviour and outcomes: An examination among senior managers. *Journal of Managerial Psychology*, 18, 788-813.
- Ciarrochi, J., Deane, F. P., & Anderson, S. (2002). Emotional intelligence moderates the relationship between stress and mental health. *Personality and Individual Differences*, 32, 197-209.
- Coetzer, W. J. (2004). *Burnout and engagement of employees in an insurance company*. Unpublished doctoral thesis, North-West University, Potchefstroom.
- Constanti, P., & Gibbs, P. (2004). Higher education teachers and emotional labor. *International Journal of Educational Management*, 18, 243-249.
- Cooper, R. K., & Sawaf, A. (1998). *Executive EQ: Emotional intelligence in leadership and organizations*. New York: Berkley Publishing Group.



- Daniels, K., & Harris, C. (2005). A daily diary study of coping in the context of the Job-Demands-Control-Support model. *Journal of Vocational Behavior*, 66, 219-237.
- Demerouti, E., Bakker, A. B., Vardakou, I., & Kantas, A. (2003). The convergent validity of two burnout instruments: A multitrait-multimethod analysis. *European Journal of Psychological Assessment*, 19(1), 12-23.
- De Vos, A. S., Strydom, H., Fouche, C. B., Poggenpoel, M., & Schurink, E. (1998). *Research at grassroots: A primer for the caring professions*. Pretoria: Van Schaik.
- Diefendorff, J. M., Richard, E. M., & Yang, J. (2008). Linking emotion regulation strategies to affective events and negative emotions at work. *Journal of Vocational Behavior*, 73, 498-508.
- Domagalski, T. A., & Steelman, L. A. (2005). The impact of work events and dispositions on the experience and expression of employee anger. *Organizational Analysis*, 13(1), 31-52.
- Dulewicz, V., Higgs, M., & Slaski, M. (2003). Measuring emotional intelligence: Content, construct and criterion-related validity. *Journal of Managerial Psychology*, 18, 405-420.
- Eisenberger, S., Fasalo, P., & Davis-LaMastro, V. (1990). Perceived organizational support and employee diligence, commitment, and innovation. *Journal of Applied Psychology*, 75(1), 51-59.
- Erickson, R. J., & Ritter, C. (2001). Emotional labour, burnout, and inauthenticity: Does gender matter? *Social Psychology Quarterly*, 64, 146-163.
- Fisher, C. D. (2000). Mood and emotions while working: Missing pieces of job satisfaction? *Journal of Organizational Behavior*, 21, 185-202.
- Fisher, C. D., & Ashkanasy, N. M. (2000). Special issue on emotions in work life. *Journal of Organizational Behavior*, 21(3), 1-17.
- Fineman, S. (2003). *Emotional labour: A done concept?* Paper presented at ESRC seminar, Loughborough, UK.
- Fitness, J. (2000). Anger in the workplace: An emotion script approach to anger episodes between workers and their superiors, co-workers and subordinates. *Journal of Organizational Behavior*, 21, 147-162.
- Gabriel, Y. (1998). An introduction to the social psychology of insults in organizations. *Human relations*, 51, 1329-1254.
- Gardner, L., & Stough, C. (2002). Examining the relationship between leadership and emotional intelligence in senior level managers. *Journal of Leadership and Organization Development*, 23(2), 68-78.
- George, J. M. (2000). Emotions and leadership: The role of emotional intelligence. *Human Relations*, 53, 1027-1041.

- Gibson, J. L., Ivancevich, J. M., & Donnelly, J. M., Jr. (1991). *Organizations: Behavior, Structure, Processes*. Boston, MA: Irwin.
- Gignac, G. E., Palmer, B. R., Manocha, R., & Stough, C. (2005). An examination of the factor structure of the Schutte self-report emotional intelligence (SSREI) scale via confirmatory factor analysis. *Personality and Individual Differences*, 39, 1029-1042.
- Giorgi, A. (1985). Sketch of a psychological phenomenological method. In A. Giorgi (Ed.), *Phenomenology and psychological research*. Pittsburgh, PA: Duquesne University Press.
- Goleman, D. (1995). *Emotional intelligence*. New York: Bantam.
- Goffman, E. (1959). *Presentation of self in everyday life*. New York: Overlook Press.
- González-Romá, V., Schaufeli, W. B., Bakker, A. B., & Lloret, S. (2006). Burnout and work engagement: Independent factors or opposite poles? *Journal of Vocational Behavior*, 68, 165-174.
- Grandey, A. A. (2000). Emotion regulation in the workplace: A new way to conceptualize emotional labor. *Journal of Occupational Health Psychology*, 5(1), 95-110.
- Grandey, A. A., Tam, A. P., & Brauburger, A. L. (2002). Affective states and traits in the workplace: Diary and survey data from young workers. *Motivation and Emotion*, 26(1), 31-55.
- Greenglass, E. R., Fiksenbaum, L., & Burke, R. J. (1994). The relationship between social support and burnout over time in teachers. *Journal of Social Behaviours and Personality*, 9, 219-230.
- Gross, J. (1998). Antecedent and response-focused emotion regulation: Divergent consequences for experience, expression, and physiology. *Journal of Personality and Social Psychology*, 74(1), 224-237.
- Gross, J. J., & John, M. (2002). Wise emotion regulation. In L. Feldman-Barrett & P. Salovey (Eds.), *The wisdom of feelings: Psychological processes in emotional intelligence* (pp. 297-318). New York: Guilford Press.
- Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of Qualitative Research* (pp. 105-117). Thousand Oaks, CA: Sage Publications.
- Guerrier, Y., & Adib, A. (2003). Work at leisure and leisure at work: A study of the emotional labor of tour reps. *Human Relations*, 56(11), 1399-1417.
- Halbesleben, J. R. B., & Demerouti, E. (2005). The construct validity of an alternative measure of burnout: Investigating the English translation of the Oldenburg Burnout Inventory. *Work and Stress*, 19(3), 208-220.
- Hammersley, M. (1998). *Reading ethnographic research*. London: Longman.

- Hochschild, A. R. (1983). *The managed heart: Commercialization of human feeling*. Berkeley, CA: University of California Press.
- Hogan, B. E., Linden, W., & Najarian, B. (2002). Social support interventions: Do they work? *Clinical Psychology Review*, 22, 381-440.
- Holmwood, J. (2005). Functionalism and its critics. In A. Harrington (Ed.), *Modern Social Theory: An introduction*. Oxford: Oxford University Press.
- Hsieh, H., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, 15, 1277-1288.
- Hu, L. T., & Bentler, P. M. (1999). Cut-off criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6, 1-55.
- Humphrey, R. H., Pollack, J. M., & Hawver, T. (2008). Leading with emotional labor. *Journal of Managerial Psychology*, 23, 151-168.
- Huysamen, G. K. (1993). *Metodologie vir die sosiale en gedragwetenskappe*. Halfway House: Southern Boekuitgewers.
- Ilangovan, A., Scroggins, W. A., & Rozell, E. J. (2007). Managerial perspectives on emotional intelligence differences between India and the United States: The development of research propositions. *International Journal of Management*, 24, 541-548.
- Jonker, C. S., & Vosloo, C. (2008). The psychometric properties of the Schutte Emotional Intelligence Scale. *South African Journal for Industrial Psychology*, 34, 21-30.
- Kahn, W. A. (1992). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*, 33, 692-724.
- Kahn, J. H., Hessling, R. M., & Russell, D. W. (2003). Social support, health, and well-being among the elderly: What is the role of negative affectivity? *Personality and Individual Differences*, 35, 5-17.
- Karademas, E. C. (2006). Self-efficacy, social support and well-being: The mediating role of optimism. *Personality and Individual Differences*, 40, 1281-1290.
- Keltner, D., & Haidt, J. (2001). Social functions of emotions. In T. J. Mayne, & G. A. Bonanno (Eds.), *Emotions: Current issues and future directions. Emotions and social behavior* (pp.192-213). New York: Guilford Press.
- Kerlinger, F. N. (1986). *Foundations of behavioral research* (3rd ed.). Fort Worth, TX: Harcourt Brace College.
- Krefting, L. (1991). Rigor in qualitative research: The assessment of trustworthiness. *The American Journal of Occupational Therapy*, 45, 214-222.

- Law, K. S., Wong, C., & Song, L. J. (2004). The construct and criterion validity of emotional intelligence and its potential utility for management studies. *Journal of Applied Psychology*, 89, 483-496.
- Lewig, K. A., & Dollard, M. F. (2003). Emotional dissonance, emotional exhaustion and job satisfaction in call centre workers. *European Journal of Work and Organizational Psychology*, 12, 366-392.
- Lewin, J. E., & Sager, J. K. (2008). Salesperson burnout: A test of the coping-mediational model of social support. *Journal of Personal Selling and Management*, 28, 233-246.
- Lovelock, C. (2001). *Services marketing: People, technology, strategy* (4th ed.). Englewood Cliffs, NJ: Prentice-Hall.
- MacCullum, R. C., Browne, M. W., & Sugawara, H. M. (1996). Power analysis and determination of sample size for covariance structure modeling. *Psychological Methods*, 1, 130-149.
- Mak, A. S., & Mueller, J. (2001). Negative affectivity, perceived occupational stress, and health during organizational restructuring: A follow-up study. *Psychology and Health*, 16, 125-137.
- Mann, S. (2005). A health-care model of emotional labor: An evaluation of the literature and development of a model. *Journal of Health Organization and Management*, 19, 304-317.
- Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology*, 52, 397-422.
- Mayer, J. D., & Salovey, P. (1993). The intelligence of emotional intelligence. *Intelligence*, 17, 433-442.
- Mayer, J. D., & Salovey, P. (1995). Emotional intelligence and the construction and regulation of feelings. *Applied and Preventive Psychology*, 4, 197-208.
- Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? In P. Salovey, & D. Sluyter (Eds.), *Emotional development and emotional intelligence: Implications for educators* (pp. 3-31). New York: Basic Books.
- Meyerson, D. E. (2000). *If emotions were honoured: A cultural analysis*. London: Sage Publications.
- Moore, C., Kelliher, C., & Hailey, V. H. (2004). *Being real or really being someone else?: Managers and emotional labour*. Paper presented at the Work Employment and Society Conference.
- Morris, J. A., & Feldman, D. C. (1996). The dimensions, antecedents, and consequences of emotional labor. *Academy of Management Review*, 21, 986-1010.
- Mouton, J. E., & Marais, H. C. (1996). *Basic concepts in the methodology of the social sciences*. Pretoria: HSRC Publishers.

- Muchinsky, P. M. (2000). Emotions in the workplace: The neglect of organizational behavior. *Journal of Organizational Behavior*, 21, 801-805.
- Mulaik, S. A., James, L. R., Van Alstine, J., Bennett, N., Lind, S., & Stilwell, C. D. (1989). Evaluation of goodness-of-fit statistics for structural equation models. *Psychological Bulletin*, 105, 430-445.
- Naudé, J. L. P. (2003). *Occupational stress, coping, burnout and work engagement of emergency workers in Gauteng*. Unpublished doctoral thesis, PU for CHE, Potchefstroom.
- Neuman, W. L. (1997). *Social research methods: Qualitative and quantitative approaches*. Needham Heights, MA: Allyn & Bacon.
- Newbury-Birch, D., & Kamali, E. (2001). Psychological stress, anxiety, depression, job satisfaction and personality characteristics in preregistration house officers. *Post Graduate Medical Journal*, 77, 109-111.
- Ogińska-Bulik, N. (2005). Emotional intelligence in the workplace: Exploring its effects on occupational stress and health outcomes in human service workers. *International Journal of Occupational Medicine and Environmental Health*, 18, 167-175.
- Parker, J. D. A., Taylor, G. J., & Bagby, R. M. (2003). The 20-item Toronto Alexithymia Scale iii: Reliability and factorial validity in a community population. *Journal of Psychosomatic Research*, 55, 269-275.
- Penrose, A., Perry, C., & Ball, I. (2007). Emotional intelligence and teacher self-efficacy: The contribution of teacher status. *Issues in Educational Research*, 17, 107-126.
- Petrides, K. V., & Furnham, A. (2000). On the dimensional structure of emotional intelligence. *Personality and Individual Differences*, 29, 313-320.
- Pérez, J. C., Petrides, K. V., & Furnham, A. (2005). Measuring trait emotional intelligence. In R. Schulze & R. D. Roberts (Eds.), *International Handbook of Emotional Intelligence* (pp. 123-143). Cambridge, MA: Hogrefe & Huber.
- Plug, C., Louw, D. A., Gouws, L. A., & Meyer, W. F. (1997). *Verklarende en vertalende sielkundewoordeboek*. Johannesburg: Heineman.
- Rafaeli, A., & Sutton, R. I. (1987). The expression of emotion as part of the workrole. *Academy of Management Review*, 12(1), 23-37.
- Rafnsdóttir, G. L., Gunnarsdóttir, H. K., & Tomasson, K. (2004). Work organization, well-being and health in geriatric care. *Work*, 22(1), 49-55.
- Reilly, A. H., & Karounos, T. J. (2009, February). Exploring the link between emotional intelligence and cross-cultural leadership effectiveness. *Journal of International Business and Cultural Studies*, 1, 1-13.

- Rhoades, L., & Eisenberger, R. (2002). Perceived organizational support: A review of the literature. *Journal of Applied Psychology, 87*, 698-714.
- Rhodes, J. E. (2004). Family, friends, and community: The role of social support in promoting health. In P. Camic & S. Knight (Eds.), *Clinical handbook of health psychology* (pp. 289-296). New York: Hogrefe and Huber.
- Rosete, D., & Ciarrochi, J. (2005). Emotional intelligence and its relationship to workplace performance outcomes of leadership effectiveness. *Journal of Leadership and Organization Development, 26*, 388-399.
- Rothmann, S. (2003). Burnout and engagement: A South African perspective. *South African Journal of Industrial Psychology, 29*, 16-25.
- Rothmann, S., & Storm, K. (2003). *Engagement in the South African Police Services*. Poster session presented at the 11th European Congress on Work and Organizational Psychology, Lisbon, Portugal.
- Saklofske, D. H., Austin, E. J., & Minski, P. S. (2003). Factor structure and validity of a trait emotional intelligence measure. *Personality and Individual Differences, 34*, 707-721.
- Salami, O. S. (2007). Relationships of emotional intelligence and self-efficacy to work attitudes among secondary school teachers in Southwestern Nigeria. *Pakistan Journal of Social Sciences, 4*, 540-547.
- Salanova, M., Agut, S., & Peiró, J. M. (2005). Linking organizational resources and work engagement to employee performance and customer loyalty: The mediation of service climate. *Journal of Applied Psychology, 90*, 1217-1227.
- Salovey, P., & Mayer, J. (1990). Emotional intelligence. *Imagination, Cognition and Personality, 9*(3), 185-211.
- Salovey, P., Mayer, J., & Caruso, D. (2002). The positive psychology of emotional intelligence. In C. R. Snyder, & S. J. Lopez (Eds.), *Handbook of positive psychology* (pp. 159-171). New York: Oxford University Press.
- Sarason, B., & Duck, S. (2001). *Personal relationship: Implications for clinical and community psychology*. Chichester, UK: John Wiley & Sons.
- Schaufeli, W. B. (2003). Past performance and future perspectives of burnout research. *Journal of Industrial Psychology, 29*(4), 1-15.
- Schaufeli, W. B., Salanova, M., Gonzáles-Romá, V., & Bakker, A. B. (2002). The measurement of engagement and burnout: A two-sample confirmatory factor analytic approach. *Journal of Happiness Studies, 3*, 71-92.

- Schutte, N. S., Malouff, J. M., Hall, L. E., Haggerty, D. J., Cooper, J. T., Golden, C. J., & Dornheim, L. (1998). Development and validation of a measure of emotional intelligence. *Personality and Individual Differences*, 25, 167-177.
- Sharma, S., Deller, J., Biswal, R., & Mandal, M. K. (2009). Emotional intelligence: Factorial structure and construct validity across cultures. *International Journal of Cross-cultural Management*, 9, 217-236.
- Shipper, F., Kincaid, J., Rotondo, D. M., & Hoffman, R. C. (2003). A cross-cultural exploratory study of the linkage between emotional intelligence and managerial effectiveness. *The International Journal of Organizational Analysis*, 11, 171-191.
- Schultz, D. P., & Schultz, S. E. (1986). *Psychology and industry today: An introduction to industrial and organizational psychology*. New York: Macmillan Publishing Company.
- Searle, B., Bright, J. E. H., & Bochner, S. (2001). Helping people to sort it out: The role of social support in the Job Strain Model. *Work and Stress*, 15(4), 328-346.
- Shaughnessy, J. J., & Zechmeister, E. B. (1997). *Research methods in psychology* (4th ed.). New York: McGraw-Hill.
- Slaski, M., & Cartwright, S. (2002). Health, performance and emotional intelligence: An exploratory study of retail managers. *Stress and Health*, 18, 63-68.
- SPSS Inc. (2003). *SPSS 12.0 Windows*. Chicago.
- Staddon, J. (2001). *The new behaviourism: Mind, mechanism and society*. Philadelphia, PA: Psychology Press.
- Storm, K. (2002). *Burnout and engagement in the South African Police Service*. Unpublished doctoral thesis, PU for CHE, Potchefstroom.
- Struwig, F. W., & Stead, G. B. (2001). *Planning, designing and reporting research*. Cape Town: Maskew Miller Longman.
- Torkelson, E., & Muhonen, T. (2003). Coping strategies and health symptoms among women and men in a downsizing organization. *Psychological Reports*, 92, 899-907.
- Tsaousis, I. (2007). *Measuring trait emotional intelligence: Development and psychometric properties of the Greek Emotional Intelligence Scale (GEIS)*. Athens, Greece: University of Aegean.
- Tucker, L. R., & Lewis, C. (1973). A reliability coefficient for maximum likelihood factor analysis. *Psychometrika*, 1-10.
- Van Rooy, D. L., Alonso, A., & Viswesvaran, C. (2005). Group differences in emotional intelligence scores: Theoretical and practical implications. *Personality and Individual Differences*, 38, 689-700.

- Weiss, H. M., & Cropanzano, R. (1996). *Affective events theory: A theoretical discussion of the structure, causes and consequences of affective experiences at work*. Greenwich, CT: JAI Press.
- Weiss, H. M., Suckow, K., & Cropanzano, R. (1999). Effects of justice conditions on discrete emotions. *Journal of Applied Psychology*, 84, 786-794.
- White, M. D., & Marsh, E. E. (2006). Content analysis: A flexible methodology. *Library Trends*, 5, 22-45.
- Wills, T. A., & Fegan, M. F. (2001). Social networks and social support. In A. Baum, T. A. Revenson, & J. E. Singer (Eds.), *Handbook of health psychology* (pp. 209-234). Mahwah, NJ: Erlbaum.
- Wong, C. S., & Law, K. S. (2002). The effects of leader and follower emotional intelligence on performance and attitude: An exploratory study. *Leadership Quarterly*, 13, 243-274.
- Woods, N. F., & Catanzaro, M. (1988). *Nursing research: Theory and practice*. St Louis: Mosbey.
- Zammuner, V. L., Lotto, L., & Galli, C. (2003). Regulation of emotions in the helping professions: Nature, antecedents and consequences. *Australian e-Journal for the Advancement of Mental Health*, 2(1), 1-13.
- Zapf, D. (2002). Emotion work and psychological well-being: A review of the literature and some conceptual considerations. *Human Resource Management Review*, 12, 237-268.
- Zapf, D., Vogt, C., Seifert, C., Mertini, H., & Isic, A. (1999). Emotion work as a source of stress: The concept and development of an instrument. *European Journal of Work and Organizational Psychology*, 8, 371-400.
- Zerbe, W. J. (1998). *Emotional dissonance and employee well-being*. Paper presented at the 1<sup>st</sup> Conference of Emotions in Organizational Life. San Diego, CA.



## CHAPTER 2

### RESEARCH ARTICLE 1

# THE EMOTION EXPERIENCES OF PROFESSIONALS IN A WORK SETTING

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## ABSTRACT

The objective of this study was to investigate and explore the emotion experiences of professionals in a work context. A non-probability sample ( $N = 52$ ) was taken from the mining industry in the North West and Gauteng Provinces of South Africa. Data collection was done through a phenomenological method of semi-structured in-depth interviews and observations. Content analysis was used to analyse and interpret the research data through open coding. The main goal was to determine the emotion experiences of employees, and the following three themes were extracted on the basis of three research questions: what are the particular emotions employees experience at work; what are the specific events or situations that lead to these emotions; and how do employees manage or control these emotion experiences. Some of the emotions experienced were anger, aggression and frustration, disappointment, and suspicion, scepticism and cynicism. The specific events were divided into three levels namely organisational, group, and individual level. Some of these events included organisational culture, lack of managerial support, supervisory relationships and ineffective communication, relationships at work, and role conflict. It was also found that employees make use of emotion work, emotional intelligence and emotional distancing and detachment to regulate and manage emotion experiences.

## OPSOMMING

Die doelstelling van hierdie studie was om die emosie-ervaringe van professionele persone in 'n werkskonteks te ondersoek en eksploreer. 'n Vrywillige nawaarskynlikheid-steekproef ( $N = 52$ ) is geneem vanuit die mynindustrie in die Noordwes- en Gauteng Provinsies van Suid-Afrika. Data-insameling is gedoen deur 'n fenomenologiese metode van semi-gestruktureerde in-diepte onderhoude en waarnemings. Inhoud-analise is gebruik om data te analiseer en interpreteer deur middel van oop-kodering. Die hoofdoelstelling was om die emosie-ervaringe van werknemers te bepaal en drie temas is onttrek aan die hand van drie navorsingsvrae: wat is die spesifieke emosies wat werknemers by die werk ervaar; wat is die spesifieke gebeurtenisse of situasies wat aanleiding gee tot hierdie emosies; en hoe beheer en reguleer werknemers hierdie emosie ervaringe. Van die emosies wat ervaar is, is woede, aggressie en frustrasie, teleurstelling, en suspisieusheid, skeptisisme en sinisme. Die spesifieke gebeurtenisse is verdeel in drie vlakke naamlik organisasie-, groep- en individuele vlak. Van hierdie gebeurtenisse sluit in organisasie kultuur, gebrek aan bestuursondersteuning, verhoudings met toesighouers en ondoeltreffende kommunikasie, werksverhoudings, en rolkonflik. Dit is ook gevind dat werknemers van emosie-werk, emosionele intelligensie en emosionele distansiëring en onttrekking gebruik maak om hul emosie-ervaringe te reguleer.

Understanding the causes, characteristics and consequences of emotion forms a central part of everyday work life, but for many years such understanding has not been regarded as important in research related to organisational behaviour (Côté, 2005; Fitness, 2000; Hosie, Forster, & Sevastos, 2004), due to the fact that moods, feelings and emotions were seen as irrational and dysfunctional, and were treated as a “hazard” in terms of work, abilities and performance (Arvey, Renz, & Watson, 1998; Ashforth & Humphrey, 1993; Muchinsky, Kriek, & Schreuder, 2003). Emotions had a negative connotation and their positive functions were overlooked (Fineman, 2003).

Today it is known that emotions are not irrational, but rather support an individual to behave in a rational manner (Hess, 2003), and this may be the reason why the management of emotions is such a rapidly-growing research subject within the field of organisational research (Madlock, 2008). Emotions form the foundation of working relationships (Burkitt, 2002), and are gaining respect and a rightful place in terms of organisational research (Fineman, 2005). Weiss and Cropanzano (1996) explain that moods and emotions, that will either be positive or negative (and that can lead to longer lasting positive or negative attitudes) are determined by events and conditions at the workplace that give rise to “affective events”.

Much has been written concerning different emotions experienced at work (Ashkanasy, Härtel, & Zerbe, 2000; Basch & Fisher, 1998; Fineman, 2000; Fisher, 2000; Newbury-Birch & Kamali, 2001), but research on the emotion experiences of employees and specific affective events causing these emotions is limited (Basch & Fisher, 1998; Diefendorff, Richard, & Yang, 2008; Weiss & Cropanzano, 1996). According to the Affective Events Theory (Weiss & Cropanzano, 1996), the behaviour and performance of employees are determined by variations of feelings they experience at work, and not so much by their attitudes and personalities (Fisher, 2000; Weiss, Nicholas, & Daus, 1999).

The Affective Events Theory suggests that affect varies over time and is influenced by characteristics such as mood cycles, and factors such as the work environment. These characteristics then influence the way in which employees react to events in the workplace (Ashton-James, & Ashkanasy, 2005). These events lead to emotional reactions and in the end influence work attitudes and behaviour (Weiss & Beal, 2005). According to Grandey (2000) employees can then modify their perceptions regarding situations in order to adjust their emotional responses. They will manage and regulate their feelings and emotions in order to express it in an appropriate manner at work (Grandey, 2000).

Emotion regulation abilities involve modifying emotional experiences in order to achieve desired affective states and adaptive outcomes. Deep acting and surface acting can be regarded as methods of regulating emotions (Constanti & Gibbs, 2004; Mann, 2005). Deep acting refers to an employee's modification of emotions in order to feel the required emotions, and surface acting occurs when an employee acts as if he or she feels the required emotion (Zammuner, Lotto, & Galli, 2003). Where the expressed emotion differs from the emotions experienced by the employee, emotional dissonance is experienced (Lewig & Dollard, 2003; Zapf & Holz, 2006; Zerbe, 1998). Emotional dissonance therefore occurs due to a conflict that exists between felt and experienced emotions (Abraham, 1999) and it can lead to dysfunctional behaviour of the employee (Lewig & Dollard, 2003).

Few studies have investigated specific events that may elicit emotions at the workplace (Basch & Fisher, 1998; Brieff & Weiss, 2002; Domagalski & Steelman, 2005; Grandey, Tam, & Brauburger, 2002; Schneider & Mattenclott, 2007). Most of the studies on stressful events are focused on life in general rather than on a work context. In order to gain more insight into emotion experiences in the workplace it is necessary to further explore the affective events in the workplace. It will also be beneficial to investigate how employees regulate their emotions, seeing that faking or suppressing of emotions has been linked to lower levels of well-being and burnout. No study has to date been undertaken to determine or explore the emotion experiences of employees, the typical events or situations at the workplace that form part of their emotional experience, and the way in which employees regulate their emotion experiences within a typical South African working environment. A typical working environment associated with the South African working sectors is the mining industry (Van Zyl, Human, & Tshabalala, 2004).

The changing nature of the mining sector is apparent in the decline of employment figures. Employment in the mining industry is decreasing at an average of 8,4% per year (Anon, 2004), which poses a definite challenge to management. Due to lower production outputs, lowered gold prices and the marginal nature of many South African gold mines, the gold mining industry has initiated processes of restructuring and cost-saving exercises in order to maintain sustainability (Gold Fields Minerals Services, 1997). A large percentage of South Africans are employed in the mining industry in South Africa. The development of South Africa depends on the development of the mining industry in more ways than one (Van Zyl et al., 2004), with the mining industry controlling almost 72% of the South African economy (Van Zyl et al., 2004). A decrease in production levels, escalating costs and the downward pressure on profitability of mines in South

Africa, led to serious financial implications for mining houses. This has led to large-scale downsizing in personnel and material support, and to the closing of mines (De Lange, 2005; Van der Walt, 2005). The mining industry was chosen for this study due to the fact that the above-mentioned factors are assumed to have an emotional effect not only on management, but also on employees at all levels.

This article will add value to the domain of industrial psychology in the understanding of emotions that employees experience, the events or situations in the workplace that cause these, and lastly the way employees regulate their emotions. The remainder of this article will focus on the definition of emotion and the importance of research on emotion at the workplace. It will highlight some research findings on the typical events or situations that cause employees to experience emotions and the different mechanisms employees use in order to regulate or manage their emotions.

### **Emotions at the workplace**

The term 'emotion' refers to a set of naturally occurring phenomena such as facial expressions, bodily changes, behavioural changes, motivation, and cognitive appraisal (Roseman & Smith, 2001; Scherer, 2001). It enriches virtually all of our waking moments, either in a pleasant or an unpleasant manner. It appears as if there is no solid definition for emotion, but rather a variety of interchangeable terms (e.g. moods, feelings, affect), and this creates much confusion within the emotion-related literature (Ashkanasy, 2003), even though many attempts have been made to eliminate the frustration associated with this (Rosenberg, 1998; Russell & Barrett, 1999).

Most definitions of emotion state that it is a multi-faceted phenomenon consisting of the following components: 1) behavioural reactions; 2) expressive reactions; 3) psychological reactions; and 4) subjective feelings (Bagozzi, Gopinath, & Nyer, 1999; Lazarus, 1991; Oatley, 1992). Most studies are in agreement that emotions have a relatively short duration, but are usually high in intensity (Bagozzi et al., 1999), that they are usually intentional (in that they have an object), and individual or specific in nature (Frijda, 1993). There is also consensus that emotions involve an interaction between cognitive and non-cognitive systems (Cacioppo & Gardner, 1999). Furthermore, emotions can be seen as mechanisms used in order to convey information and play an important role in non-verbal communication. Cognition is in many ways influenced and affected by emotions (Broekens, De Groot, & Kusters, 2008).

Emotions in organisations are studied in various disciplines, as seen in research by sociologists, applied psychologists, and representatives of management literature (Ashkanasy et al., 2000) and a greater understanding has been shown of how emotions are imbedded in all organisational aspects (Brotheridge & Lee, 2008)), such as independent relationships with management, colleagues and subordinates. Academics and management consultants are beginning to value the important contribution that emotions bring to the world of work by analysing how they are formed and regulated at work (Barsade, Brief, & Spataro, 2003; Fineman, 2000, 2005; Sturdy, 2003; Tracy, 2005). Recent findings suggest that emotions at work contribute to the explanation of important and meaningful individual and workplace outcomes, such as work effectiveness and improved performance, and that these so-called “soft skills” play a critical role in maintaining a vital economy (Boyatzis, Goleman, & Rhee, 2000).

Emotions form part of how humans function (Muchinsky, 2000) and are therefore inherent to every organisational setting and have an impact on performance and functioning. Emotion is also present in activities such as achieving targets, working on projects, and within human resources functions such as performance appraisals and selection interviews (Barsade & Gibson, 2007). However, it has only recently gained respect and credibility in different areas of research (Fineman, 2005). Frost (2003) is of the opinion that even though this impact of emotions seems obvious, it is frequently overlooked or dismissed. The conclusion can be drawn that an investigation of emotions that are experienced in the workplace thus becomes vital since being oblivious to the impact of emotions can be a very costly mistake to an organisation, in that unhappy employees are usually disengaged from their work and focused on their own unhappiness and the reasons thereof, instead of focusing on their performance (Frost, 2003). In order to gain an understanding of the nature and type of emotion experiences of employees it is therefore necessary to investigate the affective events or situations that employees experience.

### **Events at the workplace leading to emotion experiences**

However, not much attention has been paid to what really happens on the job even though these events (positive or negative) have an influence on employees' emotional condition, and therefore on employees' feelings about their jobs (Weiss & Cropanzano, 1996). The Affective Events Theory (Weiss & Cropanzano, 1996) is a model which provides a useful framework for the study and understanding of emotions at work. It offers an explanation regarding the structure, origins as well as the effects of emotions at work, by evaluating the precursors of employees' experiences of emotional work events and the reactions to these events (Ashton-James & Ashkanasy, 2005).

Emotions are believed to be a mediating system by which established work environment features have an impact on job attitudes and behaviour at work (Basch & Fisher, 1998). The theory suggests that emotions emerge from discrete affective events or situations. Weiss and Cropanzano (1996) suggest that certain workplace characteristics prompt the occurrence of certain events, leading to specific emotion reactions, which in turn influence work attitudes and behaviour (Grandey et al., 2002).

As seen in the literature certain events give rise to specific emotions, for instance interpersonal mistreatment in terms of unjust treatment and disrespect (Fitness, 2000; Weiss, Suckow, & Cropanzano, 1999) leads to feelings of anger. Anger is also caused by job incompetence (Fitness, 2000), personal attacks from customers, supervisors and co-workers, and uncivilised treatment (Grandey et al., 2002). From a performance-orientated stance anger is also experienced when task interference, or policy and structure difficulties occur (Grandey et al., 2002).

Organisational change, with regard to merges, downsising and job-redesign has also been considered to be an event that elicits many emotional responses, such as anxiety and fear (Mak & Mueller, 2001; Torkelson & Muhonen, 2003). Pride is an emotion which is usually triggered by performance feedback or recognition and recognition of potential and on an individual level self-acknowledgement leads to feelings of pride (Grandey et al., 2002).

According to Fineman (2003), bullying contributes to more negative emotion experiences than any other social stressor in the workplace, and some of the emotions associated with this include fear, anxiety, anxiousness and apathy. Social support or the lack thereof in an organisational context also has an emotional bearing (Rhoades & Eisenberger, 2002). Making wrong decisions (Fineman, 2003) or bad judgement errors can have an emotional effect on employees in that regret and disappointment could be caused. Engaging in negotiation processes can also cause many different emotions. When successfully concluded, negotiation can lead to trust (Fineman, 2003) and co-operation, but when dysfunctional it can lead to negative emotions such as scepticism, disappointment and anger.

Gabriel (1998) explains that insulting behaviour is one event that creates many negative emotional responses at work, such as guilt, shame and anger. These negative emotions usually cause the other person to engage in the same behaviour, which in the end could lead to counterproductive work behaviour (Folger & Skarlicki, 1998). It can therefore be concluded that certain emotions are

experienced due to specific events or situations that occur in the workplace, and employees manage or control their emotion experiences by making use of different regulation mechanisms.

### **Regulation and management of emotions at the workplace**

The recent growing interest in emotions at work (Härtel, Zerbe, & Ashkanasy, 2005) has led emotion research to focus on *emotion work*, a concept of emotion regulation. Employees often exert effort in displaying certain emotions and hiding other emotions when interacting with others (Côté, 2005; Pugh, 2001; Sutton, 1991; Thompson, Nadler, & Kim, 1999). Although much research has been done regarding the concept of “emotion work” within service occupations (Ashforth & Humphrey, 1993; Hochschild, 1983; Rafaeli & Sutton, 1987), limited attention has been given to emotion-related research of other occupations and professions (Grandey, 2000; Tracy, 2005; Turnbull, 1999; 2001). Emotion work refers to the extent to which an employee is required to display appropriate emotion in order to effectively perform in a particular role (Wong & Law, 2002). Manipulating and controlling emotions are by no means exclusive to front-line service employees (Warren Shepell Research Group, 2006), and other professionals may also have to manage their emotions and feelings in the performance of their jobs (Fineman, 2003).

There are various approaches to emotion work (Ashforth & Humphrey, 1993; Grandey, 2000; Hochschild, 1983; Morris & Feldman, 1996). These approaches define emotion work in different ways, however, they do share the view that emotions at work are being managed in order to meet display rules set forth by the organisation.

Hochschild (1983) described emotion work as managing feelings in order to generate visible facial and physical demonstration. She proposed two main ways of managing emotions: 1) surface acting – where emotional expressions are regulated; and 2) deep acting – where feelings are deliberately altered so as to express desired emotions. Hochschild (1983) believes that this process of management of emotion involves effort and that it may be associated with burnout and job stress. Ashforth and Humphrey (1993) defines emotion work as acts of expressing proper emotions to, in the end, conform to the image of the company, and are more concerned with emotion work as visible behaviour than the management of feelings (Grandey, 2000). They suggest that there are many factors influencing employees’ emotional expressions, and that emotion work does not necessarily entail mindfulness effort, but that it may become routine, and therefore effortless.



Morris and Feldman (1996) define emotion work as the energy, preparation, and manipulation that are needed in order to express emotions required by the organisation. According to them emotion work is composed of four dimensions: 1) the regularity of interactions; 2) the intensity of emotions and the duration of the interaction; 3) the range of required emotions; and 4) emotional dissonance. Grandey (2000) agrees that emotion work is a process of adjusting feelings and expression in order to meet organisational expectations and states that there are many individual differences that may relate to emotion work, for example emotional intelligence and affectivity, and agrees that the work situation also has an effect on the level and type of emotion work an employee endures, and mentions support as an influential organisational factor.

Gross (1998) proposes an input-output model, where individuals obtain stimulus from a given situation and then respond with certain emotions. The model suggests that emotion regulation occurs at two ends of the process; 1) antecedent-focus point (where an individual can control the originators of emotion, e.g. the situation, by modifying his or her perception and is associated with deep acting (Grandey, 2000); and 2) response-focus point (where the individual can alter the visible signs of emotions, and is associated with surface acting).

There are many theoretical perspectives of emotion (Hudlicka, 2004; Picard, 1997), and these theories set out to give an explanation of why a certain emotional event results in one emotional response, rather than in another and why certain events create certain emotions in a person. Roseman and Smith (2001) are of the opinion that the key concept of these theories is that emotion is formed through the person's subjective cognitive evaluation of an event in relation to his or her goals. This evaluation process can be referred to as appraisal, and it can be argued that the appraisal of events can be influenced by physiological changes and other non-cognitive factors.

According to Tracy (2005), emotion work plays a vital role in many organisational processes, and the employee will either express or suppress an emotion for the benefit of others (Bolton, 2005). Due to the regulatory effort that emotion work entails, it has been argued that it is a source of occupational stress and may have a negative influence on the psychological and physiological systems of the employee (Giardini & Frese, 2006; Gross, 2002). Emotion work is therefore becoming increasingly important within the study and research of occupational stress (Lewig & Dollard, 2003).

Researchers share the assumption that employees regulate their emotions by following display rules (Zammuner & Galli, 2005). Display rules are guidelines that stipulate which emotions are appropriate to express in specific situations, as well as how these emotions should be expressed towards others (Zammuner & Galli, 2005). It refers to the expectations an organisation holds regarding appropriate expression of emotions at work and on the job (Gosserand, 2003). Perceptions of display rules may develop from social, occupational and / or organisational norms (Grandey, 2000; Rafaeli & Sutton, 1989).

Employees are required to display many different emotions ranging from friendliness to social control-type emotions, but together with that they have to be very selective regarding which emotions they choose to display (Humphrey, Pollack, & Hawver, 2008), and this will force the employee to either engage in surface acting or deep acting (Zapf, Vogt, Seiffert, Mertini, & Isic, 1999).

The processes of deep acting and surface acting are very demanding on an individual, which may lead to discomfort and other unpleasant feelings (Constanti & Gibbs, 2004; Hochschild, 1983; Mann, 2005). Accordingly, surface acting and deep acting may have an influence on the well-being of the employee, and consequently on the well-being of the organisation (George, 2000; Grandey, 2000). It is therefore understandable that authors view surface acting and deep acting as the key construct of emotion work (Zapf et al., 1999).

The emotion reactions derived from these emotional events influence the employee's behaviour in the end, as well as his or her attitude towards the job (Mignonac & Herrbach, 2004). With regard to stress and burnout research, emotional dissonance forms an integral part of emotion work (Grandey, 2000).

Emotional dissonance is a process where the emotions publicly expressed, in order to satisfy a work role, do not match the private emotions actually felt (Abraham, 1999; Zerbe, 1998) and it can lead to dysfunctional behaviour of the employee (Lewig & Dollard, 2003). The incongruence between feeling and acting may lead to lowered self-esteem, increased depression, cynicism, and alienation from work (Guerrier & Adib, 2003). In the same way self-alienation may be experienced when one fails to recognise and experience true emotions (Meyerson, 2000). Lovelock (2001) explained that emotional dissonance can be a stressful experience to the employee. The possible outcome of this type of stress and a feeling of falseness can lead to burnout (Erickson & Ritter, 2001) and other

health-related conditions such as depression. Emotional dissonance can be seen as a sense of strain experienced by the employee (Moore, Kelliher, & Hailey, 2004).

The frequency of having to display emotions that are not felt at a specific moment also has an influence on emotional dissonance (Zapf, 2002), and it is especially difficult when performed in the context of ongoing relationships (Moore et al., 2004). Ashforth and Humphrey (1993) explain that the more one identifies with a work role, the less emotional dissonance will be experienced. The frequent experience of emotional dissonance may result in the incapability to regulate one's own emotions (Ogińska-Bulik, 2005); this ability, together with the ability to recognise the emotions of others, is called emotional intelligence, which has been proved to play an important role in organisations (Cherniss, 2000).

Many researchers share the view that the expression of emotions is important for successful performance in a number of occupations (Ashforth & Humphrey, 1993; Hochschild, 1983; Morris & Feldman, 1996). Keltner and Haidt (2001) are of the opinion that the ability to regulate emotions is important, seeing that emotions convey information about people's thoughts and intentions, and coordinates social encounters. Some people possess more successful strategies to regulate their emotions, and this ability forms a crucial part of emotional intelligence (Gross & John, 2002; Salovey, Mayer, & Caruso, 2002).

Salovey and Mayer (1990) initially proposed the concept of emotional intelligence and suggested that individuals differ in the way they deal with their emotions. They view emotional intelligence as knowing and managing one's own emotions, motivating oneself towards mastery and creativity, and recognising and dealing with emotions in others. A more recent definition (Schmidt & Hunter, 2000) states that emotional intelligence is the ability to grasp and reason correctly with concepts and by doing that, solving emotional problems such as detecting the emotions of others.

Emotional intelligence can be used to guide one's thinking and actions, and it involves emotional processes such as emotion regulation (Côté & Miners, 2006; Mayer, Salovey, & Caruso, 2004). It includes abilities to perceive emotions in oneself and in others, using emotions to facilitate performance, understanding emotions and having emotional knowledge, and regulating emotions in oneself and in others (Wong & Law, 2002).

Emotionally intelligent employees are thought to be more satisfied and committed to the organisation (Abraham, 2000), achieve greater success (Miller, 1999), perform better in the workplace (Watkin, 2000), take advantage of and use positive emotions to envision major improvements in organisational functioning (George, 2000), and use emotions to improve decision making and instil a sense of enthusiasm, trust and cooperation in other employees by means of interpersonal relationships (George, 2000).

According to Klausner (1997) and Murphy (2006), emotional intelligence is a dictator of interpersonal relationships. Goleman (1995) states that individuals with high levels of emotional intelligence are capable of managing social interactions, and may in fact cause others to view themselves in a more positive light. Emotion regulation can in some instances lead to alienation in relation to task performance, and therefore it can be assumed that people high on emotional intelligence will be able to deal with this more successfully than people with lower emotional intelligence (Bolton, 2005). The conclusion can be drawn that employees regulate their emotions by way of surface acting or deep acting, and that the conflict experienced, when expression differs from emotions felt, can be seen as emotional dissonance which has been associated with burnout (Erickson & Ritter, 2001). The ability to effectively manage emotions at work can assist employees in coping with occupational stress (Ogińska-Bulik, 2005).

In summary, emotions form part of every workplace and they cause employees to feel and react in certain ways. According to the Affective Events Theory particular events or situations at work give rise to specific emotions, which can be either positive or negative and employees will make use of certain mechanisms in order to regulate, control or manage these emotion events. This regulation will sometimes involve modifying feelings in order to express more appropriate emotions and behaviours. When inner feelings and outward expression are in conflict with one another, emotional dissonance occurs which in turn is associated with stress-related experiences and burnout. It is therefore necessary to investigate the emotion experiences of employees, and how employees regulate these in order to predict employee wellness.

From the above-mentioned, there exists a need to explore the emotion experiences of employees, to investigate the typical emotions that employees experience at work, and to investigate the methods employees implement in order to regulate their emotions and the ways in which they regulate and manage the effect of these emotions. However, no known study have conducted research in terms of the above-mentioned area in a mining environment of South Africa. This study will contribute to

an understanding of the emotions that employees experience at work, the affective events that give rise to these emotions, and the ways in which employees manage and control their emotion experiences within a South African mining context.

From the literature review the following research aims can then be generated:

- 1) To conceptualise emotion events, emotion experiences and emotion regulation mechanisms by means of a literature review;
- 2) To determine what the emotions are that professionals experience in a work setting;
- 3) To determine which affective events and situations employees experience; and
- 4) To determine how employees regulate or manage their emotions.

## **METHODOLOGY**

### **Research approach**

For the purposes of this research, a qualitative design from a phenomenological approach was used. Qualitative research made it possible to determine the subjective experiences of professionals in a mining environment in the North West and Gauteng Provinces. Qualitative research is defined as the study of people in their natural environments as they go about their daily lives (Bailey, 1994). Despite the negativity surrounding the use of qualitative research, Woods and Catanzaro (1988) indicated that the validity of qualitative research is one of its biggest advantages. It also enables the researcher to understand and represent personal points of view, which are often concealed or neglected (Hammersley, 1998). The objective of this research design was to analyse the types of emotions that are experienced by employees in a work setting, which events in the working environment lead to emotion experiences and how employees regulate these emotion events. In this approach, the researcher was interested in the meaning employees attribute to their experiences of reality, their world and their relationships.

### **Paradigm perspective**

A paradigm can be seen as a series of fundamental beliefs dealing with essential principles. It represents a view that defines the nature of the context, the individual's place in it, and the extent of probable relationships to the context and its parts. *Inquiry* paradigms explain what falls within the scope of legitimate inquiry. The basic beliefs that characterise inquiry paradigms can be summarised by answers to three basic questions: 1) the ontological question – characteristics and features of reality; what can be known about it?; 2) the epistemological question – what is the

nature of the relationship?; and 3) the methodological question – how should the researcher go about finding out what he or she believes is to be known? (Guba & Lincoln, 1994).

### **Participants and procedure**

The population consisted of a non-probability purposive voluntary sample of professionals in the mining industry in the North West and Gauteng Provinces ( $N = 52$ ). It is clear from Woods and Catanzaro (1988) that small samples can deliver reliable research data and are therefore acceptable for phenomenological studies. Criteria for inclusion were employees who were willing to participate in the research, and who were willing to be part of tape-recorded interviews. However, no effort was made to control gender, age, race, qualification, marital status, parental status, and work experience. Consent to conduct the research was received from the Senior Human Resource Managers of the participating business units. Interviews were scheduled on dates that best suited each of the respective participants. The interviews took place in a comfortable venue and tape-recorders were used. When conducting the interviews, non-directive dialogue techniques like attentive body language, reflection, clarification, minimal encouragement and silence were used to assist the participants in sharing their experiences (Meulenberg-Buskens, 1994).

The interviews were transcribed verbatim in order to analyse the information. Descriptive information of the sample is given in Table 1.

Table 1

*Characteristics of the participants (N=52)*

Item	Category	Frequency	Percentage
Language	Afrikaans	29	55,8
	English	19	36,5
	Setswana	3	5,8
	Sesotho	1	1,9
Province	Gauteng	21	40,4
	North-West	31	59,6
Age	26-30 years	6	11,5
	31-35 years	8	15,4
	36-40 years	13	25
	41-45 years	8	15,4
	46-50 years	6	11,5
	51-55 years	7	13,5
	56-60 years	4	7,7
Gender	Female	5	9,6
	Male	47	90,4
Ethnicity	White	47	90,4
	African	4	7,7
	Indian	1	1,9
Years Service	0-5 years	22	42,3
	6-10 years	3	5,8
	11-15 years	8	15,4
	16-20 years	4	7,7
	21-25 years	8	15,4
	26-30 years	4	7,7
	31-35 years	1	1,9
	36-40 years	1	1,9
	41-45 years	1	1,9
Job Type	Production	20	38,5
	Services	32	61,5

According to Table 1, the participants were predominantly male (90,4%). Furthermore, the sample consisted of White (90,4%), African (7,7%), and Indian (1,9%) participants of which 55,8% were Afrikaans, 36,5% were English, 5,8% were Setswana and 1,9% were Sesotho speaking. The languages Setswana and Sesotho made up 7,7%. The participants were also predominantly from the

North West Province (59,6%), while 40,4% were from the Gauteng Province. The majority of the participants were between the ages of 36-40 (55,8%). The majority of participants have been working in the same industry for 0-5 years (42,3%), and the majority of participants were from services occupations and made up 61,5% of the sample.

### **Data collection**

The data collection for this research consisted of a pilot study, qualitative interviews and field notes. The trustworthiness of the research and the data was also an important aspect to consider. Before the interviews took place, the researcher observed (job shadowing) some of the employees while they were performing their daily activities. Observation notes were taken during each of these sessions. The researcher also attended meetings between management and employees and notes were taken.

### *Pilot study*

A pilot study is a prerequisite for the successful execution and completion of a research project. It allows a researcher to acquire thorough background knowledge about a specific problem that the researcher intends to investigate and to improve the success and effectiveness of the investigation (De Vos, Strydom, Fouche, Poggenpoel, & Schurink, 1998). In this study, a preliminary pilot study was conducted to identify the possible unforeseen problems, which might have emerged during the main investigation. Therefore, two interviews were conducted with employees in a mining environment. After these interviews, the interview schedule was evaluated for appropriateness. The questions that were asked during the interviews were refined and adjusted, and problems experienced were clarified.

### *Interviews*

The measuring instrument used in this research was a semi-structured interview, based on the phenomenological paradigm. Therefore, the phenomenon was being studied without predetermined expectations of categories and the interviewer tried to understand the data from the perspective of the participant. The interview took place where it best suited the participant. In order to ensure a relaxed environment, attention was given to the climate/atmosphere of the room. A 'do not disturb' sign was put outside the door to ensure that the interview would not be interrupted. In order to ensure that the participant was at ease, the researcher introduced herself in a friendly and warm manner and then explained the context of the interview. With the permission of the participant,



tape-recorders were used. It was emphasised that the participant could withdraw from the study at any time.

To ensure that the participant was comfortable for the duration of the interview, the researcher faced the participant squarely in a relaxed way, had an open body posture and leant slightly forward. All participants were asked one standard question: "*Imagine I was an actor preparing to play your role, describe to me how I would have to act and feel in order to portray you accurately as an employee in your work setting?*". The reason for posing this question was due to the fact that this is an open-ended question which enables the participants to explain their actions and emotions in a work context. It aided employees in providing meaningful information regarding the emotions they experience at work, the affective events leading to these emotions, and the ways in which they manage and control their emotion experiences. Probing and reflective questions were also asked in order for detailed explanation to take place.

The researcher also kept eye contact with the participant at all times. Non-directive dialogue techniques like minimal verbal responses (e.g., "mm-mm, yes, I see"), paraphrasing (stating the participant's words in another form with the same meaning), clarification (e.g., "Can you tell me more about..." "You seem to be saying.."), reflection (e.g., "So, you believe that..."), reflective summary ("so what you're saying...") and silence were used to assist the participants to share their experiences. Social-desirable responses were also minimised by making use of these dialogue techniques. Rephrasing was used in order to gain credibility of information. Validity was promoted by spending enough time with the participant in order to establish rapport.

### *Field notes*

Immediately after each interview, the field notes regarding that interview were written down. Field notes form a written account of the things a researcher hears, sees, experiences and thinks in the course of the interviewing. The field notes included both the empirical observations and interpretations. The researcher wrote down her emotions, preconceptions, expectations and prejudices so that they could be developed in the final product.

### *Trustworthiness*

Guba's model for qualitative research (Guba, 1981; Krefting, 1991; Lincoln & Guba, 1985) was applied in order to ensure the trustworthiness of the findings. Attention was given to the principles of credibility (evaluating the truth value of the findings), by means of field notes, triangulation, peer

examination and independent coding; transferability (ensuring applicability of the findings), through comparison of sufficient descriptive data, as well as dense description of the data; dependability (ensuring consistency of the findings), by means of an audit, keeping of the raw material, giving a full description of the research method, applying the same procedure throughout, triangulation, peer examination and the code-recode procedure; conformability (which was accomplished by using the criterion of neutrality or freedom from bias), by keeping an appropriate distance in order not to influence the research, as well as triangulation and the code-recode procedure.

### **Ethical aspects**

Conducting research is an ethical enterprise. Research ethics provide researchers with a code of moral guidelines on how to conduct research in a morally acceptable way. The following was applied at all times to retain an ethical climate (Struwig & Stead, 2001): The researcher was honest, fair and respectful towards the participants and did not attempt to mislead or deceive the research participants. The researcher respected the rights and dignity of others; this included respecting the privacy, confidentiality and autonomy of the research participants. The researcher was also mindful of cultural and individual differences among people, such as age, gender, race, ethnicity, religion, language and socio-economic status. The researcher therefore did not knowingly discriminate against people based on such factors.

### **Data analysis**

For the purpose of this study, the results of the interviews and observation periods were analysed by using content analysis. Content analysis is a research technique used to make replicable and valid conclusions (White & Marsh, 2006). In qualitative research, content analysis focuses on and attends to content or contextual meaning of the text (Hsieh & Shannon, 2005) and was therefore applicable to this study. Guba and Lincoln (1994) argue that qualitative data, unlike quantitative approaches, can overcome the issue of ignoring influential information from the context. Qualitative data can also provide rich insight into human behaviour. It can help to avoid ambiguities associated with certain data (Guba & Lincoln, 1994). The content analysis consisted of four steps (Giorgi, 1985; Kerlinger, 1986). The first step was to universalise the context that needed to be analysed (for example the entire set of verbal answers of the participants), to be defined and to be categorised. Secondly, the sub-units of the analysis, namely words and themes were determined, where the researcher read the notes of response in order to form an overall picture. Afterwards, the researcher once again read the notes in order to determine the themes. The words that were used by

the participants were the smallest analysis that could be made. A sub-theme is usually a sentence and is more difficult but also more useful to analyse. Sub-themes could be combined in order to determine the themes. The analysis of the information was continued until repeated themes were identified. The third step was to free the data from unnecessary information and to determine the meaning of the rest of the subunits by linking these to the whole picture. Finally, the concrete language of the participants was converted into scientific language and concepts. The precise words of the participants were used in support, based on gained insights, integration and synthesis.

The trustworthiness of the content analysis was promoted by the coding that was done by the researcher, and three Industrial Psychologists with a thorough background and training in content analysis. A literature-control was done to investigate relevant research in order to determine the comparativeness and uniqueness of the current research (Krefting, 1991). Validity was promoted by spending enough time with the participant in order to establish report.

## **RESULTS**

The findings of this study were organised into major themes and various sub-themes. Below, each theme and relevant sub-themes will be discussed. The respective tables show the sub-themes and provide a description of keywords associated with the themes. It is explained by the Affective Events Theory that certain events or situations at work lead to specific emotional experiences. These emotions and events are then regulated and managed by certain regulating mechanisms.

Table 2 gives the emotions and feelings that employees experience at the workplace as indicated by statements from the interviews.

Table 2

*Theme 1 - Emotions and feelings experienced*

Emotions Experienced	Associated key words
1) Anger, aggression, aggravation and frustration	Angry; Annoyed; Irritated; Aggressive behaviour; Rage; Frustrated; Not receiving credit; Inter-departmental relations; Under-rating potential; Not feeling valued; Being overruled or bypassed in decision-making; lack of career opportunity; Relying on others' feedback to do own job
2) Disappointment	Hurt; Disappointed; Dissatisfied; Upset; Not having someone to talk to about own problems; Not achieving targets; Not satisfied with current business practice; Good initiatives being turned down
3) Stressed, overwhelmed and emotionally drained	Worried; Weighed down; Mental load to think of strategies to please management; Job uncertainty; High work standards; Fear of failure; Deals with everyone else's problems, but have nowhere to go with own problems; Over-worked; High responsibilities
4) Anxious and scared	Nervous; Concerned; Restless; Fearful; Frightened; Job uncertainty; Uncertain about quality of other people's work and impact of negligence; High responsibilities; Mistrusting management and co-workers; Backstabbing and political games; Afraid to make true feelings aware
5) Suspicion, scepticism and cynicism	Doubt; Mistrust; Disbelief; Uncertainty; Pessimism; Believe people have hidden agendas; Don't expect too much so that disappointment is lower; Not disclosing all the necessary information

**1) Anger, aggression, aggravation and frustration**

The emotional tone of social encounters is set through the way in which emotions are regulated. When pleasant emotions are displayed, people usually respond in a favourable manner, but when negative emotions are expressed, it tends to push people away, for instance, one inappropriate display of anger can destroy a relationship forever (Lopes, Salovey, Côté, & Beers, 2005). The experience of frustration begins with an event that hinders an employee from achieving or maintaining a goal at work (Spector, 1997). These feelings of frustration and anger are usually accompanied by antisocial behaviour such as aggression.

Apart from financial and safety factors, there are some other factors within the organisation that cause frustration. During observation periods it was mentioned that an emotional intelligence course was scheduled and provided by the company's in-house training facility, and a selected number of employees attended the course. It seemed as if most of them were impressed with what they discovered about themselves and the new skills they acquired, but it was also clear that they doubted the practical application of these newly acquired skills in the workplace: *"People who don't understand themselves and who are totally oblivious to the feelings of others frustrate the hell*

out of me". While observing one of the employees, the course was being discussed and he made the following comment: "...management sends us on courses like these, but why? There is no support in the organisation to implement what we learnt and not even senior management shows any of the characteristics".

Some other comments included: "I get frustrated when people come to me with their personal problems, but have no intention of thinking of a solution themselves"; "I become frustrated when management looks over my shoulder and mistrusts me, and they have no intention of supporting me"; "One thing that frustrates me is when senior management overrules my decisions – it's like why am I even here?"; and "I am frustrated here, very, but I know there are others that feel exactly the same".

The form of behaviour that causes emotions such as aggression and cynicism is usually anger directed at others by means of pressuring or bullying them. Normally anger and aggression can be considered a short-term emotional release, which flares up quickly and subsides as quickly: "Sometimes I cannot control my anger and frustration and I just scream and shout". Often it is a reaction to a perceived attack or threat to self-esteem: "I become very angry and sometimes aggressive when people take me for the fool – under-rating my intelligence"; and "On the mine production is everything, so there is little sentiment for office workers. They (senior management) don't listen and they treat you as if you're nothing. That aggravates and frustrates me".

During an observation session, the specific employee being observed was called in by his senior manager. When he returned he was furious. His face was red, his eyes looked bewildered and he was short of breath. The researcher carefully approached him and asked what had happened and whether he was going to be all right. He explained that he put in seven days leave three months before. He paid the accommodation for his holiday, but two days before (this particular day) his leave date would commence, his manager withdrew the leave. When asked for a reason the senior manager simply said that he was the boss and there was no need for him to explain why.

To most of the participants, anger and aggression were viewed as reactions to pressure for increased performance from top management, and inadequate performance from subordinates: "...incompetence makes me lose my temper"; "The fact that people are ignorant regarding their responsibilities and want to push it on to me, stresses me and makes me angry"; and "When my team fails, in that we don't achieve our targets, I become angry, because I know senior

*management is going to look at me for the answers".* The subordinates' failure to deliver targeted results is seen as disloyalty, laziness or sometimes as a challenge to the manager's authority. His or her frustration is then manifested in anger and aggressive behaviour and this decelerates performance even more.

Some other responses referring to this specific emotion theme included: *"I get angry every single day of my life at this place, but I have to keep a straight face, because we have to set an example. I become angry when I don't get recognition and when my values conflict with the values of the company"; "I have to be aggressive sometimes to get my people to do their jobs to the fullest. I have to keep them under pressure"; and "I deal with my issues by becoming aggressive. I know it's not what is expected from me as a manager, but I don't believe in bottling up and pretending everything is okay".*

## **2) Disappointment**

Disappointment is the feeling of dissatisfaction that follows the failure of expectations (Merriam-Webster, 1993). From the interviews it was evident that participants were disappointed with many aspects of the organisation, from team failure to the way in which management dealt with employees. Some of the responses to highlight the theme of disappointment included: *"...because no matter how good my ideas are, they always get shot down by sarcastic remarks"; "I am usually very disappointed when we don't achieve what we are expected to achieve"; "Production people don't accept responsibility and when things go wrong, they blame the services departments"; and "...as well as the implied lack of trust in my abilities to know what is best in my area of expertise".*

## **3) Stressed, overwhelmed and emotionally drained**

Stress refers to the consequence of failure to respond appropriately to emotional or physical threats, which can be actual or perceived (Keil, 2004). When untreated, these emotions can lead to burnout, which is a debilitating condition that results in depleted energy levels, immune deficiencies and negative attitudes (Altun, 2002). One aspect of burnout is feeling emotionally exhausted, meaning that one feels drained by one's interactions with other people. During the interviews the following statements were made: *"At the moment I am feeling emotionally drained. I have too many stuff going on and too little time to sort everything out. I feel as if I am dancing on a hot plate"; and "I feel over-worked and tired, and I feel that I am personally responsible for many aspects of the operation".* In order to cope with these feelings of exhaustion, the employee more often tries to

protect himself or herself by detaching from his or her recipients, by treating them in an indifferent and cynical manner.

#### **4) Anxious and scared**

Anxiety is a psychological as well as physiological state characterised by emotional, cognitive and behavioural components, which combine to create feelings of concern, worry and fear (Seligman, Walker, & Rosenham, 2001). From the interviews and observation periods it was clear that the mining industry has been subjected to many difficulties over the past few months, including a decline in production and an increased number of accidents. Some of the comments during the interviews indicated that participants felt anxious about their job security: *"The fact that these are uncertain times for the mining industry gets to me emotionally. I don't know if I will have a job tomorrow"; "When I come to work I am scared and anxious. Safety is my number one concern – I know that people can die if something goes wrong, so I check and re-check everything"; "I am tensed and afraid from the moment I walk in here 'till the time I leave"; "...the general feelings or rather emotions I experience on a daily basis in this place...I feel threatened, suspicious, defensive, aggressive and tense, and this is all because you have to think of ways to please senior management, without selling your soul"; and "I always feel anxious around senior management, because no matter how good my ideas are, they always get shot down by sarcastic remarks".*

#### **5) Suspicion, scepticism and cynicism**

Being sceptical means having an attitude of doubt (Merriam-Webster, 1993). It became evident from the interviews and observation periods that these employees were not only doubtful of senior management, but also of their subordinates and sometimes colleagues: *"If you want to do my job effectively, you will have to be a policeman...I am sceptical about my people's work – I always doubt the quality standard so I have to check up on them..."; "You must always be sceptical, in that you don't expect too much, because by doing that you are saving yourself from a lot of disappointment"; and "I have to act as if I trust my co-workers and subordinates even when I doubt them sometimes".*

From the observation periods it became clear that some of the employees felt that management made decisions with ulterior motives. They also felt that many subordinates took chances with management, and one had to ensure that no one took advantage of you. When they were asked permission to conduct the interviews they immediately wanted to know what senior management's involvement in the research process would be: *"Trust and respect are earned, people don't just get*

*my trust and respect. Here are very little people that I trust or respect”; and “I get suspicious when people expect me to just accept certain things and when I ask questions to better understand the reasoning behind it, they blame you for stirring trouble. That shows me something is being hid”.*

Cynicism means distrusting the intentions of others, believing that other people are not representing their true motives (Dean, Brandes, & Dharwadkar, 1998): *“You must always read between the lines, because most people have a hidden agenda”; “You have to be constantly sceptical about what others’ intentions are”; “People are dishonest – you have to think in a dishonest manner in order to know what they are thinking”; and “...the fact that senior management distrusts us and always feel the need to overrule our decisions, that really gets to me”.*

In Table 3, the various events or situations leading to emotion experiences are discussed.

## **Theme 2 – Events or situations leading to emotion experiences**

It was evident from the interviews that many events or situations gave rise to negative emotion experiences. The results from the interviews showed that the situations or events, leading to emotions, could be categorised into three levels: 1) organisational level; 2) group level; and 3) individual level



Table 3

*Theme 2 – Events or situations leading to emotion experiences*

Sub-Themes	Description of sub-themes	Associated meaning
<i>Sub-theme 1</i>	<i>Events or situations causing emotion experiences on an organisational level</i>	
	1) Organisational Culture	Way that things are done in the organisation; Attitudes, beliefs, values and experiences that define an organisation
	a) Mistrust	Do not trust management; Doubt the reasons behind others' actions and intentions; Certain information is hidden;
	b) Diversity	Salary disparities between what females and males earn; Females have to work harder to show ambition and to gain credit or respect; Do not accept authority from young managers; Evaluated on basis of colour not performance
	c) Bullying, victimisation and politics	Unfair treatment; Who you know may promote career progression; Have to play political games to advance
	2) Lack of managerial support, supervisory relationships, and ineffective communication	No support to implement ideas; No caring; Unclear requirements; Conflict between departments; Negative attitudes; Incompetence; Unfairly blamed; Not disclosing all essential detail; Overruling decisions
	3) Lack of appreciation from management	No recognition or feedback on good performance; Top-down demanding approach; Qualifications not recognised; Sarcastic remarks
	4) Work-role overload	More responsibilities; High workload; Long working hours; Too many things to do in too little time; Meeting deadlines
	5) Inefficient time management	Time constraint; Ineffective work procedures
	6) Safety requirements	High responsibility; Adhering to safety standards; Dangerous working conditions
	7) Lack of resources	Limited experience; Physical resources
	8) Job insecurity	Economic pressures necessitate job-restructuring or restructuring
	9) Lack of empowerment, autonomy and variety	Decisions overruled; No input in decisions; Monotonous work
<i>Sub-theme 2</i>	<i>Events or situations leading to emotion experiences on a group level</i>	
	1) Relationships at work	Difficult colleagues; Conflict between colleagues; Disciplinary action sometimes needed
	2) Lack of co-worker support and appreciation	Not listening; No support for personal problems; Not providing information to complete tasks
	3) Lack of control over others' work	No control over implementation; Team failure; Not achieving goals; No control over quality of others' work

Table 3

*Theme 2 – Events or situations leading to emotion experiences (Continued)*

Sub-Themes	Description of sub-themes	Associated meaning
<i>Sub-theme 3</i>	<i>Events or situations leading to emotion experiences on an individual level</i>	
	1) Role conflict and role incongruence	Many different roles – friend and supervisor; Have to portray feelings and actions of manager – not necessarily the same as authentic self
	2) Value conflict	Personal values contradict with company values; Dishonesty; Political games

**Sub-theme 1**

Events or situations causing emotion experiences on an organisational level

**1) Organisational culture**

Organisational culture is a collection of values and norms that are shared by employees, shaping the way they interact with one another (Black, 2003).

**a) Mistrust**

Mistrust refers to the belief that another party has a hidden agenda or ulterior motive (Saunders & Thornhill, 2004). Most of the participants felt that they had to trust their subordinates, due to the fact that “...there is no time to check and re-check other people’s work. My work will suffer if I have to spend all my time playing performance cop over all my employees”. It was clear that some of them did not trust senior management: “I believe that my manager does not tell me everything. Certain information is kept secret, but then he expects me to keep my people motivated... Why doesn’t he just tell us exactly what is going on so that everyone can be in the light?” Most of the participants felt that they have to be tough, because many people take chances, but overall, they have to be fair and act accordingly. When people perceive an individual as being unfair, they deny that person their best performance: “Being victimised due to personal issues and unfair behaviour really gets to me. I believe in treating all my people fair and equal”. People become negative towards someone who treats them unjustifiably or distrustful. One of the comments during the interviews was: “My manager questions all my decisions, as if I don’t know what I am doing. So if you are an actor in this role, and you want to be a good manager, you will have to trust people to do the job they were appointed to do, give them credit for what they do right, and don’t make unfair demands especially if you are not prepared to give them the necessary resources”.

## b) Diversity

Even though the mining industry is subjected to the stipulations of the Mining Charter in terms of the percentage of females that need to be employed in this industry, according to the females, traditional gender hierarchies persist: *"I can't afford to be emotional because this is a man's world; there's no place for tears. They see you as weak and typically female, and will never take you serious if you show emotion"; "I am a manager, just like my male counterparts on the same Patterson level. I do the same work, produce the same standards, and do more than anyone expects me to, but I do not get the respect my male colleagues receive. I am higher qualified than any of them, but in this organisation my qualifications mean nothing. There is also a definite salary disparity between what females earn in the same positions as the males, and I find it very unfair and very de-motivating. I also find that I have to prove myself so much more to gain respect"*.

However, it was not only in terms of gender that the candidates felt stereotyped. Two other comments were: *"People don't see me as a leader because I am very young";* and *"I find it really offensive that I am being evaluated on my colour rather than on my performance"*.

## c) Bullying, victimisation and politics

Bullying is characterised by several features such as repetition, duration, power disparity and intent (Lutgen-Sandvik, 2003). Indicative behaviour of bullying includes verbal abuse, unfair criticism, inappropriate comments and victimisation. Some of the responses indicating that this was taking place were as follows: *"Being victimised due to personal issues and unfair behaviour really gets to me"; "I put in a week's leave three months ago, paid for the accommodation and everything was set, but two days before my leave starts my manager calls me in and says my leave is cancelled. When I asked why he just said 'I am the boss and I don't need to explain myself'; "Management are sometimes very unreasonable and will blame you just because they have no one else to blame"; "Managers that dislike you on a personal level play mind games in order to victimise you";* and *"It makes me angry when I know that I am right and someone else goes out of their way to prove me wrong..."*.

One of the worst frustrations at work is the realisation that being good at your job, simply is not always enough to ensure career progression, and that it sometimes really is a situation of whom you know: *"Doing things right and giving more of yourself doesn't get you any further";* and *"Always make friends with people at the top"*. Some other comments in this regard included: *"There is a lot of back-stabbing and senior management plays political games"; "I have to be on the lookout for*

*people constantly trying to stab me in the back. I have to always act professional, even if I feel like standing up and throwing all my toys out”; “You will also have to play political games in a male-dominated environment”; “Be positive about achieving success, but be afraid of politics”; and “I become frustrated that there are so much beaurocracy and ‘red-tape’ that prevent things from getting done...”.*

## **2) Lack of managerial support, supervisory relationships, and ineffective communication**

Supervisors and management play a significant role in structuring the workplace and providing feedback to employees (Griffen, Patterson, & West, 2001). As a result supervisory relationships and behaviours have an impact on employees (Durham, Knight, & Locke, 1997). A general feeling that was prevalent in a significant number of responses was the feeling of not being able to rely on support from the organisation, specifically managerial support. It seems as if this is debilitating to employees, seeing that a lack of support leads to feelings of not being valued or important: *“You have to perform miracles for senior management and open door policy my @ss”; “They don’t listen and they treat you as if you are nothing”; “...there’s no support in the organisation to implement what we have learnt..”; and “I get so angry when my supervisor doesn’t want to listen to me...”.*

It was clear from the interviews that the relationships between departments and disciplines were a source of conflict and frustration: *“Production people don’t accept responsibility and when things go wrong they blame the services departments”; and “...all based on suspect information given by an employee split between two opposite disciplines, which some fool decided should be one department”.* Other responses showed that people view the maintenance of relationships and relationship harmony as important when dealing with others: *“...I mean I care for my people”; “...in-order to be fair to the group, but in such a way that no one is offended”; “I get so frustrated with the rudeness of other people – in that they have no patience with each other and it causes so much unnecessary conflict”; and “People are important”.*

## **3) Lack of appreciation by management**

Appreciation stimulates, fosters and encourages a better attitude (Shearer, 2006). By providing appreciation and recognition management can eliminate the perceptions employees may hold regarding management not being trustworthy, and it can help minimise the effects of overload and stress (Shearer, 2006). It therefore seems obvious that organisations should give recognition and praise when employees perform well, but it was clear from a number of responses that the candidates perceived it as not happening: *“I get angry when people do not recognise and appreciate*

*my skills and competencies”; “I feel frustrated because I don’t feel appreciated by the company”; “You will feel unappreciated and frustrated by certain individuals’ belittling”; “I am higher qualified than any of them, but in this organisation my qualifications mean nothing”; and “It gets to me when performance is not recognised”.*

#### **4) Work-role overload**

Role overload refers to having too much to do (Duxbury & Higgins, 2001). Evidence from studies indicates that the more roles employees have to fulfil, the more likely they are to report role overload (Duxbury & Higgins, 2001). It was evident that many employees felt overwhelmed by the amount of work and the different roles they had to fulfil within one position. It is clear that this leads to much frustration and stress: *“You will have to work long hours and even on weekends you will have to be prepared to spend time on work-related issues”; “When I am working under a lot of pressure, meaning I have too much to do within a given time frame, and others interrupt me continuously I tend to lose my cool and depending on my stress levels it might lead to an outburst”; and “You have to take on various roles: policeman, law expert, teacher, father, ventilation expert, cost estimator, labourer, informer, industrial relations officer, manager, gypsy (with a crystal ball), and sometimes even a preacher”.*

#### **5) Inefficient time management**

Time management has been proved to be a successful strategy in managing stress effectively (Ferner, 1995; Treven & Potocan, 2005). From the interviews and observation periods it was clear that due to the fact that employees could not plan their day to the last minute caused them to feel out of control: *“On this level it is difficult to plan your day because not all our clients make appointments and we have an open-door policy, so one gets many interruptions”.* Because most of the work should be done within a given time frame, there is not always time to recheck everything: *“...because there is no time to check and re-check your people’s work”; and “In the mining industry we never have time to do things right the first time, but we always have to time to fix the f@ckups”.* This gave rise to feelings of frustration and being overwhelmed because of poor work procedures.

#### **6) Safety requirements**

“Safety culture” has been introduced as a term to describe employees’ attitudes towards safety (Cox & Cox, 1996). From observation periods and responses from interviews it became evident that the mining environment could be regarded as a place where accidents occur on a daily basis, some more severe than others. It is therefore a high risk environment, placing many physical and

emotional demands on employees. Some responses referring to the high responsibility associated with safety were: *"I get angry when we have accidents that could and should have been avoided"*; *"I always feel a sense of responsibility for the safety of underground employees and take responsibility for decisions made"*; *"Safety is my number one concern - I know that people can die if something goes wrong, so I check and re-check everything"*; *"When we have a fatality it is very saddening and traumatic"*; and *"It really affects me on an emotional level when employees die due to mine injuries, and I have to deal with families in this regard"*.

## **7) Lack of resources**

Job resources are the physical, psychological, social or organisational aspects of the job that may be functional in achieving work goals, reducing job demands, and stimulating personal growth and development (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). From the interviews it could be argued that participants felt that factors, other than material, tools and equipment could be viewed as a resource, and were lacking in the workplace. One response referred to the availability of experienced employees as a resource: *"You also have underpaid people with very little experience working for you, reporting on legal information you cannot always trust"*. Another response implied that it was sometimes a difficult situation when resources were not available in terms of relationships with clients: *"You have to know what your clients require and how to provide them with that service, and how to react if you cannot provide it because of insufficient resources"*.

## **8) Job insecurity**

The economic and technological environment in which business functions today has recognised job insecurity as a chronic condition that exercises an impact on the general workforce (Roskies, Louis-Guerin, & Fournier, 1993). It is not only concerned with the potential loss of employment, but also the uncertainty which revolves around career progression and promotional opportunities, and as such poses a threat to the way an employee's job opportunities will unfold (Reisel & Banai, 2002). From the interviews and observations it was clear that many mining houses were retrenching and laying off employees, which led to the emotional distress of many. Not knowing whether they would have a job in the near future was a grave concern to some of the participants: *"I don't know if I will have a job tomorrow"*; and *"The fact that these are uncertain times for the mining industry gets to me emotionally"*.

## 9) Lack of empowerment, autonomy and variety

Empowerment is characterised by practices decentralising power by involving employees in the decision-making process (Carless, 2004). Variety refers to the number of different operations the job entails, whereas autonomy refers to the control the employee possesses to choose among the operations and set his or her own job pace (Dodd & Ganster, 1996). It was clear from the interviews and observations that being involved in the decision-making process and having the support from the organisation to implement decisions, were important factors of feeling appreciated, and it was indicated from the responses that when this was lacking it could lead to frustration: *"I have a problem with management; I don't appreciate how management deal, the fact that senior management distrusts us (middle management) and always feel the need to overrule our decisions - this really gets to me"*; *"I feel frustrated when management looks over my shoulder and mistrusts me, and have no intension of supporting me"*. One response also implied that the lack of variety frustrated him: *"I get frustrated doing things over and over again - it frustrates the hell out of me, so all you can do is think like a production manager; 'gold is our business'"*.

## Sub-theme 2

Events or situations leading to emotion experiences on a group level

### 1) Relationships at work

On a group level employees more frequently have to engage in face-to-face interactions and these can potentially lead to many conflict situations given the impact and consequences of diverse backgrounds and values (Pelled, 1996). From the interviews it became evident that much conflict existed between groups within the organisation and that the situation had an emotional bearing on employees: *"I am typically affected by situations in the office where I need to intervene in conflict episodes"*; *"There is so much conflict up and down"*; and *"I get frustrated with the rudeness of other people - in that they have no patience with each other and it causes so much unnecessary conflict"*. It was also clear that certain behaviours led to conflict situations, for example: *"You will become frustrated with people that are ignorant regarding the position and responsibilities of our department"*; *"It really makes me angry when my workers doubt my integrity"*; and *"Sometimes you will have great ideas, but someone else will come and say that it is their idea"*. It also mentioned that certain actions were necessary to build trust and establish harmony within relationships: *"Sometimes, depending on the criticality of the situation you have to be honest and tell them you don't know..."* and *"You must be sensitive towards others' feelings"*.

## **2) Lack of co-worker support and appreciation**

Social support has been shown to be a buffer against stressful events (Beehr, 1995). From the interview responses it was evident that the perception existed that there was a lack in terms of support from colleagues and co-workers, and that this could very easily be the source of many frustrations and stress-related experiences: *"I get very angry at people back-stabbing me, saying things when I am not there"; "You'll become frustrated with slow progress and people not listening"; "I feel frustrated because they look at my age and believe I shouldn't be giving them orders, and I end up having to take disciplinary action against them and they end up taking it personal"; "It makes me angry when I know that I am right, and someone else goes out of their way to prove me wrong - I am an expert in my field but they ignore me"; "The fact that people don't want to take responsibility and try and force it onto me stresses me and makes me angry"; "You have to be really patient because you depend on others for feedback and you will become frustrated because sometimes you can't get your own job done - not before someone else does theirs" and "You have to be caring because your people want to feel valued and needed, but then you have to deal with the fact that you don't feel any of that (valued and needed)".*

## **3) Lack of control over others' work**

Perceptions of control have been associated with many conditions at work associated with negative emotion experiences, and evidence suggests that enhanced control can have significant influences on employees' health and well-being (Spector, 2002). The participants indicated through the interviews that they sometimes felt helpless in that they did not have direct control over the way others completed their tasks, which could lead to under-achievement for the group as a whole and in the end could lead to feelings of disappointment, frustration and anger: *"I am usually very disappointed when we don't achieve what we expected to achieve"; "Because you are not directly in control of how your recommendation are implemented, or not, you will feel powerless at times, and to overcome this feeling, you will feel the urgency and feel compelled to confront employees who do not perform or implement the recommendation"; "When my team fails, in that we don't achieve our targets, I become angry because I know senior management is going to look at me for the answers"; "I become very frustrated when my people are injured or when I am blamed for something I have no control over"; and "You also have underpaid people with very little experience working for you, reporting on legal information you cannot always trust".*



### Sub-theme 3

Events or situations leading to emotion experiences on an individual level

#### 1) Role conflict and role incongruence

Role conflict is a special form of social conflict that takes place when one is forced to take on two different and incompatible roles at the same time (Vecchio, 1981). From the interviews and observations it was clear that participants felt they were in a difficult situation when they were friends with their co-workers and subordinates, but at work they had to fulfil the role of manager or supervisor: *"I feel very tired, emotionally, when I had to tell someone they did not meet my expectations or I have to counsel them"; "You will have to distance yourself seeing that the development panels and development interviews are emotionally draining, in that you sometimes have to tell friends that they do not show the potential for promotion"; "I have to act like a manager - cold and uninvolved, that is what is expected of me by the company"; and "It is very difficult for me to say 'no' if they ask me for days off".*

#### 2) Work value conflict

Work value conflict refers to conflict that employees experience between their own set of values and the values of the company (Kreitner & Kinicki, 2001). Candidates indicated through the interviews that they sometimes experienced a level of conflict when they wanted to act in a particular way, but due to rules set forth by the company they were hindered to act out what they really felt: *"You must convince yourself that you actually like what you do, even if you are bullsh\*tting yourself"; "I believe that you sometimes have to pretend in order to display what your colleagues want to see"; and "In some cases you have to act tough and be tough although the affected person is breaking your heart".* It was also mentioned that the current state of affairs at the organisation was not necessarily the same as the values the individuals held and this caused frustrations: *"Treat everyone the same, not like things are going on here"; "I become angry when I don't get recognition and when my values clash with these of the company"; and "You will have to deal with the frustrations of negative people and people with no ethics in the work environment".*

It has now been concluded that specific emotions are caused by certain events that take place in the organisational environment. The ways in which employees manage these emotions and events are depicted in Table 4.

Table 4

*Theme 3 – Ways in which employees regulate their emotion experiences*

Mechanism of Emotion Regulation	Associated Key words
1) Emotion Work (Surface acting, Deep acting, Emotional dissonance)	Faking or suppressing emotions; Change internal feelings to suit expression; Altering emotion behaviour to suit a situation; Keeping emotions separate from work; Ignoring emotions; Not losing temper gains respect; Stay calm even when mad; Act professionally regardless of emotions felt; Smile even though angry; Do not scream and shout even when feel like it; Act tough and try to feel tough
2) Emotional intelligence	Being aware of emotions in others; Empathy; Not being over-sensitive; Being friendly and optimistic ignite positive feelings in others; Change a threat into a challenge; Use different approaches with different people to suit situation
3) Emotional distancing and detachment	Put up an emotional block; Separating self mentally or physically from a potentially emotional situation; Do not allow emotions to overrule actions; Not become emotionally involved with problems of others

**1) Emotion work**

This category refers to efforts and attempts to fake or suppress emotions, attempts to change internal feelings to suit expressions, keeping emotions separate from work, and ignoring the existence and impact of emotions. Many responses implied that employees have to suppress, fake or mask their true feelings in order to be perceived as emotionally tough, and this is necessary in order to cope effectively within the particular environment: *“Never shout at a person, thus suppress your true feelings on a daily basis”*; *“...I have to try hard not to show my true feelings, because they wait for me to slip”*; *“You have to put your self-doubt in your pocket because you can’t show that to others”*; *“...even when I am hurt to the core, I don’t cry in front of my superiors and colleagues”*; *“Your people must always believe that you are enjoying what you are doing – sometimes this will involve putting up a mask”*; and *“I have to act like manager – cold and uninvolved, that is what is expected from me by the company”*.

Many participants felt that they were expected to act as sounding boards to their subordinates. They have to listen to subordinates’ problems, which are very often personal, and then attempt to distance themselves from the problem: *“You must be sensitive to the emotions of others and find out what the reason is for why they do what they do”*; and *“...but I also have to play the role of a ‘father’ and listen to their problems and give advice”*.

One of the participants said that *“Even when you feel a subordinate isn’t very important, you have to show compassion. Even if you don’t really feel it, you have to show it because that is the only way you win them over”*. These employees are expected to express emotions that suggest they truly

care for subordinates, similar to the emotion work of nurses (Morgan & Krone, 1999): *"...have to consider the people working for you in terms of their feelings, and listen to their problems"; and "I listen empathically to my employees and try to identify with them..."*. During the interviews one person responded in a very adamant manner when he said *"You have to be caring because your people want to feel valued and needed, but then you have to deal with the fact that you don't feel any of that"*.

Some responses referred to attempts to not only display certain behaviours but to modify or alter emotions felt, in order to match the expression: *"Like when I have to tell someone...I have to really see myself as a hard manager"; "You must convince yourself that you actually like what you do"; and "In some cases you have to act tough and be tough although the affected person is breaking your heart"*. Some responses suggested the alteration of emotional behaviour in order to suit a particular situation: *"As a female I have learned to express my emotions and feelings in a professional manner, rather than being too sensitive about issues"*.

Some employees referred to attempts to keep one's work separate from one's emotions: *"I maintain a professional approach and do not allow emotions to overcome me"; "...for instance it is unfair to bring my personal problems to work, especially if it is adverse"; and "On a more personal level, I cannot bring my problems as a mother – for instance sick children, or children with school difficulties – to work"*.

Few responses suggested that emotions have no place at work: *"...however, I do not let emotions come in to play at work"; "My work is quite technical and people skills and feelings very seldom come into play or form part of my job"; and "I have no time for dealing with emotions – emotions have no place at work"*.

Some of the participants felt that you should rather physically remove yourself from situations that may lead to emotional outbursts: *"...I therefore just excuse myself from situations that could lead to that"; and "...I withdraw myself whenever I feel I am going to snap"*. One participant mentioned that when he felt emotionally overwhelmed *"...I turn inward and evaluate my feelings as objectively as possible"*.

Emotional dissonance occurs when an employee is required to express emotions different from actually felt emotions in a given situation (Zapf & Holz, 2006). From the interviews it was clear

that many employees experienced emotional dissonance daily and most of them viewed it as relatively uncomfortable: *"The 'manager' and the person is not necessarily the same"; "It is expected not to lose your temper in front of subordinates, and I therefore just excuse myself from situations that could lead to that"; "You will have to act professionally regardless of the emotions or feelings involved at the time - it takes practice but it works"; "I always try to stay calm even when I am mad as hell"; "I don't allow my emotions to take control of me - stay calm and be professional as is expected from someone at this level"; "I usually treat people friendly even though I don't like them - that's how I get stuff out of them"; "I try to always be friendly, calm and collective, however, this is not always possible as I get irritated and angry if something is not done the way it was supposed to be done, but there are ways to handle it"; "Never shout at a person, thus suppress your true feelings on a daily basis"; and "With great effort, self-control and mercy from Above, I haven't physically assaulted anyone".*

Some other comments relating to dissonance were as follows: *"You have to be hard. This is no place for sissies"; "I have to deal with unhappy employees daily, but I can't let it get to me. I have to act unaffected, because when I go out those gates, I have a family with their own set of complaints"; and "You have to act as if you are not affected by hurtful comments or remarks".* It was also clear that some of the employees felt that this was a prescribed prerequisite of being a manager: *"...I do not let emotions come into play at work. I have to act like a manager – cold and uninvolved – that is what is expected from me"; "As a manager you have to be professional – I can't let my emotions and feelings get the better of me"; and "I am very affected by the personal problems of my subordinates, but I cannot show them that because the organisation expects me to be the 'boss', not their friend".*

## **2) Emotional intelligence**

Emotional intelligence refers to an individual's ability to perceive emotions in the self and others, to understand these emotions and to regulate such emotions in an appropriate manner (Salovey & Mayer, 1990). During the interviews it became evident that many employees acknowledged the fact that the aspects of emotional intelligence were important factors when dealing with employees and establishing healthy relationships: *"...choose your words carefully – don't attack the person, only the problem"; "People who don't understand themselves and who are totally oblivious to the feelings of others, frustrates the hell out of me"; "I have a personal set of guidelines regarding appropriate workplace display of emotions and try to express my feelings according to that"; "When I get criticised I ask myself 'is this really the truth?', and I don't let it get to me if it isn't*

*true”; “...and listen empathetically to your colleagues and subordinates”; “You must be sensitive to the emotions of others and find out what the reason is for why they do what they do...”; “People are my business so I have to ensure that they feel respected always...by doing this you will ignite more positive thoughts”; and “Do not feel threatened and change the situation into a challenge or an opportunity”.*

### **3) Emotional distancing and detachment**

Emotional detachment or distancing is the method that employees implement to help them cope with feeling overwhelmed and traumatised by certain events or situations (Collins & Long, 2003). From the interviews it was clear that employees emotionally “removed” themselves from a situation that had possible negative consequences for them and therefore attempted to prevent events from having an emotional effect on them. Some of the responses referring to this were as follows: *“I have to constantly try not to get emotionally involved in the lives of the people working for me”; “...and can cut myself off from others quite easily”; “I have to emotionally separate myself from certain situations”; “I have to stay emotionally detached, but it is important to show your people that you care”; “You have to be cynical in that you don’t expect too much”; and “You have to block it out and keep it in and remember why you are here – at home you can let go and cry and scream”.*

## **DISCUSSION**

The objective of this research was to investigate the emotions that employees in a mining environment experience, the events or situations that give rise to these emotion experiences, and the way in which these employees in a working context regulate or control their emotion experiences.

Although most other studies concerning emotion work have been conducted on front-line service workers, the findings from this research provided evidence that other employees and professionals such as managers were also required to display or hide certain emotions as part of their role.

Research question 1: What are the emotions that professionals experience in a work setting?

The emotions and feelings that employees experience as indicated by the interviews could be categorised into five themes: 1) anger, aggression, aggravation and frustration; 2) disappointment; 3) stressed, overwhelmed and emotionally drained; 4) anxious and scared; and 5) suspicion, scepticism, and cynicism.

Allcorn (1994) and Bensimon (1997) have identified the workplace as one of the most frustrating environments individuals have to deal with. It is not surprising then that anger may be one of the most frequently experienced emotions at work (Fitness, 2000). When the outcome of something has a bearing on one's reputation, social standing, authority, credibility or power base, it is easy to fall into the trap of aggressive behaviour. When people engage in this type of behaviour frequently, the atmosphere can become antagonistic, cynical and highly aggressive, and none of these characteristics improves behaviour. Anger in the workplace has been linked to a number of negative experiences such as hostility (Folger & Baron, 1996), destructive behaviours for instance theft (Chen & Spector, 1992), and other negative behaviours such as revenge (Bies & Tripp, 1998).

During the interviews it became evident that the participants were disappointed with many aspects of the organisation, from team failure to the way in which management treated employees. It was clear that these feelings of disappointment gave rise to many other emotions such as anger and frustration and other feelings such as feeling unappreciated and de-motivated.

In 2007 an "Employee Health and Wellness Survey" that was conducted by Afriforte on one of the business units, that formed part of the current study, it was found that nine of the eighteen (50%) participants that were assessed showed a risk of being over-committed (which, when not controlled or managed, could lead to burnout). Four of the eighteen (22,20%) participants were at a high risk of burnout. When workloads are too heavy and demands too big, employees might start suffering and their ideals might be in direct conflict with reality. According to Altun (2002), burnout is not a symptom of work stress; it is the end result of unmanaged work stress. It is a debilitating psychosocial condition brought about by unrelieved work stress, which results in depleted energy reserves, lowered resistance to illness, increased dissatisfaction and pessimism, increased absenteeism and inefficiency at work (Altun, 2002).

During the past few months the mining industry has been under much pressure in terms of production and gold loss (due to power failures and load shedding), and decreasing safety standards leading to increased numbers of accidents. This has a serious impact on the future of some of the marginal mines in South Africa and layoffs become a great consideration. It can therefore be assumed that employees of this industry may feel anxious about their job security.

In a study done by Mirvis and Kanter (1991) they concluded that 48% of American workers were cynical. They found that 65% agreed that people would tell lies if they felt they would gain from it,

41% doubted the truth of what management told them, and 49% said that management would take advantage of them when given the opportunity. The results from the current study are in accordance with the literature. A lack of trust and feelings of cynicism have a negative impact on productiveness and willingness to embrace organisational change.

Research question 2: What events and situations do employees experience when reporting their emotion experiences?

It was found that most of the events were experienced as having a negative emotional impact and these were categorised into three levels, namely organisational, group, and individual level.

The concepts of fairness and trust have been studied extensively by a number of management researchers (Kramer & Tyler, 1996; Politis, 2003). It has been established by means of empirical evidence that trust is needed in resolving interpersonal problems within an organisation (Atkinson, 1995; Davenport & Prusak, 1998). During the observation periods it became clear that some of the employees had a problem with management in terms of having to meet unfair demands, never receiving credit, and not being trusted with their tasks.

During observations, it became obvious that when something went wrong it was immediately pointed out and the people accountable were immediately reprimanded, but when things went well and someone had done something more than was expected, it was usually overlooked. This was detrimental to the motivation of the people involved and it was easy to see that it had a ripple effect.

It has only been in the past recent years that previously disadvantaged individuals and females in general had been recruited for higher level positions in the mining industry. In the past most of them were recruited for lower level surface (such as clerical positions), and under ground (such as mining teams) positions. But much has been done by the industry at large to develop these employees in order to be successful in managerial positions, by assigning them to mentors and placing them on formal development programmes.

Workplace bullying is a destructive organisational occurrence, and involves recurring patterns of inappropriate and aggressive behaviour directed at a specific person or group (Salin, 2003). It seems as if bullying leads to feelings of frustration and anxiety and obviously has a detrimental effect on the employees involved.

Supervisory relationships forms a sub-dimension of organisational support and entails the availability of the supervisor to the employee, as well as the perceived relationship between the supervisor and the employee. Ineffective communication is another sub-division of organisational support and involves clarity regarding the decision-making process in the organisation, the reporting structure, and the availability of critical information pertaining to important issues in the organisation. From the interviews it could be concluded that the communication at the organisation was not very constructive or clear and that this led to frustration and feelings of mistrust. It was obvious from the responses that not receiving recognition frustrated and aggravated employees, and they had a definite need to feel valued and appreciated. When people feel appreciated for doing something well, they will be inclined to repeat this behaviour and other employees may even copy this behaviour in order to receive recognition as well.

The mining environment is a place where accidents happen on a daily basis – some can be avoided, others are beyond the organisation's control. Due to the fact that this is a high risk environment to work in, much pressure is put on employees in terms of safety requirements. It became clear from the responses that safety placed an emotional as well as a mental burden on the employees.

Throughout literature emotional dissonance has been associated with stress and negative outcomes in terms of employee health and well-being. Emotional dissonance occurs when emotions expressed and true emotions experienced are in conflict with each other. Research has shown that when employees have to portray emotions which are in conflict with their true feelings, it can lead to feelings of emotional dissonance (Zapf, 2002), which can in the end be viewed as a sense of strain to the employee (Moore et al., 2004). It was evident that many of the participants felt that they were in a difficult situation – they were friends with their co-workers; but at work they had to fulfil the role of supervisor or manager. This caused role conflict and placed the individual in a difficult emotional situation.

Research question 3: How do employees regulate or manage their emotions?

Apart from the events causing emotions, and the actual emotions experienced, the interviews also indicated that employees regulated their emotional experiences by means of three broad regulation mechanisms: 1) emotion work; 2) emotional intelligence; and 3) emotional distancing and detachment. It was clear that most employees made use of surface acting, which refers to faking or suppressing emotions, as a means of regulating their emotional experiences. It was also clear that



most of the candidates felt that there was an unwritten guideline directing their emotional expressions and experiences, and therefore they had to prevent certain emotions or feelings from surfacing by suppressing them and at other times they had to express certain feelings in order to get others' participation. Employees who regulate their emotions effectively were aware that emotions provided important meaning (Hess, 2003), but also knew that when emotions were not managed appropriately or even ignored, it could interfere with processing information and making decisions (Vance, Groves, Paik, & Kindler, 2007).

It became clear from the interviews and the observation periods that many times they did not feel like listening to their employees and colleagues but they had to, because it was expected of them. They become annoyed with employees complaining about family issues, but they tried to convince the employees (by putting on their 'empathy masks') that they did indeed care. It is important that when inevitable emotions, such as frustration and anger surface, the person should recognise this and deal with the situation in an appropriate manner.

Despite the expectation that many organisations have of employees having to leave their problems at home, many personal problems and suffering for instance financial problems or bereavement and loss, will have a definite impact on a person's work. People take these feelings wherever they go, and it is irrational to think that feelings and emotions do not affect work.

It was evident that several of the participants felt that they were merely pawns and that they were "second to production". It was not only subordinates or lower level employees who suffered and had to deal with painful problems; middle management stated that they also went through pain, but felt that they had no one to turn to for support, although they delivered it on a daily basis.

From the observations and analysis of the results the conclusion could be drawn that the general perception was that employees in the mining industry were nothing more than a means to reaching the targets that had been strategically planned by senior management. Management was under immense pressure keeping in line with the requirements specified by the Mining Charter, reaching production targets, reducing production costs, meeting safety requirements, and effectively negotiating with organised labour structures. Yet, it seemed obvious that the emotional well-being of employees should be taken into consideration, seeing that there certainly is some truth in the theory of a 'happy worker is a productive worker'. Unfortunately up to now it has clearly not been regarded as highly important. Even though emotions are not regarded as important in every work

environment, every occupation has an emotional content linked to it (Brotheridge & Lee, 2003), as the interviews proved.

It was found that the participants experienced mostly negative emotions which were clustered into five broad themes, namely: 1) anger, aggression, aggravation and frustration; 2) disappointment; 3) stressed, overwhelmed and emotionally drained; 4) anxious and scared; and 5) suspicion, scepticism and cynicism. The events that gave rise to these specific emotions were divided into three levels: organisational level, group level, and individual level. Under the organisational level nine events or situations were described: 1) organisational culture; 2) lack of managerial support, supervisory relationships and ineffective communication; 3) lack of appreciation from management; 4) work-role overload; 5) inefficient time management; 6) safety requirements; 7) lack of resources; 8) job insecurity; and 9) lack of empowerment, autonomy and variety. From the group level three events or situations were revealed: 1) relationships at work; 2) lack of co-worker support and appreciation; and 3) lack of control over others' work. The events that were mentioned on an individual level were: 1) emotional dissonance; 2) role conflict and role incongruence; and 3) value conflict.

The ways in which employees regulated their emotion experiences were categorised into three broad themes: 1) emotion work; 2) emotional intelligence; and 3) emotional distancing and detachment.

This study adds value to the domain of Industrial Psychology in that it provides a description of general emotions which employees in a mining environment experience, as well as the specific events that provoke these emotions. It also provides a description of the regulation methods these employees implement, which will be useful to determine and improve their well-being, seeing that faking and suppressing of emotions such as anger and irritation have been linked to detrimental personal health (Grandey et al., 2002; Gross, 2002).

## **LIMITATIONS AND RECOMMENDATIONS**

The study was conducted on mine employees and most of them were on the level of middle managers and supervisors. The findings can therefore not be generalised to the lower levels of mine employees. Generalisation of the current results to other occupations awaits further empirical investigation. Another limitation of the current study was the small sample size and the sampling method that could have led to bias in the data and limited demographic characteristics of the

sample. In addition to the aforementioned, there was a possibility that some of the participants were concerned about the confidentiality of the interview and the use of tape-recorders. However, the researcher did inform the participants that the interview would be recorded and that their identity would remain anonymous. This might have influenced the outcome of the results.

Regardless of the limitations of this study, recommendations can be made for future research. With the valuable information gained from this study it is recommended that researchers continue to investigate the emotion experiences, with specific reference to events leading to emotions in the workplace, especially in the mining industry where emotions are easily neglected and set aside. The information regarding the specific events can help organisations to anticipate possible effects which may be detrimental to employee well-being.

It can be recommended that emotions and the specific events that lead to these emotions, as well as the regulation of the emotion experiences, be researched on different occupational levels in the industry. It can also be recommended that larger sample sizes are used in these studies in order to overcome the limitation of bias. In conjunction with interviews and observations participants can be asked to keep diaries of their emotions and the events causing such emotions, as well as how they deal with these experiences. The central question to be asked during the interviews can be constructed differently in order to gain better insight into the events that lead to emotion experiences as well as the methods employees implement to regulate these experiences.

Moreover, the profound information regarding emotion experiences in the workplace in a South African context could be useful to organisations and for future organisation intervention research, as well as the development of pro-active programmes or information sessions to address adverse consequences before they occur.

## References

- Abraham, R. (1999). Emotional intelligence in organizations: A conceptualization. *Genetic, Social and General Psychology Monographs*, 125, 209-224.
- Abraham, R. (2000). The role of job control as a moderator of emotional dissonance and emotional intelligence: Outcome relationships. *The Journal of Psychology*, 134, 169-184.
- Allcorn, S. (1994). *Anger in the workplace: Understanding the causes of aggression and violence*. Westport: Quorum Books.
- Altun, I. (2002). Burnout and nurses' personal and professional values. *Nursing Ethics*, 9(3), 269-278.
- Arvey, R. D., Renz, G. L., & Watson, T. W. (1998). Emotionality and job performance: Implications for personnel selection. *Research in Personnel and Human Resources Management*, 16, 103-147.
- Ashforth, B. E., & Humphrey, R. H. (1993). Emotional labor in service roles: The influence of identity. *Academy of Management Review*, 18(1), 88-115.
- Ashkanasy, N. M. (2003). Emotions in organizations: A multi-level perspective. *Research in Multi-level Issues*, 2, 9-54.
- Ashkanasy, N. M., Härtel, C. E. J., & Zerbe, W. J. (2000). *Emotions in the workplace: Theory, research, and practice*. Westport: Quorum Books.
- Ashton-James, C. E., & Ashkanasy, N. M. (2005). What lies beneath?: A process analysis of Affective Events Theory. *The Effect of Affect in Organizational Settings*, 1, 23-46.
- Atkinson, P. (1995). *Medical talk and medical work*. Newbury Park, CA: Sage Publications.
- Bagozzi, R. P., Gopinath, M., & Nyer, P. U. (1999). The role of emotions in marketing. *Academy of Marketing Science Journal*, 27, 184-206.
- Bailey, K. D. (1994). *Methods of social research*. (4th ed.). New York: Free Press.
- Barsade, S. G., Brief, A., & Spataro, S. (2003). The affective revolution in organizational behavior: The emergence of a paradigm. In J. Greenberg (Ed.), *Organizational Behavior: The state of the science* (pp. 3-52). London: Lawrence Erlbaum Associates.
- Barsade, S. G., & Gibson, D. E. (2007). Why does affect matter in organizations? *Academy of Management Perspectives*, 21, 36-59.
- Basch, J., & Fisher, C. D. (1998). Affective events – emotion matrix: A classification of work events and associated emotions. *School of Business Discussion paper*, 65, 2-16.
- Beehr, T. A. (1995). *Psychological stress in the workplace*. London: Routledge.

- Bensimon, H. (1997). What to do about anger in the workplace. *Training and Development*, 51, 28-32.
- Bies, R., & Tripp, T. (1998). Revenge in organizations: The good, the bad and the ugly. In R. Griffin, A. O'Leary-Kelly & J. Collins (Eds.), *Dysfunctional behavior in organizations: Non-violent dysfunctional behavior* (pp.49-67). Stanford, CT: JAI Press.
- Black, R. J. (2003). *Organisational culture: Creating the influence needed for strategic success*. London: Dissertation.com.
- Bolton, S. (2005). *Emotion management in the workplace*. Hampshire, UK: Palgrave Macmillan.
- Boyatzis, R. E., Goleman, D., & Rhee, K. (2000). Clustering competence in emotional intelligence: Insights from the Emotional Competency Inventory (ECI). In R. Bar-On & J. D. A. Parker (Eds.), *Handbook of emotional intelligence*. San Francisco, CA: Josey-Bass.
- Brief, A. P., & Weiss, H. M. (2002). Organizational behavior: Affect in the workplace. *Annual Review of Psychology*, 53, 279-307.
- Broekens, J., De Groot, D., & Kusters, W. A. (2008). Formal models of appraisal: Theory, specification and computational model. *Cognitive Systems Research*, 9, 173-197.
- Brotheridge, C. M., & Lee, R. T. (2003). Development and validation of the Emotional Labor Scale. *Journal of Occupational and Organizational Psychology*, 76, 365-379.
- Brotheridge, C. M., & Lee, R. T. (2008). The emotions of managing: An introduction to the special issue. *Journal of Managerial Psychology*, 23, 108-117.
- Burkitt, I. (2002). Complex emotions: Relations, feelings and images in emotional experience. In J. M. Barbalet (Ed.), *Emotions and sociology* (pp. 151-167). Oxford: Blackwell Publishing.
- Cacioppo, J. T., & Gardner, W. L. (1999). Emotion. *Annual Review of Psychology*, 50, 191-214.
- Carless, S. A. (2004). Does psychological empowerment mediate the relationship between psychological climate and job satisfaction? *Journal of Business and Psychology*, 18, 405-425.
- Chen, P., & Spector, P. (1992). Relationships of work stressors with aggression, withdrawal, thefts and substance use: An exploratory study. *Journal of Occupational and Organisational Psychology*, 65, 177-184.
- Cherniss, C. (2000, April, 15). *Emotional intelligence: What it is and why it matters*. Paper presented at the Annual Meeting of the Society for Industrial and Organizational Psychology, New Orleans, LA.
- Constanti, P., & Gibbs, P. (2004). Higher education teachers and emotional labor. *International Journal of Educational Management*, 18, 243-249.
- Côté, S. (2005). A social interaction model of the effects of emotion regulation on work strain. *Academy of Management Review*, 30(3), 509-530.

- Côté, S., & Miners, C. T. H. (2006). Emotional intelligence, cognitive intelligence, and job performance. *Administrative Science Quarterly*, 51, 1-28.
- Cox, S., & Cox, T. (1996). *Safety, systems, and people*. Oxford: Butterworth-Heinemann.
- Cromberge, P. (2006). As prospects for the yellow metal glister, South African output slump rouses concern. *Mining Weekly Online*. February, 17.
- Davenport, T., & Prusak, L. (1998). *Working knowledge: How organizations manage what they know*. Boston, MA: Harvard Business School Press.
- Dean, J. N., Brandes, P., & Dharwadkar, R. (1998). Organizational cynicism. *Academy of Management Review*, 23, 341-352.
- De Lange, J. (2005, 5 March). Buffel skag gesluit na twee sterftes. [Buffel shaft closed after two deaths.]. *Beeld*.
- Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*, 86, 499-512.
- De Vos, A. S., Strydom, H., Fouche, C. B., Poggenpoel, M., & Schurink, E. (1998). *Research at grassroots: A primer for the caring professions*. Pretoria: Van Schaik.
- Diefendorff, J. M., Richard, E. M., & Yang, J. (2008). Linking emotion regulation strategies to affective events and negative emotions at work. *Journal of Vocational Behavior*, 73, 498-508.
- Dodd, N. G., & Ganster, D. C. (1996). The interactive effects of variety, autonomy, and feedback on attitudes and performance. *Journal of Organizational Behavior*, 17, 329-347.
- Domagalski, T. A., & Steelman, L. A. (2005). The impact of work events and dispositions on the experience and expression of employee anger. *Organizational Analysis*, 13(1), 31-52.
- Durham, C. C., Knight, D., & Locke, E. A. (1997). Effects of leader role, team-set goal difficulty, efficacy, and tactic on team effectiveness. *Organizational Behavior and Human Decision Processes*, 72, 203-231.
- Duxbury, L., & Higgins, C. (2001). Work-life balance in the new millennium: Where are we? Where do we need to go? *Canadian Policy Research Networks Inc*. Discussion paper, 12.
- Erickson, R. J., & Ritter, C. (2001). Emotional labour, burnout, and inauthenticity: Does gender matter? *Social Psychology Quarterly*, 64, 146-163.
- Ferner, J. D. (1995). *Successful time management*. New York: Wiley & Sons.
- Fineman, S. (2000). Emotional arenas revisited. In S. Fineman (Ed.), *Emotion in organizations* (2nd ed.) (pp. 1-24). London: Sage Publications.
- Fineman, S. (2003). Emotional labour: A done concept? Paper presented at ESRC seminar, Loughborough, United Kingdom.

- Fineman, S. (2005). Appreciating emotion at work: Paradigm tensions. *International Journal of Work Organization and Emotion*, 1(1), 4-19.
- Fisher, C. D. (2000). Mood and emotions while working: Missing pieces of job satisfaction? *Journal of Organizational Behavior*, 21, 185-202.
- Fitness, J. (2000). Anger in the workplace: An emotion script approach to anger episodes between workers and their superiors, co-workers and subordinates. *Journal of Organizational Behavior*, 21, 147-162.
- Folger, R., & Baron, R. (1996). Violence and hostility at work: A model of reactions to perceived injustice. In G. van den Bos, & E. Bulateo (Eds.), *Violence on the job* (pp. 51-85). Washington, DC: American Psychological Association.
- Folger, R., & Skarlicki, D. P. (1998). A popcorn metaphor for employee aggression. In R. W. Griffin, A. O'Leary-Kelly, & J. M. Collins (Eds.), *Dysfunctional behaviour in organizations: Nonviolent dysfunctional behaviour* (pp. 43-82). Stanford, CT: JAI Press.
- Frijda, N. H. (1993). The place of appraisal in emotion. *Cognition and Emotion*, 7, 357-387.
- Frost, P. J. (2003). *Toxic emotions at work: How compassionate managers handle pain and conflict*. Boston, MA: Harvard Business School Press.
- Gabriel, Y. (1998). An introduction to the social psychology of insults in organizations. *Human relations*, 51, 1329-1254.
- George, J. M. (2000). Emotions and leadership: The role of emotional intelligence. *Human Relations*, 53, 1027-1041.
- Giardini, A., & Frese, M. (2006). Reducing the negative effects of emotion work in service occupations: Emotional competence as a psychological resource. *Journal of Occupational Health Psychology*, 11(1), 63-75.
- Giorgi, A. (1985). Sketch of a psychological phenomenological method. In A. Giorgi (Ed.), *Phenomenology and psychological research*. Pittsburgh, PA: Duquesne University Press.
- Gold Fields Minerals Services. (1997). *Annual Gold Fields Report 1997*. Johannesburg: Gold Fields of South Africa.
- Goleman, D. P. (1995). *Emotional intelligence: Why it can matter more than IQ for character, health and lifelong achievement*. New York: Bantam Books.
- Gosserand, R. H. (2003). *An examination of individual and organizational factors related to emotional labor*. Unpublished doctoral dissertation, Louisiana State University.
- Grandey, A. A. (2000). Emotion regulation in the workplace: A new way to conceptualize emotional labor. *Journal of Occupational Health Psychology*, 5(1), 95-110.

- Grandey, A. A., Tam, A. P., & Brauburger, A. L. (2002). Affective states and traits in the workplace: Diary and survey data from young workers. *Motivation and Emotion*, 26(1), 31-55.
- Griffin, M. A., Patterson, M. E., & West, M. A. (2001). Job satisfaction and teamwork: The role of supervisory support. *Journal of Organizational Behavior*, 22, 537-550.
- Gross, J. J. (1998). The emerging field of emotion regulation: An integrative review. *Review of General Psychology*, 2, 271-299.
- Gross, J. J. (2002). Emotion regulation: Affective, cognitive, and social consequences. *Psychophysiology*, 39, 281-291.
- Gross, J. J., & John, M. (2002). Wise emotion regulation. In L. Feldman-Barrett, & P. Salovey (Eds.), *The wisdom of feelings: Psychological processes in emotional intelligence* (pp. 297-318). New York: Guilford Press.
- Guba, E. G. (1981). Criteria for assessing the trustworthiness of naturalistic inquiries. *Educational Resources Information Centre Annual Review Paper*, 29, 75-91.
- Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. In N. K. Denzin, & Y. S. Lincoln (Eds.), *Handbook of Qualitative Research* (pp. 105-117). Thousand Oaks, CA: Sage Publications.
- Guerrier, Y., & Adib, A. (2003). Work at leisure and leisure at work: A study of the emotional labor of tour reps. *Human Relations*, 56(11), 1399-1417.
- Hammersley, M. (1998). *Reading ethnographic research*. London: Longman.
- Härtel, C. E. J., Zerbe, W. J., & Ashkanasy, N. M. (2005). *Emotions in organizational behavior*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Hess, U. (2003). Emotion at work. *The Burgundy Reports*. Center for Interuniversity Research and Analysis on Organizations (p. 1-26).
- Hochschild, A. R. (1983). *The managed heart: Commercialization of human feeling*. Berkeley: University of California Press.
- Hosie, P., Forster, N., & Sevastos, P. (2004). The impact of global challenges on Australian managers' affective well-being and performance. *Research and Practice in Human Resource Management*, 1(12), 73-91.
- Hsieh, H., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, 15, 1277-1288.
- Hudlicka, E. (2004). Beyond cognition: Modelling emotion in cognitive architectures. In *Proceedings of the sixth international conference on cognitive modelling (ICCM04)* (pp. 118-123). Mahwah, NJ: Lawrence Earlbaum.



- Humphrey, R. H., Pollack, J. M., & Hawver, T. (2008). Leading with emotional labor. *Journal of Managerial Psychology*, 23, 151-168.
- Keil, R. M. K. (2004). Coping and stress: A conceptual analysis. *Journal of Advanced Nursing*, 45, 659-665.
- Keltner, D., & Haidt, J. (2001). Social functions of emotions. In T. J. Mayne, & G. A. Bonanno (Eds.), *Emotions: Current issues and future directions. Emotions and social behavior* (pp.192-213). New York: Guilford Press.
- Kerlinger, F. N. (1986). *Foundations of behavioral research* (3rd ed.). Fort Worth, TX: Harcourt Brace College.
- Klausner, H. (1997). *Review of Raising Your Emotional Intelligence by Jeanne Segal*. <http://www.emotionalintelligence.org>
- Krefting, L. (1991). Rigor in qualitative research: The assessment of trustworthiness. *The American Journal of Occupational Therapy*, 45, 214-222.
- Kreitner, R., & Kinicki, A. (2001). *Organizational behavior* (5th ed.). New York: McGraw-Hill.
- Kramer, R., & Tyler, T. (1996). *Trust in organizations: Frontiers of theory and research*. Thousand Oaks, CA: Sage Publications.
- Lazarus, R. S. (1991). *Emotion and adaptation*. New York: Oxford University Press.
- Lewig, K. A., & Dollard, M. F. (2003). Emotional dissonance, emotional exhaustion and job satisfaction in call centre workers. *European Journal of Work and Organizational Psychology*, 12, 366-392.
- Lincoln, Y. S., & Guba, E. A. (1985). *Naturalistic inquiry*. London: Sage.
- Lopes, P. N., Salovey, P., Côté, S., & Beers, M. (2005). Brief reports: Emotion regulation abilities and the quality of social interaction. *Emotion*, 5, 113-118.
- Lovelock, C. (2001). *Services marketing: People, technology, strategy* (4th ed.). Englewood Cliffs, NJ: Prentice-Hall.
- Lutgen-Sandvik, P. (2003). The communication cycle of employee emotional abuse: Generation and regeneration of workplace mistreatment. *Management Communication Quarterly*, 16, 471-501.
- Madlock, P. E. (2008). The link between leadership style, communication competence, and employee satisfaction. *Journal of Business Communication*, 45, 61-78.
- Mak, A. S., & Mueller, J. (2001). Negative affectivity, perceived occupational stress, and health during organizational restructuring: A follow-up study. *Psychology and Health*, 16, 125-137.
- Mann, S. (2005). A health-care model of emotional labor: An evaluation of the literature and development of a model. *Journal of Health, Organisation and Management*, 19, 304-317.

- Mayer, J. D., Salovey, P., & Caruso, D. R. (2004). Emotional intelligence: Theory, findings, and implications. *Psychological Inquiry*, 15, 197-215.
- Merriam-Webster, Inc. (1993). *Webster's 10<sup>th</sup> new collegiate dictionary*. Springfield, MA: Merriam-Webster, Inc.
- Meulenberg-Buskens, I. (1994). *Manual for the free attitude interview technique*. Pretoria: Human Science Research Council.
- Meyerson, D. E. (2000). *If emotions were honoured: A cultural analysis*. London: Sage Publications.
- Mignonac, K., & Herrbach, O. (2004). Linking work events, affective states, and attitudes: An empirical study of managers' emotions. *Journal of Business and Psychology*, 19, 221-240.
- Miller, M. (1999). Emotional intelligence helps managers succeed. *Credit Union Magazine*, 56(7), 25-26.
- Mirvis, P. H., & Kanter, D. L. (1991). Beyond demography: A psychographic profile of the workforce. *Human Resource Management*, 30(1), 45-68.
- Moore, C., Kelliher, C., & Hailey, V. H. (2004). *Being real or really being someone else?: Managers and emotional labour*. Paper presented at the Work Employment and Society Conference.
- Morgan, J. M., & Krone, K. J. (1999). Bending (but not breaking) the rules of "professional" display: Emotional improvisation in caregiver performances. *Journal of Applied Communication Research*, 29, 317-340.
- Morris, J. A., & Feldman, D. C. (1996). The dimensions, antecedents, and consequences of emotional labor. *Academy of Management Review*, 21, 986-1010.
- Muchinsky, P. M. (2000). Emotions in the workplace: The neglect of organizational behavior. *Journal of Organizational Behavior*, 21, 801-805.
- Muchinsky, P. M., Kriek, H. J., & Schreuder, D. (2003). *Personnel psychology* (2nd ed.). Oxford, Cape Town: Oxford University Press.
- Murphy, K. R. (2006). *A critique of emotional intelligence*. Mahwah, NJ: Erlbaum.
- Newbury-Birch, D., & Kamali, E. (2001). Psychological stress, anxiety, depression, job satisfaction and personality characteristics in preregistration house officers. *Post Graduate Medical Journal*, 77, 109-111.
- Oatley, K. (1992). *Best laid schemes: The psychology of emotions*. Cambridge, MA: Cambridge University Press.

- Ogińska-Bulik, N. (2005). Emotional intelligence in the workplace: Exploring its effects on occupational stress and health outcomes in human service workers. *International Journal of Occupational Medicine and Environmental Health*, 18, 167-175.
- Pelled, L. H. (1996). Demographic diversity, conflict, and work group outcomes: An intervening process theory. *Organization Science*, 7, 615-631.
- Picard, R. (1997). *Affective computing*. Cambridge, MA: MIT Press.
- Politis, J. D. (2003). The connection between trust and knowledge management: What are its implications for team performance? *Journal of Knowledge Management*, 7(5), 55-66.
- Pugh, S. D. (2001). Service with a smile: Emotional contagion in the service encounter. *Academy of Management Journal*, 44, 1018-1027.
- Rafaeli, A., & Sutton, R. I. (1987). The expression of emotion as part of the workrole. *Academy of Management Review*, 12(1), 23-37.
- Rafaeli, A., & Sutton, R. I. (1989). The expression of emotion in organizational life. *Research in Organizational Behavior*, 11, 1-43.
- Reisel, W. D., & Banai, M. (2002). Comparison of a multi-dimensional and a global measure of job insecurity: Predicting job attitudes and work behaviors. *Psychological Reports*, 90, 913-922.
- Rhoades, L., & Eisenberger, R. (2002). Perceived organizational support: A review of the literature. *Journal of Applied Psychology*, 87, 698-714.
- Rosenberg, E. L. (1998). Levels of analysis and the organization of affect. *Review of General Psychology*, 2, 247-270.
- Roseman, I. J., & Smith, C. A. (2001). Appraisal theory: Overview, assumptions, varieties, controversies. In K. R. Scherer, A. Schorr & T. Johnstone (Eds.), *Appraisal processes in emotion: Theory, methods, research* (pp. 3-19). New York: Oxford University Press.
- Roskies, E., Louis-Guerin, C., Fournier, C. (1993). Coping with job insecurity: How does personality make a difference? *Journal of Organizational Behaviour*, 14, 617-630.
- Russell, J. A., & Barrett, L. F. (1999). Core affect, prototypical emotional episodes, and other things called emotion: Dissecting the elephant. *Journal of Personality and Social Psychology*, 76, 805-819.
- Salin, D. (2003). Ways of explaining workplace bullying: A review of enabling, motivating, and precipitating structures and processes in the work environment. *Human Relations*, 56, 1213-1232.
- Salovey, P., & Mayer, J. (1990). Emotional intelligence. *Imagination, Cognition and Personality*, 9, 185-211.

- Salovey, P., Mayer, J., & Caruso, D. (2002). The positive psychology of emotional intelligence. In C. R. Snyder & S. J. Lopez (Eds.), *Handbook of positive psychology* (pp. 159-171). New York: Oxford University Press.
- Saunders, M. N. K., & Thornhill, A. (2004). Trust and mistrust in organizations: An exploration using an organizational justice framework. *European Journal of Work and Organizational Psychology, 13*, 493-515.
- Scherer, K. R. (2001). Appraisal considered as a process of multi-level sequential checking. In K. R. Scherer, A. Schorr & T. Johnstone (Eds.), *Appraisal processes in emotion: Theory, methods, research* (pp. 92-120). New York: Oxford University Press.
- Schmidt, F. L., & Hunter, J. E. (2000). Select on intelligence. In E. A. Locke (Ed.), *The Blackwell handbook of organizational principles* (pp. 3-14). Oxford: Blackwell.
- Schneider, P., & Mattenklott, A. (2007). *Emotion eliciting events in the workplace: An intercultural comparison*. Paper presented at the First International Workshop on Cultural Collaboration. Kyoto, Japan.
- Seligman, M. E. P., Walker, E. F., & Rosenham, D. L. (2001). *Abnormal psychology* (4th ed.). New York: WW Norton and Company, Inc.
- Shearer, C. (2006). *Everyday excellence: Creating a better workplace through attitude, action, and appreciation*. Milwaukee: American Society for Quality Press.
- Spector, P. E. (1997). Antisocial behavior in organizations. In R. A. Giacalone & J. Greenberg (Eds.), *The role of frustration in antisocial behavior at work* (pp. 1-17). Thousand Oaks, CA: Sage Publications.
- Spector, P. E. (2002). Employee control and occupational stress. *Current Directions in Psychological Science, 11*, 133-136.
- Struwig, F. W., & Stead, G. B. (2001). *Planning, designing and reporting research*. Cape Town: Maskew Miller Longman.
- Sturdy, A. (2003). Knowing the unknowable?: A discussion of methodological and theoretical issues in emotion research and organizational studies. *Organization, 10*(1), 81-105.
- Sutton, R. I. (1991). Maintaining norms about expressed emotions: The case of bill collectors. *Administrative Science Quarterly, 36*, 254-268.
- Thompson, L. L., Nadler, J., & Kim, P. H. (1999). Some like it hot: The case for the emotional negotiator. In L. Thompson, J. Levine & D. Messick (Eds.), *Shared cognition in organizations: The management of knowledge* (pp. 139-161). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Torkelson, E., & Muhonen, T. (2003). Coping strategies and health symptoms among women and men in a downsizing organization. *Psychological Reports, 92*, 899-907.

- Tracy, S. J. (2005). Locking up emotion: Moving beyond dissonance for understanding emotion labor discomfort. *Communication Monographs*, 72, 261-283.
- Treven, S., & Potocan, V. (2005). Training programmes for stress management in small businesses. *Education and Training*, 47, 640-652.
- Turnbull, S. (1999). Emotional labor in corporate change programmes: The effects of organizational feeling rules on middle managers. *Human Resource Development International*, 2, 125-146.
- Turnbull, S. (2001). Corporate ideology: Meanings and contradictions for middle managers. *British Journal of Management*, 12, 231-242.
- Vance, C. M., Groves, K. S., Paik, Y., & Kindler, H. (2007). Understanding and measuring linear/non-linear thinking style for enhanced management education and professional practice. *The Academy of Management Learning and Education*, 6, 167-185.
- Van der Walt, N. (2005). Goudmyn se toekoms duister. [Goldmine's future is unclear.]. *Klerksdorp Record*, 9 January.
- Van Zyl, J. S., Human, J. J., & Tshabalala, H. S. S. (2004). *New Economics 2000*. Cape Town: Nasou.
- Vecchio, R. P. (1981). Situational and behavioural moderators of subordinate satisfaction with supervision. *Human Relations*, 34, 947-963.
- Warren Shepell Research Group. (2006). *Managerial and executive stress: An EAP's perspective*, 1(2), 1-7.
- Watkin, C. (2000). Developing emotional intelligence. *International Journal of Selection and Assessment*, 8(2), 89-92.
- Weiss, H. M., & Beal, D. J. (2005). Reflection on affective events theory. In N. M. Ashkanasy, W. J. Zerbe, & C. E. J. Härtel (Eds.), *Research on emotion in organizations, volume 1: The effect of affect in organizational settings*. Oxford: JAI Press.
- Weiss, H. M., & Cropanzano, R. (1996). *Affective events theory: A theoretical discussion of the structure, causes and consequences of affective experiences at work*. Greenwich, CT: JAI Press.
- Weiss, H. M., Nicholas, J. P., & Daus, C. S. (1999). An examination of the joint effects of affective experiences and job beliefs on job satisfaction and variations in affective experiences over time. *Organizational Behavior and Human Decision Processes*, 78, 1-24.
- Weiss, H. M., Suckow, K., & Cropanzano, R. (1999). Effects of justice conditions on discrete emotions. *Journal of Applied Psychology*, 84, 786-794.
- White, M. D., & Marsh, E. E. (2006). Content analysis: A flexible methodology. *Library Trends*, 5, 22-45.

- Wong, C. S., & Law, K. S. (2002). The effects of leader and follower emotional intelligence on performance and attitude: An exploratory study. *Leadership Quarterly*, 13, 243-274.
- Woods, N. F., & Catanzaro, M. (1988). *Nursing research: Theory and practice*. St Louis: Mosbey.
- Zammuner, V. L., & Galli, C. (2005). Wellbeing: Causes and consequences of emotion regulation in work settings. *International Review of Psychiatry*, 17(5), 355-364.
- Zammuner, V. L., Lotto, L., & Galli, C. (2003). Regulation of emotions in the helping professions: Nature antecedents and consequences. *Australian e-Journal for the Advancement of Mental Health*, 2(1), 1-13.
- Zapf, D. (2002). Emotion work and psychological well-being: A review of the literature and some conceptual considerations. *Human Resource Management Review*, 12, 237-268.
- Zapf, D., & Holz, M. (2006). On the positive and negative effects of emotion work in organizations. *European Journal of Work and Organizational Psychology*, 15(1), 1-28.
- Zapf, D., Vogt, C., Seifert, C., Mertini, H., & Isic, A. (1999). Emotion work as a source of stress: The concept and development of an instrument. *European Journal of Work and Organizational Psychology*, 8, 371-400.
- Zerbe, W. J. (1998). *Emotional dissonance and employee well-being*. Paper presented at the 1<sup>st</sup> Conference of Emotions in Organizational Life, San Diego, CA.

## CHAPTER 3

### RESEARCH ARTICLE 2

# THE CONSTRUCT VALIDITY AND RELIABILITY OF AN EMOTIONAL INTELLIGENCE MEASUREMENT: AN EXPLORATORY AND CONFIRMATORY FACTORY ANALYSIS APPROACH

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## ABSTRACT

The objective of this study was to determine the construct validity and reliability of the Greek Emotional Intelligence Scale and was conducted by means of two sub-studies: Sub-study 1 was an exploratory factor analysis on a combined sample of 241 White and African professionals from a gold-mining environment. The four factors identified were caring and empathy, control of emotion, emotion expression and recognition, and use of emotion to facilitate thinking. Sub-study 2 was a confirmatory factor analysis in order to support findings from sub-study 1: A four-factor model on a combined sample of 345 White and African professionals from a platinum- and steel production environment was tested. However, several items from the emotion expression and recognition scale cross-loaded on the other three factors and it was decided to test a three-factor model. The three-factor model indicated the best goodness-of-fit indices and showed acceptable alpha coefficients. Step 2 involved testing these three factors in a White and African sample independently. In the White sample the three factor model fitted the data after an investigation of the modification indices. However, when it was tested in the African sample four items were found to be problematic, but after omitting these items the model did in fact fit. This could possibly be explained by cultural differences between the White and African sample. The GEIS seems to be a promising emotional intelligence measure; all four factors worked by means of exploratory research, and by means of confirmatory analysis it was indicated that three of the four factors (excluding items 22, 37, 17 and 38) remained consistent over the two culture groups.

## OPSOMMING

Die doelstelling van die studie was om die konstruk geldigheid en betroubaarheid van die Griekse Emosionele Intelligensie Skaal te bepaal en is uitgevoer deur middel van twee substudies: Sub-studie 1 was 'n eksploratiewe faktoranalise vir 'n gekombineerde populasie van 241 Wit en Swart werknemers vanuit 'n goud-mynomgewing. Die vier faktore geïdentifiseer was omgee en empatie, kontrole van emosie, uitdrukking en herkenning van emosie, en gebruik van emosie om denke te fasiliteer en daar is besluit om 'n drie-faktor model te toets. Sub-studie 2 was 'n bevestigings-faktoranalise om die bevindinge van sub-studie 1 te ondersteun: 'n Vier-faktor model is getoets op 'n gekombineerde populasie van 345 Wit en Swart werknemers van 'n platinum- en staal produksie industrie. Nietemin, verskeie items van die uitdrukking en herkenning van emosie skaal het gekruis-laai op die ander drie faktore en daar is besluit om 'n drie-faktor model te toets. Die drie-faktor model het die beste gepas en aanvaarbare alpha koëffisiënte getoon. Stap 2 het bestaan uit die toets van die drie faktore op 'n Wit en Swart populasie afsonderlik. Nietemin, met die toets van die drie-faktor model op die Swart populasie, was vier items problematies, maar na die uitsluiting van die items het die model gepas. Dit kan moontlik verduidelik word deur kultuurverskille tussen die Wit en Swart kultuur groepe. Die GEIS is 'n belowende meetinstrument van emosionele intelligensie sienende dat al vier faktore gewerk het tydens die eksploratiewe faktoranalise en deur middel van bevestigings-faktoranalise het drie van die vier faktore (uitsluitend items 22, 37, 17 en 38) konstant gebly oor die twee kultuurgroepe.



The construct and concept of emotional intelligence has been a popular research topic over recent years (Byrne, Dominick, Smither, & Reilly, 2007). Not only has it been a research subject within the field of social cognition (Craig et al., 2009; Phelps, 2006; Williams & Gordon, 2007), but it has also been researched comprehensively within the field of organisational- and industrial psychology, in terms of leadership effectiveness (Kerr, Garvin, Heaton, & Boyle, 2006), leadership development (Groves, McEnrue, & Shen, 2008), management performance (Langhorn, 2004), and improvement of human resources (Luthans, 2002).

Even though interest in the subject of emotional intelligence has increased, most of the studies on emotional intelligence are directed towards leadership (George, 2000) and development, work performance (Rosete & Ciarrochi, 2005), and stress management (Ciarrochi, Deane, & Anderson, 2002; Slaski & Cartwright, 2002), but very little research has focused on validation studies in terms of emotional intelligence (Austin, Saklofske, Huang, & McKenney, 2004; Cakan & Altun, 2005; Gignac, Palmer, Manocha, & Stough, 2005; Jonker & Vosloo, 2008). Research is also mostly limited to selective populations such as leaders (Dulewicz, Higgs, & Slaski, 2003), executives (Carmeli, 2003; Gardner & Stough, 2002) and teachers (Penrose, Perry, & Ball, 2007; Salami, 2007), and only a small number of studies compare emotional intelligence in terms of gender differences (Byron, 2008; Downey, Papageorgiou, & Stough, 2006), cultural differences (Ilangovan, Scroggins, & Rozell, 2007), age groups (Van Rooy, Alonso, & Viswesvaran, 2005), and different occupational groups (Reilly & Karounos, 2009). According to Matsumoto (2002), culture plays a key role in recognition and comprehension of emotions, and noteworthy differences in these abilities were found across cultures (Matsumoto, Angua-Wong, & Martinez, 2008). Given the fact that only limited research has been conducted on appraising ethnic group differences in emotional intelligence (Viswesvaran et al., 2005), Zeidner, Matthews, and Roberts (2001) express the urgent need for studies exploring group differences in emotional intelligence.

Additionally there is insufficient information regarding the predictive validity of emotional intelligence within an organisational framework (Cherniss, 2000), and more research should be done in this regard (Van Rooy & Viswesvaran, 2004). Pheiffer (2001) is of the opinion that the main limitation to existing emotional intelligence research literature is the deficiency in scientifically indisputable, unbiased measures. The Schutte Emotional Intelligence Scale - SEIS (Schutte et al., 1998) is a widely used measure of emotional intelligence (Austin et al., 2004; Cakan & Altun, 2005; Gignac et al., 2005; Jonker & Volsoo, 2008), nonetheless this scale seems to be problematic in terms of its factor structure. While the authors claim that the scale is a uni-

dimensional measure of emotional intelligence, additional studies have suggested a four-factor structure (Gignac et al., 2005; Petrides & Furnham, 2000; Saklofske, Austin, & Minski, 2003; Sharma, Deller, Biswal, & Mandal, 2009) and a three-factor structure (Austin et al., 2004). In a South African study done by Jonker and Vosloo (2008) a six-factor structure was found. Due to these varied findings it is suggested that an alternative measure of emotional intelligence be sought for research purposes. The Greek Emotional Intelligence Scale - GEIS (Tsaousis, 2007) can be presented as an alternative emotional intelligence measurement. It is a short questionnaire and is based on the theoretical model of Mayer and Salovey (1997), but it has not been widely used and its factorial validity and reliability has not yet been tested on a South African population.

The aim of this article will be to determine the factorial validity of the GEIS in a South African population. Since the GEIS has never been used in a South African population the factorial validity will first be determined by making use of an exploratory factor analysis and will then be exposed to a confirmatory factor analysis to support the initial findings. Furthermore, the factor structures will be tested in a White and African sample to determine whether the same factors emerge across cultures.

This article sets out to further explore the construct of emotional intelligence, address certain measurement issues (of which emotional intelligence and culture will form part) and to determine the factorial validity and reliability (internal consistency) of a measure of emotional intelligence in a South African sample. In the remainder of the article the different emotional intelligence approaches and measurement issues are highlighted, emotional intelligence in the organisations will be explored, a literature review of different emotional intelligence instruments will be given and the issue of emotional intelligence and culture will be addressed.

## **Emotional intelligence**

Emotional intelligence advanced from Thorndike's (1920) brainchild of "social intelligence" in order to explain features of success that could not be ascribed to IQ (Dulewicz et al., 2003). Gardner (1983) developed and expanded the idea of "multiple intelligence" and in the *personal intelligence* domain he investigated aspects such as interpersonal intelligence, intrapersonal intelligence, self-awareness, and emotional traits. The abilities portraying these constructs are closely related to emotional intelligence. The key concept of intrapersonal intelligence is to comprehend one's own emotions, while the core of interpersonal intelligence is the ability to understand the emotions and intentions of others (Schutte et al., 1998).

Salovey and Mayer (1990) published an article that can be seen as the research basis for emotional intelligence. Emotional intelligence is defined by them as “the ability to monitor one’s own and others’ feelings and emotions, to discriminate among them, and to use this information to guide one’s thinking and actions” (Salovey & Mayer, 1990; p. 189). Later that year they published another article on the subject of emotional intelligence, in which they presented a possible measure of emotional intelligence and an explanation of how emotional intelligence might serve as a forecast of certain aspects regarding one’s life, as well as the ability to respond in an empathic manner (Mayer, DiPaolo, & Salovey, 1990).

### **Emotional intelligence in organisations**

Emotions form a valuable component of success; especially in today’s organisations where restructuring and economising are main features (Van Rooy & Viswesvaran, 2004). In such environments emotional intelligence will be beneficial to employees, not only on an individual level but on a group level as well. Emotionally intelligent employees can be expected to be more empathic towards others and to find ways of working productively and cooperatively (Van Rooy & Viswesvaran, 2004). Emotions intercede between constantly varying situations and the individual’s responding behaviour, and it can therefore be assumed that it has an important adaptive function for the individual.

Optimal development and exploitation of individual attributes and abilities are critical in order to improve the efficiency of an organisation (Jonker, 2002). Assessing and improving emotional intelligence could therefore play a significant role (Wolmarans, 1998), due to the fact that it could be beneficial to organisations (Cooper, 1997; O’Connor & Little, 2003). Arumugam (2003) points out that emotional intelligence forms a key component in the development process of employees.

Emotional intelligence covers the competence of reasoning in terms of emotions, as well as the capacity of emotions to advance reasoning (Brackett, Mayer, & Warner, 2004). It consists of a set of non-cognitive skills, capabilities and competencies, and these could influence the approach an individual takes in order to manage environmental demands and pressures. Emotional intelligence can be viewed as a multi-dimensional notion embodying a set of core abilities to recognise, process and control emotions (Akerjordet, 2009), which will be beneficial to most employees seeing that part of most work roles involves the control and regulation of emotions.

Emotional intelligence affords an individual with an advantage in any sphere of life, ranging from personal areas to more work-related and professional areas (Bar-On, 2000; Goleman, 2005; Matthews, Zeidner, & Roberts, 2007). Craig et al. (2009) found that higher levels of emotional intelligence were associated with a person who is dependable and independent-minded. It can therefore be assumed that organisations will benefit from employees with higher levels of emotional intelligence seeing that dependability and independent thinking are favourable characteristics at the workplace. Organisations will also benefit more from employees and managers who are able to perceive emotions in others more precisely (Byron, 2008; Wong & Law, 2002). Such employees and managers can also be expected to receive more positive performance ratings (Sedmar, Robbins, & Ferris, 2006).

Many studies have confirmed the relationship between emotional intelligence and leadership performance in a number of work contexts (Bradberry & Su, 2006; Downey, Papageorgiou, & Stough, 2006; Gardner & Stough, 2002; Palmer, Walls, Burgess, & Stough, 2001; Thi Lam & Kirby, 2002). Dulewicz and Higgs (1999) found that emotional intelligence serves as a greater indication of advancement than either cognitive intelligence or personality traits. It has been found that employees with higher emotional intelligence scores report substantially lower levels of stress and distress, higher morale and quality of work life, and better health and work performance than employees with lower emotional intelligence levels (Slaski & Cartwright, 2002). It can therefore be argued that emotional intelligence leads to a healthy workforce, benefiting organisations seeing that healthier employees equal lower absenteeism and turnover.

### **Emotional intelligence measurement**

Given the claim that emotional intelligence contribute to academic performance (Barchard, 2003; Parker, Duffy, Wood, Bond, & Hogan, 2005) and organisational outcomes such as leadership effectiveness (Kerr et al., 2006), little research exists investigating cross-cultural relevancy of emotional intelligence and management inferences with regard to the organisation and management of culturally miscellaneous workforces (Ilangovan et al., 2007; Shipper, Kincaid, Rotondo, & Hoffman, 2003). Shipper et al. (2003) noted that emotional intelligence varies across cultures, and the diversification of the workforce gives rise to the need for studying the impact of cultural differences in terms of emotional intelligence.

Due to the central proposal that success is influenced by an amalgamation of IQ and emotional intelligence (Goleman, 1996), it is important to investigate the viability of measuring emotional

intelligence (Dulewicz & Higgs, 2000). Numerous studies have shown that successful use of emotional intelligence leads to higher levels of intuition, insight into intricate challenges, and motivation to act (Maier, 1999; Reed-Woodard & Clarke, 2000). Keele and Bell (2008) state that even though there has been a high number of methodical studies on emotional intelligence, the minority of studies included more than one measure, and only a small number of these carried out joint factor analysis. Disparities between the conjectural foundation of models and the tangible facts should be abolished in order to evolve in terms of predicting criteria, since this will only be feasible if these measures actually measure what they purport to measure (Keele & Bell, 2008).

Craig et al. (2009) raise their concern regarding the extent to which self-report measures of emotional intelligence overlap with personality constructs (Petrides & Furnham, 2001), and whether or not emotional intelligence can be labelled as a form of intelligence (Robert, Zeidner, & Matthews, 2001). It is due to these questions that the measurement of emotional intelligence is a topic that gained extensive attention, and causes much deliberation (Austin et al., 2004). As asserted by Jonker and Vosloo (2008), a great deal has been printed on emotional intelligence, but not as much has been written on how it should be measured or how employees can be advanced in it, or what an emotionally intelligent organisation looks like (Watkin, 2000). It seems as if the measurement of emotional intelligence has not kept pace with the concept and fascination with regard to emotional intelligence (Petrides & Furnham, 2003; Pheiffer, 2001; Schutte et al., 1998).

Emotional intelligence assessments are almost all based on self-report instruments; they lack norms or a standardisation group, and unlike the large number meticulously developed cognitive ability tests, the emotional intelligence measures available have deplorable levels of internal consistency and permanence (Pheiffer, 2001). According to Davies, Stankov, and Roberts (1998), independent emotional intelligence measures are not reliable, and self-report measures display substantial similarities to conventional personality measures. Conte (2005) points out that the critical concerns for the assessment of emotional intelligence, range from scoring of ability emotional intelligence measures to discriminant validity issues for self-report measures of emotional intelligence (in Jonker & Vosloo, 2008). Bradberry and Su (2006) state that it is much more complicated to study the interaction between individuals, than it is to assess the cognitive abilities of an individual.

Schutte et al. (1998) give an explanation of the importance of standardised emotional intelligence measures. They state that these are significant endeavours to make conjectural progress regarding the concept of emotional intelligence, to investigate the disposition and development of emotional

intelligence, and to predict future performance of individuals. From a measurement perspective, emotional intelligence assessments should be both valid and reliable. Barchard and Russel (2004) explain that constructive emotional intelligence measures should show evidence of test-retest reliability, and significant internal reliability. These measures should possess content and congruent validity. Furthermore, it should display discriminant and incremental validity. From a practical perspective these measures should be able to predict conclusions theoretically related to emotional intelligence.

Due to the perplexity that exists regarding the precise significance and domain of emotional intelligence, more than one theoretical framework would have to be used to conceptualise this concept.

### **Mixed versus ability models of emotional intelligence**

Two distinct representations have been developed that classify the different theories and measurement tools of emotional intelligence. Mayer, Salovey, and Caruso (2000) discuss the variations between “ability” (or information-processing) and “mixed” (or trait) models of emotional intelligence. Mayer, Caruso and Salovey (1999) advised that a construct should coincide with three sets of criteria in order to be categorised as a form of intelligence: 1) it must involve a concrete form of cognitive behaviour (e.g. the competency to distinguish between emotions and to unravel emotion-related questions); 2) it should be reasonably related to other intelligences (e.g. emotional intelligence should moderately overlap with verbal intelligence); and 3) it should be able to develop and increase with age and experience.

Ability models describe emotional intelligence as an arrangement of intellectual abilities associated with the accurate processing of emotion-relevant information. In the definition of Salovey and Mayer (1990), emotional intelligence is explained as an intricate construct consisting of three types of abilities (in Lyusin, 2006): 1) identifying and expressing emotion; 2) regulating emotion; and 3) applying emotional information in terms of thoughts and actions. In 1997 Mayer and Salovey amended their existing model, which allowed them to identify four components: 1) identifying emotions; 2) using emotions in order to increase the effectiveness of thoughts and actions; 3) comprehension of emotions; and 4) the guiding of emotions. According to Lyusin (2006), it is imperative to take into account the fact that these components relate to both the individual’s own as well as others’ emotions.

Rosete and Ciarrochi (2005) state that emotional intelligence is theorised parallel to cognitive intelligence (IQ). Within the ability framework it is assumed that emotional intelligence develops over time, correlates with IQ measures, and can be measured with performance-based tests (Ciarrochi, Chan, & Caputi, 2000).

Proponents of ability models (Law, Wong, & Song, 2004; Mayer et al., 2000) classify emotional intelligence as a form of social intelligence, involving the skill to monitor one's own and others' emotions, to distinguish between them, and to make the most of this information (Salovey & Mayer, 1990). Mayer et al. (2000) suggested that emotional intelligence can be considered as an important factor of having thriving interpersonal interactions within a work milieu, seeing that individuals regarded as "emotionally intelligent" would be able to perceive, comprehend and regulate the emotions of others. Emotional intelligence forms the conduit between the cognitive and emotional systems of personality (Mayer & Salovey, 1995). Van Rooy, Viswesvaran, and Pluta (2005) affirm that measures of emotional intelligence rooted in the ability model, do not share as strong a relation with personality, as do measures based on the mixed model.

Van Rooy et al. (2005) cite that several problems related to performance-based scoring designs do exist. Firstly, with performance-based measures of emotional intelligence there is usually more than one correct answer for each question. Candidates are rewarded credits based on the opinions of emotional intelligence experts. Secondly, there are concerns regarding distinguishing between the most emotionally intelligent people.

Rosete and Ciarrochi (2005) state that mixed models of emotional intelligence integrate both non-cognitive models (Bar-On, 1997) and competency-based models (Goleman, 1995). Bar-On's (1997) model contains emotion-related abilities such as "stress tolerance", and basic personality traits such as "optimism". The mixed model of emotional intelligence overlaps with traditional personality models (Rosete & Ciarrochi, 2005) and usually approaches assessment of emotional intelligence by making use of self-report measures, as opposed to performance measures. Advocates of mixed models (Bar-On, 1997; Cooper & Sawaf, 1998; Goleman, 1995; Pérez, Petrides, & Furnham, 2005) view emotional intelligence as a mix of abilities, traits, motivation, and skills (Byrne et al., 2007). They describe emotional intelligence as being different from personality and general cognitive ability, and focus on emotion-related abilities and competencies in order to determine potential for learning and self-realisation (Bar-On, 2000; Matthews et al., 2007). These



models focus on constructs such as self-awareness, self-management, self-motivation, self-confidence, and relationship skills (Goleman, 2005).

Van Rooy et al. (2005) recorded Daus and Ashkanasy's (2003) criticism of mixed models. They feel that mixed models may declare value in certain organisational situations, but that they are too broad in range and do not vary enough from personality and cognitive ability to be regarded as strictly emotional intelligence models. Hedlund and Sternberg (2000) reasoned that measures based on the mixed model, measure almost everything but cognitive ability and they have no hypothetical foundation suggesting that it should be associated with cognitive ability (Van Rooy et al., 2005). There is also evidence that self-report scales coincide with personality measures (Brackett & Mayer, 2003; Ciarrochi, Chan, & Bajgar, 2001; MacCann, Matthews, Zeidner, & Roberts, 2003; Saklofske et al., 2003), and the argument derived from these findings is that these measures of emotional intelligence lack discriminant validity (Byrne et al., 2007).

O'Connor and Little (2003) concentrate on the dissimilarity between ability-based and self-report measures of emotional intelligence (in Jonker & Vosloo, 2008). Rosete and Ciarrochi (2005) are of the opinion that ability measures of emotional intelligence only correlate slightly with personality and also correlate modestly with intelligence. A deliberation has surfaced whether or not self-report measures prove to be accurate assessments of one's emotional intelligence score (Jonker & Vosloo, 2008). Self-report measures have shown value and evidence suggests that such measures can be differentiated from other personality constructs (Van Rooy & Viswesvaran, 2004). However, Daus and Ashkanasy (2003) maintain that self-report measures are not the preferred method to measure emotional intelligence, but rather that skill and behaviour-based assessments should be implemented.

### **Trait versus ability emotional intelligence**

It is not easy to provide a working definition for emotional intelligence that is accepted by everyone (Van Rooy & Viswesvaran, 2004), and this may be due to the fact that many different labels have been assigned to the concept. Petrides and Furnham (2000) suggested a distinction from the varying conceptualisations by referring to "ability" and "trait" emotional intelligence.

With ability emotional intelligence, emotional intelligence is measured as a cognitive ability (also known as information-processing emotional intelligence) and is separated from social-emotional personality traits (Freudenthaler & Neubauer, 2005). Emotional intelligence is defined as the



ability to perceive emotions, produce emotions in order to enhance thinking, understand emotions and have emotional knowledge, and to regulate emotions in order to promote emotional as well as intellectual growth (Mayer & Salovey, 1997). They contend that emotional intelligence represents a supplementary aspect of crystallised intelligence. Petrides and Furnham (2000) state that ability emotional intelligence can be most accurately assessed by making use of measures of maximal performance.

Trait emotional intelligence is concerned with stabilities in behaviour across various situations (Petrides & Furnham, 2000). The trait approach includes many personality variables, such as empathy and optimism, but sometimes includes more indistinguishable constructs such as motivation and happiness (Jonker & Vosloo, 2008). Trait emotional intelligence is mostly measured by making use of self-report indices (Pérez, et al., 2005).

Petrides and Furnham (2003) state that ability emotional intelligence and trait emotional intelligence are different constructs due to the fact that the procedures used in developing their definitions are fundamentally different, even though their hypothetical domains might overlap one another. Ciarrochi et al. (2000) state that even though the definitions of emotional intelligence vary, they seem to be complementary, rather than paradoxical, and would not necessarily mean that the two models are mutually exclusive (Van Rooy et al., 2005). Pérez et al. (2005) mention that the method used to measure emotional intelligence variables has a direct impact on the functionality thereof.

Studies have shown that emotional intelligence proves moderate levels of predictive validity (Van Rooy & Viswesvaran, 2004), but as Van Rooy et al. (2005) state, there is still extensive dispute regarding what emotional intelligence comprises, and elucidation is urgently needed. Due to the fact that there is more than one way of assessing emotional intelligence, it is important to note the dissimilarities between the different emotional intelligence measurements.

### **Measures of emotional intelligence as a trait**

Since emotional intelligence has been introduced to the scientific, academic, and social psychology fields, many tests have been developed to assess this construct (Bar-On, 1997; Boyatzis, Goleman, & Rhee, 2000; Mayer, Salovey, & Caruso, 1997; Schutte et al., 1998). The upsurge in the number of trait emotional intelligence measures may have led to the notion that the construction of a psychometrically sound test is uncomplicated (Pérez et al., 2005). Pérez et al. (2005) further state

that not many trait emotional intelligence measures have been constructed within an unambiguous theoretical structure, and even less have substantial empirical grounds.

### ***GEIS*** (Tsaousis, 2007)

The *Greek Emotional Intelligence Scale* is a new measure of trait emotional intelligence based on the theoretical framework as suggested by Mayer and Salovey (1997). It consists of 53 items measuring four fundamental skills: 1) expression and recognition of emotions; 2) control of emotions; 3) utilising emotion to facilitate thinking; and 4) caring and empathy. A total of 1387 individuals participated in the various development and validation stages of the test. The Cronbach alpha coefficients for the four factors ranged from 0,80 to 0,92. The test-retest correlation coefficients ranged between 0,79 and 0,91. Convergent and discriminant validity was also supported by five different studies conducted during the development phases of the test.

### ***SEIS*** (Schutte et al., 1998)

The *Schutte Emotional Intelligence Scale* is a measure of emotional intelligence based on the model of Salovey and Mayer (1990). A pool of 62 items represented the different dimensions of the model. A factor analysis of the responses of 346 participants suggested the creation of a 33-item scale. Schutte et al. (1998) reported a Cronbach alpha coefficient of 0,90 for the internal consistency for adults with a mean age of 29,30 (SD=10,20) and a Cronbach alpha coefficient of 0,78 for test-retest reliability after a two-week interval on the scale for a smaller group drawn from the sample. Predictive validity of  $r(63) = 0,32$  for GPA of first-year college students, for discriminant validity they reported  $r(41) = -0,06$  for the correlation between the scale and SAT scores, and  $r(22) = -0,28$  to 0,54 for subscales of the NEO Personality Inventory scores of college students.

### ***TMMS*** (Salovey, Mayer, Goldman, Turvey, & Palfai, 1995)

The *Trait Meta Mood Scale* was designed upon the results from Mayer and Salovey's work on reflective processes associated with mood states (Downey et al., 2006). It requires participants to describe how well they believe they know their own emotions in terms of emotional clarity, attention to self-emotions, and emotion-regulation or mood repair. It is a 30-item self-report measure to which participants respond on a five-point Likert scale. Preliminary psychometric analysis of the TMMS suggests that this scale may be a reliable and valid self-report index of the ability to monitor and regulate emotions. Salovey et al. (1995) reported that each of the subscales measures something coherent and internally consistent ( $\alpha = 0,86$  attention to feelings,  $\alpha = 0,88$

clarity of feelings, and  $\alpha = 0,82$  for emotion regulation), and demonstrates evidence of both convergent and discriminant validity.

#### ***EQ-i*** (Bar-On, 1997)

The *Emotional Quotient Inventory* is based on Bar-On's theoretical framework of non-cognitive factors. It is a 133-item self-report measure that consists of 15 distinct scales, including a) intrapersonal emotional intelligence (emotional self-awareness, assertiveness, self-regard, self-actualisation, and independence); b) interpersonal emotional intelligence (empathy, relationship skills, and social responsibility); c) adaptability (problem solving, reality testing, and flexibility); and d) stress management (stress tolerance and impulse control). The EQ-i has shown good internal consistency as well as evidence of convergent and divergent validity, mainly from the personality domain (Bar-On, Brown, Kirkcaldy, & Thome, 2000; Dawda. & Hart, 2000; Newsome, Day, & Catano, 2000). The internal consistency coefficients for the subscales ranged from 0,70 to 0,89, and therefore demonstrated good reliability. Test-retest reliability ranged from 0,78 to 0,92 for a one-month study, and from 0,55 to 0,87 for a four-month study (Bar-On, 1997). According to Bar-On (1997), the EQ-i subscales measure the construct they were proposed to measure.

#### ***ECI*** (Boyatzis et al., 2000)

The *Emotional Competence Inventory* is a 110-item instrument designed to measure 20 competencies organised into four clusters: 1) Self-Awareness; 2) Self-Management; 3) Social Awareness; and 4) Social Skills. The internal consistency reliability of the ECI ranges from 0,61 to 0,92, while descriptive and predictive validity evidence comes only from the Self-Assessment Questionnaire (SAQ), which is the predecessor of the ECI. This lack of validity evidence prompted Conte (2005) to argue that, until peer-reviewed empirical studies using this measure have been conducted, the ECI does not deserve serious consideration. In a study by Byrne et al. (2007) they reported internal consistency coefficients ranging from 0,52 to 0,87.

#### ***TEIQue*** (Petrides, 2001; Petrides & Furnham, 2003)

The *Trait Emotional Intelligence Questionnaire* is a 153-item instrument of trait emotional intelligence, containing four components (well-being, self-control, emotionality, and sociability) and fifteen subscales. The TEIQue has demonstrated adequate reliability and validity data (Pérez et al., 2005; Petrides & Furnham, 2006; Petrides, Pérez-González, & Furnham, 2007) and has already been translated into many different languages for example Greek, Spanish and Polish.

### ***SUEIT*** (Palmer & Stough, 2001)

The workplace *Swinburne University Emotional Intelligence Test* is a 64-item self-report test, which indexes the way an individual thinks, feels and acts in the work context, on the basis of emotional information. It has been designed specifically for the workplace. Participants respond on a five-point Likert scale (1 = never; 5 = always) and are instructed to indicate the extent to which each statement is true of the way they typically think, feel and act at work. The workplace SUEIT provides five factor scores of emotional intelligence: 1) emotional recognition and expression ( $\alpha = 0,91$ ); 2) understanding emotions external ( $\alpha = 0,89$ ); 3) emotions direct cognition ( $\alpha = 0,70$ ); 4) emotional management ( $\alpha = 0,83$ ); and 5) emotional control ( $\alpha = 0,77$ ).

### ***EQ*** (Dulewicz & Higgs, 2000)

The *Emotional Intelligence Questionnaire* is an instrument that aims to assess the concept of emotional intelligence. It has been designed to specifically assess through self-report, seven elements of an individual's emotional intelligence: 1) self-awareness; 2) emotional resilience; 3) motivation; 4) inter-personal sensitivity; 5) influence; 6) intuitiveness; and 7) conscientiousness. Evidence is presented to support the reliability and validity of the instrument (Dulewicz et al., 2003) and claims have been made that the EQ is suitable as a measure for emotional intelligence within an organisational framework. Cronbach alpha reliability coefficients for each of the element scales ranged from 0,60 to 0,80. The alpha coefficient for the overall EQ score derived from the seven elements was 0,77 (Dulewicz & Higgs, 2000). The EQ showed construct validity in relation to the Occupational Personality Questionnaire, the 16-PF, Belbin Team Roles, and the MBTI (Dulewicz & Higgs, 1999; 2000).

### ***EISRS*** (Martinez-Pons, 2000)

This *Emotional Intelligence Self-Regulation Scale* is built upon the self-regulation model of emotional intelligence by Martinez-Pons. It endeavours the integration of Bandura's Social Cognitive Theory with the original emotional intelligence model by Salovey and Mayer (1990). The EISRS comprises 52 items, and is responded to on a 7-point Likert scale. It consists of ten subscales and four higher-order dimensions: 1) motivation; 2) goal setting; 3) strategy usage; and 4) self-evaluation of strategy effectiveness and adjustment. Martinez-Pons (2000) presents data based on a sample of 100 adults, displaying sufficient internal consistency reliabilities. Pérez et al. (2005) state that the EISRS has not yet been used in other studies recorded in the literature.

### ***SPTB*** (Sjöberg, 2001)

The *Sjöberg Personality Test Battery* is a large instrument measuring many different personality constructs and features, including trait emotional intelligence. The complete battery consists of 789 items, responded to on a 4-point Likert scale. In an exploratory factor analysis of the 21 SPTB scales, one of the four factors that were obtained, encompassed seven traits, which the author interprets as 'dimensions of emotional intelligence': 1) introversion; 2) empathy; 3) emotional inhibition; 4) machiavellianism; 5) alexithymia; 6) self-actualisation; and 7) external attribution (Pérez et al., 2005).

### ***WEIP-3*** (Jordan, Ashkanasy, Härtel, & Hooper, 2002)

The *Workgroup Emotional Intelligence Profile* was designed to outline the emotional intelligence of individuals in a workgroup. It comprises 27 items and measures seven components organised into two broad dimensions (interpersonal and intrapersonal) (Pérez et al., 2005). It is responded to on a 7-point Likert scale. Earlier research on the WEIP has shown that work teams consisting of individuals with high levels of trait emotional intelligence, tend to perform better than teams consisting of individuals with low trait emotional intelligence (Jordan et al., 2002).

### ***EIS*** (Van der Zee, Schakel, & Thijs, 2002)

The *Emotional Intelligence Scale* is made up of 85 items measuring 17 subscales. It is responded to on a 5-point Likert scale. The EIS appears to have a three-factor structure: 1) empathy; 2) autonomy; and 3) emotional control (Pérez et al., 2005). The internal consistencies for most of the subscales are relatively low, with several values below the 0,50 mark. Coherent to the conceptual dissimilarities between trait emotional intelligence and ability emotional intelligence, Van der Zee et al. (2002) found that the EIS is related to personality traits, but not to cognitive ability.

### ***WLEIS*** (Wong & Law, 2002)

*Wong and Law's Emotional Intelligence Scale* is based on the original model of Salovey and Mayer (1990). It was designed as a brief measure of emotional intelligence for use in organisational research. It consists of 16 items, and has a 7-point Likert scale response format. It measures four different dimensions: 1) self-emotion appraisal; 2) emotion appraisal of others; 3) use of emotion; and 4) regulation of emotion. Wong and Law report good internal consistency reliabilities, and in terms of validity it shows that the WLEIS is related to job performance and job satisfaction (Pérez et al., 2005). Not many studies have used the WLEIS and therefore no safe conclusions can be drawn regarding its quality.

**EII** (Tapia, 2001)

The *Tapia Emotional Intelligence Inventory* consists of 41 items that factor into four dimensions: 1) empathy; 2) utilisation of feelings; 3) handling relationships; and 4) self-control. Pérez et al. (2005) state that the EII represents the methodological confusion that is seeping into the field of emotional intelligence, because it claims to operationalise the cognitive ability model of Mayer and Salovey (1997) by making use of self-report items. It should be clear that the EII is a measure of trait emotional intelligence because it attempts to operationalise self-perceptions and characteristics, rather than emotion-related cognitive abilities (Pérez et al., 2005).

Table 1 presents a summary of trait emotional intelligence measures along with basic information about their reliability, validity and factor structure provided by Pérez et al. (2005, p. 130-133).

Table 1

*Summary of trait emotional intelligence measures*

Measure	Author	$\alpha$	Convergent / Discriminant Validity	Structure	Sample
<b>GEIS</b> (Greek Emotional Intelligence Scale)	Tsaousis (2007)	0,80 to 0,92 Test-retest: 0,79 to 0,91	Satisfactory. Not correlated significantly to Conscientiousness and Openness to experience. Independent of the standard cognitive ability construct. Significant correlations with other EI instruments	4 factors	1387 individuals from various contexts
<b>SEIS</b> (Schutte Emotional Intelligence Scale)	Schutte et al. (1998)	0,70 to 0,85 Two-week test-retest: 0,78	Significant correlation to Openness to Experience 0,54. Not correlated to SAT scores -0,06	1 factor (Schutte et al., 1998)  4 factors (Petrides & Furnham, 2000; Saklofske, Austin, & Minski, 2003)	346 participants from a variety of settings
<b>TMMS</b> (Trait Meta-Mood Scale)	Salovey et al. (1995)	0,70 to 0,88	Moderate correlations with the Big Five	3 factors. No global score	43 past and current students (Palmer, Walls, Burgess, & Stough 2001)

Table 1

*Summary of trait emotional intelligence measures (Continued)*

Measure	Author	$\alpha$	Convergent / Discriminant Validity	Structure	Sample
EQ-i (Bar-On Emotional Quotient Inventory)	Bar-On (1997)	Generally good ( $\pm$ 0,85)	Moderate to high correlations with the Big Five	General factor, 5 second-order factors & 15 primary factors (Bar- On, 1997) General factor & 6 primary factors (Palmer, Manocha, Gignac, & Stough, 2003)	243 university students (Dawda & Hart, 2000)
ECI (Emotional Competency Inventory)	Boyatzis et al. (2000)	0,70 to 0,85 for global score > 0,85 for social skills	Unclear (small samples). Uncorrelated with critical thinking and analytical reasoning	4 factors (Byrne, Dominick, Smither, & Reilly, 2007)	298 part-time graduate management students
TEIQue (Trait Emotional Intelligence Questionnaire)	Petrides (2001)	Generally good ( $\pm$ 0,85)	Can be isolated in Giant Three and Five-Factor space (Petrides, 2001)	4 factors. Global score	650 secondary education pupils (Petrides, Frederickson, & Furnham, 2004)
SUEIT (Swinburne University Emotional Intelligence Test)	Palmer and Stough (2001)	Generally good ( $\pm$ 0,85) Test-retest: 0,81 to 0,94	Moderate correlations with Neuroticism (-0,41), Extraversion (0,44), and Openness (0,27)	5 factors (Palmer & Stough, 2001)	Community sample of 191 participants (Gannon & Ranzijn, 2005)
EIQ (Emotional Intelligence Questionnaire)	Dulewicz and Higgs (1999)	Ranges between 0,60 and 0,80 for each element scale. Overall score is 0,77		7 factors (Dulewicz & Higgs, 1999)	



Table 1

*Summary of trait emotional intelligence measures (Continued)*

Measure	Author	$\alpha$	Convergent / Discriminant Validity	Structure	Sample
EISRS (Emotional Intelligence Self Regulation Scale)	Martinez-Pons (2000)	0,75 to 0,94	Significant. Evidence proves convergent and discriminant validity	2 factors and a general factor (Martinez-Pons, 2000)	100 adults (Martinez-Pons, 2000)
SPTB (Sjöberg Personality Test Battery)	Sjöberg (2001)	0,70 to 0,85	Moderate correlations with Extraversion (0,37) and Neuroticism (-0,50)	?	153 respondents
WEIP-3 (Workgroup Emotional Intelligence Profile – Version 3)	Jordan et al. (2002)	0,70 to 0,85	Small to moderate correlations with TMMS	7 factors	448 undergraduate students (Jordan et al., 2002)
EIS (Emotional Intelligence Scale)	Van der Zee et al. (2002)	Adequate for “other ratings” (0,70 to 0,85)	Low correlations with IQ. Moderate to high correlations with the Big Five.	Unclear (3 factors)	
WLEIS (Wong and Law Emotional Intelligence Scale)	Wong and Law (2002)	0,70 to 0,85	Moderately correlated to Neuroticism and Conscientiousness (Law, Wong, & Song, 2004). Small negative correlations with IQ	4 factors. Global score.	216 undergraduates (Law et al., 2004)
EII (Emotional Intelligence Inventory)	Tapia (2001)	0,70 to 0,85	Significant correlations with SEIS (Tapia & Marsh, 2006)	4 factors	234 undergraduate students (Tapia & Marsh, 2006)

*Note.* Information in this table is necessarily succinct and readers are encouraged to consult the original sources for specific details. Entries designated “unclear” do not necessarily indicate conflicting evidence, as they may also refer to lack of adequate data. Question marks indicate that Pérez et al. (2005) have been unable to obtain data from the relevant entry.  $\alpha$  = Reliability estimate Cronbach’s  $\alpha$ , Convergent/ Discriminant Validity = Convergent/ discriminant validity, Structure = Factor structure. (Adapted from Pérez et al., 2005, p. 130–133).

### **Measure of emotional intelligence as ability**

Measures of emotional intelligence as ability are slowly emerging. Ability emotional intelligence tests face the challenge of intrinsic subjectivity of emotional experiences (Spain, Eaton, & Funder, 2000; Watson, 2000). According to Pérez et al. (2005) no definite criteria have been set for what the correct response comprises of.

#### ***MEIS*** (Mayer et al., 1999)

Mayer et al. (1999) developed an objective measure of emotional intelligence, the *Multi-Factor Emotional Intelligence Scale* in an attempt to resolve the drawbacks of self-report measures of emotional intelligence (Ciarrochi et al., 2002). The MEIS consists of 12 tasks and is divided into four branches of abilities: 1) perceiving emotions; 2) assimilating emotions; 3) understanding of emotions; and 4) managing emotions (Caruso, Mayer, & Salovey, 2002). Ciarrochi et al. (2002) state that the MEIS has been shown to be reliable, relatively independent from performance and verbal IQ, and related to important criterion variables such as life satisfaction and relationship quality, even after controlling for other well-established personality traits (Mayer et al., 1999).

#### ***MSCEIT*** (Mayer, Salovey, & Caruso, 2002)

The *Mayer-Salovey-Caruso Emotional Intelligence Test* is a 141-item scale. It contains emotional problems asking respondents to identify emotions in photographs of faces, images and landscapes; compare different emotions to different sensations; indicate how emotions influence thinking and reasoning; assemble emotions into complex feelings; identify how emotions are transitioned from one to another; and rate the effectiveness of different emotion regulation strategies in both interpersonal and intrapersonal contexts. Respondents are presented with five potential answers to each problem and must choose the most appropriate answer. Respondents are credited to the extent that they choose the same answers as expert researchers on emotion. The total scores are interpretable, normalised standard scores with a mean of 100 and a standard deviation of 15. Mayer et al. (2002) report a split half reliability of 0,91 and a test-retest reliability of 0,86 for the total score. O'Connor and Little (2003) state that branch score reliabilities range from 0,74 to 0,89 and coefficient alphas for the subtests range from 0,64 to 0,93. Research on the MSCEIT has confirmed a four factor structure with branch score Cronbach alphas ranging from 0,59 to 0,87 (Bradberry & Su, 2006).

**EARS** (Geher, Warner, & Brown, 2001)

The *Emotional Accuracy Research Scale* consists of eight emotionally-laden vignettes that individuals are instructed to read prior to selecting mood items that they believe are the targets of each vignette's reported feeling.

**FNEIPT** (Freudenthaler & Neubauer, 2003)

The *Freudenthaler and Neubauer Emotional Intelligence Performance Test* consists of 49 items and is scored on a 6-point Likert scale. It measures self-assessed emotional abilities in terms of: 1) perception of own emotions; 2) perception of others' emotions; 3) control over the expression of emotions; 4) the masking of emotions; 5) regulation of one's own emotions; and 6) regulation of others' emotions. Factor analysis yielded two subscales namely intrapersonal emotional abilities and interpersonal emotional abilities.

**MEIA** (Tett, Fox, & Wang, 2005)

The *Multidimensional Emotional Intelligence Assessment* is a 116-item self-report measure. It is designed to measure six core dimensions and four utilisation dimensions of the model of Salovey and Mayer (1990). Most scales on the MEIA contains 12 items (six negatively keyed), but Mood Redirected Attention has eight positive-keyed items (Barchard & Christensen, 2007). They use a six-point scale, where 1 = Strongly Disagree, and 6 = Strongly Agree.

Table 2 presents a summary of ability emotional intelligence measures, along with basic information about their reliability, validity and factor structure provided by Pérez et al. (2005, p. 127-128).

Table 2

*Summary of ability emotional intelligence measures*

Measure	Authors	$\alpha$	Convergent / Discriminant Validity	Structure	Sample
<b>EARS</b> (Emotional Accuracy research Scale)	Mayer and Geher (1996)	Low (0,24 for target scoring; 0,53 for consensus scoring)	Small and unstable correlations with self-report empathy)	Unclear (4 factors)	321 undergraduate students (Mayer & Geher, 1996)
<b>MEIS</b> (Multi- Factor Emotional Intelligence Scale)	Mayer et al. (1999)	Good for global ability EI (0,70 to 0,80). Branch scores coefficient alphas ranging from 0,81 to 0,96, with full-scale consistency of 0,96 (Mayer et al., 1999)	Small to moderate correlations with crystallised intelligence. Low correlations with the Big Five	4 factors (Mayer & Salovey, 1997)	503 adults; 229 adolescents (Mayer et al., 1999)
<b>MSCEIT</b> (Mayer- Salovey- Caruso Emotional Intelligence Test)	Mayer et al. (1997; 2002)	Branch scores 0,59 to 0,87 for Version 1 (Mayer et al., 1999)	Convergence between general consensus and expert consensus scoring. Very low correlations < 0,30 with trait emotional intelligence	Unclear (4 factors)	277 participants (Mayer et al., 1999) 2112 adults (Mayer, Salovey, Caruso, & Sitarenios, 2003)

Table 2

*Summary of ability emotional intelligence measures (Continued)*

Measure	Authors	$\alpha$	Convergent / Discriminant Validity	Structure	Sample
<i>FNEIPT</i> (Freudenthaler & Neubauer Emotional Intelligence Performance Test)	Freudenthaler and Neubauer (2003)	Moderate: 0,69 for “managing own emotions”; 0,64 for “managing others’ emotions”	“Managing own emotions” correlated with self-reported intrapersonal emotional intelligence (0,51) and “managing others’ emotions” correlated with self-report interpersonal emotional intelligence (0,25). Both subscales correlated with the Big Five (0,18 to -0,51)	Unclear (2 factors)	
<i>MEIA</i> (Multi- dimensional Emotional Intelligence Assessment)	Tett et al. (2005)		Small to moderate correlations between first- order factors	10 factors (Barchard & Christensen, 2007)	442 undergraduate psychology students (Barchard & Christensen, 2007)

*Note.* Information in this table is necessarily succinct and readers are encouraged to consult the original sources for specific details. Entries designated “unclear” do not necessarily indicate conflicting evidence, as they may also refer to lack of adequate data. Question marks indicate that Pérez, et al. (2005) have been unable to obtain data from the relevant entry.  $\alpha$  = Reliability estimate Cronbach’s  $\alpha$ , Convergent/ Discriminant Validity = Convergent/ discriminant validity, Structure = Factor structure. Adapted from Pérez et al. (2005, p. 127-128).

Jonker and Vosloo (2008) mention that with the exemption of one study done on a South African population to determine the validity of the Bar-On EQ-i, no other assessment measure has been validated for South African employees. It is evident that there is a need for South African norms in order to promote the implementation and development of emotional intelligence programmes (Jonker, 2002).

The Schutte Emotional Intelligence Scale (SEIS) that was formulated by Schutte et al. (1998) is grounded on the original emotional intelligence model of Mayer and Salovey (1997). It has subsequently been used in many other studies (Ciarrochi et al., 2001; Jonker & Vosloo, 2008; Petrides & Furnham, 2000; Saklofske et al., 2003; Schutte et al., 2001). Because of the brevity of this scale compared to other trait emotional intelligence measures (such as the Bar-On EQ-i), much attention has been given to this scale. Studies done on the SEIS provide evidence that it is a reliable and valid measure of trait emotional intelligence. However, this scale has been slated for not having reversed-key items (Petrides & Furnham, 2000; Saklofske et al., 2003), seeing that it could probably lead to confusion due to the submissiveness of the scale (Austin et al., 2004). Nonetheless, the SEIS has been used extensively and can be utilised to measure global trait emotional intelligence (Pérez et al., 2005).

In terms of South African studies, no evidence for the validity, reliability and established norms of the SEIS, for different occupational groups, was found. Only the study done by Jonker and Vosloo (2008) has provided such information to students of Economical and Management Sciences in South Africa, where they found a six-factor structure consisting of positive affect, emotion-others, happy emotions, emotion-own, non-verbal emotions, and emotion management. This finding is contradicting to the study done by the authors of the SEIS (Schutte et al., 1998) who found a uni-dimensional structure for emotional intelligence. The conclusion can be drawn that research is lacking in finding an alternative emotional intelligence measurement, especially one that can be applied in a South African context, and therefore the current study made use of the Greek Emotional Intelligence Scale (GEIS) (Tsaousis, 2007).

The Greek Emotional Intelligence Scale (Tsaousis, 2007) is a newly developed measure of trait emotional intelligence. Within the available literature, no studies could be found where the GEIS was used. This scale is based on the proposed framework of Mayer and Salovey (1997). The author claims that it has been proved to be a reliable and valid trait emotional intelligence measure, and that it correlates with the Big Five personality domains, but not with fluid or crystallised intelligence (Tsaousis, 2007).

No studies have been done to provide validity and reliability evidence on the GEIS for South African employees. For this reason, research in terms of emotional intelligence of South African employees necessitated the current study. This study will investigate the reliability and validity of emotional intelligence measures for a sample of South African employees.

Even though emotional intelligence is such a popular topic in organisational and industrial psychological research, there is continuing deliberation regarding the literal definition, theory and measurements of emotional intelligence, and whether or not this concept meets the indispensable requirements to be depicted as a meaningful psychological construct (Conte, 2005; Landy, 2005; Matthews, Zeidner, & Roberts, 2003; Van Rooy & Viswesvaran, 2004). Several factors relating to the measurement of emotional intelligence were identified. Due to the disparity in organisations in terms of diverse cultures, research is lacking and necessary with regard to culture and ethnic group differences in terms of emotional intelligence (Saxenian, 2000). There is also an existing need for validation studies of emotional intelligence measures with regards to the confusion arising from differences between theoretical foundations of emotional intelligence models (Keele & Bell, 2008). Different approaches and measurement instruments were reviewed and the need for an alternative measure of emotional intelligence was identified and the recommendation was made for the use of a new measure of emotional intelligence, the Greek Emotional Intelligence Scale, which is based on the theoretical underpinnings of the model of Mayer and Salovey (1990).

From the literature review the following research aims could thus be formulated:

- 1) To conceptualise emotional intelligence by means of a literature review;
- 2) To determine the factorial validity and internal consistency of the GEIS through an exploratory factor analysis approach;
- 3) To determine whether the factors of the GEIS that were determined by exploratory factor analysis can be supported by a confirmatory factor analysis approach;
- 4) To determine whether the emotional intelligence factors of the confirmatory factor analysis would remain constant across cultures (White and African groups); and
- 5) To make recommendations on the use of the GEIS as opposed to the SEIS in South-Africa.

## **METHOD**

### **Research design**

The research objectives were achieved by employing a survey design. The specific design selected was the cross-sectional design. In this design, information is collected from the sample population at a given point in time (Shaugnessy & Zechmeister, 1997). The information garnered was used to describe the population at that point in time. The cross-sectional design was used to examine groups of subjects in various stages of development simultaneously, while the survey describes the technique of data collection in which questionnaires were used to gather data about an identified

population (Burns & Grove, 1993). The design could also be used to assess interrelationships. According to Shaugnessy and Zechmeister (1997), the design is usually ideal to address the descriptive functions with correlation research.

### **Procedure**

The study will consist of two sub-studies. Sub-study 1 will make use of exploratory factor analysis to test the factor structure of the GEIS on a sample of professionals in a gold mining environment. This will be done to determine whether the factors of the GEIS can be replicated on a South African population. In sub-study 2 the results of the exploratory factor analysis will be supported with confirmatory factory analysis. For the purpose of sub-study 2 an availability sample of professionals from a platinum- and steel production environment will be used. This sub-study will consist of two steps: Step 1 will be a confirmatory factor analysis on the total population; Step 2 will involve splitting the data according to ethnicity (White and African) to determine whether the factor structure remains stable across these two cultural groups.

### **Study population**

The study population of sub-study 1 could be defined as an availability sample of employees in a gold mining environment. A population of 241 professionals in a gold mining environment in the North West and Gauteng Provinces were targeted. The study population of sub-study 2 could be defined as an availability sample of employees in a platinum- and steel production environment. A population of 345 professionals in a platinum- and steel production environment in the North West Province were targeted.

Descriptive information of the sample of sub-study 1 is given in Table 3.



Table 3

*Characteristics of the participants: Study 1(N = 241)*

Item	Category	Frequency	Percentage (%)
Gender	Male	190	78,8
	Female	51	21,2
Age	0-18 years	2	0,8
	22-32 years	41	17,0
	33-42 years	58	24,1
	43-52 years	97	40,2
	53-70 years	43	17,8
Race	White	206	85,5
	Black	32	13,3
	Coloured	3	1,2
Sector	Gold mine	241	100

According to Table 3, the participants were unevenly distributed in terms of gender with males (78,8%) and females (21,2%). Most of the participants were between the ages of forty-three and fifty-two years of age (40,2%). Furthermore, the sample consisted mostly of White (85,5%) and African (13,3%) participants. All of the participants (100%) were from a gold mining sector.

Descriptive information of the sample of sub-study 2 is given in Table 4.

Table 4

*Characteristics of the participants: Study 2 (N = 345)*

Item	Category	Frequency	Percentage (%)
Gender	Male	189	54,8
	Female	156	45,2
Age	0-18 years	9	2,6
	22-32 years	85	24,6
	33-42 years	103	29,9
	43-52 years	100	29,0
	53-70 years	48	13,9
Race	White	200	58,0
	African	145	42,0
Sector	Steel	129	37,4
	Platinum	216	62,6

According to Table 4, the participants were relatively evenly distributed in terms of gender with males (54,8%) and females (45,2%). Most of the participants were between the ages of thirty-three and forty-two years of age (29,9%). Furthermore, the sample consisted of White (58,0%) and African (42%) participants. The participants were from the steel (37,4%) and platinum (62,6%) sectors.

### Measurement instrument

The *Greek Emotional Intelligence Scale* (GEIS; Tsousis, 2007) measures four basic emotional skills, namely: 1) expression and recognition of emotion - relates to the ability of the individuals to express and recognise accurately their own emotional reactions (*"I am unable to explain my emotional state to others"*; *"I find it difficult to express my emotions to others"*); 2) control of emotions - relates to the ability of the individuals to control and regulate emotions in themselves and others (*"When I am under pressure I snap"*; *"I often get angry and afterwards I find my anger inexcusable"*); 3) use of emotions to facilitate thinking - relates to the ability of the individuals to harness their own emotions in order to solve problems through optimism and self-assurance, two emotional states that facilitate inductive reasoning and creativity (*"I deal with my problems in a positive way by trusting myself"*; *"I think of the positive side of things"*); and 4) caring and empathy - relates to the willingness of the individual to help other people and his or her ability to comprehend another's feelings, and to re-experience them (*"I am always willing to help someone*

*who is confronted with personal problems*"; *"I like to talk with others about their problems"*). The fifty-two-item instrument demonstrated acceptable psychometric properties, which justified its use as a reliable and valid measure of emotional intelligence (Tsaousis, 2007). More specifically, the factor analytic data suggested a four-factor solution, which had a close resemblance to Mayer and Salovey's (1997) theoretical framework. The Cronbach alpha coefficients for the four factors ranged between 0,80 and 0,92. All scales demonstrated high internal consistency, indicating that they were homogeneous in their measurements. Furthermore, test-re-test data covering a four-week period indicated the temporal reliability of the GEIS in that correlation coefficients ranged between 0,79 and 0,91 (Tsaousis, 2007). Also according to Tsaousis (2007), data from five different studies provided support for good convergent and discriminant validity of the GEIS scales, suggesting that the test tapped a fairly broad range of related emotional constructs, such as positive correlation with empathy, social skills, emotional expressiveness, and well-being, as well as negative correlation with locus of control, negative affect, low physical and psychological well-being, and work stress. These findings justified the concurrent validation of the newly developed instrument and the GEIS was, therefore, used in this study.

### **Statistical Analysis**

The data analysis was carried out with the SPSS programme (SPSS, 2003). The dataset was studied to identify bivariate and multivariate outliers. To identify bivariate outliers, the data were standardised (to z-scores). Values higher than 2,58 were inspected to decide whether they should be deleted from the dataset. An inspection was also made of the anti-image scores of the different items. Items with scores lower than 0,60 were considered problematic and were therefore excluded from the rest of the statistical analysis.

Furthermore, missing values were analysed and replaced where possible. Principal factor extraction with oblique rotation was performed on the measuring instrument to determine the factor structure. Principal component analysis was used prior to principal factor extraction to estimate the number of factors, presence of outliers and factorability of the correlation matrices. The eigen values and scree plot were studied to determine the number of factors underlying the specific measuring instrument.

Covariance analysis or structural equation modelling (SEM) methods, as implemented by AMOS (Arbuckle, 1997), were used to construct and test a four-factor model of emotional intelligence. Hypothesised relationships were tested empirically for goodness-of-fit with the sample data. The  $X^2$

and several other goodness-of-fit indices summarise the degree of correspondence between the implied and observed covariance matrices. However, the  $\chi^2$  test is widely recognised to be problematic (Jöreskog, 1969). It is sensitive to sample size, and could also be invalid when distributional assumptions are violated, leading to the rejection of good models or the retention of bad ones. Due to the drawbacks of  $\chi^2$  test, many alternative fit statistics have been developed.

The Goodness-of-Fit Index (GFI) is commonly used to indicate the relative amount of variance and co-variance in the sample predicted by the estimates of the population. It usually varies between 0 and 1, and a result of 0,90 or above indicates a good model fit. The Adjusted Goodness-of-Fit Index (AGFI) is a measure of the relative amount of variance accounted for by the model, corrected for the degrees of freedom in the model relative to the number of variables. Both these values are classified as absolute values, because they compare the hypothesised model with no model at all (Hu & Bentler, 1995). The Parsimony Goodness-of-Fit Index (PGFI) addresses the issue of parsimony in SEM (Mulaik et al., 1989). Although this index generally demonstrates lower levels in comparison to the other fit indices at the 0,50 level in comparison to values higher than 0,90, values >0,80 are considered to be more appropriate (Byrne, 2001).

The Normed Fit Index (NFI) is used to measure global fit. The NFI represents the point at which the model being evaluated falls on a scale running from a null model to a perfect fit. This index is normed to fall on a 0 to 1 continuum and tends to over-estimate fit in smaller samples. The Comparative Fit Index (CFI) also compares the hypothesised and independent models, but takes sample size into account. The Tucker-Lewis Index (TLI) is a relative measure of covariation explained by the hypothesised model which has been specifically designed for the assessment of factor models (Tucker & Lewis, 1973). Critical values for good model fit have been recommended for the NFI, CFI and TLI to be acceptable above the 0,90 level (Bentler, 1992), although Hu and Bentler (1999) recommended a cut-off value of 0,95. The Root Mean Square Error of Approximation (RMSEA) estimates the overall amount of error; it is a function of the fitting function value relative to the degrees of freedom (Brown & Cudeck, 1993). Hu and Bentler (1999) suggested a value of 0,06 to indicate acceptable fit, whereas MacCullum, Browne, and Sugawara (1996) suggested that values between 0,08 and 1,00 indicate mediocre fit and values above 1,00 poor fit.

In accordance with Hu and Bentler (1999), a combination approach was used to evaluate model fit. Specifically an absolute close-fit index (RMSEA) and two incremental close-fit indices were chosen

(TLI and CFI) because it has been argued that they would provide more stable and accurate estimates than several other fit indices (Hu & Bentler, 1999; Maruyama, 1998) and the mentioned three indices have been used in other confirmatory factor analysis studies of emotional intelligence (Gignac et al., 2005). Other fit indices were included as support to the TLI, GFI and RMSEA as they were used in other studies for evaluation of psychological tests (Parker, Taylor, & Bagby, 2003) and provided easy comparisons to the other data sets. Although there is no absolute standard for accepting or rejecting a plausible model, the model was considered to have an adequate fit when the CFI > 0,90 (Newcomb, 1994) and the RMSEA showed a coefficient of 0,05 or lower, which was necessary for unequivocal evidence of a good fit (Parker et al., 2003).

## RESULTS

A principle component analysis with oblique direct oblimin rotation was performed on the 52 items of the GEIS. The cut-off value of 0,30 was set for inclusion of a variable in the interpretation of a factor. According to the results, a four-factor solution emerged, accounting for 37,29 % of the total variance. Each factor is described below as Tsousis (2007) indicated the factor:

- Factor 1 was named caring and empathy and related to the willingness of the individual to help other people and his / her ability to understand someone else's feelings, as well as re-experience them. Examples of items included in this subscale were: *"I respond to the emotions of others"* and *"I sympathise with others' personal problems"*.
- Factor 2 was named control of emotion and related to the ability of the individuals to control and regulate emotions in themselves and others. Examples of items included in this subscale were: *"I get carried away by emotions of anger"* and *"When I am under pressure I snap"*.
- Factor 3 was named emotion expression and recognition and related to the ability of the individual to express and recognise his or her own emotional reactions accurately. Examples of items included in this subscale were: *"I find it difficult to describe exactly what I feel with words"* and *"I am unable to explain my emotional state to others"*.
- Factor 4 was named use of emotions to facilitate thinking which related to the ability of the individuals to harness their own emotions in order to solve problems via optimism and self-assurance, which in turn facilitated inductive reasoning and creativity. Examples of items included in this subscale were: *"I think of the positive side of things"* and *"Usually, my personal problems do not affect my performance at work"*.

The results of the factor analysis on the GEIS are shown in Table 5. Loading of variables on factors, communalities and percentage variance are shown. Variables were ordered and grouped by size of loadings to facilitate interpretation. Labels for each factor are suggested in a footnote.

Table 5

*Factor loadings, communalities ( $h^2$ ), percentage variance for principal factor extraction and direct oblimin rotation on GEIS items*

Item	F <sub>1</sub>	F <sub>2</sub>	F <sub>3</sub>	F <sub>4</sub>	$h^2$
21 – I sympathise with others' personal problems	<b>0,72</b>	0,08	0,12	0,16	0,52
24 – I am always willing to help someone who is confronted with personal problems	<b>0,71</b>	0,15	0,01	0,18	0,55
51 – When someone is talking to me about his/her problems, I almost feel like I have experienced these problems myself	<b>0,68</b>	0,09	-0,07	-0,08	0,48
50 – I can easily understand what someone else feels by putting myself in his/her position	<b>0,67</b>	0,26	0,13	0,01	0,53
5 – I like to talk with others about their problems	<b>0,62</b>	0,03	0,20	0,07	0,43
14 – I am interested in other's psychological motives	<b>0,60</b>	0,03	0,09	-0,03	0,37
41 – I am "open" to listen to others	<b>0,55</b>	0,26	0,13	0,25	0,45
34 – I respond to the emotions of others	<b>0,54</b>	0,06	0,28	0,10	0,38
37 – I am not interested in the problems of others	<b>0,52</b>	0,16	0,20	0,11	0,35
35 – I get carried away by emotions of anger	0,10	<b>0,69</b>	0,19	0,04	0,52
15 – I often get angry and afterwards I find my anger inexcusable	0,12	<b>0,67</b>	0,12	0,04	0,48
17 – I often regret things that I did or said when I was angry	-0,01	<b>0,59</b>	0,15	-0,13	0,39
1 – I get angry easily, but my anger does not last for too long	-0,07	<b>-0,59</b>	0,10	-0,00	0,37
31 – I usually control my anger	0,35	<b>0,58</b>	-0,01	0,05	0,46
38 – I have the tendency to show my impatience to others	0,26	<b>0,57</b>	-0,01	-0,00	0,40
3 – I have the tendency to focus on the negative side of things	0,01	<b>0,55</b>	0,17	0,37	0,47
6 – When I am under pressure I snap	0,08	<b>0,55</b>	0,14	0,21	0,37
52 – When I try to help someone, I unintentionally give directions by strongly criticising them	0,29	<b>0,50</b>	0,09	0,08	0,34
2 – I often have conflicting emotions for the same persons	0,18	<b>0,49</b>	-0,06	0,14	0,30
44 – Its difficult for me to be optimistic	0,17	<b>0,43</b>	0,30	0,38	0,45
23 – I am reserved in expressing emotions	0,16	-0,07	<b>0,74</b>	0,09	0,58
20 – I find it difficult to express my emotions to others	0,25	0,03	<b>0,73</b>	0,05	0,59
11 – I am careful not to reveal my emotions to others	0,03	0,05	<b>0,69</b>	0,06	0,48
9 – I usually keep to myself when I am sad	0,13	-0,01	<b>0,58</b>	-0,08	0,36
43 – I find it difficult to describe exactly what I feel with words	0,09	0,31	<b>0,52</b>	0,16	0,41
18 – I believe that few people understand my emotions	0,12	0,26	<b>0,50</b>	-0,07	0,34
4 – Most people cannot understand exactly what I feel	-0,08	0,30	<b>0,47</b>	0,16	0,34
30 – I overlook my emotions	0,36	0,16	<b>0,42</b>	-0,26	0,41
26 – I rarely analyse my emotions	0,36	0,16	<b>0,42</b>	-0,16	0,36

Table 5

*Factor loadings, communalities ( $h^2$ ), percentage variance for principal factor extraction and direct oblimin rotation on GEIS items (Continued)*

Item	F <sub>1</sub>	F <sub>2</sub>	F <sub>3</sub>	F <sub>4</sub>	$h^2$
40 – I function more based on the hope for success and less with the fear of failure	0,22	0,28	0,21	<b>0,55</b>	0,47
29 – I find various alternative solutions to a problem	0,02	0,15	0,07	<b>0,53</b>	0,31
25 – Usually, my personal problems do not affect my performance at work	-0,08	-0,02	-0,06	<b>0,52</b>	0,30
45 – When faced with failure, I tend to behave energetically by designing a new plan of action	0,00	0,08	0,13	<b>0,51</b>	0,30
22 – I think of the positive side of things	0,26	0,36	0,35	<b>0,48</b>	0,55
39 – I always try to see the good side of things	0,29	0,45	0,22	<b>0,46</b>	0,54
Variance explained	10,88%	10,15%	8,54%	7,72%	
Total variance explained					37,29

F<sub>1</sub> Caring & Empathy, F<sub>2</sub> Control Emotion, F<sub>3</sub> Emotion Expression/Recognition, F<sub>4</sub> Emotion Use to Facilitate Thinking

The following items showed low communalities and it was decided to omit these items: E16 (*“My worries and stress do not decrease my ability to complete any task”*), E27 (*“I adapt easily by reacting creatively to any obstacles”*), E28 (*“When I am conversing with someone I am concentrated to what he / she is telling me”*), and E12 (*“Most of the times I believe that things will go well for me”*). E13 (*“I am unable to explain my emotional state to others”*) had a low alpha coefficient and were not included in the emotion expression and recognition scale. E19 (*“I respect the others’ emotions”*) cross loaded on both caring and empathy, and emotion expression and recognition. E7 (*“When I am upset everything bothers me”*) cross loaded on both control of emotion and emotion expression and recognition. E49 (*“Prior to important events I feel tense”*) cross loaded on both control of emotion and emotion expression and recognition.

Structural equation modelling (SEM) methods, as implemented by AMOS (Arbuckle, 1997) were used to support the four-factor model for emotional intelligence determined by the exploratory factor analyses in Study 1. Data analysis was conducted in two consecutive steps. Several goodness-of-fit statistics (GFI, AGFI, PGFI, NFI, TLI, CFI and RMSEA) were used to assess the model fit globally. Secondly, given findings of a poor-fitting initially hypothesised model, exploratory analysis was done. Possible misspecifications, as suggested by so-called modification indices, were looked for in order to fit a revised, re-specified model to the data.



The four-factor model of the GEIS consisting of 52 items was tested in order to test factorial validity. Statistics of the fit between the theoretical model and the empirical data are given in Table 6.

Table 6

*Goodness-of-fit statistics for the GEIS*

Model	GFI	AGFI	PGFI	NFI	TLI	CFI	RMSEA
Model 1 Combined (four-factor)	0,80	0,76	0,72	0,60	0,69	0,70	0,07
Model 1 Combined (four-factor) Rev	0,81	0,78	0,71	0,62	0,71	0,73	0,07
Model 2 Combined (three-factor)	0,85	0,82	0,71	0,74	0,79	0,81	0,07
Model 2 Combined (three-factor) Rev	0,91	0,89	0,71	0,84	0,91	0,93	0,05
Model 3 White (three-factor)	0,77	0,73	0,66	0,66	0,73	0,75	0,09
Model 3 White (three-factor) Rev	0,89	0,85	0,67	0,85	0,94	0,95	0,04
Model 4 African (three-factor)	0,81	0,78	0,68	0,58	0,76	0,78	0,06
Model 4 African (three-factor) Rev	0,88	0,85	0,69	0,74	0,93	0,94	0,04

Model 1 (combined four-factor): The data did not fit the model, and even after inspection of the modification indices, the revised model did not fit the data adequately (GFI = 0,81, AGFI = 0,78, PGFI = 0,71, NFI = 0,62, TLI = 0,71, CFI = 0,73 and RMSEA = 0,07). From the four-factor model (Model 1) it was evident that several items of the emotion expression and recognition scale had cross loadings on the use of emotion to facilitate thinking, caring and empathy, and control of emotion scales. Theory also indicated that there may be cultural differences in emotion expression and recognition (Bar-On, 2000; Mayer et al., 2000; Parker, Taylor, & Bagby, 2003). The particular items of emotion expression and recognition may be problematic because they do not correspond to the conceptual domain of the particular dimension. However, it is more likely that they are somewhat ambiguous or that they are either sample- or country-specific. It was therefore decided to

test a three-factor model in the combined sample (both white and african ethnicities) consisting of use of emotion to facilitate thinking, caring and empathy, and control of emotion.

Model 2 (combined three-factor): The results indicated a poor, but better fit than the revised four-factor model ( $GFI = 0,85$ ,  $AGFI = 0,82$ ,  $PGFI = 0,71$ ,  $NFI = 0,74$ ,  $TLI = 0,79$ ,  $CFI = 0,81$  and  $RMSEA = 0,07$ ). Further inspection of the modification indices (MI) revealed that the fit between the three-factor model (Model 2) and the data could be further improved if correlation was allowed between the measurement of errors of control of emotion, and caring and empathy scales. This means that the fit of the proposed model could be improved if the errors between items 15 and 35 ( $MI = 26,40$ ) and items 1 and 2 ( $MI = 26,58$ ) of the control of emotion scale, and items 51 and 52 ( $MI = 26,51$ ) of the caring and empathy scale were allowed to correlate. The revised model – including covariation – showed an excellent fit ( $GFI = 0,91$ ,  $TLI = 0,91$ ,  $CFI = 0,93$ , and  $RMSEA = 0,05$ ). Although the  $AGFI$ ,  $PGFI$  and  $NFI$  indices were below 0,90, the rest of the critical indices showed a good fit. Lastly, good alpha coefficients were obtained for the three-factor model, which will be reported in Table 7.

Next, the sample was split according to ethnicity to test for the White and African samples separately. For model 3 (white sample: three-factor), the indices revealed a poor fit between the model and the data ( $GFI = 0,77$ ,  $AGFI = 0,73$ ,  $PGFI = 0,66$ ,  $NFI = 0,66$ ,  $TLI = 0,73$ ,  $CFI = 0,75$  AND  $RMSEA = 0,09$ ). However, inspection of the modification indices (MI) revealed that the fit between the model (Model 3) and the data could be further improved if correlation was allowed between the measurement of errors of control of emotion, and caring and empathy scales. This means that the fit of the proposed model could be improved if the errors between items 3 and 45 ( $MI = 26, 50$ ) and items 38 and 52 ( $MI = 10,47$ ) of the control of emotion scale, and items 50 and 51 ( $MI = 17,30$ ) and items 24 and 37 ( $MI = 15,61$ ) of the caring and empathy scale were allowed to correlate. The revised model showed an improvement: ( $TLI = 0,94$ ,  $CFI = 0,95$  and  $RMSEA = 0,04$ ) and indicated that the data fitted the model. Next, the African sample was investigated.

Model 4 (African three-factor): The African sample was tested to confirm the three factors (use of emotion to facilitate thinking, caring and empathy, and control of emotion). Statistics of fit between the theoretical model and the empirical data are indicative of a poor overall fit to the theoretical three-factor model of the GEIS in Model 4. Values lower than 0,90 were found for  $GFI = 0,81$ ,  $AGFI = 0,78$ ,  $NFI = 0,58$ ,  $TLI = 0,76$  and  $CFI = 0,78$ . The  $RMSEA$  (0,06) was also above 0,05 (indicative of a poor fit). To pinpoint possible areas of misfit, modification indices were examined.

Items 22 (“*I think of the positive side of things*”), 37 (“*I am not interested in the problems of others*”), 17 (“*I often regret things that I did or said when I was angry*”) and 38 (“*I have the tendency to show my impatience to others*”) showed low regression weights and non-significant  $p$ -values ( $p>0,00$ ) that possibly accounted for the misspecification of the hypothesised factor loadings. These items were therefore omitted in the subsequent analysis which resulted in the revised model. After omitting these items the critical goodness-of-fit indices were indicative of a model fit (TLI (0,93), CFI (0,94) and RMSEA (0,04))

The descriptive statistics and Cronbach alpha coefficients of the different factor models of the GEIS are given in Table 7.

Table 7

*Descriptive statistics, alpha coefficients of the GEIS*

Model	Factor	Mean	SD	Skewness	Kurtosis	$\alpha$
Exploratory Four-Factor	Caring and Empathy	46,56	6,70	-0,70	1,01	0,83
	Control of Emotion	34,73	6,72	-0,32	-0,18	0,80
	Expression and Recognition of Emotion	26,15	6,36	0,04	-0,32	0,79
	Use of Emotion to Facilitate thinking	28,06	3,56	-0,55	0,75	0,71
	Use of Emotion to Facilitate Thinking	23,73	4,55	1,82	3,55	0,81
Combined Sample	Caring and Empathy	31,11	5,07	-0,97	1,58	0,81
	Control of Emotion	32,34	5,60	-0,51	0,01	0,72
White Sample	Use of Emotion to Facilitate Thinking	22,65	4,01	-1,13	1,19	0,83
	Caring and Empathy	29,70	5,40	-0,74	0,95	0,83
	Control of Emotion	25,71	4,97	-0,53	-0,15	0,77
African Sample	Use of Emotion to Facilitate Thinking	25,00	3,32	-0,74	1,54	0,81
	Caring and Empathy	32,55	3,80	-0,63	1,3	0,84
	Control of Emotion	27,18	3,88	-0,59	0,54	0,74

Table 7 shows that Cronbach alpha coefficients varying from 0,71 to 0,84 were obtained for all the GEIS factors of each model. The factors Use of Emotion to Facilitate Thinking in the exploratory four-factor model (0,71) and Control of Emotion in the combined sample (0,72) showed the lowest

alpha values, but can still be regarded as acceptable (alphas above 0,70) by the guideline provided by Nunnally and Bernstein (1994). The values for the factors in all of the models were acceptable. It is evident from Table 6 that the scores from the various scales for each model are relatively normally distributed, with low skewness and kurtosis except for caring and empathy from the exploratory, combined and African sample model, and use of emotion to facilitate thinking from the combined sample, White sample and African sample model. In conclusion it can be said that all the factors of the GEIS for all four the models showed sufficient reliability and validity to be used for subsequent analysis.

## DISCUSSION

The aim of this study was to determine the construct and factorial validity of the Greek Emotional Intelligence Scale in a South African population. The results indicated the following:

Research aim 1: To conceptualise emotional intelligence by means of a literature review

Salovey and Mayer (1990) defined emotional intelligence as the ability to observe the emotions and feelings of oneself and others, to differentiate among these feelings and emotions, and to utilise this information to direct one's thoughts and behaviours. Emotions form an indispensable part of organisational success (Van Rooy & Viswesvaran, 2004) and it has an important adaptive function to the individual. Arumugam (2003) also argues that emotional intelligence plays a critical role in the development process of employees. Two distinct classifications of emotion intelligence theories and measurement tools exist: ability or information processing models, and mixed or trait models of emotional intelligence (Mayer et al., 2000). Ability models refer to emotional intelligence as a collection of intellectual abilities associated with accurate emotion information processing (Salovey & Mayer, 1990), whereas mixed models view emotional intelligence as a mix of abilities, traits, motivation and skills (Bar-On, 1997; Byrne et al., 2007; Cooper & Sawaf, 1998; Goleman, 1995; Pérez et al., 2005).

Research aim 2: To determine the factorial validity and internal consistency of the GEIS through an exploratory factor analysis approach

From the exploratory factor analysis it was indicated that the four factors of the GEIS could indeed be replicated to a specific sample. Factor 1 was named caring and empathy. It consisted of nine

items and relates to the willingness of the individual to help others and the ability to understand others' feelings and re-experience these feelings: "*I can easily understand what someone else feels by putting myself in his/her position*". Factor 2 was named control of emotion and consisted of eleven items. This factor refers to an individual's ability to control emotions in him or herself and in others: "*When I am under pressure I snap*". Factor 3 was named emotion expression and recognition and comprised 9 items. This factor refers to the ability to express and recognise one's own emotions accurately: "*Most people cannot exactly understand how I feel*". Factor 4 was named use of emotion to facilitate thinking. It consisted of eight items and relates to the ability to harness one's own emotions and solve problems: "*I think of the positive side of things*". The four factors from the current study accounted for 37,29% of the total variance. During the development study of the GEIS Tsouasis (2007) found Factor 1 to be use of emotion to facilitate thinking (comprising of fifteen items), Factor 2 as caring and empathy (fifteen items composed this factor), Factor 3 to be control of emotion (comprising of twelve items), and Factor 4 to be expression and recognition of emotions (consisting of ten items). The fifty two retained items comprising the four factors accounted for 40% of the total variance. In comparison with the original findings of Tsouasis the factorial validity (as determined by exploratory factor analysis) of the GEIS in a South African sample proved to be satisfactory.

Research aim 3: To determine whether the factors of the GEIS that was determined by exploratory factor analysis can be supported by a confirmatory factor analysis approach

Confirmatory factor analyses indicated that three of the four factors (caring and empathy, control of emotions, and use of emotion to facilitate thinking) could be supported with factor analyses. Some of the items comprising the excluded factor includes: "*Most people cannot understand what I feel; I am careful not to reveal my emotions to others; I usually keep to myself when I am sad; I am reserved in expressing emotions*". Expression, recognition and comprehension of emotions have been found to be influenced by culture (Bar-On, 2000; Matsumoto, 2002; Matsumoto et al., 2008; Mayer et al., 2000). This may be a possible reason for the failure of the factor expression and recognition of emotions. Bagozzi, Wong, and Yi (1999) believe that individualistic and collectivist cultures differ in terms of how they control the experience and expression of each individual's own emotions (value orientation). Items from the particular factor may possibly be more indicative of how people semantically categorise their feelings, in stead of how they subjectively express these emotions. Another possible explanation might be that the items comprising this factor did not measure exactly what it set out to measure. It may also be possible that items relating to this factor

are vague or ambiguous and difficult to interpret correctly. The language in which the questionnaire was developed is English and not all of the participants' home language is English. For this reason, the questions may have been understood or interpreted differently. Coetzer, (2004) found similar tendencies when a work engagement measure was validated for White and African groupings in South Africa.

Research aim 4: To determine whether the emotional intelligence factors of the confirmatory factor analysis will remain constant across cultures (White and African sample)

When the sample was split and confirmatory factor analysis was conducted on the White and African samples independently, the three factors (caring and empathy, control of emotions, and use of emotion to facilitate thinking) remained consistent over the two culture groups, but certain items (22 – *“I think of the positive side of things”*, 37 – *“I am not interested in the problems of others”*, 17 – *“I often regret things that I did or said when I was angry”*, and 38 – *“I have the tendency to show my impatience to others”*) did not explain the factors well and did not load meaningful onto these factors for the African sample.

Again, the nature of feelings and emotions and how they are expressed are known to differ cross-culturally (Dubé, Cervellán, & Han, 2003; Williams & Aaker, 2002). South Africa is known as the country with the “rainbow nation” due to the existence of so many different cultures and traditions. Census 2001 (Statistics South Africa, 2003) indicated that South Africa is home to eleven official language groups and cultures, creating a highly differential environment on the basis of culture ethnicity, values and attitudes (Nel et al., 2001).

People from collectivist and individualistic cultures experience emotion in different ways (Markus & Kitayama, 1991). Certain terms, such as “positive” are abstract terms and not seen as specific as for instance “happy” or “encouraging”. It may be that some of the items were not fully understood in the exact manner it was meant to be interpreted. The fact that collectivist cultures are much tighter knit and involved with one another than individualistic cultures, may explain why showing no interest in the problems of others is a problematic statement for the African culture. It may be that African cultures, much the same as Chinese cultures (also collectivist), place a lot of emphasis on ritual-like behaviour and language (expressing emotions) act more as a vehicle for guiding behaviours (Hansen, 1992). Collectivist cultures do not make use of emotion to influence people in the same manner as individualistic cultures (Bagozzi et al., 1999). It may also be that African

cultures regard their own feelings as less significant than the feelings of others, much the same as the findings from a study by Potter (1988) where Chinese informants frequently responded: "*what I feel doesn't matter*". Bagozzi et al. (1999) explain that within the collectivist culture their study was conducted, there is an unwritten rule that individuals may feel what they want, but are not allowed to express what they want. It may be the same for the African culture with regards to expressing impatience and anger for example. Collectivist cultures usually do not express the same urgency to get things done as individualistic cultures, and it may be assumed that they could therefore be regarded as more patient.

People in collectivist cultures do not devote much energy to the analysis of their own and others' emotions, and emotions are viewed as secondary reactions. Emotions are not implemented to control or influence others, but rather to blend in with others and express group commitment (Bagozzi et al., 1999). People from individualistic cultures, on the other hand, devote substantial effort to analysing their own and others' emotions and view emotions as crucial in explaining behaviours and actions. Emotions are used to distinguish between oneself and others and to promote individuality, and is implemented to initiate, influence and disperse social relations (Bagozzi et al., 1999).

With regards to the internal consistency of the GEIS, use of emotion to facilitate thinking showed an alpha coefficient of  $\alpha = 0,81$ , caring and empathy also showed an alpha coefficient of  $\alpha = 0,81$ , and control of emotion showed an alpha coefficient of  $\alpha = 0,72$ , which is acceptable values according to the guideline provided by Nunnally and Bernstein (1994) of  $\alpha > 0,70$ .

Research aim 5: To make recommendations on the use of the GEIS as opposed to the SEIS in South Africa

The SEIS (Schutte et al., 1998) is a widely used measure of emotional intelligence but shows inconsistencies with regards to its factor structure. The authors claimed the scale measures emotional intelligence as a uni-dimensional factor, while other research indicated a four factor structure (Gignac et al., 2005; Sharma et al., 2009), a three factor structure (Austin et al., 2004), and a six factor structure (Jonker & Vosloo, 2008). The factor structure of the SEIS failed to show consistency for a South African population, and therefore the GEIS can be identified as a promising instrument for measuring emotional intelligence; it showed that the four factors, also identified by the author (Tsouasis, 2007), worked as indicated by the exploratory analysis, and with the

confirmatory analyses it showed three of the four factors to work, and that the factor structure (excluding items 22, 37, 17 and 38) showed consistency over the two culture groups (White and African).

## **LIMITATIONS AND RECOMMENDATIONS**

This study had several limitations. Firstly, a cross-sectional survey design was used, which made it impossible to prove the causality of the obtained relationship. Secondly, since a self-report questionnaire was used, descriptions given by participants were likely to be inaccurate, in comparison to a description an outsider would give of the same person (Hofstee, 1994). Thirdly, the study was conducted solely in a mining environment and can therefore, not be generalised to the whole public. Another limitation to the study was the fact that the GEIS (Tsaousis, 2007) is a newly developed scale and has not been standardised for a South African population.

From an organisational perspective, managers need to recognise the importance of emotional intelligence and consider the probability of different emotional intelligence profiles across different cultures (Ilangoan et al., 2007). Taking into consideration the benefits associated with an emotional intelligent workforce, management should capitalise on cross-cultural differences in emotional intelligence by recognising strengths and weaknesses in terms of emotional intelligence across cultures and place them in work contexts embracing their emotional intelligence profiles (Earley & Peterson, 2004).

In terms of future research, studies can be directed towards focusing on the impact of culture on emotional intelligence (Ghorbani, Bing, Watson, Davison, & Mack, 2002; Roberts, Zeidner, & Matthews, 2001; Van Rooyen et al., 2005). Future research should also attempt to identify cultural factors which might influence emotional intelligence levels of individuals in a particular culture. Another area of interest could be the relationship between cultural differences in terms of emotional intelligence and performance outcomes. Several recommendations for research have been made for identifying cultural and ethnic group differences when sample selection is done (Paniagua, 2005). There is a great need for a culture-specific questionnaire, and studies should be conducted on determining the meaning attributed to different emotions across various culture groups in South Africa. Researchers have shown that some of the important questionnaires and tests used are not suitable for a multi-cultural society like South Africa (Abrahams, 2002; Meiring, 2000).



## References

- Abrahams, F. (2002). Fair usage of the 16PF (SA 92) in South Africa: A response to C. H. Prinsloo & I. Ebersohn. *South African Journal of Psychology*, 32, 5841.
- Akerjordet, K. (2009). Emotional intelligence: Part 1: The development of scales and psychometric testing. *Nursing and Health Sciences*, 11(1), 58-63.
- Akerjordet, K., & Severissson, E. (2004). Emotional intelligence in mental health nurses talking about practice. *International Journal of Mental Health Nursing*, 13, 164-170.
- Arbuckle, J. L. (1997). *AMOS user's guide version 3.6*. Chicago, IL: Smallwaters.
- Arumugam, S. (2003). EQ: The new business leader's edge. *Management Today*, 19, 22-23.
- Austin, E. J., Saklofske, D. H., Huang, S. H. S., & McKenny, D. (2004). Measurement of trait emotional intelligence: Testing and cross-validating a modified version of Schutte et al.'s (1998) measure. *Personality and Individual Differences*, 36, 555-562.
- Bagozzi, R. P., Wong, N., & Yi, Y. (1999). The role of culture and gender in the relationship between positive and negative affect. *Cognition and Emotion*, 13, 641-672.
- Barchard, K. (2003). Does emotional intelligence assist in the prediction of academic success? *Educational and Psychological Measurement*, 63, 840-858.
- Barchard, K. A., & Christensen, M. M. (2007). Dimensionality and higher-order factor structure of self-reported emotional intelligence. *Personality and Individual Differences*, 42, 971-985.
- Barchard, K. A., & Russell, J. A. (2004). Psychometric issues in the measurement of emotional intelligence. In G. Geher (Ed.), *Measuring emotional intelligence* (pp. 51-70). Hauppauge, NY: Nova Science Publishing.
- Bar-On, R. (1997). *Bar-On Emotional Quotient Inventory*. Toronto: Multi-Health Systems.
- Bar-On, R. (2000). Emotional and social intelligence: Insights from the Emotional Quotient Inventory. In R. Bar-On & J. D. A. Parker (Eds.), *The handbook of emotional intelligence: Theory, development, assessment and application at home, school and in the workplace*. San Francisco, CA: Jossey-Bass.
- Bar-On, R., Brown, J. M., Kirckaldy, B. D., & Thome, E. P. (2000). Emotional expression and implications for occupational stress: An application. *Personality and Individual Differences*, 28, 1107-1118.
- Boyatzis, R. E., Goleman, D., & Rhee, K. (2000). Clustering competence in emotional intelligence : Insights from the Emotional Competency Inventory (ECI). In R. Bar-On & J. D. A. Parker (Eds.), *The handbook of emotional intelligence: Theory, development, assessment and application at home, school and in the workplace*. San Francisco, CA: Josey-Bass.

- Brackett, M. A., & Mayer, J. D. (2003). Convergent, discriminant, and incremental validity of competing measures of emotional intelligence. *Personality and Social Psychology Bulletin*, 29, 1147-1158.
- Brackett, M. A., Mayer, J. D., & Warner, R. M. (2004). Emotional intelligence and its relation to everyday behaviour. *Personality and Individual Differences*, 36, 1387-1402.
- Bradberry, T. R., & Su, L. D. (2006). Ability- versus skill-based assessment of emotional intelligence. *Psichothema*, 18, 59-66.
- Burns, N., & Grove, S. K. (1993). *The practice of nursing research, conduct, critique, and utilization* (2nd ed.). Philadelphia: W.B. Saunders.
- Byrne, B. M. (2001). *Structural equation modeling with AMOS: Basic concepts, applications and programming*. Mahwah, NJ: Erlbaum.
- Byrne, J. C., Dominick, P. G., Smither, J. W., & Reilly, R. R. (2007). Examination of the discriminant, convergent, and criterion-related validity of self-ratings on the Emotional Competence Inventory. *International Journal of Selection and Assessment*, 15, 341-353.
- Byron, K. (2007). Male and female managers' ability to 'read' emotions: Relationships with supervisor's performance ratings and subordinates' satisfaction ratings. *Journal of Occupational and Organizational Psychology*.
- Byron, K. (2008). Differential effects of male and female managers' non-verbal emotional skills on employees' ratings. *Journal of Managerial Psychology*, 23, 118-134.
- Cakan, M., & Altun, S. A. (2005). Adaptation of an emotional intelligence scale for Turkish educators. *International Educational Journal*, 6, 367-372.
- Carmeli, A. (2003). The relationship between emotional intelligence work attitudes, behaviour and outcomes: An examination among senior managers. *Journal of Managerial Psychology*, 18, 788-813.
- Caruso, D. R., Mayer, J. D., & Salovey, P. (2002). Relation of a measure of emotional intelligence to personality. *Journal of Personality Assessment*, 79, 306-320.
- Cherniss, C. (2000). *Emotional intelligence: What it is and why it matters*. Paper presented at the Annual Meeting of the Society for Industrial and Organizational Psychology, New Orleans, LA.
- Ciarrochi, J., Chan, A. Y., & Caputi, P. (2000). A critical evaluation of the emotional intelligence concept. *Personality and Individual Differences*, 34, 1477-1490.
- Ciarrochi, J., Chan, A. Y., & Bajgar, J. (2001). Measuring emotional intelligence in adolescents. *Personality and Individual Differences*, 31, 1105-1119.

- Ciarrochi, J., Deane, F. P., & Anderson, S. (2002). Emotional intelligence moderates the relationship between stress and mental health. *Personality and Individual Differences*, 32, 197-209.
- Coetzer, W. J. (2004). *Burnout and engagement of employees in an insurance company*. Unpublished doctoral thesis, North-West University, Potchefstroom.
- Conte, J. M. (2005). A review and critique of emotional intelligence measures. *Journal of Organizational Behavior*, 26, 433-440.
- Cooper, R. K. (1997). Applying emotional intelligence in the workplace. *Training and Development*, 51(12), 31-38.
- Cooper, R. K., & Sawaf, A. (1998). *Executive EQ: Emotional intelligence in leadership and organizations*. New York: Berkley Publishing Group.
- Craig, A., Tran, Y., Hermens, G., Williams, L. M., Kemp, A., Morris, C., & Gordon, E. (2009). Psychological and neural correlates of emotional intelligence in a large sample of adult males and females. *Personality and Individual Differences*, 46, 111-115.
- Daus, C. S., & Ashkanasy, N. M. (2003). Will the real emotional intelligence please stand up?: On deconstructing the emotional intelligence "debate". *The Industrial and Organizational Psychologist*, 41(2), 69-72.
- Davies, M., Stankov, L., & Roberts, R. (1998). Emotional intelligence: In search of an elusive construct. *Journal of Personality and Social Psychology*, 75, 989-1015.
- Dawda, D., & Hart, S. D. (2000). Assessing emotional intelligence: Reliability and validity of the Bar-On Emotional Quotient Inventory (EQ-i) in university students. *Personality and Individual Differences*, 28, 797-812.
- Downey, L. A., Papageorgiou, V., & Stough, C. (2006). Examining the relationship between leadership, emotional intelligence and intuition in senior female managers. *Journal of Leadership and Organizational Development*, 27, 250-264.
- Dubé, L., Cervellán, M. C., Han, J. (2003). Should consumer attitudes be reduced to their Affective and cognitive bases?: Validation of a hierarchical model. *International Journal of Research in Marketing*, 20, 259-272.
- Dulewicz, V., & Higgs, M. J. (1999). Can emotional intelligence be measured and developed? *Leadership and Organisation Development Journal*, 20, 242-252.
- Dulewicz, V. & Higgs, M. (2000). Emotional intelligence: A review and evaluation study. *Journal of Managerial Psychology*, 15, 341-372.
- Dulewicz, V., Higgs, M., & Slaski, M. (2003). Measuring emotional intelligence: Content, construct and criterion-related validity. *Journal of Managerial Psychology*, 18, 405-420.

- Earley, P. C., & Peterson, R. S. (2004). The illusive cultural chameleon: Cultural intelligence as a new approach to intercultural training for the global manager. *Academy of Management Training and Education*, 3, 100-115.
- Freudenthaler, H. H., & Neubauer, A. C. (2003). The localization of emotional intelligence within human abilities and personality. Poster presented at the 11<sup>th</sup> Biennial Meeting of the International Society of the Study of Individual Differences (ISSID), Graz, Austria.
- Freudenthaler, H. H., & Neubauer, A. C. (2005). Emotional intelligence: The convergent and discriminant validities of intra- and interpersonal emotional abilities. *Personality and Individual Differences*, 39, 569-579.
- Gannon, N., & Ranzijn, R. (2005). Does emotional intelligence predict unique variance in life satisfaction beyond IQ and personality? *Personality and Individual Differences*, 38, 1353-1364.
- Gardner, H. (1983). *Frames of mind*. New York: Basic Books.
- Gardner, L., & Stough, C. (2002). Examining the relationship between leadership and emotional intelligence in senior level managers. *Journal of Leadership and Organization Development*, 23(2), 68-78.
- Geher, G., Warner, R. M., & Brown, A. S. (2001). Predictive validity of the emotional accuracy research scale. *Intelligence*, 29, 373-388.
- George, J. M. (2000). Emotions and leadership: The role of emotional intelligence. *Human Relations*, 53, 1027-1041.
- Ghorbani, N., Bing, M., Watson, P., Davison, H., & Mack, D. (2002). Self-reported emotional intelligence: Construct similarity and functional dissimilarity of higher-order processing in Iran and the United States. *International Journal of Psychology*, 37, 297-308.
- Gignac, G. E., Palmer, B. R., Manocha, R., & Stough, C. (2005). An examination of the factor structure of the Schutte self-report emotional intelligence (SSREI) scale via confirmatory factor analysis. *Personality and Individual Differences*, 39, 1029-1042.
- Goleman, D. (1995). *Emotional intelligence*. New York: Bantam.
- Goleman, D. (1996). Emotional intelligence. *Learning*, 24, 49-51.
- Goleman, D. (2005). *Emotional intelligence: Why it matters more than IQ*. New York: Bantam Dell.
- Groves, K. S., McEnrue, M. P., & Shen, W. (2008). Developing and measuring the emotional intelligence of leaders. *Journal of Management Development*, 27, 225-250.
- Hansen, C. (1992). *A Daoist theory of Chinese thought*. New York: Oxford University Press.

- Hedlund, J., & Sternberg, R. J. (2000). Too many intelligences?: Integrating social, emotional, and practical intelligence. In R. Bar-On & J. D. A. Parker (Eds.), *Handbook of emotional intelligence* (pp. 136-167). New York: Jossey-Bass.
- Hofstee, W. K. B. (1994). Who should own the definition of personality? *European Journal of Personality*, 8, 149-162.
- Hu, L. T., & Bentler, P. M. (1999). Cut-off criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1-55.
- Ilangovan, A., Scroggins, W. A., & Rozell, E. J. (2007). Managerial perspectives on emotional intelligence differences between India and the United States: The development of research propositions. *International Journal of Management*, 24, 541-548.
- Jöreskog, K. G. (1969). A general approach to confirmatory maximum likelihood factor analysis. *Psychometrika*, 34, 183-202.
- Jonker, C. S. (2002). *The compilation and evaluation of a development program aimed at emotional intelligence*. Unpublished doctoral thesis, PU for CHE, Potchefstroom.
- Jonker, C. S., & Vosloo, C. (2008). The psychometric properties of the Schutte Emotional Intelligence Scale. *South African Journal for Industrial Psychology*, 34, 21-30.
- Jordan, P. J., Ashkanasy, N. M., Härtel, C. E. J., & Hooper, G. S. (2002). Workgroup emotional intelligence scale development and relationship to team process effectiveness and goal focus. *Human Resource Management Review*, 12, 195-214.
- Keele, S. M., & Bell, R. C. (2008). The factorial validity of emotional intelligence: An unresolved issue. *Personality and Individual Differences*, 44, 487-500.
- Kerr, R., Garvin, J., Heaton, N., & Boyle, E. (2006). Emotional intelligence and leadership effectiveness. *Leadership and Organization Development*, 27, 265-279.
- Landy, F. J. (2005). Some historical and scientific issues related to research on emotional intelligence. *Journal of Organizational Behavior*, 26, 411-424.
- Langhorn, S. (2004). How emotional intelligence can improve management performance. *International Journal of Contemporary Hospitality Measurement*, 16, 220-230.
- Law, K. S., Wong, C., & Song, L. J. (2004). The construct and criterion validity of emotional intelligence and its potential utility for management studies. *Journal of Applied Psychology*, 89, 483-496.
- Luthans, F. (2002). Positive organizational behaviour: Developing and managing psychological strengths for performance improvement. *Academy of Management Executive*, 16(1), 57-76.

- Lyusin, D. B. (2006). Emotional intelligence as a mixed construct: Its relation to personality and gender. *Journal of Russian and East European Psychology*, 44(6), 54-68.
- MacCann, C., Matthews, G., Zeidner, M., & Roberts, R. (2003). Psychological assessment of emotional intelligence: A review of self-report and performance-based testing. *International Journal of Organizational Analysis*, 11, 247-274.
- Maier, M. D. (1999). Move over technology: Make room for emotions. *TMA Journal*, 19, 34-37.
- Markus, H., & Kitayama, S. (1991). Culture and the self: Implication for cognition, emotion, and motivation. *Psychological Review*, 98, 224-253.
- Martinez-Pons, M. (2000). Emotional intelligence as a self-regulatory process: A social cognitive view. *Imagination, Cognition, and Personality*, 19, 331-350.
- Matsumoto, D. (2002). Methodological requirements to test a possible in-group advantage in judging emotions across cultures: Comments on elfenbein and ambady and evidence. *Psychological Bulletin*, 128, 236-242.
- Matsumoto, D., Angua-Wong., & Martinez, E. (2008). Priming effects of language on emotion judgments in Spanish-English bilinguals. *Journal of Cross-Cultural Psychology*, 39, 335-342.
- Matthews, G., Zeidner, M., & Roberts, R. (2003). *Emotional intelligence: Science and myth*. Cambridge, MA: The MIT Press.
- Matthews, G., Zeidner, M., & Roberts, R. (2007). Emotional intelligence: Consensus, controversies, and questions. In G. Matthews, M. Zeidner, & R. D. Roberts (Eds.), *The science of emotional intelligence: Knowns and unknowns* (pp.3-46). New York: Oxford University Press.
- Mayer, J. D., Caruso, D. R., & Salovey, P. (1999). Emotional intelligence meets traditional standards for intelligence. *Intelligence*, 27, 267-298.
- Mayer, J. D., DiPaolo, M., Salovey, P. (1990). Perceiving affective content in ambiguous visual stimuli: A component of emotional intelligence. *Journal of Personality Assessment*, 54, 772-781.
- Mayer, J. D., & Geher, G. (1996). Emotional intelligence and the identification of emotion. *Intelligence*, 22, 89-113.
- Mayer, J. D., & Salovey, P. (1995). Emotional intelligence and the construction of regulation of feelings. *Applied and Preventative Psychology*, 4, 197-208.
- Mayer, J. D., Salovey, P., & Caruso, D. R. (1997). *Emotional intelligence test*. Needham, MA: Virtual Knowledge.
- Mayer, J. D., Salovey, P., & Caruso, D. R. (2002). *The Mayer, Salovey, Caruso Emotional Intelligence Test (MSCEIT): Users' manual*. Toronto: Multi-Health Systems.
- Mayer, J. D., Salovey, P., & Caruso, D., & Sitarenios, G. (2003). Measuring emotional intelligence with the MSCEIT V2.0. *Emotion*, 3, 97-105.

- Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? In P. Salovey, & D. Sluyter (Eds.), *Emotional development and emotional intelligence: Implications for educators* (pp. 3-31). New York: Basic Books.
- Mayer, J. D., Salovey, P., & Caruso, D. R. (2000). Models of emotional intelligence. In R. J. Sternberg (Ed.), *Handbook of human intelligence* (pp. 396-420). New York: Cambridge University Press.
- Mayer, J. D., Salovey, P., & Caruso, D. R. (2004). Emotional Intelligence: Theory, findings and implications. *Psychological Inquiry*, 15(3), 197-215.
- Meiring, D. (2000. June). *Revisiting the cross-cultural comparability of the 16 Personality Factor Inventory (16PF) in the South African context*. Paper presented at the Industrial Psychology Conference (incorporating the Psychometrics Conference), Pretoria, South Africa.
- Mulaik, S. A., James, L. R., Van Alstine, J., Bennet, N., Lindi, S., & Stilwell, C. D. (1989). Evaluation of goodness-of-fit statistics for structural equation models. *Psychological Bulletin*, 105, 430-445.
- Nel, P. S., Gerber, P. D., Van Dyk, P. S., Haasbroek, G. D., Schultz, H. B., Soho, T., & Werner, A. (2001). *Human resources management* (5th ed.). Cape Town: Oxford University Press Southern Africa.
- Newsome, S., Day, A. L., & Catano, V. M. (2000). Assessing the predictive validity of emotional intelligence. *Personality and individual differences*, 29, 1005-1016.
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (4th ed.). New York: McGraw-Hill.
- O'Connor Jr, R. M., & Little, S. I. (2003). Revisiting the predictive validity of emotional intelligence: Self-report versus ability-based measures. *Personality and Individual differences*, 35, 1893-1902.
- Palmer, B. R., Manocha, R., Gignac, G., & Stough, C. (2003). Examining the factor structure of the Bar-On Emotional Quotient Inventory with an Australian general population sample. *Personality and Individual Differences*, 35, 1191-1210.
- Palmer, B., & Stough, C. (2001). *Workplace SUEIT: Swinburne University Emotional Intelligence Test – Manual*. Swinburne University, Swinburne: Organizational Psychology Research Unit.
- Palmer, B., Walls, M., Burgess, Z., & Stough, C. (2001). Emotional intelligence and effective leadership. *Journal of Leadership and Organizational Development*, 22(1), 5-10.
- Paniagua, F. A. (2005). *Assessing and treating culturally diverse clients: A practical guide*. Thousand Oaks, CA: Sage Publications.

- Parker, J. D. A., Duffy, J. M., Wood, L. M., Bond, B. J., & Hogan, M. J. (2005). Academic achievement and emotional intelligence: Predicting the successful transition from high school to university. *Journal of First-Year Experience*, 17, 1-12.
- Parker, J. D. A., Taylor, G. J., & Bagby, R. M. (2003). The 20-item Toronto Alexithymia Scale iii: Reliability and factorial validity in a community population. *Journal of Psychosomatic Research*, 55, 269-275.
- Penrose, A., Perry, C., & Ball, I. (2007). Emotional intelligence and teacher self-efficacy: The contribution of teacher status. *Issues in Educational Research*, 17, 107-126.
- Pérez, J. C., Petrides, K. V., & Furnham, A. (2005). Measuring trait emotional intelligence. In R. Schulze & R. D. Roberts (Eds.), *International Handbook of Emotional Intelligence* (pp. 123-143). Cambridge, MA: Hogrefe & Huber.
- Petrides, K. V., Frederickson, N., & Furnham, A. (2004). The role of trait emotional intelligence in academic performance and deviant behaviour at school. *Personality and Individual Differences*, 36, 277-293.
- Petrides, K. V. (2001). *A psychometric investigation into the construct of emotional intelligence*. Unpublished doctoral thesis. University College, London.
- Petrides, K. V., & Furnham, A. (2000). On the dimensional structure of emotional intelligence. *Personality and Individual Differences*, 29, 313-320.
- Petrides, K. V. & Furnham, A. (2001). Trait emotional intelligence: Psychometric investigation with reference to established trait taxonomies. *European Journal of Personality*, 15, 425-448.
- Petrides, K. V. & Furnham, A. (2003). Trait emotional intelligence: Behavioural validation in two studies of emotion recognition and reactivity to mood induction. *European Journal of Personality*, 17, 39-57.
- Petrides, K. V. & Furnham, A. (2006). The role of trait emotional intelligence in a gender-specific model of organizational variables. *Journal of Applied Social Psychology*, 36, 552-569.
- Petrides, K. V., Pérez-González, J. C., & Furnham, A. (2007). On the criterion and incremental validity of trait emotional intelligence. *Cognition and Emotion*, 21, 26-55.
- Pheiffer, S. I. (2001). Emotional intelligence: Popular but elusive construct. *Roeper Review*, 23(3), 138-143.
- Phelps, E. A. (2006). Emotions and cognition: Insights from studies of the human amygdale. *Annual Reviews Psychology*, 57, 27-53.
- Potter, S. H. (1988). The cultural construction of emotion in rural Chinese social life. *Ethos*, 16, 181-208.



- Reed-Woodard, M. A., & Clark, R. D. (2000). Put some feeling into it: Emotional intelligence is paramount in a thriving workplace. *Black Enterprise*, 30, 68-69.
- Reilly, A. H., & Karounos, T. J. (2009, February). Exploring the link between emotional intelligence and cross-cultural leadership effectiveness. *Journal of International Business and Cultural Studies*, 1, 1-13.
- Roberts, R. D., Zeidner, M., & Matthews, G. (2001). Does emotional intelligence meet traditional standards for intelligence? Some new data and conclusions. *Emotions*, 1, 196-231.
- Rosete, D., & Ciarrochi, J. (2005). Emotional intelligence and its relationship to workplace performance outcomes of leadership effectiveness. *Journal of Leadership and Organization Development*, 26, 388-399.
- Saklofske, D. H., Austin, E. J., & Minski, P. S. (2003). Factor structure and validity of a trait emotional intelligence measure. *Personality and Individual Differences*, 34, 707-721.
- Salami, O. S. (2007). Relationships of emotional intelligence and self-efficacy to work attitudes among secondary school teachers in Southwestern Nigeria. *Pakistan Journal of Social Sciences*, 4, 540-547.
- Salovey, P., & Mayer, J. (1990). Emotional intelligence. *Imagination, Cognition and Personality*, 9(3), 185-211.
- Salovey, P., Mayer, J. D., Goldman, S., Turvey, G., & Palfai, T. (1995). Emotional attention, clarity and repair: Exploring emotional intelligence using the Trait Meta-Mood scale. In J. W. Pennebaker, (Ed.), *Emotion, disclosure and health* (pp. 125-145). Washington, DC: American Psychological Association.
- Saxenian, A. (2000). Indians form 15% of Silicon Valley's skilled manpower. <http://www.rediff.com/money/2000/nov/07saxen.htm>.
- Schutte, N. S., Malouff, J. M., Hall, L. E., Haggerty, D. J., Cooper, J. T., Golden, C. J., & Dornheim, L. (1998). Development and validation of a measure of emotional intelligence. *Personality and Individual Differences*, 25, 167-177.
- Schutte, N. S., Malouff, J. M., Bobik, C., Coston, T. D., Greeson, C., Jedlicka, C., Rodes, E., & Wendorf, G. (2001). Emotional intelligence and interpersonal relations. *Journal of Social Psychology*, 141, 523-536.
- Sedmar, A., Robins, G., & Ferris, G. R. (2006). Comparing the validity of multiple social effectiveness constructs in the prediction of managerial job performance. *Journal of Organizational Behavior*, 27, 443-461.

- Sharma, S., Deller, J., Biswal, R., & Mandal, M. K. (2009). Emotional intelligence: Factorial structure and construct validity across cultures. *International Journal of Cross-cultural Management*, 9, 217-236.
- Shaughnessy, J. J., & Zechmeister, E. B. (1997). *Research methods in psychology* (4th ed.). New York: McGraw-Hill.
- Shipper, F., Kincaid, J., Rotondo, D. M., & Hoffman, R. C. (2003). A cross-cultural exploratory study of the linkage between emotional intelligence and managerial effectiveness. *The International Journal of Organizational Analysis*, 11, 171-191.
- Sjöberg, L. (2001). Emotional intelligence: A psychometric analysis. *European Psychologist*, 6, 79-95.
- Slaski, M., & Cartwright, S. (2002). Health, performance and emotional intelligence: An exploratory study of retail managers. *Stress and Health*, 18, 63-68.
- Spain, J. S., Eaton, L. G., & Funder, D.C. (2000). Perspectives on personality: The relative accuracy of self versus others for the prediction of emotion and behavior. *Journal of Personality*, 68, 837-867.
- SPSS Inc. (2003). *SPSS 12.0 Windows*. Chicago.
- Statistics South Africa. (2003). *Census 2001: Persons*.  
<http://www.statssa.gov.za/specialprojects/census2001/census/database/census%202001/provincial%20level/persons/persons.asp>
- Tapia, M. (2001). Measuring emotional intelligence. *Psychological Reports*, 88, 353-364.
- Tapia, M., & Marsh, G. E. (2006). A validation of the emotional intelligence inventory. *Psychothema*, 18, 55-58.
- Tett, R. P., Fox, K. E., Wang, A. (2005). Development and validation of a self-report measure of emotional intelligence as a multidimensional trait domain. *Personality and Social Psychology Bulletin*, 31, 859-888.
- Thi Lam, L., & Kirby, S. L. (2002). Is emotional intelligence an advantage?: An exploration of the impact of emotional and general intelligence on individual performance. *The Journal of Social Psychology*, 142, 133-143.
- Thorndike, E. L. (1920). A constant error in psychological ratings. *Journal of Applied Psychology*, 4, 25-29.
- Tsaousis, I. (2007). *Measuring trait emotional intelligence: Development and psychometric properties of the Greek Emotional Intelligence Scale (GEIS)*. University of Aegean, Athens, Greece.

- Tucker, L. R., & Lewis, C. (1973). A reliability coefficient for maximum likelihood factor analysis. *Psychometrika*, 38, 1–10.
- Van der Zee, K., Schakel, L. K., & Thijs, M. (2002). The relationship of emotional intelligence with academic intelligence and the big five. *European Journal of Personality*, 16, 103-125.
- Van Rooy, D. L., Alonso, A., & Viswesvaran, C. (2005). Group differences in emotional intelligence scores: Theoretical and practical implications. *Personality and Individual Differences*, 38, 689-700.
- Van Rooy, D. L., & Viswesvaran, C. (2004). Emotional intelligence: A meta-analytic investigation of predictive validity and nomological net. *Journal of Vocational Behavior*, 65, 71-95.
- Van Rooy, D. L., Viswesvaran, C., & Pluta, P. (2005). An evaluation of construct validity: What is this thing called emotional intelligence. *Human Performance*, 18(4), 445-462.
- Watkin, C. (2000). Developing emotional intelligence. *International Journal of Selection and Assessment*, 8(2), 89-92.
- Watson, D. (2000). *Mood and temperament*. New York: Guilford Press.
- Williams, P., & Aaker, J. L. (2002). Can mixed emotions peacefully coexist? *Journal of Consumer Research*, 28, 636-649.
- Williams, L. M., & Gordon, E. (2007). The dynamic organization of the emotional brain: Responsivity, stability and instability. *The Neuroscientist*, 13, 349-370.
- Wolmarans, S. (1998). Goodbye Taylor, hello emotions! *Management Today*, 14, 26-29.
- Wong, C. S., & Law, K. S. (2002). The effects of leader and follower emotional intelligence on performance and attitude: An exploratory study. *Leadership Quarterly*, 13, 243-274.
- Zeidner, M., Matthews, G., & Roberts, R. D. (2001). Slow down, you move too fast: Emotional intelligence remains an elusive construct. *Emotion*, 1, 265–275.

**CHAPTER 4**

**RESEARCH ARTICLE 3**

# A MODEL OF WORK WELLNESS FOR HUMAN RESOURCE EMPLOYEES IN A PLATINUM AND STEEL PRODUCTION ENVIRONMENT

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## ABSTRACT

The objective of this study was to develop and test a structural model of work wellness of human resource employees in a platinum- and steel production environment in South Africa. A cross-sectional survey design was utilised in this study. An availability sample ( $N = 465$ ) was taken from human resource employees in platinum- and steel production environment. The Oldenburg Burnout Inventory (OLBI), Utrecht Work Engagement Scale (UWES), Frankfurt Emotion Work Scale (FEWS), Greek Emotional Intelligence Scale (GEIS) and Social Support Scale were administered. The results obtained from structural equation modelling (SEM) showed that emotional intelligence and social support are negatively related to emotion work and burnout, and positively related to engagement, which means that employees with emotional intelligence and social support will be less likely to experience negative effects of emotion work and burnout and more likely to experience work engagement. Results also indicated that emotion work is positively related to burnout, meaning that emotion work leads to burnout.

## OPSOMMING

Die doelstelling van hierdie studie was om 'n strukturele model van werkswelstand vir mensehulpbron-werknemers in 'n platinum- en staal produksie omgewing in Suid-Afrika te ontwikkel en te toets. 'n Dwarssneeopname-ontwerp is gebruik. 'n Beschikbaarheidsteekproef ( $N = 465$ ) is geneem van mensehulpbron-werknemers vanuit 'n platinum- en staal produksie omgewing. Die Oldenburg Uitbranding-Vraelys (OLBI), Utrecht Werksbegeesterings Skaal (UWES), Frankfurt Emosie Werk Skaal (FEWS), Griekse Emosionele Intelligensie Skaal (GEIS) en Sosiale Ondersteuning Skaal is afgeneem. Die resultate is verkry deur gebruik te maak van strukturele vergelykingsmodellering (SEM) en het getoon dat emosionele intelligensie en sosiale ondersteuning negatief verband hou met emosie-werk en uitbranding en positief verband hou met werksbegeestering, wat beteken dat wanneer emosionele intelligensie en sosiale ondersteuning voor kom, werknemers minder geneig sal wees om negatiewe effekte van emosie werk en uitbranding te ervaar en meer geneig sal wees om werksbegeestering te ervaar. Resultate het ook daarop gedui dat emosie-werk positief verband hou met uitbranding, wat beteken dat emosie-werk aanleiding gee tot uitbranding.

Emotions are present in, and affect every aspect of life including organisational settings (Ashkanasy & Daus, 2002). The workplace is becoming increasingly complex in terms of high demands for diverse skills, strenuous competition, and increased working hours (Snow, Swan, Raghaven, Connell, & Klein, 2003). Empirical research is understandably increasingly focusing on the link between work-related stress and employee well-being (Daniels & Harris, 2005; Lewin & Sager, 2008; Moore & Mellor, 2003). The concept of work usually causes wavering feelings. One view is that it requires effort and is associated with negative consequences, and on the other hand it is said to give rise to higher levels of energy which is associated with positive consequences (Rothmann, 2003). Hence, it seems that work can either lead to illness or to health outcomes (Schaufeli & Bakker, 2001; Turner, Barling, & Zachartos, 2002).

One consequence of exposure to chronic occupational stress is burnout (Lewin & Sager, 2008). Burnout refers to a state of mental weariness or collapse (Schaufeli & Bakker, 2004) and is characterised by emotional exhaustion, cynicism, and a lack of professional efficacy. Another conception of burnout is provided by Demerouti, Bakker, Vardakou, and Kantas (2003), which perceives burnout as a condition related to negative experiences at work, including feelings of exhaustion and disengagement from work. Exhaustion is labelled as an outcome of prolonged exposure to certain job pressures (Demerouti et al., 2003). This definition covers affective and physical as well as cognitive aspects of exhaustion. Disengagement according to Demerouti et al. (2003) refers to estrangement from one's work in general, the work objects, as well as the work content, and refer to identification with work and the willingness to continue in the same position. This study will make use of exhaustion and disengagement to describe the engagement construct.

On the other hand, the positive antipode of burnout is assumed to be engagement (Schaufeli & Bakker, 2004). This is a multi-dimensional construct defined as a positive fulfilling state of mind characterised by vigour, dedication and absorption (Greenglass, Stokes, & Fiksenbaum, 2005). Vigour is defined as the ability to recover from setbacks, willingness to invest time and effort in one's work, to persevere in difficult situations and is accompanied by high levels of energy (González-Romá, Schaufeli, Bakker, & Lloret, 2006). When a sense of significance, enthusiasm, inspiration and pride is experienced and work presents a challenge, it is termed dedication. Absorption refers to the fully emerged state of work where time passes quickly and the employee finds it difficult to detach from his or her work (Schaufeli, Salanova, González-Romá, & Bakker, 2002).

Some researchers regard vigour and dedication as the "core dimensions of engagement", while absorption is considered relevant but less central to the engagement concept (Schaufeli & Bakker, 2001). Absorption is also regarded in the same light as "flow" (Csikszentmihalyi, 1990; Nakamura & Csikszentmihalyi, 2002) where high concentration, complete control and natural enjoyment are experienced (Schaufeli et al., 2002); and seems to act as a consequence of work engagement (González-Romá et al., 2006; Rothmann, 2005; Schaufeli & Bakker, 2004; Schaufeli et al., 2002). Consequently, researchers are inclined to disregard the absorption scale and to only use the vigour and dedication dimensions to assess engagement. Rothmann (2005) indicated that South African studies obtained much lower alpha coefficients on the absorption scale than international research, indicating that this scale is problematic and not entirely suitable for use in South Africa. For the purpose of this study, the factor structure will be tested for the core dimensions of engagement (i.e. vigour and dedication).

Grandey (2000) states that there is something specific about interpersonal interaction within human services professions that may lead to burnout, which can be summarised under the construct of emotion work (Heuven & Bakker, 2003). Emotion work involves the management of emotions in order to meet organisational or occupational display rules (Glomb, Rotundo, & Kammeyer-Mueller, 2004). Emotions displayed by employees are often inconsistent with their internal emotional states and emotion regulation is the attempt which employees use in order to modify their feelings. When emotions are faked or suppressed it can lead to job strain (Grandey, Fisk, & Steiner, 2005) and it is therefore important for employees to be able to regulate their own emotions and interactions with others (Brotheridge & Lee, 2003). According to Zapf (2002), emotional dissonance forms part of emotion work. Emotional dissonance refers to the extent to which emotions felt differ from emotions required by the organisation (Giardini & Frese, 2006). Emotional dissonance is seen as a stressor impairing effective fulfilment of tasks and can become a threat to the well-being of employees (Abraham, 1998). Not successfully regulating emotions could lead to stress and burnout (Bakker, Schaufeli, Sixma, & Bosveld, 2001).

Grandey (2000) argues that certain individual outcomes (emotional intelligence) and organisational factors (social support) have an influence on the experience of well-being. Grandey suggests that the level and type of emotion work performed by an employee may be affected by the environment. Emotional intelligence can be defined as the ability to recognise emotions in others and the regulation of one's own emotions (Salovey & Mayer, 1990). Research suggests that higher levels of emotional intelligence are related to better psychological well-being (Austin, Saklofske, & Egan,

2005). Environmental resources such as social support act as a buffer against the negative effects of work stressors (Kahn & Byosier, 1992). Support from co-workers and supervisors can contribute to the creation of a positive working environment (Schneider & Bowen, 1985). Indirectly this positive supportive environment may help the employee to cope with stressors (Grandey).

However, this conceptual model of Grandey (2000) has not been tested in South Africa, especially amongst employees that perform people work (human resource employees). In the remainder of this article the importance of well-being (burnout and engagement) will be discussed, emotion work's relationship to burnout will be determined, and the role that emotional intelligence and social support play in the emotion work–well-being relationship will be further investigated.

## **Burnout**

Due to the growing interest in employee well-being, researchers have been increasingly concerned with the study of burnout (Yildirim, 2008). Burnout is a consequence of persistent occupational stress (González-Romá et al., 2006). It is an allegory describing a state of mental weariness, disillusionment and fatigue (Schaufeli & Bakker, 2004), and it involves three symptoms or facets: 1) emotional exhaustion; 2) depersonalisation or cynicism; and 3) reduced personal accomplishment or a lack of professional efficacy (Cordes & Dougherty, 1993; Glassberg, Eriksson, & Norberg, 2006; González-Romá et al., 2006).

Emotional exhaustion refers to feelings of being emotionally drained, over-stretched and worn-out. Employees experiencing emotional exhaustion have very low levels of energy and feel that their mental and emotional resources are depleted (Schaufeli & Enzmann, 1998). In order to deal with these feelings associated with emotional exhaustion, employees attempt to detach themselves from others by means of emotional distancing. This attitude of detachment is referred to as depersonalisation and may result in excessive negative and cynical feelings regarding oneself, one's work and others (González-Romá et al., 2006). This could in the end lead to decreased feelings of personal accomplishment (Le Blanc, Bakker, Peeters, Van Heesch, & Schaufeli, 2001), which are characterised by negative evaluations regarding one's own capabilities and work achievements (Glassberg et al., 2006).

As stated by Lewin and Sager (2008), the three-dimensional model of burnout is widely accepted, but emotional exhaustion and depersonalisation are usually viewed as the core component in the burnout process (Boles, Johnston, & Hair, 1997; Maslach, Schaufeli, & Leiter, 2001), and are



therefore the focus in burnout research (Lee & Ashforth, 1993; Leiter, 1991). However, according to Demerouti et al. (2003), burnout is a condition of negative work-related encounters and includes feelings of exhaustion and disengagement from work. Professional efficacy is excluded from this definition because it does not form a core dimension of burnout (Bakker, Demerouti, & Verbeke, 2004). Exhaustion is defined as an effect of intense physical, emotional and cognitive strain, in other words it is a long-term result of long-lasting exposure to certain job demands (Demerouti et al., 2003). This definition differs from other operationalisations of exhaustion in that it covers not only affective aspects, but also physical and cognitive aspects of exhaustion. Disengagement according to Demerouti et al. (2003) refers to distancing oneself from one's work in general, the work objects, as well as the work content. It concerns the relationship between employees and their jobs with specific reference to identification with work and the willingness to continue in the same position.

It has been suggested that employees required to engage in interpersonal contact with others are more vulnerable to experience burnout (Coggburn & Hays, 2004; Maslach & Jackson, 1986; Sand & Miyazaki, 2000; Van Emmerik, 2000). It is a common occurrence in professions working with people, and emotion management forms a central part of these jobs (Zapf, 2002). Burnout is indicative of an employee's inability to effectively control his or her emotions, and the consequences of burnout include withdrawal from others, diminished self-esteem, depression, insomnia, decrease in work quality, and substance abuse (Kahill, 1988; Lewin & Sager, 2008).

Research indicates that employees suffering from burnout describe themselves as feeling extremely tired, depleted, frustrated, guilty, bored, apathetic, fatigued and not motivated (Cummings & Nall, 1982; Ifeagwazi, 2006), and this can be ascribed to the fact that their emotional resources have diminished (Koivula, Paunonen, & Laippala, 2000). It can, therefore, be argued that burnout is linked to physiological and affective outcomes, as well as organisational consequences such as absenteeism and high turnover (Brotheridge & Grandey, 2002).

## **Engagement**

Work engagement is conceptually viewed as the opposite of burnout (González-Romá et al., 2006; Maslach & Leiter, 1997) meaning that when burnout occurs, work engagement has been eroded (Maslach & Leiter). Kahn and Byosier (1992) first described work engagement as being fully present at one's job on a psychological level. It is an enduring and pervasive affective-cognitive

condition not directed at any particular object, situation, person or behaviour (Schaufeli & Bakker, 2004), and is characterised by energy, commitment, and effectiveness.

Schaufeli et al. (2002) define engagement as a positive state of contentment characterised by three dimensions: 1) vigour; 2) dedication; and 3) absorption. Vigour refers to high levels of vitality, enthusiasm, and mental resilience (Salanova, Agut, & Peiró, 2005), as well as the motivation to devote effort to fulfilling one's job. Dedication is used to explain the sense of gratification and encouragement employees experience when strongly involved in their work (Schaufeli et al. 2002). High levels of vigour and dedication will result in a satisfying state where employees are totally captivated in their work, and this is called absorption (Schaufeli & Bakker, 2004; Schaufeli et al. 2002). However, vigour (high energy) and dedication (strong identification) are seen as the core of engagement (Schaufeli et al., 2002) and absorption plays a less central role in the work engagement concept (Schaufeli, 2003) and this subscale is therefore omitted from various studies (Naudé, 2003; Storm, 2002).

Recently the interest in positive antecedents of work behaviour has increased and more research is conducted to focus on positive aspects of behaviour and their implications for organisational functioning (Greenglass et al., 2005). Not many studies have been directed at investigating the effects of positive constructs on well-being at work in the past (Greenglass et al., 2005), however, research has indicated that some employees do not develop burnout despite high job demands and stressors (Rothmann & Joubert, 2007); rather, these employees enjoy working hard and dealing with job demands (Schaufeli & Bakker, 2001). This, according to Rothmann and Joubert (2007), led to the research focus on work engagement, which is now regarded as an important construct to the world of work.

### **Emotion Work**

The term emotion work depicts the manner in which employees demonstrate certain emotions, not necessarily felt by the employee, as a result of organisational expectations in terms of emotional behaviour (Austin, Dore, & O'Donovan, 2008). Zapf (2002) mentions that there are certain distinctions that can be made in terms of the conceptualisations of emotion work, but that these various definitions include three basic characteristics (Ashforth & Humphrey, 1993; Hochschild, 1983; Morris & Feldman, 1996): a) it takes place during face-to-face or voice-to-voice interactions; b) emotions are displayed in order to influence the feelings, attitudes and actions of others; and c) the emotional displays follow certain rules, called display rules.

Emotion work, together with the importance of emotional expression, has become indicative of a person's well-being (Zammuner, Lotto, & Galli, 2003). The emotions experienced at work may be important considerations in defining quality of work-life, as well as the well-being of employees (Zammuner et al., 2003). Hochschild (1983) asserts that displaying emotions inconsistent to emotions felt, could lead to estrangement of one's true feelings and in the end lead to psychological ill health. This belief was brought about by a uni-dimensional concept of emotion work: the more interactions required, the higher the frequency of having to display emotions, the more emotions have to be shown repeatedly which are not felt, and consequently this leads to negative health outcomes (Zapf, 2002).

Due to the fact that most studies conducted on the basis of this concept could not prove the expected negative relation to psychological strain (Adelmann, 1995), researchers began to work on differentiating between the different aspects of emotion work (Zapf, 2002); frequency of having to display emotions, attentiveness (intensity and duration) to display rules, variety of emotions needed to be expressed, and emotional dissonance. There is research evidence suggesting that employees engaging in high levels of interpersonal contact daily are subject to more explicit display rules (Sutton, 1991). Display rules may have detrimental health (physical and psychological) consequences for the employee, in that it often causes dissonance between true emotions and emotions that had to be expressed (Ashforth & Humphrey, 1993; Morris & Feldman, 1996).

A key component of emotion work with regard to negative health outcomes and specifically burnout is emotional dissonance (Grandey, 2000). Although most researchers include the concept of emotional dissonance in studies regarding emotion work (Abraham, 1998; Brotheridge & Lee, 1998; Morris & Feldman, 1996; Zapf, Seiffert, Schmutte, Mertini, & Holz, 2001), some treat it as a dimension of emotion work (Grandey, 1998; Morris & Feldman, 1996), some view it as a dependent variable (Adelmann, 1995; Ashforth & Humphrey, 1993), and others believe it to be a stressor affixed to the social environment (Zapf, Vogt, Seifert, Mertini, & Isic, 1999). According to Zapf (2002), emotional dissonance rises from situations where employees have to express emotions they do not truly feel in the given situation, and it is therefore considered by some as a form of person-role-conflict (Abraham, 1998; Rafaeli & Sutton, 1987). Sometimes a person may not feel anything when a certain emotion display is required, or the suppression of an adverse emotion and the display of a neutral or positive emotion instead are required (Zapf, 2002). Being unable to experience emotions that need to be felt, may lead to the employee feeling dishonest and insincere

and may cause negative health outcomes such as depression (Zapf, 2002). Dissonance is deemed a job demand, more specifically an emotion regulation problem (Zapf et al., 1999). It is a stressor which impairs effective fulfilment of tasks and as such can become a threat to the employee's well-being.

In the current study, more emphasis is placed on emotional dissonance than on deep acting and surface acting, due to the fact that more direct links to the concept of stress research exists. Nevertheless, surface acting and deep acting are acknowledged as surface acting implies a state of emotional dissonance (Grandey, 2003). Furthermore Grandey (2003) suggests that deep acting by definition means to minimise emotional dissonance by aligning feelings with expressions (Giardini & Frese, 2006).

Deep acting and surface acting are viewed as methods of emotion regulation (Constanti & Gibbs, 2004), or as ways in which individuals can create certain imprints required in a particular environment (Austin et al., 2008). Surface acting involves managing the visible aspects of emotion. The employee pretends to be experiencing the expected emotions, while inner feelings remain unchanged (Zapf et al., 1999) and the true or less appropriate feelings are then suppressed (Austin et al., 2008). This may cause feelings of detachment towards one's own feelings and to those of others, suggesting a relationship to the dimension of depersonalisation (Brotheridge & Grandey, 2002). Deep acting refers to an employee's desire to raise certain thoughts, images, and memories in order to display a specific emotion or feeling (Ashforth & Humphrey, 1993). This is an active attempt to align felt and displayed emotions, resulting in the regulation of expressive behaviour as well as inner feelings (Zapf et al., 1999). In contrast to the effects of surface acting, it has been argued that the sincere attempt to actually feel the emotion required, that is associated with deep acting, will allow more positive outcomes (Brotheridge & Grandey, 2002; Brotheridge & Lee, 2002) that correspond to work engagement.

Another form of emotion regulation is the expression of naturally felt emotions, where the employee unpretentiously feels the required emotions (Ashforth & Humphrey, 1993; Diefendorff, Croyle, & Gosserand, 2005). During this form of emotion regulation, emotion work takes place effortlessly (Martínez-Iñigo, Totterdell, Alcover, & Holman, 2007), and is therefore expected to be negatively related to emotional exhaustion (Austin et al., 2008).

## **Emotional intelligence**

Being able to manage the emotions of others as well as perceiving emotions accurately is deemed a necessity (Zapf, 2002) and forms a part of emotional intelligence (Goleman, 1998). According to Grandey (2000), emotional intelligence refers to the ability to recognise and utilise emotional information in social interactions. Among the emotional competencies regarded as the basis of emotional intelligence (Mayer, Salovey, & Caruso, 2000), the ability to regulate emotions is of particular interest (Austin et al., 2008). Clear conjectural evidence exists linking emotional intelligence to emotion work (Austin et al., 2008). Employees with high levels of emotional intelligence should be able to regulate their emotions in such a manner that they produce and experience emotions appropriate to any given situation (Austin et al., 2008).

Theoretical associations exist for emotional intelligence with social support and well-being (Bar-On, 2005), in that people with high levels of emotional intelligence hold a greater ability to comprehend and analyse emotion, which leads to positive affect (Mayer & Salovey, 1997). Gallagher and Vella-Brodick (2008) propose that emotional intelligence may serve as a moderator in the relationship between social support and well-being, in other words the relationship between social support and well-being may vary as emotional intelligence levels differ. Coherently, emotional intelligence has been found to moderate the relationship between stress and health (Ciarrochi, Dean, & Anderson, 2002; Slaski & Cartwright, 2002).

Emotional intelligence forms a momentous part of basically all areas of human functioning (Sharma, 2008). It plays an important role in organisations in terms of understanding emotions at work, acts as an antecedent of an individual's emotional responses and mindset, and also gives an indication of an employee's well-being (Sharma, 2008). Emotional intelligence can be applied to predict certain work behaviours (for instance leadership effectiveness and job performance) more accurately than intelligence (Hay Group, 2000; Weisinger, 1998). Research has shown that emotional intelligence plays an important role in productivity and success at work (Sharma, 2008). It has an influence on an employee's ability to successfully cope with demands and pressures from the work environment (Bar-On, 1997), and is therefore an important factor in determining physiological and psychological well-being (Bar-On, 2001; Goleman, 1995; Mayer & Salovey, 1997; Ogińska-Bulik, 2005).

Employees with high levels of emotional intelligence (which is seen as a personal resource) will view their work environment as less stressful and may therefore experience fewer negative health

consequences (Ogińska-Bulik, 2005). Emotional intelligence may exercise an impact on perceived job stress and consequences of stress experienced (Gardner & Stough, 2003; Ogińska-Bulik, 2005; Slaski & Cartwright, 2002). Emotional intelligence mediates and influences personal efficiency, which in turn plays a moderating role in burnout (Sharma, 2008).

### **Social support**

Social support can be explained as a network of social relationships and transactions, which serves as a resource in order to cope with and adapt to any given situation (Sarason & Duck, 2001). Social support can be classified into two main categories: support *within* the organisation, and support from *outside* the organisation (Sand & Miyazaki, 2000). Factors contributing to perceived support from the organisation include fairness, supervisory support, favourable conditions, and appealing rewards (Rhoades & Eisenberger, 2002). A supportive workplace can aid in the prevention of the occurrence of burnout (Garret & McDaniel, 2001). The absence of resources, such as social support, can lead to the prediction of burnout, which expectedly leads to an array of negative outcomes including physical illness, high turnover, high levels of absenteeism, and lower levels of organisational commitment (Maslach, Jackson, & Leiter, 1996). According to Demerouti, Bakker, Nachreiner, and Schaufeli (2001), the Job Demand-Resources model stipulates that job demands (such as long working hours) are linked to exhaustion, and lacking of resources (such as social support) are associated with disengagement.

There is consensus throughout literature that social support holds a positive relation to well-being (Cohen, Gottlieb, & Underwood, 2000; Gallagher & Vella-Brodrick, 2008; Kahn, Hessling, & Russell, 2003). It is thought to potentially ease the damaging effects associated with work stress and burnout (Terry, Rawle, & Callan, 1995; Wilk & Maynihan, 2005), and is studied as a form of adjustment to stress (Lewin & Sager, 2008). According to Gallagher and Vella-Brodrick (2008), some researchers even regard it as vital to well-being (Baumeister & Leary, 1995; Diener & Oishi, 2005).

Schneider and Bowen (1985) suggested that support in the workplace should build a positive work environment and promote well-being, in that emotions, cognitions and behaviours are influenced in such a way that positive affect is promoted (Cohen et al., 2000). Social support can assist an employee by helping the individual to alter and manage the stressor, modify his or her perception of the stressor, or transform his or her emotional responses to the stressor (Lewin & Sager, 2008).

Social support appears to result in positive well-being in terms of two processes. Firstly, support acts as a defence against job-related stress and stress-related outcomes by re-evaluating potential negative effects of a situation, or improving self-efficacy perceptions when dealing with stressful events (Sand & Miyazaki, 2000). Secondly, social support can have a direct effect on any stress experienced. It has been found that social support has a direct effect on two burnout dimensions namely emotional exhaustion and depersonalisation (Ersoy-Kart, 2009; Prins et al., 2007).

Maslach et al. (2001) suggest that social support prevents emotional exhaustion in that it diminishes the intensity of stressors and therefore reduces their negative consequences. Gallagher and Vella-Brodrick (2008) suggest that well-being will only occur when social support is present in the absence of emotional intelligence, but explain that more research is necessary in this area to confirm the hypothesis.

In summary, it is clear that emotions influence every aspect of life including work life, and that work can either lead to illness (burnout) or health (engagement) outcomes. Emotion work is associated with burnout and according to the model of Grandey (2000) certain individual characteristics (emotional intelligence) and organisational factors (social support) have an influence on the levels of emotion work experienced. In order to meet the general objective of this study, namely to develop a model of wellness for human resource employees from an emotion work perspective, it is necessary to first determine the construct validity and internal consistency for the measures of the Oldenburg Burnout Inventory, Utrecht Work Engagement Scale, Frankfurt Emotion Work Scale, Greek Emotional Intelligence Scale, and Social Support Scale, and secondly to investigate the relationship between emotion work, and factors of well-being (burnout and engagement), emotional intelligence (individual factor) and social support (organisational factor).

The general objective of this study will be to provide a work wellness model for human resource employees from an emotion work perspective. The results obtained in this study will add new information to the role of emotion constructs and social support in the experience of well-being, and will provide a framework of wellness to the existing understanding of current organisational behaviour.

Based on the theoretical model of Grandey (2000), the following hypotheses are formulated:

H1: Emotional intelligence and social support is negatively related to emotion work.

H2: Emotion work is positively related to burnout.

Based on the literature review, the following hypotheses are formulated:

H3: Social support is positively related to engagement, and negatively related to burnout.

H4: Emotional intelligence is positively related to engagement, and negatively related to burnout.

The following research aims can thus be formulated:

- 1) To conceptualise burnout, engagement, emotion work, emotional intelligence and social support by means of a literature review;
- 2) To determine whether emotional intelligence and social support is negatively related to emotion work;
- 3) To determine whether emotion work is positively related to burnout;
- 4) To determine whether social support is positively related to engagement and negatively related to burnout; and
- 5) To determine whether emotional intelligence is positively related to engagement and negatively related to burnout.

## **METHOD**

### **Research Design**

A cross-sectional survey design was used. Cross sectional designs are appropriate where groups of subjects at various stages of development are studied simultaneously, whereas the survey technique of data collection gathers information from the target population by means of questionnaires (Burns & Grove, 1993). A cross-sectional design draws a sample from a population at one specific time (Shaughnessy & Zechmeister, 1997). Information collected is used to describe the population at that time. The design can also be used to assess interrelationships between variables *within the* population. According to Shaughnessy and Zechmeister (1997) this design is ideal to address the descriptive and predictive functions associated with correlation research.



**Study Population**

The study population could be defined as an availability sample of employees in a platinum- and steel production environment. A population of 465 human resources employees in a platinum- and steel production environment was targeted.

Descriptive information of the sample is given in Table 1.

Table 1

*Characteristics of the participants (N = 465)*

Item	Category	Frequency	Percentage (%)
Gender	Male	239	51,4
	Female	226	48,6
Age	22-32 years	107	23,0
	33-42 years	131	28,2
	43-52 years	159	34,1
	53-67 years	68	14,6
Race	White	290	62,4
	African	149	32,0
	Coloured	16	3,5
	Indian	9	1,9
	Other	1	0,2
Language	Afrikaans	199	42,8
	English	69	14,9
	Sepedi	35	7,5
	Sesotho	28	6,0
	Setswana	104	22,4
	Tshivenda	3	0,7
	IsiXhosa	16	3,4
	IsiZulu	9	1,9
	IsiTsonga	2	0,4
Qualification	Below Grade 10	8	1,7
	Grade 10	22	4,7
	Grade 11	19	4,1
	Grade 12	141	30,3
	Technikon Diploma	76	16,3
	Technical College Diploma	86	18,4
	University Degree	53	11,4
	Post Graduate Degree	42	9,0
	Other	18	3,9

Table 1

*Characteristics of the participants (Continue)*

Item	Category	Frequency	Percentage (%)
Sector	Steel Mine	229	49,2
	Platinum Mine	236	50,8
Years in Position	1-10 years	361	77,6
	11-20 years	70	15,1
	21-30 years	23	4,9
	> 30 years	11	2,4

According to Table 1, the employees from the steel environment represented 49,2% of the population and employees from the platinum environment represented 50,8% of the population. The participants were relatively evenly distributed in terms of gender with males (51,4%) and females (48,6%). Most of the participants were between the ages of thirty-three and fifty-two years of age (62,3%). Furthermore, the sample consisted mainly of White (62,4%) and African (32,0%) participants of which 42,8% were Afrikaans, 36,5% were English, and 22,4% were Setswana speaking. The majority of the participants (77,6%) have been working in the same positions between one and ten years.

### Measuring Battery

The measuring battery consisted of questionnaires, which were used to test the emotional regulation process and which included measures of emotion work, well-being (burnout and engagement), and individual (emotional intelligence), and organisational (social support) factors. The following measuring instruments were used in the empirical study:

The *Greek Emotional Intelligence Scale* (GEIS; Tsaousis, 2007) measures four basic emotional skills, namely: 1) expression and recognition of emotion - relates to the ability of the individuals to express and recognise accurately their own emotional reactions (*"I am unable to explain my emotional state to others"*; *"I find it difficult to express my emotions to others"*); 2) control of emotions - relates to the ability of the individuals to control and regulate emotions in themselves and others (*"When I am under pressure I snap"*; *"I often get angry and afterwards I find my anger inexcusable"*); 3) use of emotions to facilitate thinking - relates to the ability of the individuals to harness their own emotions in order to solve problems through optimism and self-assurance, two emotional states that facilitate inductive reasoning and creativity (*"I deal with my problems in a*

*positive way by trusting myself*"; *"I think of the positive side of things"*); and 4) caring and empathy - relates to the willingness of the individual to help other people and his or her ability to comprehend another's feelings, and to re-experience them (*"I am always willing to help someone who is confronted with personal problems"*; *"I like to talk with others about their problems"*). The fifty-three-item instrument demonstrated acceptable psychometric properties, which justifies its use as a reliable and valid measure of emotional intelligence (Tsaousis, 2007). More specifically, the factor analytic data suggest a four-factor solution, which bears a close resemblance to Mayer and Salovey's (1997) theoretical framework. The Cronbach alpha coefficients for the four factors range between 0,80 and 0,92. All scales demonstrated high internal consistency, indicating that they were homogeneous in their measurements. Furthermore, test-re-test data covering a four-week period indicated the temporal reliability of the GEIS in that correlation coefficients ranged between 0,79 and 0,91 (Tsaousis, 2007). Also according to Tsaousis (2007), data from five different studies provided support for good convergent and discriminant validity of the GEIS scales, suggesting that the test taps a fairly broad range of related emotional constructs, such as positive correlation with empathy, social skills, emotional expressiveness, and well-being, as well as negative correlation with locus of control, negative affect, low physical and psychological well-being, and work stress. These findings justify the concurrent validation of the newly developed instrument and the GEIS is therefore used in this study.

The *Frankfurt Emotion Work Scale* (FEWS) (Zapf, et al., 1999) is based on the existing literature on emotion work, action theory and emotional regulation requirements. The subscales include the requirement to express positive emotions, the requirements to express and handle negative emotions, the requirement to be sensitive to clients' emotions, and the requirement to show sympathy, emotional regulation possibilities (control), and emotional regulation problems (emotional dissonance). Subscales showed satisfactory reliabilities. Exploratory and confirmatory factor analysis revealed minor problems with discriminant validity of the scales within samples of a handicapped children's home ( $N=83$ ), in the hotel business ( $N=175$ ) and employees working in call-centres ( $N=250$ ). Construct validation showed that emotion work scales were both positively and negatively related to psychological health (Zapf et al., 1999). Scales that indicate the requirement to express positive (*"How often in your job do you have to display, according to the situation, differing positive emotions towards clients (i.e. friendliness, enthusiasm, hope etc.)?"*), negative (*"How often do you yourself have to come across as being in a negative mood when dealing with clients (i.e. angry)?"*), and neutral (*"How often are you required to display neither positive nor*

*negative emotions towards clients (i.e. showing impartiality)?*”) emotions as emotion work, and emotional dissonance are administered in this study.

The *Utrecht Work Engagement Scale* (UWES; Schaufeli, Salanova, Gonz  les-Rom  , & Bakker, 2002) was used to measure the levels of work engagement of the participants. The UWES includes three dimensions, namely: 1) vigour (“*I am bursting with energy in my work*”); 2) dedication (“*I find my work full of meaning and purpose*”); and 3) absorption (“*Time flies when I am working*”), which are conceptually seen as the opposite of burnout and scored on a seven-point, frequency-rating scale, varying from 0 (‘never’) to 6 (‘every day’). The questionnaire consists of seventeen questions. The alpha coefficients for the three subscales varied between 0,80 and 0,91. The alpha coefficient could be improved ( $\alpha$  varies between 0,78 and 0,89 for the three subscales) by eliminating a few items without substantially decreasing the scale’s internal consistency. Rothmann and Storm (2003) obtained the following alpha coefficients for the shortened version of the UWES in a sample of 2396 members of the South African Police Service: vigour, 0,78; dedication, 0,89; and absorption, 0,78. Coetzer (2004) obtained, among a sample of employees in an insurance company, the following alpha coefficients: vigour, 0,80; dedication, 0,87; and absorption, 0,69. The short version of the UWES — Afrikaans and English forms — were used in this study.

The *Oldenburg Burnout Inventory* (OLBI, the English version) was used to measure burnout. Demerouti, Bakker, Vardakou, and Kantas (2003) developed and offered initial construct validity and evidence for the OLBI. The OLBI is based on a model similar to that of the Maslach Burnout Inventory; however, it features two scales, namely: 1) exhaustion (“*There are days when I feel tired before I arrive at work*”); and 2) disengagement (“*It happens more and more often that I talk about my work in a negative way*”). The most current version of the OLBI features questions that have balanced positive and negative wording (Bakker, Demerouti, & Verbeke, 2004). The OLBI also features questions designed to assess cognitive and physical components of exhaustion (Halbesleben & Demerouti, 2005). Internal consistency of the OLBI is acceptable, with Cronbach’s alpha scores ranging from 0,74 to 0,87; scores are all above 0,70. Test–re-test reliability showed significant correlations from time one to two. Factorial validity indicated a two-factor model (disengagement and exhaustion).

The *Social Support Scale* was used to measure the construct, social support, with a ten-item questionnaire based on the work of Caplan, Cobb, French, Van Harrison, and Pinneau (1975) who examined the relation between job demands and worker health. It measures three different sources

of social support, namely: 1) social support: co-workers (*"I usually receive help from my co-worker when something needs to be done quickly"*); 2) social support: supervisor (*"When I encounter problems at work, I can always ask my manager for advice"*); and 3) social support: family (*"I can receive support from those who are close to me when it comes to problems at work"*). In their findings, they state that social support appears to be of major importance to the psychological well-being of the workers. Low support from supervisors and from co-workers is associated not only with job dissatisfaction, but also with depression (with a correlation of or above 0,30). The items in the questionnaire cover the extent to which people around the employee provide support by being good listeners or by being persons he or she can rely on when help is needed.

### **Statistical Analysis**

The data analysis was carried out with the SPSS programme (SPSS, 2003). The dataset was studied to identify bivariate and multivariate outliers. To identify bivariate outliers, the data were standardised (to z-scores). Values higher than 2,58 were inspected to decide whether they should be deleted from the dataset. An inspection was also made of the anti-image scores of the different items. Items with scores lower than 0,60 were considered as being problematic and could therefore be excluded from the rest of the statistical analysis.

Furthermore, missing values were analysed and replaced where possible. Principal factor extraction with oblique rotation was performed on the measuring instrument to determine the factor structure. Principal component analysis was used prior to principal factor extraction to estimate the number of factors, presence of outliers and factorability of the correlation matrices. The eigen values and scree plot were studied to determine the number of factors underlying the specific measuring instrument.

Covariance analysis or structural equation modelling (SEM) methods, as implemented by AMOS (Arbuckle, 1997), were used to construct and test the model of work wellness. Hypothesised relationships are tested empirically for goodness-of-fit with the sample data. The  $X^2$  and several other goodness-of-fit indices summarise the degree of correspondence between the implied and observed covariance matrices. However, the  $X^2$  test is widely recognised to be problematic (Jöreskog, 1969). It is sensitive to sample size, and may also be invalid when distributional assumptions are violated, leading to the rejection of good models or the retention of bad ones. Due to the drawbacks of  $X^2$  test, many alternative fit statistics have been developed and it was decided based on the sample size not to use the  $X^2$  test for the purpose of this study.

The Goodness-of-Fit Index (GFI) indicates the relative amount of variance and co-variance in the sample predicted by the estimates of the population. It usually varies between 0 and 1, and a result of 0,90 or above indicates a good model fit. The Adjusted Goodness-of-Fit Index (AGFI) is a measure of the relative amount of variance accounted for by the model, corrected for the degrees of freedom in the model relative to the number of variables. Both these values are classified as absolute values, because they compare the hypothesised model with no model at all (Hu & Bentler, 1995). The Parsimony Goodness-of-Fit Index (PGFI) addresses the issue of parsimony in SEM (Mulaik et al., 1989). Although this index generally demonstrates lower levels in comparison to the other fit indices at the 0,50 level in comparison to values higher than 0,90, values >0,80 are considered to be more appropriate (Byrne, 2001).

The Normed Fit Index (NFI) is used to measure global fit. The NFI represents the point at which the model being evaluated falls on a scale running from a null model to a perfect fit. This index is normed to fall on a 0 to 1 continuum and tends to over-estimate fit in smaller samples. The Comparative Fit Index (CFI) also compares the hypothesised and independent models, but takes sample size into account. The Tucker-Lewis Index (TLI) is a relative measure of covariation explained by the hypothesised model which has been specifically designed for the assessment of factor models (Tucker & Lewis, 1973). Critical values for good model fit have been recommended for the NFI, CFI and TLI to be acceptable above the 0,90 level (Bentler, 1992), although Hu and Bentler (1999) recommended a cut-off value of 0,95. The Root Mean Square Error of Approximation (RMSEA) estimates the overall amount of error; it is a function of the fitting function value relative to the degrees of freedom (Brown & Cudeck, 1993). Hu and Bentler (1999) suggested a value of 0,06 to indicate acceptable fit, whereas MacCullum, Browne, and Sugawara (1996) suggested that values between 0,08 and 1,00 indicate mediocre fit and values above 1,00 poor fit.

In accordance with Hu and Bentler (1999), a combination approach will be used in this study to evaluate model fit. Specifically an absolute close-fit index (RMSEA) and two incremental close-fit indices were chosen (TLI and CFI) because it has been argued that they provide more stable and accurate estimates than several other fit indices (Hu & Bentler, 1999; Maruyama, 1998) and has been used in other confirmatory factor analysis studies of emotional intelligence (Gignac et al., 2005). Other fit indices were included as support to the TLI, CFI and RMSEA as they were used in other studies for evaluation of psychological tests (Parker, Taylor, & Bagby, 2003) and provide easy comparisons to the other data sets. Although there is no perfect standard for accepting or

rejecting a plausible model, we considered the model to have an adequate fit when the CFI > 0,90 (Newcomb, 1994) and the RMSEA shows a coefficient of 0,05 or lower, which is necessary for unequivocal evidence of a good fit (Parker et al., 2003).

## RESULTS

Structural equation modelling (SEM) methods, as implemented by AMOS (Arbuckle, 1997) were used to test the factorial models for wellness (burnout and engagement). Data analysis was conducted in two consecutive steps. Several goodness-of-fit statistics (GFI, AGFI, PGFI, NFI, TLI, CFI and RMSEA) were used to assess the model fit globally. Secondly, given findings of a poor-fitting initially hypothesised model, exploratory analysis was done. Possible misspecifications, as suggested by so-called modification indices, were looked for in order to fit a revised, re-specified model to the data.

Firstly, models of wellness, which incorporate the essence of burnout (exhaustion and cynicism) and the core of work engagement (vigour and dedication), were tested. Three models were tested, namely a) Model 1 – a one-factor model where all four dimensions (exhaustion, disengagement, vigour and dedication) load on one factor, b) Model 2 – a four-factor model, where exhaustion and disengagement load onto burnout, and vigour and dedication load onto work engagement, c) Model 3 – a three-factor model consisting of exhaustion, disengagement (forming part of burnout) and work engagement incorporating vigour and dedication in one dimension. The goodness-of-fit statistics are reported in Table 2.

Table 2

*Goodness-of-fit statistics for the hypothesised wellness models*

Model	GFI	AGFI	PGFI	NFI	TLI	CFI	RMSEA
Model 1 (one-factor)	0,74	0,69	0,63	0,69	0,72	0,74	0,09
Model 1 (one-factor) Rev	0,79	0,75	0,66	0,76	0,77	0,80	0,09
Model 2 (four-factor)	0,86	0,83	0,72	0,80	0,84	0,85	0,07
Model 2 (four-factor) Rev	0,86	0,83	0,72	0,82	0,86	0,87	0,07
Model 3 (three-factor)	0,86	0,83	0,72	0,82	0,86	0,87	0,07
Model 3 (three-factor) Rev	0,92	0,90	0,71	0,90	0,94	0,95	0,05



Results indicated that the three-factor model provided the best fit. Inspection of the modification indices (MI) revealed that the fit between the model and the data could be further improved if correlation was allowed between the measurement of errors of disengagement, engagement and exhaustion. This means that the fit of the proposed model can be improved if the errors between items 15 and 16 (MI = 59,60), items 14 and 15 (MI = 38,79) and items 5 and 7 (MI = 26,66) of the OLBI are allowed to correlate. The proposed model could be further improved if the measurement errors of items 12 and 17 of the UWES are allowed to correlate.

A negative correlation of 0,30 was found between work engagement and disengagement. Results indicated that the three-factor model provided the best fit. The revised model – including covariation – showed an excellent fit (GFI = 0,92, AGFI = 0,90, NFI = 0,90, TLI = 0,94, CFI = 0,95, and RMSEA = 0,05).

Secondly, models of emotion work were tested. Two models were tested, namely a) Model 1 – a three-factor model with emotional dissonance and neutral emotions as one factor, display of positive emotions, and display of negative emotions, and b) Model 2 – a four-factor model in which neutral emotions were included as the fourth factor. The goodness-of-fit statistics are reported in Table 3.

Table 3

*Goodness-of-fit statistics for the hypothesised emotion work models*

Model	GFI	AGFI	PGFI	NFI	TLI	CFI	RMSEA
Model 1 (three-factor)	0,87	0,84	0,71	0,74	0,78	0,80	0,07
Model 1 (three-factor) Rev	0,92	0,90	0,69	0,90	0,89	0,91	0,05
Model 2 (four-factor)	0,86	0,83	0,72	0,73	0,78	0,80	0,07
Model 2 (four-factor) Rev	0,92	0,90	0,71	0,90	0,91	0,92	0,05
Model 3 (three factor excluding neutral emotions)	0,95	0,93	0,68	0,90	0,95	0,96	0,03

Results at first indicated that the revised four-factor model provided the best fit with the PGFI (0,71), CFI (0,92) and TLI (0,91) values, slightly higher than the three-factor model revised, and the RMSEA value (0,05). Inspection of the estimates of the original four-factor model revealed that items ED2 (*For person A's job it is very important to hide any personal feelings which may arise*

from the clients. For person B's job it is of lesser significance to hide such feelings from clients. Which one of these two jobs is most similar to yours?) and EV4 (Person A has to display – if any – only very superficial negative feelings toward clients (i.e. superficial strictness). Person B must, in addition, also display intensive negative feelings towards clients (i.e. strong anger). Which one of these two jobs is most similar to yours?) showed non-significant  $p$ -values ( $p = 0,001$ ) and that the fit between the model and the data could further be improved if these items were omitted. These items were therefore removed. However, subsequent analyses indicated unacceptably low alpha coefficients for neutral emotions. Therefore it was decided to test a three-factor model which included emotional dissonance, display of positive emotions and display of negative emotions. The goodness-of-fit indices supported this decision with good overall fit of the three-factor (emotional dissonance, display of positive emotion, and display of negative emotion) model (GFI = 0,95, AGFI = 0,93, NFI = 0,90, TLI = 0,95, CFI = 0,96, and RMSEA = 0,03). No further modification of the model was deemed necessary, seeing that this model represented acceptable comparative evidence of fit between the empirical data and a theoretical model in line with the conjectural premises of emotion work.

Thirdly, models of social support were tested. Three models were tested, namely a) Model 1 – a two-factor model, where co-worker and family support were loaded onto one factor, and supervisory support were loaded onto another factor, b) Model 2 – a two-factor model, where co-worker and supervisory support loaded onto one factor, and family support was loaded onto another factor, and c) Model 3 – a three-factor model with co-worker support, supervisory support, and family support as three separate factors. The goodness-of-fit statistics are given in Table 4.

Table 4

*Goodness-of-fit statistics for the hypothesised social support models*

Model	GFI	AGFI	PGFI	NFI	TLI	CFI	RMSEA
Model 1 (two-factor)	0,73	0,56	0,45	0,70	0,61	0,70	0,21
Model 1 (two-factor) Rev	0,94	0,89	0,51	0,94	0,93	0,95	0,09
Model 2 (two-factor)	0,79	0,66	0,49	0,77	0,71	0,78	0,18
Model 2 (two-factor) Rev	0,92	0,86	0,54	0,92	0,90	0,93	0,11
Model 3 (three-factor)	0,96	0,92	0,56	0,96	0,96	0,97	0,07
Model 3 (three-factor) Rev	0,98	0,96	0,50	0,98	0,98	0,99	0,05

Results indicated that the three-factor model provided the best fit. The fit statistics indicated a good overall fit of the originally hypothesised social support model (GFI = 0,94, NFI = 0,94, TLI = 0,93, and CFI = 0,95). However, subsequent analyses indicated unacceptably low alpha coefficients for supervisory support item 3 (*My manager helps me when I encounter problems in my work that I can not solve by myself*). Therefore it was decided to test a three-factor model which excluded this item. The goodness-of-fit indices also supported this decision by improving on Model 3 with an improvement in the (GFI = 0,98, AGFI = 0,96, NFI = 0,98, TLI = 0,98, CFI = 0,99 and RMSEA = 0,05) indices.

Fourthly models of emotional intelligence were tested. The factorial validity of the Greek Emotional Intelligence Scale (GEIS) was assessed. Analysis of the data were assessed against comparative fit indices, such as the Goodness-of-Fit Index (GFI), the Adjusted Goodness-of-Fit Index (AGFI), the Parsimony Goodness-of-Fit Index (PGFI), the Normed-Fit-Index (NFI), the Comparative Fit Index (CFI), the Tucker-Lewis Index (TLI). The Root Mean Square Error of Approximation (RMSEA) was utilised to indicate the fit of the original theoretical factorial model of the GEIS.

The four-factor model of the GEIS consisting of 52 items was tested in order to test factorial validity. Statistics of the fit between the theoretical model and the empirical data are given in Table 5.

Table 5

*Goodness-of-fit statistics for the hypothesised emotional intelligence models*

Model	GFI	AGFI	PGFI	NFI	TLI	CFI	RMSEA
Model 1 (four-factor)	0,86	0,84	0,76	0,79	0,87	0,88	0,04
Model 2 (three-factor)	0,90	0,88	0,74	0,86	0,91	0,93	0,04

Statistics of fit between the theoretical model and the empirical data were indicative of a poor overall fit to the theoretical four-factor model of the GEIS in Model 1. The goodness-of-fit indices also supported this finding by not reaching the recommended critical values. Values lower than 0,90 were found for GFI, AGFI, NFI, TLI and CFI. However, the RMSEA was lower than 0,05 (indicative of a good fit). In order to obtain a better fit between the theoretical four-factor model and the population data, modification of the model was needed. In an effort to determine misfit,

modification indices were examined. Looking at the regression weights, several parameters were found that represented the cross-loadings of factors. This finding could account for substantial misspecification of the hypothesised factor loadings. This might have been caused by the ambivalence of the particular items and the fact that the GEIS had not been standardised and the factorial validity not yet been established in South Africa. Subsequent post hoc analysis would be required to re-specify the theoretical model and test it against the empirical data of human resources employees in a production environment.

The rejection of the postulated theoretical model in the previous section initiated by implication, a model development process, in other words, an exploratory factor analysis where the factors of emotional intelligence are studied specifically in the human resources population. Closer inspection of the estimates in the modification indices revealed that the majority of the emotion recognition and expression items had cross-loadings on all of the other three factors. The decision was therefore made to test a three-factor model excluding this factor. The particular items could be problematic because they did not correspond with the conceptual domain of the particular dimension. However, it was more likely that they were somewhat ambiguous or that they were either sample- or country-specific. The adjusted three-factor model was fitted with the data. According to Table 5, it is evident that the SEM analysis yielded a marginal fit at least between the theoretical model and the empirical data, and the goodness-of-fit indices ( $GFI = 0,90$ ,  $TLI = 0,91$ ,  $CFI = 0,93$  and  $RSMEA = 0,04$ ) showed a marginal improvement on the four-factor model. Although the AGFI, PGFI and NFI indices are not below 0,90, the rest of the critical indices (RMSEA TLI and CFI) showed a good fit. Lastly, good alpha reliabilities were obtained for the three-factor model. The descriptive statistics and alpha coefficients of the OLBI, UWES, FEWS, GEIS and Social Support Scale are depicted in Table 6.

Table 6

*Descriptive statistics, alpha coefficients of the OLBI, UWES, FEWS, GEIS and Social Support Scale*

<b>Variable</b>	<i>Mean</i>	<i>SD</i>	<b>Skewness</b>	<i>Kurtosis</i>	<i><math>\alpha</math></i>
<b>OLBI</b>					
Disengagement	2,12	0,53	0,23	0,21	0,70
Exhaustion	2,30	0,44	0,21	0,31	0,70
<b>UWES</b>					
Engagement	4,43	1,20	-0,60	4,83	0,86
<b>GEIS</b>					
Use of Emotion to Facilitate Thinking	39,45	6,43	-1,07	1,61	0,87
Caring and Empathy	50,16	6,05	-0,62	1,35	0,79
Control of Emotion	25,56	4,91	-0,52	-0,22	0,75
<b>FEWS</b>					
Requirement to Display Negative Emotion	2,01	0,66	0,67	-0,05	0,74
Requirement to Display Positive Emotion	3,88	0,62	-0,69	0,44	0,78
Emotional Dissonance	2,95	0,93	-0,08	-0,67	0,80
<b>Social Support Scale</b>					
Support - Family	3,61	1,07	-0,55	-0,48	0,84
Support - Supervisor	3,86	1,02	-0,90	0,31	0,90
Support - CoWorker	3,78	0,91	-0,78	0,45	0,85

Table 6 shows that Cronbach alpha coefficients varying from 0,70 to 0,90 were obtained for the scales. The factors Disengagement (0,70) and Exhaustion (0,70) showed the lowest alpha values, but can still be regarded as acceptable (Nunnally & Bernstein, 1994). The values for the factors of all the scales were acceptable. It is evident from Table 6 that the scores on the various measuring instruments are relatively normally distributed, with low skewness and kurtosis, except for the Engagement scale which showed a high kurtosis. In conclusion it can be said that all *instruments* showed sufficient reliability and validity to be used for subsequent analysis.

The product moment correlation coefficients between burnout, work engagement, emotional intelligence, social support and emotion work are illustrated in Table 7.

Table 7

*Product-moment correlation coefficients between the OLBI, UWES, FEWS, GEIS, and Social Support Scale*

Item	1	2	3	4	5	6	7	8	9	10	11	12
1. Use of emotion	.	.	.	.	.	.	.	.	.	.	.	.
2. Caring and empathy	0,38*+	.	.	.	.	.	.	.	.	.	.	.
3. Control of emotion	0,44*+	0,36*+	.	.	.	.	.	.	.	.	.	.
4. Support family	0,07	0,17*	0,07	0,19*	.	.	.	.	.	.	.	.
5. Support supervisor	0,19*	0,13*	0,13*	0,15*	0,28*	.	.	.	.	.	.	.
6. Support co-worker	0,20*	0,20*	0,10*	0,15*	0,28*	0,46*+	.	.	.	.	.	.
7. Disengagement	-0,36*+	-0,19*	-0,33*+	-0,18*	-0,16*	-0,31*+	-0,25*	.	.	.	.	.
8. Exhaustion	-0,35*+	-0,09	-0,33*+	-0,12*	-0,10*	-0,25*	-0,22*	-0,62*++	.	.	.	.
9. Engagement	0,35*+	0,21*	0,17*	0,11*	0,14*	0,30*+	0,27*	-0,54*++	-0,44*+	.	.	.
10. Negative emotion	-0,14*	-0,25*	-0,35*+	-0,16*	-0,89*	-0,19*	-0,18*	0,23*	0,32*+	-0,12*	.	.
11. Positive emotion	0,25*	0,38*+	0,23*	0,16*	0,13*	0,11*	0,11*	-0,11*	-0,09	0,13*	-0,26*	.
12. Emotional dissonance	-0,11*	0,04	-0,11*	-0,16*	0,04	-0,06	-0,04	0,24*	0,26*	-0,14*	0,20*	0,23*

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

+  $r > 0,30$  – practically significant (medium effect)

++  $r > 0,50$  – practically significant (large effect)

Inspection of Table 7 indicates that use of emotion is significantly positively related (medium effect) to caring and empathy, control of emotion, and engagement. Use of emotion to facilitate thinking is significantly negatively related (medium effect) to disengagement and exhaustion. Caring and empathy is significantly positively related (medium effect) to control of emotion, and display of positive emotion. Control of emotion is significantly negatively related (medium effect) to disengagement, exhaustion, and display of negative emotion.

Supervisory support is significantly positively related (medium effect) to co-worker support and engagement, and is significantly negatively related (medium effect) to disengagement. Disengagement is significantly negatively related (large effect) to exhaustion and engagement. Exhaustion is significantly negatively related (medium effect) to engagement and significantly positively related (medium effect) to display of negative emotion.

Next, a model based on the results of the product-moment correlations, the work wellness model, as well as consensus of findings based on a review of the literature on work wellness with specific bearing on the mining and smelter industries was tested with SEM analysis. Results indicated that the model did fit the data adequately. However, inspection of the modification indices (MI) revealed that the fit between the model and the data could be further improved if correlation was allowed between the measurement errors of emotional intelligence and emotion work factors. It is important to note that items with identical rating scales often have correlating measurement errors (Byrne, 1989). This means that the fit of the model can further be improved if measurement errors between use of emotion to facilitate thinking and display of negative emotions ( $MI = 28,31$ ), and between display of negative emotions, and control of emotion ( $MI = 12,05$ ) are allowed to correlate. The revised model – including covariation – shows a good fit ( $GFI = 0,96$ ,  $AGFI = 0,94$ ,  $PGFI = 0,50$ ,  $NFI = 0,93$ ,  $TLI = 0,93$ ,  $CFI = 0,95$ , and  $RMSEA = 0,52$ ). The final model is given in Figure 1.

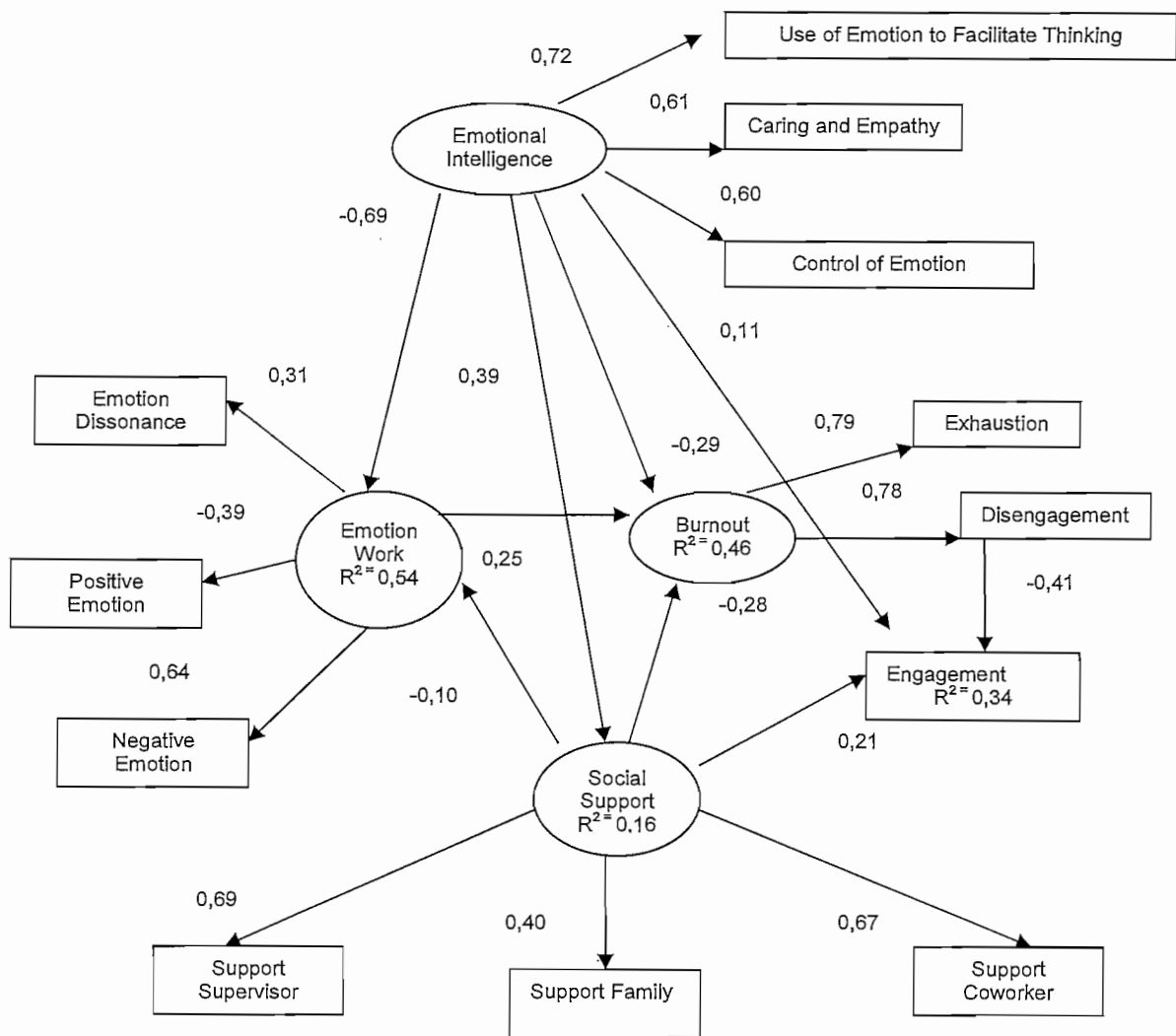


Figure 1. A model of work wellness

As can be seen in Figure 1, the path from emotion work to burnout, is significant. This means that participants that experience emotion work are likely to develop burnout (exhaustion and disengagement). This finding confirms hypothesis H2: emotion work is positively related to burnout.

The path from emotional intelligence to support and engagement is significant. This means that employees with emotional intelligence will experience social support, and engagement. This finding is confirmatory of part of hypothesis H4: emotional intelligence is positively related to engagement. The path from emotional intelligence to emotion work and burnout is significant, meaning that employees with emotional intelligence will experience less emotion work and burnout. This path confirms part of hypothesis H4: emotional intelligence is negatively related to



burnout, and confirms part of hypothesis H1: emotional intelligence is negatively related to emotion work. The path from support to emotion work and burnout is significant, which means that employees who receive social support will experience less emotion work and burnout. This path confirms part of hypothesis H1: social support is negatively related to emotion work, and part of hypothesis H3: social support is negatively related to burnout. The path from support to engagement is significant, which means that employees who receive social support will experience work engagement. This path confirms part of hypothesis H3: social support is positively related to engagement.

From the findings above it has been indicated that all four of the hypotheses have been confirmed.

## DISCUSSION

The aim of this study was to develop and test a structural model of work wellness for human resource employees from a platinum- and steel production environment, comprising emotion work, emotional intelligence and social support. First the construct validity and internal consistency of the OLBI, UWES, FEWS, GEIS and Social Support Scale were determined.

For the hypothesised wellness model, the best fit was found between a three-factor model of the wellness constructs (burnout and engagement) and the data. Regarding burnout the following were obtained: exhaustion  $\alpha = 0,70$  and disengagement  $\alpha = 0,70$ . According to Demerouti et al. (2003), burnout consists of exhaustion and disengagement. Professional efficacy is excluded from their definition because it does not form a core dimension of burnout (Bakker et al., 2004).

Regarding engagement the following was obtained:  $\alpha = 0,86$  – vigour and dedication. Vigour and dedication are seen as the core of engagement (Schaufeli et al., 2002) and absorption plays a less central role in the work engagement concept (Schaufeli, 2003). Mauno, Kinnunen, and Ruokolainen (2007) also found vigour and dedication to be the main indication of engagement in employees. The absorption subscale is therefore omitted from various studies (Naudé, 2003; Storm, 2002). In the South African context Rothmann and Storm (2003) studied the internal factorial validity, structural equivalence and bias of the UWES, and found high correlations between the work engagement dimensions of vigour, dedication and absorption and suggested that work engagement (as measured by the UWES) is a one-dimensional construct.

The results obtained by using the structural equation modelling approach supported a three-factor model for the FEWS. Due to the low alpha coefficients for neutral emotions, a three-factor model was tested which included emotional dissonance – that refers to a display of unfelt emotions and to the suppression of felt but organisationally undesirable emotions ( $\alpha = 0,80$ ), as well as to display of positive emotions – that refers to the requirement to display pleasant emotions ( $\alpha = 0,78$ ), and also a display of negative emotions – that refers to the requirement to display unpleasant emotions ( $\alpha = 0,74$ ). As a result, only three of the four factors could be replicated for a South African sample of human resources employees. This model showed a fit between empirical data and the theoretical model. This finding was in line with a study done by De Wet (2008) on health professionals which also confirmed a three-factor structure in a South African setting.

For the hypothesised social support model, the structural equation analysis showed the best fit for a three-factor model for social support, where support from supervisors ( $\alpha = 0,90$ ), support from co-workers ( $\alpha = 0,85$ ), and support from family ( $\alpha = 0,84$ ) each loaded onto a separate factor. This finding is supported by studies suggesting that distinguishing between the sources of social support is an important consideration (Albar-Marín & García-Ramírez, 2005; Arkar, Sari, Fidaner, 2004; Gutierrez-Dona & Gutierrez-Dona, 2005; Sieberhagen, 2006).

The results obtained for the hypothesised emotional intelligence model, from the structural equation modelling analysis, showed that the revised three-factor model for emotional intelligence had the best fit and indicated that the original four-factor model did not fit well. The three factors were caring and empathy – which is related to the employee's willingness to help others and his or her ability to comprehend the feelings of others and re-experience such feelings ( $\alpha = 0,79$ ), use of emotion to facilitate thinking – which refers to the ability of the employee to harness own emotions in order to solve problems by means of optimism and self-assurance ( $\alpha = 0,87$ ), and control of emotion – which is related to the ability of the employee to control emotions in the self and others ( $\alpha = 0,75$ ). The factor that was dismissed (expression and recognition of emotion – the ability of the employee to express and recognise own emotions accurately) may be somewhat ambiguous and sample- or country-specific, and estimates in the modification indices revealed that most of the items of this factor had cross-loadings on all other three factors. The GEIS has not been standardised for South African samples and apart from the questionnaire development studies done by Tsauosis (2007), no other studies are known that made use of this scale.

Hypothesis H1 was confirmed: Emotional intelligence and social support is negatively related to emotion work

The path from emotional intelligence to emotion work indicates that employees with emotional intelligence will experience less emotion work. The path from support to emotion work indicates that employees who receive social support will experience less emotion work. Emotional intelligence will help to minimise the impact of emotion work and burnout (Jonker & Joubert, 2009; Ogińska-Bulik, 2005) in employees. It has been found to enhance positive work attitudes and work outcomes (Carmeli, 2003), and also plays a moderating role between work-family conflict and career commitment. Giardini and Frese (2006) explain that emotional competence (which refers to ability to control and regulate emotions in oneself and others) will allow employees to cope more effectively with emotional as well as time-related demands, and such employees will be more likely to view challenging situations in a more positive manner. Opengart (2005) suggests that emotion work, which refers to the regulation of emotions to display required emotion expression, requires emotional intelligence in order to perceive, learn and adjust behaviour as necessary. Higher levels of social support will lower the negative effects of emotion work (Grandey, 2000).

Hypothesis H2 was confirmed: Emotion work is positively related to burnout

Exhaustion (burnout) was positively related to display of negative emotions (a factor of emotion work), meaning that the frequency of having to display unpleasant emotions leads to feelings of exhaustion. Substantial evidence exists to support the finding that burnout is associated with emotion work (Nerdinger & Röper, 1999; Schaubroeck & Jones, 2000; Zapf et al., 1999; Zapf et al., 2001). The structural model of work wellness indicated that the path from emotion work to burnout is significant, meaning that emotion work results in burnout. This indicates that the demand to regulate emotions in order to display required emotions leads to burnout in employees, and the same has been supported by various studies confirming that emotion work leads to burnout in employees (Brotheridge & Lee, 2003; Jonker & Joubert, 2009; Kim, 2008; Mann, 2005). This finding is substantiated by the fact that emotion work in itself may contribute to personal conflict and tension (Clarke, Hope-Hailey, & Kelliher, 2007).

Hypothesis H3 was confirmed: Social support is positively related to engagement and negatively related to burnout

Supervisory support was found to be positively related to engagement, and negatively related to disengagement (burnout). This is in line with studies done on the correlation between lack of resources and burnout in organisations (Demerouti et al., 2001; Prins et al., 2007). Social support is regarded as a job resource (Hakanen, Bakker, & Schaufeli, 2006; Saks, 2006; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009) and has been found to be positively related to work engagement (Bakker et al., 2003; Hakanen, Perhoniemi, & Toppinen-Tanner, 2008; Mauno et al., 2007; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007; Xanthopoulou et al., 2009). Jorgensen (2006) found in a South African police sample, that employees who experienced social support were more dedicated (which forms part of engagement) to their job and more committed to the organisation. More specifically, Hakanen et al. (2006) found supervisory support to be positively related to engagement. Higher levels of social support will lower the negative effects of burnout (Albar-Marín & García-Ramírez, 2005; Dierendock, Schaufeli, & Buunk, 1998; Ersoy-Kart, 2009; Prins et al., 2007), and will increase the level of engagement employees experience. This is consistent with findings from studies conducted on the relationship between social support and well-being, stress and professional effectiveness (Cooper, 2005; Slattery, 2004).

Hypothesis H4 was confirmed: Emotional intelligence is positively related to engagement and negatively related to burnout

The analysis of Pearson correlations in this study showed that use of emotion to facilitate thinking (emotional intelligence) was positively related to engagement, and negatively related to disengagement and exhaustion (burnout). It can therefore be argued that a greater ability to harness emotions in oneself in order to solve problems (which is indicative of emotional intelligence) may lead to employees feeling more engaged in their work, and experiencing less burnout (Ogińska-Bulik, 2005; Sharma, 2008).

The path from emotional intelligence to social support and engagement indicated that employees with emotional intelligence would also experience social support and engagement. This means that the ability to utilise emotions in problem solving, being willing to help others and the ability to sympathise with others, and the regulation and control of own emotions and the emotions of others, lead to better quality of social interactions (Austin et al., 2005), and improved well-being (Dawda &

Hart, 2000; Slaski & Cartwright, 2002). Lopes, Salovey, and Strauss (2003) found that emotional intelligence was associated with satisfaction with social relationships, in that individuals who were better able to manage their emotions were more satisfied with their social relationships and experienced more support from family.

## **LIMITATIONS AND RECOMMENDATIONS**

A limitation of this study is its cross-sectional design. As a result, no casual inferences could be drawn, despite the use of advanced structural equation modelling techniques. Therefore, the casual relationships between variables were interpreted rather than established, and more complex forms of non-recursive linkages could not be examined. Furthermore, results were obtained solely by self-report measures, and this may lead to a problem referred to as “method variance”. Descriptions given by participants are likely to differ from the descriptions others could give to the same person (Hofstee, 1994).

The study was conducted on human resources employees in a production environment in the North-West Province of South Africa, and can therefore not be generalised to other populations. Another limitation to the study was the fact that the GEIS (Tsaousis, 2007) that was utilised to measure emotional intelligence is a newly developed scale and has not been standardised for a South African population.

From an organisational perspective, it is important for employees to possess the ability to manage their own emotions as well as their interaction with others (Brotheridge & Lee, 2003) seeing that failure to do so may result in stress and burnout (Bakker et al., 2001; Zapf et al., 2001). Given the pervasive nature of burnout, results obtained from this study could aid organisations to implement interventions aimed at preventing burnout and increasing employee wellness. Once emotional intelligence and well-being levels have been determined, appropriate interventions that focus on emotional intelligence and emotion work can be developed. These interventions should be directed at informing employees on appropriate ways to manage and express emotions, as well as ways to prevent emotional dissonance and exhaustion.

In terms of future research, the relationship between emotional intelligence and emotion work seems to be a promising research area (McQueen, 2004). Studies should be directed at exploring the effect of emotional intelligence on emotion work. Also, the role of social support in the

relationship between emotion work and burnout should be further investigated. Future studies could also be aimed at validating the Greek Emotional Intelligence Scale in a South African context.

## References

- Abraham, R. (1998). Emotional dissonance in organizations: Antecedents, consequences and moderators. *Genetic, Social, and General Psychology Monographs*, 124, 229-246.
- Adelman, P. K. (1995). Emotional labor as a potential source of job stress. In S. L. Sauter & L. R. Murphy (Eds.), *Organizational risk factors for job stress* (pp. 371-381). Washington, DC: American Psychological Association.
- Albar Marín, M. J., & García-Ramírez, M. (2005). Social support and emotional exhaustion among hospital nursing staff. *European Journal of Psychiatry*, 19(2), 96-106.
- Arbuckle, J. L. (1997). *AMOS user's guide version 3.6*. Chicago, IL: Smallwaters.
- Arkar, H., Sari, O., & Fidaner, H. (2004). Relationships between quality of life, perceived social support, social network, and loneliness in a Turkish sample. *Yeni Symposium*, 42, 20-27.
- Ashforth, B. E., & Humphrey, R. H. (1993). Emotional labor in service roles: The influence of identity. *Academy of Management Review*, 18(1), 88-115.
- Ashkanasy, N. M., & Daus, C. S. (2002). Emotions in the workplace: The new challenge for managers. *Academy of Management Executive*, 16(1), 76-86.
- Austin, E. J., Dore, T. C. P., & O'Donovan, K. M. (2008). Associations of personality and emotional intelligence with display rule perceptions and emotional labour. *Personality and Individual Differences*, 44, 679-688.
- Austin, E. J., Saklofske, D. H., & Egan, V. (2005). Personality, wellbeing, and health correlates of emotional intelligence. *Personality and Individual Differences*, 38, 547-558.
- Bakker, A. B., Demerouti, E., & Verbeke, W. (2004). Using the Job Demands-Resources Model to predict burnout and performance. *Human Resource Management*, 43(1), 83-104.
- Bakker, A. B., Schaufeli, W. B., Sixma, H. J., & Bosveld, W. (2001). Burnout contagion among general practitioners. *Journal of Social and Clinical Psychology*, 20, 82-98.
- Bar-On, R. (1997). *Bar-On Emotional Quotient Inventory*. Toronto: Multi-Health Systems.
- Bar-On, R. (2001). Emotional intelligence and self-actualization. In J. Ciarrochi, J. P. Forgas, & J. Mayer (Eds.), *Emotional intelligence in everyday life: A scientific inquiry* (pp. 82-97).
- Baumeister, R., & Leary, M. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117, 497-529.
- Bentler, P. M. (1992). On the fit of models to covariances and methodology to the Bulletin. *Psychological Bulletin*, 112, 400-404.

- Boles, J. S., Johnston, W., & Hair, J. F. (1997). Role stress, work-family conflict and emotional exhaustion: Inter-relationships and effects on some work-related consequences. *Journal of Personal Selling and Sales Management*, 17(1), 17-28.
- Brotheridge, C. M., & Grandey, A. (2002). Emotional labor and burnout: Comparing two perspectives of "people work". *Journal of Vocational Behavior*, 60(1), 17-39.
- Brotheridge, C. M., & Lee, R. T. (1998). On the dimensionality of emotional labor: Development and validation of an emotional labor scale. Paper presented at the 1<sup>st</sup> Conference on Emotions in Organizational Life. San Diego, CA.
- Brotheridge, C. M., & Lee, R. T. (2002). Testing a conservation of resources model of the dynamics of emotional labor. *Journal of Occupational Health Psychology*, 7(1), 57-67.
- Brotheridge, C. M., & Lee, R. T. (2003). Development and validation of the emotional labour scale. *Journal of Occupational and Organizational Psychology*, 76, 365-379.
- Brown, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen & J. S. Long (Eds.), *Testing structural equation models* (pp. 445-455). Newbury Park, CA: Sage Publications.
- Burns, N., & Grove, S. K. (1993). *The practice of nursing research, conduct, critique, and utilization* (2nd ed.). Philadelphia: W.B. Saunders.
- Byrne, B. M. (2001). *Structural equation modeling with AMOS: Basic concepts, applications and programming*. Mahwah, NJ: Erlbaum.
- Caplan, R. D., Cobb, S., French, J. R. P., Jr., Van Harrison, R., & Pinneau, S. R., Jr. (1975). *Job demands and worker health*. Washington, D. C.: U.S. Department of Health, Education and Welfare.
- Ciarrochi, J., Deane, F. P., & Anderson, S. (2002). Emotional intelligence moderates the relationship between stress and mental-health. *Personality and Individual Differences*, 32, 197-209.
- Clarke, C., Hope-Hailey, V., & Kelliher, C. (2007). Being real or really being someone else?: Change, managers and emotion work. *European Management Journal*, 25, 92-102.
- Coetzer, W. J. (2004). *Burnout and engagement of employees in an insurance company*. Unpublished doctoral thesis, North-West University, Potchefstroom.
- Cogburn, J. D., & Hays, S. W. (2004). Innovations in local government human resource systems: Observations from several best practice locations. *Public Administration Quarterly*, 27, 433-455.
- Cohen, S., Gottlieb, B., & Underwood, L. (2000). Theoretical and historical perspectives. In S. Cohen, L. Underwood, & B. Gottlieb (Eds.), *Social support measurement and intervention: A guide for health and social scientists* (pp. 3-28). New York: Oxford University Press.



- Constanti, P., & Gibbs, P. (2004). Higher education teachers and emotional labor. *International Journal of Educational Management*, 18, 243-249.
- Cordes, C. L., & Dougherty, T. W. (1993). A review and integration of research on job burnout. *Academy of Management Review*, 18, 621-656.
- Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. New York: Harper.
- Cummings, O., & Nall, R. (1982). Counselor burnout and relationship style: A connection. *School Counselor*, 29, 190-195.
- Daniels, K., & Harris, C. (2005). A daily diary study of coping in the context of the Job-Demands-Control-Support model. *Journal of Vocational Behavior*, 66, 219-237.
- Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*, 86, 499-512.
- Demerouti, E., Bakker, A. B., Vardakou, I., & Kantas, A. (2003). The convergent validity of two burnout instruments: A multitrait-multimethod analysis. *European Journal of Psychological Assessment*, 19(1), 12-23.
- De Wet, M. (2008). *The relationship between emotion work and well-being in a caregiving environment*. Unpublished master dissertation, North-West University, Potchefstroom.
- Diefendorff, J. M., Croyle, M. H., & Gosserand, R. H. (2005). The dimensionality and antecedents of emotional labor strategies. *Journal of Vocational Behavior*, 66, 339-357.
- Diener, E., & Oishi, S. (2005). The nonobvious social psychology of happiness. *Psychological Inquiry*, 16, 162-167.
- Dierendonck, D., Schaufeli, W. B., & Buunk, B. P. (1998). The evaluation of an individual burnout intervention program: The role of inequity and social support. *Journal of Applied Psychology*, 83, 392-407.
- Ersoy-Kart, M. (2009). Relations among social support, burnout, and the experiences of anger: An investigation among emergency nurses. *Nurses Forum*, 44, 165-174.
- Gallagher, E. N., & Vella-Brodrick, D. A. (2008). Social support and emotional intelligence as predictors of subjective well-being. *Personality and Individual Differences*, 44, 1551-1561.
- Gardner, L. J., & Stough, C. (2003). Exploration of the relationship between workplace, emotional intelligence, occupational stress and employee health. *Australian Journal of Psychology*, 55, 181-195.
- Garrett, D. K., & McDaniel, A. M. (2001). A new look at nurse burnout: The effects of environmental uncertainty and social climate. *Journal of Nursing Administration*, 31(2), 91-96.

- Giardini, A., & Frese, M. (2006). Reducing the negative effects of emotion work in service occupations: Emotional competence as a psychological resource. *Journal of Occupational Health Psychology, 11*(1), 63-75.
- Glassberg, A. L., Eriksson, S., & Norberg, A. (2006). Burnout and "stress of conscience" among health-care personnel. *Journal of Advanced Nursing, 57*, 392-403.
- Glomp, T. M., Rotundo, M., & Kammeyer-Mueller, J. D. (2004). Emotional labor demands and compensating wage differentials. *Journal of Applied Psychology, 89*, 700-714.
- Goleman, D. (1995). *Emotional intelligence*. New York: Bantam Books.
- González-Romá, V., Schaufeli, W. B., Bakker, A. B., & Lloret, S. (2006). Burnout and work engagement: Independent factors or opposite poles? *Journal of Vocational Behavior, 68*, 165-174.
- Grandey, A. A. (2000). Emotion regulation in the workplace: A new way to conceptualize emotional labor. *Journal of Occupational Health Psychology, 5*(1), 95-110.
- Grandey, A. A. (2003). When the "show must go on": Surface acting and deep acting as determinants of emotional exhaustion and peer-rated service delivery. *Academy of Management Journal, 46*, 86-96.
- Grandey, A. A., Fisk, G. M., & Steiner, D. D. (2005). Must "service with a smile" be stressful?: The moderating role of personal control for American and French employees. *Journal of Applied Psychology, 90*, 893-904.
- Greenglass, E., Stokes, P., & Fiksenbaum, L. (2005). Engagement, work stress and well-being: Implications for psychological functioning. *Stress News, 17*, 4-8.
- Gutierrez-Dona, S., & Gutierrez-Dona, B. (2005). More spousal support for men than for women: A comparison of sources and types of support. *Sex Roles: A Journal of Research, 52*, 7-8.
- Hakanen, J. J., Bakker, A., & Schaufeli, W. B. (2006). Burnout and engagement among teachers. *Journal of School Psychology, 43*, 495-513.
- Hakanen, J. J., Perhoniemi, R., & Toppinen-Tanner, S. (2008). Positive gain spirals at work: From job resources to work engagement, personal initiative, and work-unit innovativeness. *Journal of Vocational Behaviour, 73*, 78-91.
- Halbesleben, J. R. B. & Demerouti, E. (2005). The construct validity of an alternative measure of burnout: Investigating the English translation of the Oldenburg Burnout Inventory. *Work and Stress, 19*(3), 208-220.
- Hay Group. (2000). *Emotional intelligence: A soft skill with a hard edge*. [http://ei.haygroup.com/about\\_ei/](http://ei.haygroup.com/about_ei/).

- Heuven, E., & Bakker, A. B. (2003). Emotional dissonance and burnout among cabin attendants. *European Journal of Work and Organizational Psychology, 12*, 81-100.
- Hochschild, A. R. (1983). *The managed heart: Commercialization of human feeling*. Berkeley, CA: University of California Press.
- Hofstee, W. K. B. (1994). Who should own the definition of personality? *European Journal of Personality, 59*, 1216-1229.
- Hu, L. T., & Bentler, P. M. (1999). Cut-off criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal, 6*(1), 1-55.
- Ifeagwazi, C. M. (2006). The influence of marital status on self-report of symptoms of psychological burnout among nurses. *Omega, 52*, 359-373.
- Jonker, C. S., & Joubert, S. (2009). Emotion work and well-being of client service workers within small and medium-sized enterprises. *Management Dynamics, 18*(2), 35-48.
- Jöreskog, K. G. (1969). A general approach to confirmatory maximum likelihood factor analysis. *Psychometrika, 34*, 183-202.
- Jorgensen, L. I. (2006). *Work-related well-being among police members in the North West Province*. Unpublished Doctoral Thesis, North-West University, Potchefstroom Campus, Potchefstroom, South Africa.
- Kahill, S. (1988). Symptoms of professional burnout: A review of the empirical evidence. *Canadian Psychology, 29*, 284-297.
- Kahn, R. L., & Byosier, P. (1992). Stress in organizations. In M. D. Dunnette & L. M. Hough (Eds.), *Handbook of Industrial and organizational psychology* (pp. 571-650). Palo Alto, CA: Consulting Psychologists Press.
- Kahn, J. H., Hessling, R. M., & Russell, D. W. (2003). Social support, health, and well-being among the elderly: What is the role of negative affectivity? *Personality and Individual Differences, 35*, 5-17.
- Kim, H. J. (2008). Hotel service providers' emotional labour: The antecedents and effects on burnout: Comparing two perspectives of "people work". *Journal of Vocational Behaviour, 60*, 17-39.
- Koivula, M., Paunonen, M., & Laippala, P. (2000). Burnout among nursing staff in to Finnish hospitals. *Journal of Nursing Management, 8*, 149-158.
- Le Blanc, P., Bakker, A. B., Peeters, M. C. W., Van Heesch, N. C. A., & Schaufeli, W. B. (2001). Burnout in oncology care providers: The role of individual differences. *Anxiety, Stress, and Coping, 14*, 243-263.

- Lee, R. T., & Ashforth, B. E. (1993). A further examination of managerial burnout: Toward and integrated model. *Journal of Organizational Behavior*, 14, 3-20.
- Leiter, M. P. (1991). Coping patterns as predictors of burnout: The function of control and escapist coping patterns. *Journal of Organizational Behavior*, 12, 123-144.
- Leiter, M. P., & Maslach, C. (1998). Burnout. In H. Friedman (Ed.), *Encyclopedia of mental health*. San Diego, CA: Jossey-Bass.
- Lewin, J. E., & Sager, J. K. (2008). Salesperson burnout: A test of the coping-mediational model of social support. *Journal of Personal Selling and Management*, 28, 233-246.
- MacCullum, R. C., Browne, M. W., & Sugawara, H. M. (1996). Power analysis and determination of sample size for covariance structure modeling. *Psychological Methods*, 1, 130-149.
- Mann, S. (2005). A health-care model of emotional labor: An evaluation of the literature and development of a model. *Journal of Health Organization and Management*, 19, 304-317.
- Martínez-Iñigo, D., Totterdell, P., Alcover, C. M., & Holman, D. (2007). Emotional labor and emotional exhaustion: Interpersonal and intrapersonal mechanisms. *Work and Stress*, 21(1), 30-47.
- Maslach, C., & Jackson, S. E. (1986). *Maslach Burnout Inventory manual*. Palo Alto, CA: Consulting Psychologist Press.
- Maslach, C., Jackson, S. E., & Leiter, M. P. (1996). *Maslach Burnout Inventory: Manual* (3rd ed). Palo Alto, CA: Consulting Psychologist Press.
- Maslach, C., & Leiter, M. (1997). *The truth about burnout*. San Francisco: Jossey-Boss.
- Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology*, 52, 397-422.
- Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? In P. Salovey, & D. Sluyter (Eds.), *Emotional development and emotional intelligence: Implications for educators* (pp. 3-31). New York: Basic Books.
- Mayer, J. D., Salovey, P., & Caruso, D. R. (2002). *The Mayer, Salovey, Caruso Emotional Intelligence Test (MSCEIT): Users' manual*. Toronto: Multi-Health Systems.
- Mauno, S., Kinnunen, U., & Ruokolainen, M. (2007). Job demands and resources as antecedents of work engagement: A longitudinal study. *Journal of Vocational Behavior*, 70, 149-171.
- McQueen, A. C. H. (2004). Emotional intelligence in nursing work. *Journal of Advanced Nursing*, 47, 101-108.
- Moore, K. A., & Mellor, D. J. (2003). The role of management consultation, support, and coping on nurses' health during the stress of restructuring. *International Journal of Public Administration*, 26, 1621-1636.

- Morris, J. A., & Feldman, D. C. (1996). The dimensions, antecedents, and consequences of emotional labor. *Academy of Management Review*, 21, 986-1010.
- Mulaik, S. A., James, L. R., Van Alstine, J., Bennet, N., Lindi, S., & Stilwell, C. D. (1989). Evaluation of goodness-of-fit statistics for structural equation models. *Psychological Bulletin*, 105, 430-445.
- Nakamura, J., & Csikszentmihalyi, M. (2002). The concept of flow. In C. R. Snyder, & S. J. Lopez (Eds.), *Handbook of positive psychology* (pp. 715-728). Oxford: Oxford University Press.
- Naudé, J. L. P. (2003). *Occupational stress, coping, burnout and work engagement of emergency workers in Gauteng*. Unpublished doctoral thesis, PU for CHE, Potchefstroom.
- Nerdinger, F.W., & Röper, M. (1999). Emotionale dissonanz und burnout: Eine empirische Untersuchung im Pflegebereich eines Universitätskrankenhauses [Emotional dissonance and burnout: An empirical examination in the nursing sector of a university hospital]. *Zeitschrift für Arbeitswissenschaft*, 53, 187-193.
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (4th ed.). New York: McGraw-Hill.
- Ogińska-Bulik, N. (2005). Emotional intelligence in the workplace: Exploring its effects on occupational stress and health outcomes in human service workers. *International Journal of Occupational Medicine and Environmental Health*, 18, 167-175.
- Prins, J. T., Hoekstra-Weebers, J. E. H. M., Gazendam-Donfrio, S. M., Van de Wiel, H. B. M., Sprangers, F., & Jaspers, F. C. A. (2007). The role of social support in burnout among Dutch medical residents. *Psychology, Health and Medicine*, 12(1), 1-6.
- Rafaeli, A., & Sutton, R. L. (1987). Expression of emotion as part of the work role. *Academy of Management Review*, 12(1), 23-37.
- Rhoades, L., & Eisenberger, R. (2002). Perceived organizational support: A review of the literature. *Journal of Applied Psychology*, 87, 698-714.
- Rothmann, S. (2003). Burnout and engagement: A South African perspective. *South African Journal of Industrial Psychology*, 29(4), 16-25.
- Rothmann, S., & Joubert, J. H. M. (2007). Job demands, job resources, burnout and work engagement of managers at a platinum mine in the North West Province. *South African Journal of Business Management*, 38(3), 49-61.
- Rothmann, S., & Storm, K. (2003, May). *Engagement in the South African Police Services*. Poster session presented at the 11th European Congress on Work and Organizational Psychology, Lisbon, Portugal.
- Saks, A. M. (2006). Antecedents and consequences of employee engagement. *Journal of Managerial Psychology*, 21, 600-619.

- Salanova, M., Agut, S., & Peiró, J. M. (2005). Linking organizational resources and work engagement to employee performance and customer loyalty: The mediation of service climate. *Journal of Applied Psychology, 90*, 1217-1227.
- Salovey, P., & Mayer, J. (1990). Emotional intelligence. *Imagination, Cognition and Personality, 9*, 185-211.
- Sand, G., & Miyazaki, A. D. (2000). The impact of social support on salesperson burnout and burnout components. *Psychology and Marketing, 17*, 13-26.
- Sarason, B., & Duck, S. (2001). *Personal relationship: Implications for clinical and community psychology*. Chichester: John Wiley & Sons.
- Schaubroeck, J., & Jones, J. R. (2000). Antecedents of workplace emotional labor: Dimensions and moderators of their effects on physical symptoms. *Journal of Organizational Behavior, 21*, 163-183.
- Simon, R. W., & Nath, L. E. (2004). Gender and emotion in the United States: Do men and women differ in self-reports of feelings and expressive behavior. *American Journal of Sociology, 109*(5), 1137-1176.
- Schaufeli, W. B. (2003). Past performance and future perspectives of burnout research. *Journal of Industrial Psychology, 29*(4), 1-15.
- Schaufeli, W. B., & Bakker, A. B. (2001). Werk en welbevinden: Naar een positieve benadering in de Arbeids- en Gezondheidspsychologie [Work and wellbeing: Towards a positive approach to occupational health psychology]. *Gedrag en Organizatie, 14*, 229-253.
- Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behavior, 25*, 293-315.
- Schaufeli, W. B., & Enzmann, D. (1998). *The burnout companion to study and practice: A critical analysis*. London: Taylor & Francis.
- Schaufeli, W. B., Salanova, M., Gonzáles-Romá, V., & Bakker, A. B. (2002). The measurement of engagement and burnout: A two-sample confirmatory factor analytic approach. *Journal of Happiness Studies, 3*(1), 71-92.
- Schneider, B., & Bowen, D. E. (1985). Employee and customer perceptions of service in banks: Replication and extension. *Journal of Applied Psychology, 70*, 423-433.
- Sharma, R. R. (2008). Emotional intelligence from 17th century to 21st century: Perspectives and directions for future research. *VISION – The Journal of Business Perspective, 12*(1), 59-66.
- Shaughnessy, J. J., & Zechmeister, E. B. (1997). *Research methods in psychology* (4th ed.). New York: McGraw-Hill.

- Sieberhagen, C. F. (2006). *The moderating effect of social support on the relation between role overload, job satisfaction and turnover intention*. Unpublished Doctoral Thesis, North-West University, Potchefstroom Campus, Potchefstroom, South Africa.
- Slaski, M., & Cartwright, S. (2002). Health, performance and emotional intelligence: An exploratory study of retail managers. *Stress and Health, 18*(2), 63-68.
- Snow, D. L., Swann, S. C., Raghaven, C., Connell, C. M., & Klein, I. (2003). The relationships of work stressors, coping and social support to psychological symptoms among female secretarial employees. *Work and Stress, 17*, 241-263.
- Storm, K. (2002). *Burnout and engagement in the South African Police Service*. Unpublished doctoral thesis, PU for CHE, Potchefstroom.
- Sutton, R. (1991). Maintaining norms about expressed emotions: The case of bill collectors. *Administrative Science Quarterly, 36*, 245-268.
- Terry, D. J., Rawle, R., & Callan, V. J. (1995). The effects of social support on adjustment to stress: The mediating role of coping. *Personal Relationships, 2*, 97-124.
- Tsaousis, I. (2007). *Measuring trait emotional intelligence: Development and psychometric properties of the Greek Emotional Intelligence Scale (GEIS)*. Athens, University of Aegean.
- Turner, N., Barling, J., & Zacharatos, A. (2002). Positive psychology at work. In C. R. Snyder & S. J. Lopez (Eds.), *Handbook of Positive Psychology* (pp. 715-728). Oxford: Oxford University Press.
- Van Emmerik, I. J. H. (2002). Gender differences in the effects of coping assistance on the reduction of burnout in academic staff. *Work and Stress, 16*, 251-263.
- Weisinger, H. (1998). *Emotional intelligence at work: The untapped edge for success*. San Francisco, CA: Jossey-Bass.
- Wilk, S. L., & Moynihan, L. M. (2005). Display rule 'regulators': The relationship between supervisors and worker emotional exhaustion. *Journal of Applied Psychology, 90*, 917-927.
- Xanthopoulou, D., Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2007). The role of personal resources in the job demands-resources model. *International Journal of Stress Management, 14*, 121-141.
- Xanthopoulou, D., Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2009). Reciprocal relationships between job resources, personal resources, and work engagement. *Journal of Vocational Behavior, 74*, 235-244.
- Yildirim, I. (2008). Relationship between burnout, sources of social support and sociodemographic variables. *Social Behavior and Personality, 36*, 603-616.

- Zammuner, V. L., Lotto, L., & Galli, C. (2003). Regulation of emotions in the helping professions: Nature, antecedents and consequences. *Australian e-Journal for the Advancement of Mental Health*, 2(1), 1-13.
- Zapf, D. (2002). Emotion work and psychological well-being: A review of the literature and some conceptual considerations. *Human Resource Management Review*, 12, 237-268.
- Zapf, D., Seifert, C., Schmutte, B., Mertini, H., & Holz, M. (2001). Emotion work and job stressors and their effects on burnout. *Psychology and Health*, 16, 527-545.
- Zapf, D., Vogt, C., Seifert, C., Mertini, H., & Isic, A. (1999). Emotion work as a source of stress: The concept and development of an instrument. *European Journal of Work and Organizational Psychology*, 8, 371-400.



## **CHAPTER 5**

### **CONCLUSION, LIMITATIONS AND RECOMMENDATIONS**

The purpose of this chapter is to provide conclusions regarding the results of the empirical studies of the three research articles. Conclusions are drawn with regard to the research objectives. Furthermore, limitations of the study are discussed. Finally, recommendations for the organisation are made and research opportunities that emanate from this research are presented.

#### **5.1 CONCLUSIONS**

##### **Article 1: The emotion experiences of professionals in a work setting**

The main aim of this article was to investigate and explore the emotion experiences of professionals in a work setting. Based on the results of this article, the following conclusions could be made:

- Research aim 1: To conceptualise emotion events, emotion experiences and emotion regulation mechanisms by means of a literature review.

Emotions can be defined as a multi-dimensional construct consisting of behavioural, expressive and psychological reactions and subjective feelings (Bagozzi, Gopinath, & Nyer, 1999). It affects every aspect of life either positively or negatively. Even though emotions have recently been regarded as an interesting research topic, confusion arises in terms of the fact that the term emotion is referred to as “moods”, “feelings” and “affect” (Ashkanasy, 2003), and all of these terms explain the same concept. Emotion involves an interaction between cognitive and non-cognitive systems (Cacioppo & Gardner, 1999), and conveys information. The Affective Events Theory (AET) (Weiss & Cropanzano, 1996) is a model which provides a framework for studying and understanding emotions at work. It evaluates the events leading to emotions experienced, as well as employees’ emotion-related responses to these events (Ashton-James & Ashkanasy, 2005), i.e. emotions emerge from affective events or situations and result certain emotion reactions. Specific events give rise to specific emotions (Fitness, 2000).

Unfair treatment and disrespect usually give rise to feelings of anger (Fitness, 2000). Anger is also triggered by job incompetence, personal attacks, or uncivilised treatment (Fitness, 2000; Grandey, Tam, & Brauburger, 2002). Anxiety and fear would usually be caused by occurrences such as merges, downsizing or job re-design (Mak & Mueller, 2001; Torkelson & Muhonen, 2003). Performance feedback and recognition lead to feelings of pride (Grandey et al., 2002). Making wrong decisions or judgement errors cause regret and disappointment (Fineman, 2003). Guilt and shame can be caused by insulting behaviour (Gabriel, 1998).

With the increase in interest of emotions at work, emotion regulation surfaces as an important concept. When interacting with others, employees often engage in effortful actions to display certain emotions and hide other emotions (Côté, 2005), and this might force employees to engage in either surface acting or deep acting (Zapf, Vogt, Seiffert, Mertini, & Isic, 1999). Surface acting refers to regulating emotional expression, and deep acting refers to the deliberate alteration of feelings in order to express desired emotions (Hochschild, 1983).

- Research aim 2: To determine what the emotions are that professionals experience in a work setting.

The results from this qualitative study indicated that employees in a gold mining environment experienced five broad categories of emotions. The first category was *anger, aggression, aggravation and frustration*, and included responses referring to not receiving credit, not feeling valued or appreciated, and being overruled or bypassed during the decision-making process; “People who don’t understand themselves and who are totally oblivious to the feelings of others frustrate the hell out of me”, and “Sometimes I cannot control my anger and frustration and I just scream and shout”. Feelings of frustration and anger are usually accompanied by antisocial behaviour such as aggression.

The second category was named *disappointment*, and responses were associated with not having support for their own personal problems, not achieving targets, and good initiatives being turned down; “...because no matter how good my ideas are, they always get shot down by sarcastic remarks”, and “Production people don’t accept responsibility and when things go wrong, they blame the services departments”. Disappointment can be explained as the feeling of dissatisfaction that follows the failure

of expectations (Merriam-Webster, 1993). The third category was *stressed, overwhelmed and emotionally drained*. Responses forming part of this category referred to job uncertainty, high work standards, fear of failure, and having too many responsibilities; “At the moment I am feeling emotionally drained. I have too many stuff going on and too little time to sort everything out. I feel as if I am dancing on a hot plate”, “I feel over-worked and tired, and I feel that I am personally responsible for many aspects of the operation”. Stress refers to the consequence of failure responding to emotional or physical threats in an appropriate manner (Keil, 2004), and when untreated it can lead to burnout (Altun, 2002).

The fourth category was *anxious and scared*, and included responses referring to being unsure about the quality of others’ work and the impact of negligence, mistrusting management and co-workers, and backstabbing; “The fact that these are uncertain times for the mining industry gets to me emotionally. I don’t know if I will have a job tomorrow”, and “...the general feelings or rather emotions I experience on a daily basis in this place...I feel threatened, suspicious, defensive, aggressive and tense, and this is all because you have to think of ways to please senior management, without selling your soul”. Anxiety is a psychological and physiological state characterised by emotional, cognitive and behavioural components, which combine to create feelings of concern, worry and fear (Seligman, Walker, & Rosenhan, 2001).

The fifth category was *suspicion, scepticism and cynicism*, and responses from this category were associated with the belief that others have hidden agendas, and that management did not disclose all the necessary information; “If you want to do my job effectively, you will have to be a policeman...I am sceptical about my people’s work – I always doubt the quality standard so I have to check up on them...”, and “I have to act as if I trust my co-workers and subordinates even when I doubt them sometimes”. Being sceptical means having an attitude of doubt (Merriam-Webster, 1993). Cynicism means distrusting the intentions of others, believing that other people are not representing their true motives (Dean, Brandes, & Dharwadkar, 1998).

- Research aim 3: To determine which affective events and situations employees experience.

From the interview responses it was found that affective events or situations could be divided into three levels: 1) organisational level; 2) group level; and 3) individual level. On the organisational level, nine affective events or situations were identified. *Organisational culture* referred to: a) mistrust – included responses associated with not trusting management due to the failure of disclosing all of the necessary information, and doubting others' intentions and actions, e.g. "I believe that my manager does not tell me everything. Certain information is kept secret, but then he expects me to keep my people motivated... Why doesn't he just tell us exactly what is going on so that everyone can be in the light?"; b) *diversity* – included responses referring to salary disparities in terms of gender, and being evaluated on the basis of ethnicity and age, e.g. "I can't afford to be emotional because this is a man's world; there's no place for tears. They see you as weak and typically female, and will never take you serious if you show emotion"; c) *bullying, victimisation and politics* – included responses associated with unfair treatment, knowing certain people in order to progress career-wise, and playing political games in order to advance, e.g. "Being victimised due to personal issues and unfair behaviour really gets to me".

*Lack of managerial support, supervisory relationships and ineffective communication* included responses associated with a lack of support for implementing ideas, experiencing no caring, inter-departmental conflict, and keeping essential information hidden, i.e. "They don't listen and they treat you as if you are nothing". *Lack of appreciation from management* included responses referring to not receiving recognition or feedback for performance, a demanding approach from the top structures of the organisation, and qualifications not being recognised, e.g. "I feel frustrated because I don't feel appreciated by the company". *Work-role overload* was indicated by responses referring to added responsibilities, long working hours, meeting deadlines, and having too much to do within a given time frame, e.g. "You will have to work long hours and even on weekends you will have to be prepared to spend time on work-related issues".

*Inefficient time management* included responses referring to time constraints and implementing ineffective work procedures, e.g. "On this level it is difficult to plan your day because not all our clients make appointments and we have an open-door policy, so one gets many interruptions". *Safety*

*requirements* included responses associated with responsibilities in adhering to safety requirements, and dangerous working conditions, e.g. “I get angry when we have accidents that could and should have been avoided”. *Lack of resources* referred to limited experience and a lack of physical resources, e.g. “You also have underpaid people with very little experience working for you, reporting on legal information you cannot always trust”. *Job insecurity* included responses associated with the economical pressures necessitating redesign of jobs or restructuring, e.g. “I don’t know if I will have a job tomorrow”. *Lack of empowerment, autonomy and variety* included responses associated with monotonous work, having no input in decision making, and decisions being overruled, e.g. “I have a problem with management; I don't appreciate how management deal, the fact that senior management distrusts us (middle management) and always feel the need to overrule our decisions - this really gets to me”.

On a group level, three events were identified that give rise to emotion experiences. *Relationships at work* included responses referring to difficult colleagues, conflict between employees, and disciplinary action: “I am typically affected by situations in the office where I need to intervene in conflict episodes”. *Lack of co-worker support and appreciation* included responses associated with co-workers not listening, receiving no support for personal problems, and failure to provide all the necessary information for task performance: “You'll become frustrated with slow progress and people not listening”. *Lack of control over others' work* included responses associated with team failure, not achieving goals, and having no control over the quality of others' work: “When my team fails, in that we don't achieve our targets, I become angry because I know senior management is going to look at me for the answers”.

On an individual level, two affective events were identified, namely *role conflict and role-incongruence* – which referred to many different roles for one individual, and displaying feelings and actions not necessarily the same as those of the authentic self, e.g. “You will have to distance yourself seeing that the development panels and development interviews are emotionally draining, in that you sometimes have to tell friends that they do not show the potential for promotion”; and *value conflict* – which referred to personal values contradicting with company values and dishonesty, e.g. “I become angry when I don't get recognition and when my values clash with these of the company”.

- Research aim 4: To determine how employees regulate or manage their emotions.

Four mechanisms of emotion regulation were identified through the interviews. *Emotion work* referred to surface acting, deep acting and emotional dissonance, and included responses referring to the faking or suppressing of emotions, altering emotional behaviour to suit a situation, ignoring emotions, remaining calm despite feelings of anger, and acting tough and attempting to feel tough; “Your people must always believe that you are enjoying what you are doing – sometimes this will involve putting up a mask”, “Even when you feel a subordinate isn’t very important, you have to show compassion. Even if you don’t really feel it, you have to show it because that is the only way you win them over”, and “I have to act like manager – cold and uninvolved, that is what is expected from me by the company”. *Emotional intelligence* included responses associated with being aware of others’ emotions, empathy, and using different approaches with different people to suit a situation; “People are my business so I have to ensure that they feel respected always...by doing this you will ignite more positive thoughts”, and “Do not feel threatened and change the situation into a challenge or an opportunity”. *Emotional distancing and detachment* included responses referring to putting up an emotional block, separating oneself mentally or physically from a potentially emotional situation, and not becoming emotionally involved with the problems of others; “You have to block it out and keep it in and remember why you are here – at home you can let go and cry and scream”.

This article added value to the domain of industrial psychology in the understanding of emotions that employees experience, the events or situations at the workplace that cause these, and lastly the way employees regulate their emotions.

## **Article 2: The construct validity and reliability of an emotional intelligence measurement: An exploratory and confirmatory factor analysis approach**

The main aim of this article was to determine the construct validity and reliability of the Greek Emotional Intelligence Scale. Based on the results of this article, the following conclusions can be made:

- Research aim 1: To conceptualise emotional intelligence by means of a literature review.

Emotional intelligence originated from earlier conceptualisations of social intelligence (Warwick & Nettelbeck, 2004). From the model of Salovey and Mayer (1990), emotional intelligence can be defined as the ability to monitor the feelings and emotions in oneself and others, to distinguish between these emotions and feelings, and to utilise this information as a guiding framework for one's thoughts and behaviours. Brackett, Mayer, and Warner (2004) stated that emotional intelligence embraces the skill of interpreting emotions, consisting of the core competencies of recognising, processing and controlling emotions (Akerjordet, 2009).

Emotional intelligence can be categorised in terms of two conceptualisations referred to as “ability” and “trait” emotional intelligence (Petrides & Furnham, 2000). Ability emotional intelligence is measured as a cognitive ability (also known as information-processing emotional intelligence) and differs from social-emotional personality traits (Freudenthaler & Neubauer, 2005). When referring to ability emotional intelligence, it is defined as the ability to perceive emotions, produce emotions in order to enhance thinking, understand emotions and have emotional knowledge, and to regulate emotions in order to promote emotional as well as intellectual growth (Mayer & Salovey, 1997).

Trait emotional intelligence is concerned with steadiness in terms of behaviour (Petrides & Furnham, 2000). This approach includes many personality variables, such as empathy and optimism, and sometimes includes more indistinguishable constructs such as motivation and happiness (Jonker & Vosloo, 2008).

According to Van Rooy and Viswesvaran (2004) employees who are emotionally intelligent will be more likely to display empathy towards others and to find ways of working productively and cooperatively. Assessing and improving emotional intelligence could therefore be beneficial to organisations (Cooper, 1997; O'Connor & Little, 2003; Wolmarans, 1998). Emotional intelligence forms a vital component of employee development (Arumugam, 2003). Higher levels of emotional intelligence are associated with dependability and independent-mindedness (Craig et al., 2009), which are favourable characteristics in the workplace. Organisations will also benefit more from employees and

managers who are able to perceive emotions in others more precisely (Byron, 2008; Wong & Law, 2002).

- Research aim 2: To determine the factorial validity and internal consistency of the GEIS through an exploratory factor analysis approach.

From an exploratory factor analysis it was indicated that the four factors of the GEIS (caring and empathy, control of emotion, emotion expression and recognition, and use of emotion to facilitate thinking) could be replicated to a sample of professionals in a gold mining industry. The four factors accounted for 37,29% of the total variance compared to the variance of 40,0% during the development study (Tsaousis, 2007). Factor 1 was named caring and empathy and related to the willingness of the individual to help other people and his or her ability to understand someone else's feelings, as well as re-experience them. Examples of items included in this subscale were: *"I respond to the emotions of others"* and *"I sympathise with others' personal problems"*. Factor 2 was named control of emotion and related to the ability of individuals to control and regulate emotions in themselves and others. Examples of items included in this subscale were: *"I get carried away by emotions of anger"* and *"When I am under pressure I snap"*. Factor 3 was named emotion expression and recognition and related to the ability of the individual to express and recognise his or her own emotional reactions accurately. Examples of items included in this subscale were: *"I find it difficult to describe exactly what I feel with words"* and *"I am unable to explain my emotional state to others"*. Factor 4 was named use of emotion to facilitate thinking which related to the ability of individuals to harness their own emotions in order to solve problems via optimism and self-assurance, which in turn would facilitate inductive reasoning and creativity. Examples of items included in this subscale were: *"I think of the positive side of things"* and *"Usually, my personal problems do not affect my performance at work"*.

During the development study of the GEIS Tsouasis (2007) found Factor 1 to be use of emotion to facilitate thinking (comprising of fifteen items), Factor 2 as caring and empathy (fifteen items composed this factor), Factor 3 to be control of emotion (comprising of twelve items), and Factor 4 to be expression and recognition of emotions (consisting of ten items). From the findings of the exploratory factor analysis, the GEIS seems to be a promising measurement of emotional intelligence



for application across cultures. In comparison to the original findings of Tsaousis (2007), the factorial validity of the GEIS in a South African sample proved to be satisfactory.

- Research aim 3: To determine whether the factors of the GEIS, that were determined by exploratory factor analysis, could be supported by a confirmatory factor analysis approach

Confirmatory factor analyses supported three of the four factors (caring and empathy, control of emotion, and use of emotion to facilitate thinking). The combined (white and African) three-factor model indicated a poor, but better fit than the revised four-factor model from the exploratory study. After inspection of the modification indices (MI), and after correlation of the measurement errors had been allowed for, the revised model – including covariation – showed an excellent fit (GFI = 0,91, TLI = 0,91, CFI = 0,93, and RMSEA = 0,05). Good alpha coefficients were also obtained for the combined three-factor model.

After emotion expression and recognition was excluded the model did in fact fit. Some of the items comprising the emotion expression and recognition factor included: *“Most people cannot understand what I feel; I am careful not to reveal my emotions to others; I usually keep to myself when I am sad; I am reserved in expressing emotions”*. The failure of this factor could possibly be explained by culture differences. Expression, recognition and comprehension of emotions have been found to be influenced by culture (Bar-On, 2000; Matsumoto, 2002; Mayer, Salovey, & Caruso, 2000). Bagozzi, Wong, and Yi (1999) believe that individualistic and collectivist cultures differ in terms of how they control the experience and expression of each individual’s own emotions. Another possible explanation might be the items not measuring what they set out to measure; or that the factor was vague or difficult to interpret. The fact that not all the participants were English may have caused misunderstandings or misinterpretations of some of the questions.

- Research aim 4: To determine whether the emotional intelligence factors of the confirmatory factor analysis will remain constant across cultures (White and African sample).

The sample was split according to ethnic groups and confirmatory factor analysis was conducted on the white and African samples independently. For the White three-factor model the data revealed a poor

fit, but after correlation of measurement errors had been allowed for, the model showed an improvement (TLI = 0,94, CFI = 0,95 and RMSEA = 0,04) and indicated that the data fitted the model. Next, the African sample was investigated, and the African three-factor model was tested to confirm the three factors (use of emotion to facilitate thinking, caring and empathy, and control of emotion). Statistics of fit between the theoretical model and the empirical data were indicative of a poor overall fit to the theoretical three-factor model of the GEIS. To pinpoint possible areas of misfit, modification indices were examined. Items 22 (*"I think of the positive side of things"*), 37 (*"I am not interested in the problems of others"*), 17 (*"I often regret things that I did or said when I was angry"*) and 38 (*"I have the tendency to show my impatience to others"*) showed low regression weights and non-significant  $p$ -values ( $p > 0,00$ ) that possibly accounted for the misspecification of the hypothesised factor loadings. These items were therefore omitted in the subsequent analysis which resulted in the revised model. After omitting these items the critical goodness-of-fit indices were indicative of a model fit (TLI (0,93), CFI (0,94) and RMSEA (0,04)). Except for four items (22, 37, 17 and 38), which did not load meaningful onto the factors for the African sample, the three factors (caring and empathy, control of emotions, and use of emotion to facilitate thinking) remained consistent over the two culture groups. This finding could possibly be explained by differences in terms of individualistic and collectivist cultures with regard to experiencing emotions, showing interest in the problems of others, emphasis on language, and using emotions to influence others.

- Research aim 5: To make recommendations on the use of the GEIS as opposed to the SEIS in South Africa.

Even though the Schutte Emotional Intelligence Scale (Schutte et al., 1998) is a widely used measure of emotional intelligence, it is inconsistent with regard to its factor structure (Austin, Saklofske, Huang, & McKenny, 2004; Gignac, Palmer, Manocha, & Stough, 2005; Sharma, Deller, Biswal, & Mandal, 2009). Seeing that the SEIS also failed to prove internal consistency for a South African sample (Jonker & Vosloo, 2008), the GEIS (Tsaousis, 2007) can be promoted as a promising instrument for emotional intelligence measurement in South Africa. It showed that the four factors (also identified by Tsaousis (2007)) worked, as indicated by exploratory factor analysis, and three of the four factors worked in the confirmatory factor analyses. The factor structure (excluding items 22, 17, 37 and 38) showed consistency across the two culture groups (White and African).

This study contributed to the domain of industrial psychology in providing data on the factorial validity investigation of the Greek Emotional Intelligence Scale, a newly developed emotional intelligence scale which has not been utilised within a South African sample previously. This study also provided information on the fact that GEIS showed consistency across two different cultures (White and African), and can therefore be promoted as a promising measure of emotional intelligence in South African research.

### **Article 3: A model of work wellness for human resource employees in a platinum- and steel production environment**

The main aim of this article was to develop and test a structural model of work wellness, from an emotion work perspective for human resource employees in a platinum- and steel production environment in South Africa. Based on the results of this article, the following conclusions can be made:

- Research aim 1: To conceptualise burnout, engagement, emotion work, emotional intelligence and social support by means of a literature review.

For the purpose of this article, the definition for *burnout* according to Demerouti, Bakker, Vardakou, and Kantas (2003) is applied. Burnout is seen as a condition of negative work-related encounters and includes feelings of exhaustion and disengagement. Because professional efficacy is not regarded as a core burnout dimension (Bakker, Demerouti, & Verbeke, 2004), it is excluded from this definition. Exhaustion is viewed as an effect of intense physical, emotional and cognitive strain, while disengagement refers to distancing oneself from work (Demerouti et al., 2003).

Schaufeli, Salanova, Gonzáles-Romá, and Bakker, (2002) define *engagement* as a positive state of satisfaction characterised by vigour, dedication and absorption. Vigour refers to high levels of energy, enthusiasm and mental resilience (Salanova, Agut, & Peiró, 2005). Dedication explains the sense of fulfillment and encouragement experienced when strongly involved in one's work (Schaufeli et al., 2002). Absorption is experienced when high levels of vigour and dedication exist and the employee is totally captivated in his or her work (Schaufeli & Bakker, 2004). In this article absorption was

excluded from the engagement dimensions, seeing that vigour and dedication are viewed as the core of engagement (Schaufeli et al., 2002) and is consequently excluded from various studies (Naudé, 2003; Storm, 2002).

*Emotion work* refers to the display of certain emotions, by employees, which are not necessarily felt, but which the organisation prescribes and expects (Austin, Dore, & O'Donovan, 2008). Emotional dissonance takes place when employees express emotions they do not feel at a particular moment (Zapf, 2002), and can be viewed as a conflict between felt and expressed emotions.

*Emotional intelligence* refers to the ability to recognise and use emotional information during social interactions (Grandey, 2000). The ability to regulate emotions forms a significant part of emotional intelligence (Austin et al., 2008). According to Sharma (2008), emotional intelligence plays an important role in organisations with regard to understanding emotions at work, acts as antecedents for employees' emotion responses and attitudes, and is indicative of employee well-being.

*Social support* is referred to as a social system of relationships offering support in coping with and adapting to different situations (Sarason & Duck, 2001). It is usually divided into support from within the organization and support from outside the organisation (Sand & Miyazaki, 2000).

- Research aim 2: To determine whether emotional intelligence and social support are negatively related to emotion work.

From the structural model of work wellness it was evident that the path from emotional intelligence and social support to emotion work was significant, meaning that employees with emotional intelligence will experience less emotion work, and employees receiving social support will also experience less emotion work. This finding was supported by Jonker and Joubert (2009) who found that emotional intelligence will minimise the impact of emotion work and burnout. Grandey (2000) also confirmed that higher levels of social support will lower the negative effects of emotion work.

- Research aim 3: To determine whether emotion work is positively related to burnout.

From the Pearson correlation results it was evident that exhaustion (burnout) was found to positively related to display of negative emotions (emotion work), meaning that having to display negative emotions leads to feelings of exhaustion. From the structural model it was indicated that the path from emotion work to burnout showed that emotion work resulted in burnout and this finding is supported by previous studies (Brotheridge & Lee, 2003; Jonker & Joubert, 2009; Schaubroeck & Jones, 2000).

- Research aim 4: To determine whether social support is positively related to engagement and negatively related to burnout.

From the correlation results, it was evident that social support is positively related to engagement and negatively related to disengagement (burnout), meaning that employees with social support will experience work engagement and will be less likely to experience burnout. This finding is supported by previous studies on the relationship between lack of resources (social support) and burnout (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; Prins, Hoekstra-Weebers, Gazendam-Donfrio, Van de Wiel, Sprangers, & Jaspers, 2007) and the effects of resources on engagement (Hakanen, Perhoniemi, & Toppinen-Tanner, 2008; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007).

- Research aim 5: To determine whether emotional intelligence is positively related to engagement and negatively related to burnout.

Analyses of the Pearson correlations showed that use of emotion to facilitate thinking (emotional intelligence) was positively related to engagement, and negatively related to disengagement and exhaustion (burnout). This is in line with the results from a study done by Ogińska-Bulik (2005) where the ability to harness emotions in oneself to solve problems (emotional intelligence) was related to higher levels of engagement and lower levels of burnout.

This study contributed to the domain of industrial psychology in developing and testing a structural model of work wellness, and provided information on the factors influencing burnout and engagement.

The main finding from this model was the important role that emotional intelligence played in terms of burnout, emotion work, engagement and social support. With regard to burnout, emotional intelligence proved to lower the risk of burnout. Employees who were emotionally intelligent did not experience burnout. Emotion work was also influenced by emotional intelligence in that employees who possess emotional intelligence did not experience emotion work. This showed that emotional intelligence lowered burnout and emotion work experiences. Emotional intelligence existed where engagement was experienced, meaning that employees who were emotionally intelligent were also engaged in their work. It was indicated that social support was also influenced by emotional intelligence, in that employees who possessed emotional intelligence also experienced social support. This could be due to the fact that emotional intelligence could aid employees in being more socially skilled and more successful in their social interactions.

## **5.2 LIMITATIONS OF THIS RESEARCH**

### **Article 1: The emotion experiences of professionals in a work setting**

The first limitation of this article was the fact that the participants were all from a gold mining industry and most of the participants were on managerial or supervisory level. The findings can therefore not be generalised to lower level employees in the gold mining industry, and furthermore not to employees from other industries or occupations. The second limitation was the small sample size ( $N = 52$ ) and the sampling method (qualitative interviews) which could have led to bias. The third limitation was the possibility that participants were concerned about confidentiality and the use of tape-recorders, even though participants had been reassured of the anonymity of results. The fourth limitation was the central question asked during the interviews, in that it did not manage to obtain enough information regarding the specific affective events and regulation methods.

### **Article 2: The construct validity and reliability of an emotional intelligence measurement: An exploratory and confirmatory factor analysis approach**

The first limitation of this article was the fact that a cross-sectional design was used, which made it impossible to prove the casualty of the obtained relationships. Secondly, a self-report questionnaire

was used, and therefore descriptions supplied by the participants were likely to be inaccurate in comparison to descriptions an outsider would use to describe the same participant. The third limitation was the fact that the study was conducted solely in a mining environment (gold, platinum and steel) and can therefore not be generalised beyond these parameters. The fourth limitation was the fact that the GEIS is a newly developed emotional intelligence scale (Tsaousis, 2007), and has not been standardised for a South African population. The fifth limitation was the fact that the questionnaire had been developed in English, and not all of the participants were English, and this may have led to misunderstandings or misinterpretations of some of the items. The sixth limitation was the fact that the questionnaire had not been designed to take into account the differences between various cultures, with regard to interpretations and meanings ascribed to certain emotions.

### **Article 3: A model of work wellness for human resource employees in a platinum- and steel production environment**

The first limitation was the cross-sectional design. As a result no causal inferences could be drawn, despite the use of advanced structural equation modeling techniques, and therefore causal relationships between variables were interpreted rather than established. Secondly, results were obtained from self-report questionnaires and this may have led to a problem referred to as “method variance” – *in which* descriptions of others for the same participant may differ from the descriptions of the participant of him or herself. The third limitation was the fact that the study was conducted solely on human resource practitioners from a platinum- and steel production environment and can therefore not be generalised to other populations. Fourthly, the GEIS used, was a newly developed questionnaire and has not been standardised for a South African population.

### **5.3 RECOMMENDATIONS**

Recommendations pertaining to the specific organisation used in this study, as well as recommendations for future research are made in this section.

### **5.3.1 Recommendations to the organisation**

#### **Article 1: The emotion experiences of professionals in a work setting**

The findings from this article could be beneficial to organisations in the sense that they provide the organisation with a guideline for the typical emotions that professionals in a gold mining industry experience, the typical events and situations that give rise to these specific emotions, and the way in which employees deal with these emotion experiences. Therefore, the insightful findings regarding the emotion experiences of professionals in a South African gold mining environment could be useful in aiding organisations in developing interventions for effectively dealing with certain emotion experiences and could be beneficial to preventing certain events from affecting employees negatively.

#### **Article 2: The construct validity and reliability of an emotional intelligence measurement: An exploratory and confirmatory factor analysis approach**

Three factors of emotional intelligence remained consistent over the white and African culture groups. These three factors were caring and empathy, control of emotion, and use of emotion to facilitate thinking). However, four items of the GEIS (*“I think of the positive side of things”*; *“I am not interested in the problems of others”*; *“I often regret things that I did or said when I was angry”*; and *“I have the tendency to show my impatience to others”*) did not have meaningful loadings for the African sample. The recommendation can therefore be made that differences in emotional intelligence across different South African culture groups should be investigated, with specific reference to emotion expression and recognition. It can also be recommended that culture specific emotional intelligence measures should be developed, aiming to determine the specific emotional differences in terms of various culture groups within South Africa.

Managers should recognise the importance of emotional intelligence, and their awareness should be alerted to the fact that the emotional intelligence profiles for employees, might differ across cultures (Ilangoan, Scroggins, & Rozell, 2007). Management should also capitalise on cross-cultural differences in emotional intelligence by placing employees in work contexts that embrace their



emotional intelligence profiles (Earley & Peterson, 2004), considering strengths and weaknesses in terms of emotional intelligence across cultures.

### **Article 3: A model of work wellness for human resource employees in a platinum- and steel production environment**

Given the fact that stress and burnout are, *inter alia*, caused by a failure to regulate ones own emotions and interactions with others (Brotheridge & Lee, 2003), it is important that employees are supported by organisations implementing interventions aimed at preventing burnout and increasing wellness. Interventions focusing on emotional intelligence and emotion regulation should be developed and should be directed towards informing employees on appropriate ways to manage and express their emotions, as well as ways to prevent emotional dissonance and exhaustion.

#### **5.3.2 Recommendations for future research**

##### **Article 1: The emotion experiences of professionals in a work setting**

It can be recommended that emotions and specific events leading to these emotions, as well as the regulation of emotion experiences, be researched on different occupational levels in various industries. It can also be recommended that larger samples be used to overcome the possible limitation of bias. Together with interviews and observations, participants could additionally be asked to keep diaries of their emotions and events causing such emotions, as well as ways in which they deal with the experiences. The central question asked during interviews, could be constructed in such a way as to gain better insight into the events leading to emotion experiences, as well as methods implemented to regulate these experiences.

##### **Article 2: The construct validity and reliability of an emotional intelligence measurement: An exploratory and confirmatory factor analysis approach**

Future studies should be directed towards focusing on the impact of culture on emotional intelligence, with regard to how different cultures experience, express and recognise emotions. Future research

should also investigate cultural factors that may influence emotional intelligence levels of individuals from a particular culture, for instance gender roles, individualism, collectivism etc. Research should also be directed at identifying the relationship between cultural differences and performance outcomes. During sample selection, cultural and ethnic group statuses should be a factor of inclusion (Paniagua, 2005). Studies should be directed towards determining the meaning attributed to different emotions across various cultures in South Africa, seeing that the need exists to develop culture-specific questionnaires (Abrahams, 2002; Meiring, 2000).

### **Article 3: A model of work wellness for human resource employees in a platinum- and steel production environment**

Future research should investigate the relationship between emotional intelligence and emotion work (McQueen, 2004), seeing that emotion regulation forms part of the ability of emotional intelligence, as well as one of the aspects of emotion work. The role of social support in the relationship between emotion work and burnout should be further investigated, because of the fact that social support have been found to influence burnout as well as emotion work. Future studies could also be aimed at validating the Greek Emotional Intelligence Scale for a South African context, seeing that no studies have been done in this regard and the GEIS shows promise of being a valid measure of emotional intelligence across cultures.

This chapter provided conclusions regarding the results of the empirical studies of the three independent articles that formed part of this study. Conclusions were formed with regard to the research objectives that were stated for each article. Limitations in terms of the specific articles were stated and discussed. Finally, recommendations for the organisation were made, and recommendations for future research were presented.

## References

- Abrahams, F. (2002). Fair usage of the 16PF (SA 92) in South Africa: A response to C. H. Prinsloo & I. Ebersohn. *South African Journal of Psychology*, 32, 5841.
- Akerjordet, K. (2009). Emotional intelligence: Part 1: The development of scales and psychometric testing. *Nursing and Health Sciences*, 11(1), 58-63.
- Altun, I. (2002). Burnout and nurses' personal and professional values. *Nursing Ethics*, 9(3), 269-278.
- Arumugam, S. (2003). EQ: The new business leader's edge. *Management Today*, 19, 22-23.
- Ashkanasy, N. M. (2003). Emotions in organizations: A multi-level perspective. *Research in Multi-level Issues*, 2, 9-54.
- Ashton-James, C. E., & Ashkanasy, N. M. (2005). What lies beneath?: A process analysis of Affective Events Theory. *The Effect of Affect in Organizational Settings*, 1, 23-46.
- Austin, E. J., Dore, T. C. P., & O'Donovan, K. M. (2008). Associations of personality and emotional intelligence with display rule perceptions and emotional labour. *Personality and Individual Differences*, 44, 679-688.
- Austin, E. J., Saklofske, D. H., Huang, S. H. S., & McKenny, D. (2004). Measurement of trait emotional intelligence: Testing and cross-validating a modified version of Schutte et al.'s (1998) measure. *Personality and Individual Differences*, 36, 555-562.
- Bagozzi, R. P., Gopinath, M., & Nyer, P. U. (1999). The role of emotions in marketing. *Academy of Marketing Science Journal*, 27, 184-206.
- Bagozzi, R. P., Wong, N., & Yi, Y. (1999). The role of culture and gender in the relationship between positive and negative affect. *Cognition and Emotion*, 13, 641-672.
- Bakker, A. B., Demerouti, E., & Verbeke, W. (2004). Using the Job Demands-Resources Model to predict burnout and performance. *Human Resource Management*, 43(1), 83-104.
- Bar-On, R. (2000). Emotional and social intelligence: Insights from the Emotional Quotient Inventory. In R. Bar-On & J. D. A. Parker (Eds.), *The handbook of emotional intelligence: Theory, development, assessment and application at home, school and in the workplace*. San Francisco, CA: Jossey-Bass.
- Brackett, M. A., Mayer, J. D., & Warner, R. M. (2004). Emotional intelligence and its relation to everyday behaviour. *Personality and Individual Differences*, 36, 1387-1402.

- Brotheridge, C. M., & Lee, R. T. (2003). Development and validation of the emotional labour scale. *Journal of Occupational and Organizational Psychology*, 76, 365-379.
- Byron, K. (2008). Differential effects of male and female managers' non-verbal emotional skills on employees' ratings. *Journal of Managerial Psychology*, 23, 118-134.
- Cacioppo, J. T., & Gardner, W. L. (1999). Emotion. *Annual Review of Psychology*, 50, 191-214.
- Cooper, R. K. (1997). Applying emotional intelligence in the workplace. *Training and Development*, 51(12), 31-38.
- Côté, S. (2005). A social interaction model of the effects of emotion regulation on work strain. *Academy of Management Review*, 30, 509-530.
- Craig, A., Tran, Y., Hermens, G., Williams, L. M., Kemp, A., Morris, C., & Gordon, E. (2009). Psychological and neural correlates of emotional intelligence in a large sample of adult males and females. *Personality and Individual Differences*, 46, 111-115.
- Dean, J. N., Brandes, P., & Dharwadkar, R. (1998). Organizational cynicism. *Academy of Management Review*, 23, 341-352.
- Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*, 86, 499-512.
- Demerouti, E., Bakker, A. B., Vardakou, I., & Kantas, A. (2003). The convergent validity of two burnout instruments: A multitrait-multimethod analysis. *European Journal of Psychological Assessment*, 19(1), 12-23.
- Earley, P. C., & Peterson, R. S. (2004). The illusive cultural chameleon: Cultural intelligence as a new approach to intercultural training for the global manager. *Academy of Management Training and Education*, 3, 100-115.
- Fineman, S. (2003, July). Emotional labour: A done concept? Paper presented at ESRC seminar, Loughborough, UK.
- Fitness, J. (2000). Anger in the workplace: An emotion script approach to anger episodes between workers and their superiors, co-workers and subordinates. *Journal of Organizational Behavior*, 21, 147-162.
- Freudenthaler, H. H., & Neubauer, A. C. (2005). Emotional intelligence: The convergent and discriminant validities of intra- and interpersonal emotional abilities. *Personality and Individual Differences*, 39, 569-579.

- Gabriel, Y. (1998). An introduction to the social psychology of insults in organizations. *Human relations*, 51, 1329-1254.
- Gignac, G. E., Palmer, B. R., Manocha, R., & Stough, C. (2005). An examination of the factor structure of the Schutte self-report emotional intelligence (SSREI) scale via confirmatory factor analysis. *Personality and Individual Differences*, 39, 1029-1042.
- Grandey, A. A. (2000). Emotion regulation in the workplace: A new way to conceptualize emotional labor. *Journal of Occupational Health Psychology*, 5(1), 95-110.
- Grandey, A. A., Tam, A. P., & Brauburger, A. L. (2002). Affective states and traits in the workplace: Diary and survey data from young workers. *Motivation and Emotion*, 26, 31-55.
- Hakanen, J. J., Perhoniemi, R., & Toppinen-Tanner, S. (2008). Positive gain spirals at work: From job resources to work engagement, personal initiative, and work-unit innovativeness. *Journal of Vocational Behaviour*, 73, 78-91.
- Hochschild, A. R. (1983). *The managed heart: Commercialization of human feeling*. Berkeley, CA: University of California Press.
- Ilangovan, A., Scroggins, W. A., & Rozell, E. J. (2007). Managerial perspectives on emotional intelligence differences between India and the United States: The development of research propositions. *International Journal of Management*, 24, 541-548.
- Jonker, C. S., & Joubert, S. (2009). Emotion work and well-being of client service workers within small and medium-sized enterprises. *Management Dynamics*, 18, 35-48.
- Jonker, C. S., & Vosloo, C. (2008). The psychometric properties of the Schutte Emotional Intelligence Scale. *South African Journal for Industrial Psychology*, 34, 21-30.
- Keil, R. M. K. (2004). Coping and stress: A conceptual analysis. *Journal of Advanced Nursing*, 45, 659-665.
- Mak, A. S., & Mueller, J. (2001). Negative affectivity, perceived occupational stress, and health during organizational restructuring: A follow-up study. *Psychology and Health*, 16, 125-137.
- Matsumoto, D. (2002). Methodological requirements to test a possible in-group advantage in judging emotions across cultures: Comments on elfenbein and ambady and evidence. *Psychological Bulletin*, 128, 236-242.
- Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? In P. Salovey and D Sluyter (Eds.), *Emotional development and emotional intelligence: Implications for educators* (pp. 3-31). New York: Basic Books.

- Mayer, J. D., Salovey, P., & Caruso, D. R. (2000). Models of emotional intelligence. In R. J. Sternberg (Ed.), *Handbook of human intelligence* (pp. 396-420). New York: Cambridge University Press.
- McQueen, A. C. H. (2004). Emotional intelligence in nursing work. *Journal of Advanced Nursing*, 47, 101-108.
- Meiring, D. (2000. June). *Revisiting the cross-cultural comparability of the 16 Personality Factor Inventory (16PF) in the South African context*. Paper presented at the Industrial Psychology Conference (incorporating the Psychometrics Conference), Pretoria, South Africa.
- Merriam-Webster, Inc. (1993). *Webster's 10<sup>th</sup> new collegiate dictionary*. Springfield, MA: Merriam-Webster, Inc..
- Naudé, J. L. P. (2003). *Occupational stress, coping, burnout and work engagement of emergency workers in Gauteng*. Unpublished doctoral thesis, PU for CHE, Potchefstroom.
- O'Connor Jr, R. M., & Little, S. I. (2003). Revisiting the predictive validity of emotional intelligence: Self-report versus ability-based measures. *Personality and Individual Differences*, 35, 1893-1902.
- Ogińska-Bulik, N. (2005). Emotional intelligence in the workplace: Exploring its effects on occupational stress and health outcomes in human service workers. *International Journal of Occupational Medicine and Environmental Health*, 18, 167-175.
- Paniagua, F. A. (2005). *Assessing and treating culturally diverse clients: A practical guide*. Thousand Oaks, CA: Sage Publications.
- Petrides, K. V., & Furnham, A. (2000). On the dimensional structure of emotional intelligence. *Personality and Individual Differences*, 29, 313-320.
- Prins, J. T., Hoekstra-Weebers, J. E. H. M., Gazendam-Donfrio, S. M., Van de Wiel, H. B. M., Sprangers, F., & Jaspers, F. C. A. (2007). The role of social support in burnout among Dutch medical residents. *Psychology, Health and Medicine*, 12(1), 1-6.
- Salanova, M., Agut, S., & Peiró, J. M. (2005). Linking organizational resources and work engagement to employee performance and customer loyalty: The mediation of service climate. *Journal of Applied Psychology*, 90, 1217-1227.
- Salovey, P., & Mayer, J. (1990). Emotional intelligence. *Imagination, Cognition and Personality*, 9(3), 185-211.
- Sand, G., & Miyazaki, A. D. (2000). The impact of social support on salesperson burnout and burnout components. *Psychology and Marketing*, 17(1), 13-26.

- Sarason, B., & Duck, S. (2001). *Personal relationship: Implications for clinical and community psychology*. Chichester: John Wiley & Sons.
- Schaubroeck, J., & Jones, J. R. (2000). Antecedents of workplace emotional labor: Dimensions and moderators of their effects on physical symptoms. *Journal of Organizational Behavior*, 21, 163-183.
- Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behavior*, 25, 293-315.
- Schaufeli, W. B., Salanova, M., Gonzáles-Romá, V., & Bakker, A. B. (2002). The measurement of engagement and burnout: A two-sample confirmatory factor analytic approach. *Journal of Happiness Studies*, 3(1), 71-92.
- Schutte, N. S., Malouff, J. M., Hall, L. E., Haggerty, D. J., Cooper, J. T., Golden, C. J., & Dornheim, L. (1998). Development and validation of a measure of emotional intelligence. *Personality and Individual Differences*, 25, 167-177.
- Seligman, M. E. P., Walker, E. F., & Rosenham, D. L. (2001). *Abnormal psychology* (4<sup>th</sup> ed.). New York: WW Norton and Company, Inc.
- Sharma, R. R. (2008). Emotional intelligence from 17th century to 21st century: Perspectives and directions for future research. *VISION – The Journal of Business Perspective*, 12(1), 59-66.
- Sharma, S., Deller, J., Biswal, R., & Mandal, M. K. (2009). Emotional intelligence: Factorial structure and construct validity across cultures. *International Journal of Cross-cultural Management*, 9, 217-236.
- Storm, K. (2002). *Burnout and engagement in the South African Police Service*. Unpublished doctoral thesis, PU for CHE, Potchefstroom.
- Torkelson, E., & Muhonen, T. (2003). Coping strategies and health symptoms among women and men in a downsizing organization. *Psychological Reports*, 92, 899-907.
- Tsaousis, I. (2007). *Measuring trait emotional intelligence: Development and psychometric properties of the Greek Emotional Intelligence Scale (GEIS)*. Athens, University of Aegean.
- Van Rooy, D. L., & Viswesvaran, C. (2004). Emotional intelligence: A meta-analytic investigation of predictive validity and nomological net. *Journal of Vocational Behavior*, 65(1), 71-95.
- Weiss, H. M., & Cropanzano, R. (1996). *Affective events theory: A theoretical discussion of the structure, causes and consequences of affective experiences at work*. Greenwich, CT: JAI Press.
- Wolmarans, S. (1998). Goodbye Taylor, hello emotions! *Management Today*, 14, 26-29.

- Wong, C. S., & Law, K. S. (2002). The effects of leader and follower emotional intelligence on performance and attitude: An exploratory study. *Leadership Quarterly*, 13, 243-274.
- Xanthopoulou, D., Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2007). The role of personal resources in the job demands-resources model. *International Journal of Stress Management*, 14, 121-141.
- Zapf, D. (2002). Emotion work and psychological well-being: A review of the literature and some conceptual considerations. *Human Resource Management Review*, 12, 237-268.
- Zapf, D., Vogt, C., Seifert, C., Mertini, H., & Isic, A. (1999). Emotion work as a source of stress: The concept and development of an instrument. *European Journal of Work and Organizational Psychology*, 8, 371-400.