

POSITIVE PSYCHOLOGICAL FUNCTIONING AMONG CIVIL SERVANTS

by

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DECLARATION

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I declare that **POSITIVE PSYCHOLOGICAL FUNCTIONING AMONG CIVIL SERVANTS** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

SIGNATURE

(Miss MA Patrick)

DATE

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To my Heavenly Father, all the Honour and Glory!

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SUMMARY

Employees in the workplace face many challenges that cause stress. Despite these stresses many cope and remain positive. This study investigated positive psychological functioning among civil servants and explored how they functioned despite stressors in the work environment. The constructs of locus of control, sense of coherence, engagement and their relationship to the burnout construct (viewed as the opposite end of the wellness continuum) were used to examine this behaviour. Results showed that high sense of coherence, locus of control and engagement scores resulted in low burnout scores. Internal control and meaningfulness were found to be significant predictors of engagement. Employees will therefore be engaged in their work only if and when they display and/or are allowed to exhibit emotional meaningfulness in their work and their relationships, and when they behave and make decisions from an internal motivation.

KEY TERMS

Positive psychology, salutogenesis, psychofortology, locus of control, sense of coherence, engagement, burnout

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CHAPTER 1: SCIENTIFIC INTRODUCTION TO THE STUDY

The aim of this chapter is to provide the background to and motivation for the study. This study deals with positive psychological functioning among civil servants. Subsequently, the literature and empirical aims are formulated and the paradigm perspective is discussed. In addition, the literature relevant to this study is indicated and the research design and methodology are presented. The chapter division for the study is delineated and the chapter concludes with a summary.

1.1 BACKGROUND AND MOTIVATION FOR THIS STUDY

One of the symptoms of today's pressurised society is that work is becoming less of a positive experience for many people. Levels of work stress have risen and job satisfaction has decreased, while burnout in the workplace has increased. This is not limited to any specific job, but can be seen across the spectrum of all jobs (<http://www.cstherapy.co.za>). Despite the demands and stresses of their current work environment, however, most individuals are coping and continuing to work. Antonovsky (1979) concludes that stressors are omnipresent in human existence; in fact the human condition is stressful. It is this response to the experiencing of stress in the organisation, and the ability to adapt and cope in the face of it, that is described in this study.

Over the past decade, organisational wellness in South Africa has received much attention, as employees struggle to cope with and adapt to the continuous, significant and pervasive organisational changes that have occurred. Organisations in both the private and the public sectors are starting to realise the importance of employee health, safety and wellness for moral as well as business reasons (Rothmann, 2005).

During visits to all provincial and head office structures of the government department that was studied for this research, the Executive Management observed that stress was a major challenge to the organisation and that it needed to be investigated. This observation correlates with a previous survey

conducted in the department which evaluated medicine and drug usage. The results of that survey showed that the use of medication for depression and anxiety was abnormally high (Drug usage survey, Employee Assistance Programmes, 2005).

The Employee Assistance Programmes (EAP) unit of the department was tasked with following up and investigating the issues uncovered by the drug use survey by conducting a stress audit of all employees of the organisation, and thereafter to submitting recommendations to deal with the identified stressors (Stress Audit, Employee Assistance Programmes, 2006).

The EAP Unit used focus groups to conduct the stress audit, which included employees from the head office and all the provincial offices. Each focus group had its own constitution and identity while being drawn from different working environments. Where individuals felt hesitant to voice their opinions in the group or where fear of victimisation existed, such individuals were interviewed privately. It was found that, despite the different geographic locations, the same perceived stressors were conveyed by employees of all groups. The consistency of the reports from all offices contributed to the reliability of the information received.

The audit results were collated, grouped and analysed to identify trends and patterns. Individual responses that did not fit the trends or patterns were also included and fed back to top management. The results overwhelmingly indicated that stress was being experienced by employees. Employees reported that they were despondent, lacked energy and were often not interested in working because they had lost hope. They were particularly reluctant to expect any improvement after the audit because there was the general perception that hopes were regularly raised by promises, only to be disappointed by inaction.

A number of stressors were identified. These included poor communication, especially exclusion from decision making, feeling distanced from head office decisions, being ill equipped for job tasks, and a management and

organisational culture that was not conducive to rewarding individual hard work and diligence. The above complaints and perceived stressors are not unique to the organisation in question and sum up the stressors experienced by most organisations in depression.

While further being under strain from the numerous changes that had taken place under each new political head in the department, it was nevertheless observed that there were some employees who had adapted better than others. Many went on functioning at a steady rate of productivity, reached their deadlines, were absent only for valid reasons, maintained a normal family and personal life, were not in debt and were not substance dependent. This study explores the way in which these employees have adapted positively to the stressors in the work environment.

This study examines the way in which employees in the organisation function in terms of a positive psychology perspective.

1.2 PROBLEM STATEMENT

This study investigated the use of appropriate constructs to determine how employees function in the organisation. This was viewed from a positive psychology paradigm. The empirical study measured the constructs identified as they manifested in a sample of employees in the organisation. The data were then analysed in order to draw inferences about positive psychological functioning among these employees.

The following research questions were formulated for this study:

- How do employees cope with stress in the organisation?
- How can positive psychological functioning be conceptualised?
- What is the nature of positive psychological functioning in this specific organisation?

1.3 AIMS

The general aim of this study was to explore positive psychological functioning among civil servants. The specific literature aims were to conceptualise coping with stress in the organisation, and to theoretically integrate the use of the constructs in positive psychology.

The specific aims for the empirical study were to measure and interpret positive psychological functioning among employees in the civil service and to recommend strategies for the organisation in coping with organisational life.

1.4 THE PARADIGM PERSPECTIVE OF THE STUDY

According to Mouton and Marais (1996), research is always conducted within the context of a specific paradigm. Paradigms are assumptions or views on which theorists agree. Paradigmatic research is conducted within the framework of a given research tradition or paradigm. This refers to the intellectual climate or variety of meta-theoretical values or beliefs and assumptions underlying the theories and models that form the definitive context of the research (Mouton & Marais, 1996).

1.4.1 Relevant psychological paradigms

The positive psychology paradigm is the overarching perspective that guides this study and salutogenesis is presented as a sub-discipline of positive psychology. This study also uses the humanistic paradigm as a basis for the theoretical review, while the empirical paradigm applied is the functionalist paradigm, which is concerned with understanding society in a way that generates useful empirical knowledge (Morgan, 1980).

1.4.1.1 Positive psychology paradigm

Strümpfer (2002) asserts that the first assumption of positive psychology is that stressors, adversity and other inordinate demands are inherent in the human condition. Secondly, that there are also sources of strength through

which this condition can be endured and even transcended. A third assumption is that physical, emotional and social trials and tribulations can stimulate continuous growth and strengthening, as products of the discovery of capacities (Strümpfer, 2002).

1.4.1.2 Salutogenic paradigm

The salutogenic paradigm (Antonovsky, 1979) focuses on the origins of health and wellness, the location and development of personal and social resources, and the adaptive tendencies which relate to the individual's disposition and allow the individual to select appropriate strategies to deal with confronting stressors. Instead of studying abnormal behaviour, this paradigm focuses on locating and developing personal and social resources and adaptive tendencies which result in effective coping behaviour and growth (Breed, Cilliers & Visser, 2006). In contrast to the traditional pathogenic paradigm, a paradigm of salutogenesis (tracing the origins of health) is strongly in the ascent and maintains that stressors are omnipresent, rather than the exception, and that people are nevertheless surviving and remaining healthy.

Most of the South African research on salutogenesis started in the 1980s and was initiated by Strümpfer (1990). Strümpfer (1995) contends that salutogenic studies are designed to test hypotheses that explain successful (healthy) outcomes, give attention to the deviant cases and accept that stressors may have salutary consequences. He maintains that the salutogenic paradigm is vitally important for new insights and new growth in the social sciences, as it holds promise for the integration of knowledge at a new, higher level.

1.4.1.3 Humanistic paradigm

The humanistic paradigm takes as its model the responsible human being who is able to choose freely from the possibilities available. The basic assumptions of this approach are the positive nature of human beings and the conscious processes of the individual; the individual is seen as an active being contributing to his or her own growth and potential; and lastly, is seen

as an integrated whole who should be studied as an integrated, unique, organised whole or gestalt (Meyer, Moore & Viljoen, 1995).

1.5 APPLICABLE MODELS AND THEORIES

A number of models and theories are applicable to this study and they are discussed here.

1.5.1 The salutogenic model

Historically, the salutogenic model (Strümpfer, 1990) highlights the strengths of individuals and their capacity for successful adjustment; it also tries to explain why certain people seem to preserve health and well-being and cope with tension and exposure to life's stresses and difficulties. A number of salutogenic constructs were identified by Strümpfer (1990) in an attempt to define salutogenic behaviour.

The salutogenic constructs of the Strümpfer model illustrate the potential of salutogenic thinking. The constructs of sense of coherence, hardiness, self-efficacy, locus of control and potency are seen as the most important in this regard. Breed *et al.* (2006) maintain that the operationalisation of these constructs is used increasingly as a way of explaining how individuals cope with change and adapt to the new world of work and its demands.

1.5.2 Positive psychology constructs

Positive psychology studies various individual constructs, namely, locus of control, self-efficacy and emotional intelligence (Snyder & Lopez, 2002), hope and optimism (Peterson, 2000) and specific approaches like positive coping (Somerfield & McCrae, 2000). Positive psychology encompasses the salutogenic paradigm, to which Strümpfer (1990) proposes the constructs of sense of coherence, personality hardiness, potency, stamina and learned resourcefulness are linked, as they deal with how people manage stress and stay well (Antonovsky, 1987). Strümpfer (1990) also links personal causation,

self-efficacy, human agency, internal-external locus of control and social interest as other salutogenesis-related constructs.

Various South African studies have used the constructs of sense of coherence, locus of control, and learned resourcefulness (Cilliers & Ngokha, 2006; Cilliers & Kossuth, 2004; Du Buisson-Narsai, 2005; Breed *et al.*, 2006). Frenz, Carey and Jorgensen (1993) contend that the sense of coherence construct has been applied widely in research, while locus of control is viewed as one of the core dimensions of the salutogenic model in the field of positive psychology (Sutherland & Cooper, 1990).

It is proposed that, in this study, these constructs are most appropriate for assessing how members are coping in the organisation.

1.5.3 Operational definitions of constructs

An operational definition assigns meaning to a construct by specifying the activities or operations necessary to measure it (Kerlinger, 1996); thus, an operational definition specifies the activities of the researcher when measuring the variables. The following positive psychology constructs will be used for this study.

1.5.3.1 *Locus of control*

Locus of control refers to the extent that an individual perceives that they have control over a given situation (Sutherland & Cooper, 1990). This construct is a descriptor of individual differences which point to the fact that people who are internally motivated are more inclined to perceive their behaviour as instrumental in obtaining the desired outcomes, and people who are externally motivated, believe that undesirable outcomes are the results of forces beyond their control (Leone & Burns, 2000). Accordingly, locus of control is defined as a generalised expectancy of the extent to which a person perceives that events in life are the consequences of one's behaviour (Rotter, 1966).

The Locus of Control Inventory (Scheppers, 1995) was used as an instrument in this study.

1.5.3.2 Sense of coherence

Sense of coherence is defined by Antonovsky (1979; 1987) as a global orientation that expresses the extent to which one has a pervasive enduring, though dynamic, feeling of confidence that (1) the stimuli deriving from one's internal and external environments in the course of living are structured, predictable and explicable; (2) the resources are available to meet the demands posed by these stimuli; and (3) these demands are challenges worthy of investment and engagement.

The Antonovsky (1987) Orientation to Life questionnaire was used as an instrument in this study.

1.5.3.3 Engagement

Schutte, Toppinen, Kalimo and Schaufeli (2000) define engagement as an energetic state in which employees are dedicated to excellent performance at work and are confident of their effectiveness. Schaufeli and Bakker (2003) define engagement as a positive, fulfilling work-related state of mind that is characterised by vigour, dedication and absorption. It is a pervasive affective-cognitive state that is not focused on any particular object, event, individual or behaviour.

The Utrecht Work Engagement Scale was used as an instrument in this study.

1.5.3.4 Burnout

Burnout is defined as a persistent, negative, work-related state in normal individuals that is primarily characterised by exhaustion, and which is accompanied by distress, a sense of reduced effectiveness, decreased motivation and the development of dysfunctional attitudes and behaviours at work (Schaufeli & Enzmann, 1998). Maslach and Jackson (1986) view

burnout as a syndrome of emotional exhaustion, depersonalisation and reduced personal accomplishment that can occur among individuals.

Schaufeli and Enzmann (1998) describe burnout as the opposite of engagement and define the construct as a persistent, negative, work-related state of mind in normal individuals, primarily characterised by emotional exhaustion and accompanied by distress, a sense of reduced effectiveness, decreased motivation, and the development of dysfunctional attitudes and behaviour at work.

The Maslach Burnout Indicator-General Survey was used as an instrument in this study.

1.6 RESEARCH DESIGN

A research design is essentially the arrangement of conditions so that data can be collected and analysed in a manner that aims to combine relevance in the research purpose with economy in procedure (Mouton & Marais, 1996). The research design sets up the framework for the study of relationships among variables.

According to Mouton and Marais's (1996) definition of exploratory and descriptive research, this study can be viewed as:

- exploratory, in that it conducts a survey of people who have had practical experience of stress in the organisation and attempts to gain insight into how they cope and adapt in the organisation
- descriptive, as it seeks an in-depth description of the individual's ability to cope and adapt in the organisation

Surveys are a widely used descriptive research technique which represents a probe into a given state of affairs at a given time (Christensen, 1994). Babbie (1995) notes that survey research has the advantage of being economical in the sense that large amounts of data can be collected and the collected data

can be standardised. This is a deductive approach in terms of which the researcher starts with a theoretical or applied research problem and ends with empirical measurement and data analysis (Neuman, 1997).

In this study, measures of positive psychology were assessed to determine how people adapt and cope positively in an organisation. The unit of analysis was the individual employee in the organisation and the data collected from the employees in terms of this study were analysed and the results documented.

The population and sample used was representative of the race, gender, age, occupational band and job function of the employees of the organisation. An important criterion was the tenure served in the organisation, which may be an indication of the length of time the individual has had to cope with constant organisational stressors.

1.7 RESEARCH METHOD

The study was applied in two phases. Phase one comprised the literature review and phase two consisted of the empirical study for the project.

1.7.1 Literature review

The literature review was used to conceptualise coping with stress in the organisation and to integrate the use of constructs theoretically in positive psychology.

1.7.2 Empirical study

The empirical study measured positive psychological functioning as it manifested in a sample of employees in the organisation; it also interpreted the positive psychological functioning of these employees.

1.7.2.1 *Description of the population and sample*

The population of a study refers to the total collection of all units of analysis (members or individuals) about which specific conclusions are made (Welman, Kruger & Mitchell, 2006). In this study a convenience sample was drawn from the population, which involves the selection of the most accessible subjects for the required sample size (Marshall, 1996).

The population (N = 1100) for this study consisted of employees from a government department. A convenience sample (n = 235) was drawn, which comprised employees across all job levels and included both the head office and provincial offices of the organisation. The final sample consisted of n = 144.

Employees in the sample were representative of all race groups, gender, ages and job function in the organisation. They were also drawn from all occupational bands and included members of management.

1.7.2.2 *Reliability of instruments*

Reliability refers to the application of a valid measuring instrument to different groups under different sets of circumstances which should lead to the same observation (Mouton & Marais, 1996). The researcher will make use of valid and structured instruments in order to ensure that reliability is maximised (Welman & Kruger, 2001). In this study, the following instruments were identified to assess positive psychological functioning among employees in the organisation.

- *Locus of control.* The Locus of Control Inventory by Schepers (1995)
- *Sense of coherence.* The Orientation to Life questionnaire by Antonovsky (1987)
- *Engagement.* Utrecht Work Engagement Scale (Schaufeli & Bakker, 2003)
- *Burnout.* Maslach Burnout Indicator-General Survey, (Schaufeli, Leiter, Maslach & Jackson, 1996).

A biographical questionnaire was also administered to gather demographic characteristics of the participants in the study. These characteristics included race, gender, age and tenure.

1.7.2.3 Data gathering

The questionnaires were bound and mailed (electronically or by internal organisation mail service) or distributed by hand to all employees in the sample. The returned questionnaires were then captured electronically. The raw data were statistically analysed using the Statistical Program for the Social Sciences (Aspelmeier, 2009).

1.7.2.4 Interpretation of the data

The results obtained from the questionnaires were reported, interpreted and integrated to test the statistical hypotheses around the relationships between the constructs.

1.7.2.5 Conclusion, limitations and recommendations

Conclusions were drawn with reference to the study and limitations were noted. Recommendations were made for future use in the organisation.

1.8 CHAPTER DIVISION

The chapters describing the research are presented in the following manner:

Chapter 2: Coping with stress in the organisation

Chapter 3: Positive psychology constructs

Chapter 4: Research design

Chapter 5: Results

Chapter 6: Conclusions, limitations and recommendations

1.9 CHAPTER SUMMARY

Chapter 1 provided the background to and the motivation for the research. The problem statement and aims of the research were presented. A paradigm perspective including operational definitions of the constructs was given. The research design was presented. The chapter concluded with the research methodology which included the literature review and empirical study, and a delineation of the chapters.

CHAPTER 2: COPING WITH STRESS IN THE ORGANISATION

The aim of this chapter is to conceptualise coping with stress in the organisation. Accordingly, stress is defined and the dimensions and symptoms of stress, coping with stress and positive psychological functioning are discussed. Finally the chapter concludes with a summary.

2.1 DEFINITIONS OF STRESS

Stress can be examined within the broader constructs of stress versus wellbeing. A search on the PsychInfo database shows 97 705 citations for the word stress (Rothmann, 2007). The *New Oxford American Dictionary* (McKean, 2005) describes stress as a state of mental or emotional strain or tension resulting from adverse or very demanding circumstances. The stress process involves an interaction between the individual and the environment, where the discrepancy between an individual's perceived threats and the resources that are seen as being available for facing the threats leads to the experience of stress (Cooper, 2000).

According to Lazarus and Folkman (cited in Rothmann, Jackson & Kruger, 2003), job stress occurs when job demands tax or exceed the person's adaptive resources. Stress is a temporary adaptation process that is accompanied by mental and physical symptoms and is caused by an imbalance between job demands and the response capability of the worker (Rothmann, Jackson & Kruger, 2003). Stress thus refers to any event in which environmental demands, internal demands, or both, tax or exceed the adaptive resources of an individual, social system or tissue system (Monat & Lazarus, 1991).

Pienaar and Rothmann (2006) define occupational stress as the mind-body arousal resulting from physical and/or psychological job demands. In addition, Ivancevich and Matteson (2002) describe stress as the result of a unique interaction between stimulus conditions in the environment and the person's predisposition to respond in a particular way. Cooper, Dewe and O' Driscoll

(2001) categorise three types of stress definition, namely, stimulus, response and interactive. Stimulus-based definitions view stress as a situational or environmental-based stimulus which impinges on the person; response based-definitions, on the other hand, define stress as an individual's psychological or physiological response to environmental forces; while interactive-type definitions define stress as both a source and outcome of stress (Cooper, Dewe & O' Driscoll, 2001).

For the purposes of this study the following operational definition of stress is proposed: Chronic malfunctioning at work causes people to feel depleted of resources, which affects their ability to cope with the job. This continuous depletion of resources over a prolonged period, when demands of the workplace exceed adaptive responses and individuals cannot cope, results in stress.

The individual also experiences stress under the following circumstances: when expectancy regarding the outcome of events is not met and the individual has little control to change this; when events in the individual's environment no longer make cognitive sense and resources to handle the situation are inadequate; and when stimuli are not motivationally relevant, resulting in the individual not being able to connect to work activities or engage in work (Rothmann, 2003).

In this study, the cumulative result of stress in the work environment, where the employee is not engaged in work, is proposed as leading to burnout. While stress is not regarded as a measurable variable in this study, it is proposed that it relates to all behaviour that is assessed in this organisation.

2.2 DIMENSIONS AND SYMPTOMS OF STRESS

Experts at the Centre for Disease Control and the National Institute for Occupational Safety and Health in the United States (US) (<http://www.stressdirections.com>), who are dedicated to studying stress, have found that stress is linked to physical and mental health, as well as a

decreased willingness to take on new and creative endeavours. In terms of this finding, job burnout experienced by 25 to 40 percent of US workers is blamed on stress. Depression, which is just one type of stress reaction, is predicted to be the leading occupational disease of the 21st century, responsible for more days lost than any other single factor. \$300 billion, or \$7 500 per employee, is spent annually in the US on stress-related compensation claims, reduced productivity, absenteeism, health insurance costs, direct medical expenses (nearly 50 percent higher for workers who report stress), and employee turnover.

Khan (2008) reports that the findings from a long-running study involving more than 10 000 British civil servants suggest that stress-induced biological changes play a direct role in disrupting the body's internal systems. This study provided evidence of how on-the-job stress raises the risk of heart disease by disrupting the body's internal systems. The researchers measured stress among civil servants by asking questions about their job demands such as how much control they had at work, how often they took breaks, and how pressed for time they were during the day. Seven surveys conducted over a 12-year period found that chronically stressed workers had a 68 percent higher risk of developing heart disease.

A 2008/09 survey of Self-reported Work-related Illness (SWI08/09) prevalence estimate (<http://www.hse.gov.uk/statistics>) indicated that around 531 000 individuals in Britain believed that they were experiencing work-related stress at a level that was making them ill. Estimates from the SWI08/09 prevalence estimate indicate that self-reported work-related stress, depression and anxiety account for an estimated 29.3 million reported lost working days per year in Britain. The 2008/09 survey reported that an estimated 1.2 million people suffered from work-related ill-health. Musculoskeletal disorders and stress were the most commonly reported illness types.

This growing trend of stress is reflected in the experience of workers in South Africa (<http://www.cstherapy.co.za>). In addition to being a social concern,

when work stress is high, job satisfaction low and burnout increasing there is an economic impact on the organisation. According to a South African Chamber of Business (SACOB) survey, absenteeism in the workplace could be costing the South African economy as much as R12 billion a year (<http://www.business.iafrica.com>). Increasing numbers of South Africans are taking sick leave because of psychological illness, costing companies over R1 billion a year. In 2006, about R19 billion was lost on account of absenteeism resulting from sick leave in South Africa. Of this amount, R1.2 billion was lost by companies that had to pay the direct costs of sick leave resulting from psychological causes. In organisations, the symptoms of stress translate into decreased performance and motivation, increased health care costs, sick leave and absenteeism (Pienaar & Rothmann, 2006).

According to Schaufeli and Bakker (2004), from a stress perspective, any occupation can be viewed in terms of two elements, namely, job demands and job resources. Job demands are those physical, psychological, social or organisational aspects of the job which require sustained physical and/or psychological effort and, as a consequence, are associated with physiological or psychological costs. These demands can turn into stressors when trying to meet high demands. Job resources refer to physical, social or organisational aspects of the job that reduce job demands and are functional in the achievement of work goals or stimulate personal growth, learning and development (Naudé & Rothmann, 2003).

2.2.1 Macroeconomic factors

Luthans (2002) maintains that factors outside the organisation can play an important role in workplace stress. When the organisation is viewed as an open system it can be expected that forces outside the organisation will contribute to workplace stress, thus affecting individuals inside the organisation. In the 21st century, business operates faster and with more complexity and uncertainty than ever before (<http://www.stressdirections.com>). Hence, the impact of stress on profitability, whether creative or negative, must be understood, measured and managed in

a realistic and thorough way if a company is to navigate the business environment successfully (Kickul & Posig, 2001). Increased demands made by the operating and economic conditions worldwide force organisations to make rapid changes to their workforce, including downsizing, outsourcing and restructuring which impact on workers' demands and obligations. This leaves workers with experiences of stress, insecurity, misunderstanding, undervaluation and alienation (Coetzer & Rothmann, 2007).

During the last few decades, the occupational arena has been influenced by a number of factors. These include the increased use of information and communication technology, the rapid expansion of the service sector, the globalisation of the economy, the changing structure of the workforce, and changing labour legislation (Rothmann, 2005). In addition, the socioeconomic and political turmoil of the past 30 years and the changes resulting from the dissolution of apartheid have resulted in a particularly stressed work environment for the South African worker (Rothmann, 2003).

Turner, Barling and Zacharatos (2002) note that recent employment trends affect the quantity and quality of work and the changing nature of competition and create contradictions in the work experience. While long-term employment was the norm for much of the older population, much of today's workforce faces a very different situation where work increasingly involves part-time employment, contingent employment and multiple careers. Many employees experience a loss of control over working hours and a sense of job insecurity. The struggle for organisations to compete has meant adopting practices that attempt to reduce costs and increase productivity which favours profits over the welfare of people. Turner *et al.* (2002) maintain that the nurturing of human potential in today's workplace must not be neglected.

2.2.2 Organisational stressors

The individual has potential stressors outside the workplace to contend with, as well those generated within the organisation. Internal organisational stressors are unique to the organisation and occur at the macro-level

(Luthans, 2002). The literature on stress is overwhelmingly clear about the negative effects of occupational stress, the symptoms of which include impaired performance or a reduction in productivity, diminishing levels of customer service, health problems, absenteeism, high staff turnover, and alcohol and drug abuse (Naudé & Rothmann, 2003).

Stressors are viewed as factors that influence the mechanisms through which an individual responds to stressful situations (Anisman & Merali, 1999). Barling, Kelloway and Frone (2005) write that stressors are stress-producing environmental circumstances or stress-producing events and conditions (SPECs). If these stressors or SPECs are not readily coped with, negative reactions ensue.

Stressors inherent to the organisation include the functioning of the organisation, the task characteristics, the physical working conditions, equipment, career matters and social issues (Van Zyl, 2002). Over the past four decades there has been considerable research that supports the notion that work- and organisation-related stresses can indeed have deleterious effects on valued work outcomes and employee health (Bhagat, Krishnan, Nelson, Leonard, Ford & Billing, 2010).

The term organisational stressors refers to stress that results from certain characteristics of the organisation itself and includes stressors such as management style, staff shortages, inadequate resources, lack of communication and work overload (Wiese, Rothmann & Storm, 2003). Cartwright and Cooper (2002) identify several occupational stressors which include poor or unsupportive relationships with colleagues and/or superiors, work-life imbalance, unmanageable workloads and time pressures, fear of job loss, lack of resources and communication, pay and benefits, and lack of control or influence in the way in which work is organised.

Barling *et al.* (2005) cite poor leadership, work–family conflict, a poor physical work environment, advanced technology, workplace aggression, busy work schedules and organisational politics as factors that contribute to a stressed

organisation. Dua (1994) cites a number of variables that act as organisational stressors. They include intrinsic job factors (e.g. poor working conditions and work overload), the nature of the organisation (e.g. lack of promotion policies and job security), poor relationships at work and organisational culture (e.g. politics in organisations and lack of participation in decision making). According to Spielberger, Vagg and Wasala (2003), employees evaluate their work environment in terms of the severity and frequency of the occurrence of specific job demands and pressure, and the level of support provided by supervisors, co-workers and organisational policies and procedures.

Studies on occupational stressors identify a number of negative effects of stress among emergency workers and members of the police service (Naudé & Rothmann, 2003; Pienaar & Rothmann, 2006; Van der Colff & Rothmann, 2009). They include job demands, lack of organisational support, decreased performance and motivation, increased health care costs, sick leave and absenteeism.

Rothmann and Coetzee (2005) conducted the first study in South Africa using a stress assessing tool on employees at a higher education institution. They also wanted to compare the findings to established normative data in order to determine a stress profile of employees within the organisation. Compared to the normative data, they found that employees were more stressed by aspects of work relationships and job characteristics that included constant changes within the organisation, physical working conditions and the way in which work performance is measured. High levels of the physical and psychological outcomes of stress were also found.

In a study conducted by Naudé and Rothmann (2003) to identify occupational stressors for emergency workers, it was found that these workers reported that the stressors most experienced by them in their current jobs related to a lack of organisational support. These stressors include a lack of job resources, such as insufficient personnel to handle the workload, inadequate

remuneration, co-workers not doing their jobs, a lack of recognition and a lack of opportunity for advancement.

Organisational stress is seen as a source of psychological strain which leads to ineffective cognitive functioning or disturbed affective states (Bhagat *et al.*, 2010). This experience of psychological strain manifests in nervousness, feelings of anxiety, and depression. Regardless of the national or cultural context, individuals report psychological strain or distress when they are confronted with unclear expectations regarding how to perform their work-related duties and responsibilities.

Wallace, Edwards, Arnold, Frazier and Finch (2009) maintain that there is a focus on the negative outcomes of stressors given evidence of a negative relationship between stressors and productivity. As a result of job demands that continue to rise, work-related stressors have become increasingly important issues for employees and employers. The general assumption is that stressors are detrimental and that organisations must find ways to prevent or reduce stressors and their associated strains.

2.2.3 Individual stressors

Although all individuals operate on a physical, emotional, mental and spiritual level, each individual responds to similar stimuli in different ways. Accordingly, the individual is at the core of the work stress, lack of job satisfaction and the burnout problem (Rothmann, 2007). Occupational stress has been related to heart disease, hypertension, upper respiratory tract infections, peptic ulcers, migraines, depression, anxiety and other mental disorders (Pienaar & Rothmann, 2006).

The term job stressors refer to the degree to which the work environment contains stimuli that require sustained cognitive, emotional or physical effort. Three types of job stressor can be distinguished (De Jonge & Dormann, 2006): (1) cognitive stressors, which impinge primarily on the brain processes involved in information processing; (2) emotional stressors, which refer primarily to the effort needed to deal with organisationally desired emotions

during interpersonal transactions; and (3) physical stressors, which are primarily associated with the musculoskeletal system.

Occupational stress is defined as the mind-body arousal resulting from the physical and/or psychological demands associated with the job. The appraisal of a stressor as threatening leads to the emotional arousal of anxiety and anger, and the associated activation of the autonomic nervous system. If severe and persistent, the resulting physical and psychological strain may cause adverse behavioural consequences (Spielberger *et al.*, 2003).

Research (Maslach & Leiter, 2008) has established that burnout is a stress phenomenon that shows the expected pattern of health correlates, such as headaches, gastrointestinal disorders, muscle tension, hypertension, cold or flu episodes, and sleep disturbances.

Cartwright and Cooper (2002) state that a stressor has to be perceived and recognised by the individual as overwhelming their ability to cope; therefore, stress arises when individuals perceive that the demands made on them exceed their ability to cope. These authors identify several occupational stressors, namely, poor work relationships, work-life imbalances, job overload, job insecurity, and lack of resources, communication, pay and benefits.

Studies have shown that occupational stressors may result in mental, physical and behavioural stress reactions such as burnout, depression and psychosomatic diseases (Coetzer & Rothmann, 2007). Cavanaugh, Boswell, Roehling, and Boudreau (2000), posit that individuals typically perceive some work stressors to be manageable owing to the perception that the stressor is under their control. In this way, the stressor, if overcome, might allow opportunity for individual growth. Alternatively, some stressors are perceived to be unmanageable and controlling, which in turn might hinder the perceiver and his or her opportunity for growth (Wallace *et al.*, 2009).

2.3 COPING WITH STRESS

Employees at all levels are affected by the worldwide phenomenon of stress. In the 1960s and 70s stress research concentrated on human performance and focused on work stress rather than stress in general. This focus on work characteristics and their effect on mental health and wellbeing developed throughout the 1970s and 80s (Wainwright & Calnan, 2002). Since then psychologists have focused more on the personal attributes of the worker and the extent to which they influence the appraisal of threats and the ability to cope. Seligman (1999) calls attention to the positive aspects of human functioning and experience, and proposes integrating them with an understanding of the negative aspects of human functioning and experience. In this way the conceptualisation of coping with stress moved towards a more positive approach.

Initial research into job stress devoted considerable attention to how people cope. Lazarus (1988) examines coping from a cognitive rather than situational perspective, where a person uses cognitive and behavioural efforts to cope and a distinction is drawn between problem-focused and emotion-focused coping styles. Consequently, work-related stress can be associated with a number of diverse outcomes pertaining to deteriorating physical and emotional wellbeing, as well as actual participation in the workforce. The nature of stress causes different people to perceive the same situation as either stressful or challenging.

Literature on stress research is frequently linked to coping mechanisms (Van der Colff & Rothmann, 2009). The extent to which adverse psychological and physiological effects of stress occur and the level of stress experienced depends on how well an individual uses coping strategies in the organisational setting (Bhagat, Ford, O'Driscoll, Frey, Bakabus & Mahanyele, 2001). Rosenbaum (1988) defines coping as the person's cognitive and behavioural efforts to manage the internal and external demands of the person–environment transaction. According to Koeske and Kirk (1993), on the other

hand, coping relates to the way in which an individual perceives a stressor and how the individual copes with the demands of the situation and the extent of the support structure available to the individual.

As a result of the recent movement from pathogenic functioning to a salutogenic paradigm, which includes the potential to maintain and enhance psychological wellbeing within the context of a stressful environment (Spangenberg & Orpen-Lyall, 2000), coping has received much attention from researchers. Research on coping has demonstrated that appraisals of negative life events that put them into perspective in terms of one's own capabilities for meeting the challenge, mediate the actual experience of distress (Gable & Haidt, 2005).

Bhagat *et al.* (2010) maintain that coping is concerned with efforts, both real and cognitive, directed at alleviating and resolving the sources and effects of stresses that arise from the work environment. According to Taylor (2007), people who maintain or develop socio-emotional resources cope much better. These socio-emotional resources include a sense of hope and optimism, belief in personal control over the things that go on around one and the feeling that one is a person of worth. In chronically stressful circumstances, where people do not have much control over either the job pace or job activities, there is a negative impact on health.

Studies from organisations such as the National Institute for Occupational Safety and Health and the American Psychological Association (<http://www.stressdirections.com>) show that changes in working conditions have overburdened traditional coping mechanisms. These changes include growing psychological demands as productivity demands and work hours increase, the need to gather and apply growing amounts of information, job insecurity, demographic changes such as aging workers, female participation in the workforce, and the integration of a growing population of ethnic and racial minorities into the workplace and the need for both men and women to

balance obligations between work and family as women enter the workforce worldwide.

Stressors have an impact on the day-to-day lives of people in the workplace. Accordingly, the concepts of positive psychology have a role to play in helping people not only to cope more effectively, but also to open their hearts and minds in order to move forward with newfound confidence, resilience, determination, hope and a vision for a better future (Froman, 2010).

2.3.1 Psychofortology

Since the 1980s, the focus in the social sciences has in fact moved away from studying stress and general coping behaviour (Sheldon & King, 2001) from an abnormal behavioural paradigm, towards studying specific personality coping constructs from the perspective of positive psychology (Fredrickson, 2009; Seligman & Csikszentmihalyi, 2000) and salutogenesis paradigms (Antonovsky, 1979; Breed, 1997), including psychofortology as a field of study (Cilliers & Coetzee, 2001).

In 1995, Strümpfer argued that Antonovsky's (1979) concept of salutogenesis should be broadened from an emphasis on health only to fortigenesis, which refers to the origins of psychological strength in general and is more embracing and holistic than salutogenesis (Cilliers & Coetzee, 2001). Strümpfer (2002) maintains that while stressors are always present, people are nevertheless surviving and remaining healthy.

Psychofortology was introduced by Wissing and Van Eeden (1997) to suggest a new sub-discipline in which not only the origins of psychological wellbeing should be studied, but also the nature, manifestations and, consequently, the ways to enhance psychological wellbeing and develop human capacities. Wissing and Van Eeden (1997) developed the construct of psychofortology as a domain from Strümpfer's (1995) concept of fortigenesis to study the origins, nature, manifestations and enhancements of psychological wellbeing.

Strümpfer (2005) states that psychofortology is an alternative designation for positive psychology and fortology. This concept of fortology also happens to fit positive psychology's approach of studying and classifying strengths (Strümpfer, 2005).

The conceptualisation of psychological wellbeing, including the processes involved in the coping of individuals, has been proposed through many constructs (Cilliers & Coetzee, 2003). Strümpfer (1990) identified six constructs which describe the core of salutogenic and fortigenic functioning: sense of coherence, locus of control, self-efficacy, hardiness, potency and learned resourcefulness. Strümpfer (2005) underlines this, stating that psychofortological constructs (and measures) are mushrooming.

Much psychofortology research has been done in South Africa, Israel, Europe and the US (Cilliers and Coetzee, 2001). Moreover, the effect of the constructs identified above by Strümpfer (1990) has been investigated in terms of organisational outcomes, including occupational burnout and job stress. In addition, Cilliers and Coetzee (2001) maintain that the quality of work life can be predicted by identifying the psychofortological functioning among employees.

2.3.2 Salutogenesis

Since the advent of psychology as a discipline, researchers have been interested in how people adapt to adverse circumstances (Suls, James & Harvey, 1996). The term salutogenesis was introduced by the late Aaron Antonovsky (1979), Professor of Medical Sociology at the Ben Gurion University of the Negev. In his research on the individual experiencing different kinds of stress, Antonovsky (1979) noticed that stressors are omnipresent, but that individuals survive in spite of them.

Most of the South African research on salutogenesis, which started in the 1980s, was initiated by Strümpfer (1990). Strümpfer indicated at the time that "a new paradigm is strongly in the ascent. It emphasises the origins of health or wellness and can best be described as salutogenesis" (1990, p. 265). Since

1990, research on salutogenesis has received special attention in South Africa with the focus being on salutogenesis, fortigenesis and psychofortology (Breed *et al.*, 2006).

Salutogenesis focuses on the origins of health and wellness. Instead of studying abnormal behaviour, this paradigm focuses on locating and developing personal and social resources and adaptive tendencies, which result in effective coping behaviour and growth (Breed *et al.*, 2006).

Strümpfer (1990) contends that salutogenic studies are designed to test hypotheses that explain successful (healthy) outcomes, give attention to the deviant case and accept that stressors may have salutary consequences. He maintains that the salutogenic paradigm is vitally important to new insights and new growth in the social sciences, as it holds a promise for the integration of knowledge at a higher, new level. In contrast to the traditional pathogenic paradigm, a paradigm of salutogenesis (tracing the origins of health) is strongly in the ascent, hence, although stressors are omnipresent, rather than the exception, people are nevertheless surviving and remaining healthy.

Strümpfer (1990) maintains that psychology and other social sciences have been functioning in a paradigm of pathogenic thinking for a long time. Positive psychology proposes that this imbalance must be corrected. Accordingly, the conceptualisation of salutogenesis provides a critical perspective on how individuals manage to stay psychologically healthy in the organisational context as well as in life in general.

According to Kossuth and Cilliers (2002), salutogenic functioning consists of the following behaviour: individuals can, on a cognitive level, view stimuli from the environment in a positive and constructive way and can use the information to facilitate effective decision making. On the affective level, individuals function as self-aware, confident, self-fulfilled people and view stimuli as meaningful and are maturely committed to life. On the motivational level, individuals have intrinsic motivation and perceive stimuli as a personal

challenge, which directs their energy towards coping, solving problems and achieving results.

The salutogenic model is also about the location and development of personal and social resources and adaptive tendencies that relate to an individual's disposition and which allow them to select appropriate strategies to deal with the stressors confronting them (Antonovsky, 1987). A person who has developed a salutogenic approach to dealing with stressors is less likely to develop physical and mental illness owing to a homeostatic balance that is restored through the use of coping mechanisms. This will result in optimisation under stress (Viviers, 1998b).

Employees with a salutogenic personality profile will strive towards optimisation, which will result in a proactive approach to life and their work. The salutogenic individual will be mentally equipped with mechanisms and will successfully process and utilise the omnipresent stressors in life (Viviers, 1998a).

2.4 POSITIVE PSYCHOLOGICAL FUNCTIONING

In his 1998 presidential address to the APA, Martin P Seligman initiated a shift in the focus of psychology towards a more positive psychology (Seligman, 1999). Seligman and Csikszentmihalyi (2000) highlight the fact that the almost exclusive attention to pathology neglects the fulfilled individual and the thriving community. They argue that the aim of positive psychology is to begin to catalyse a change in the focus of psychology from a preoccupation with only repairing the worst things in life to also building positive qualities. One of the major achievements of the positive psychology movement has been to consolidate and celebrate what makes life worth living, as well as carefully delineating the areas where more needs to be done (Linley, Joseph, Harrington & Wood, 2006).

At the subjective level (Seligman & Csikszentmihalyi, 2000), the field of positive psychology is about valued subjective experiences; wellbeing,

contentment, satisfaction (in the past); hope and optimism (for the future); and flow and happiness (in the present). At the individual level, it is about positive individual traits, the capacity for love and vocation, courage, interpersonal skill, aesthetic sensibility, perseverance, forgiveness, originality, future mindedness, spirituality, high talent and wisdom. At the group level, it is about civic virtues and the institutions that move individuals toward better citizenship, responsibility, nurturance altruism, civility, moderation, tolerance and work ethic (Seligman & Csikszentmihalyi, 2000).

According to Snyder and Lopez (2006, p. 3), in the 21st century the question arising as to what is right about people is “at the heart of the burgeoning initiative in positive psychology which is the scientific and applied approach to uncovering people’s strengths and promoting their positive functioning”.

Positive psychology proposes a number of constructs that can be used to assess the optimal functioning of people. These include hope, flow, happiness, optimism, autonomy, self-regulation, quality of life, talent, spirituality, wisdom, tolerance, engagement, gratitude, emotional intelligence, humour, mastery, resilience, mindfulness/meaningfulness, integrity, humility, wellbeing, creativity and courage (Coetzee & Viviers, 2007; Lopez, 2008; Seligman & Csikszentmihalyi, 2000; Seligman, Steen, Park & Peterson, 2005; Snyder & Lopez, 2002; 2006).

The salutogenic paradigm and its constructs are being used increasingly to explain and measure the way individuals cope with changes and stresses in organisations (Cilliers, 2003; Cilliers & Kossuth, 2002). Salutogenic constructs focus on health as opposed to disease and act as coping mechanisms that equip individuals to deal more effectively with stress (Smith, 2002).

Initially, Strümpfer (1990) linked the constructs of sense of coherence, hardiness, potency, stamina and learned resourcefulness to the salutogenic paradigm. Later, Strümpfer (1995) elaborated on this classification, which was based on the views of Antonovsky (1991), and included the constructs of self-efficacy and locus of control. After introducing fortigenesis, Strümpfer (2003)

listed the constructs of engagement, meaningfulness, subjective wellbeing, positive emotions and proactive coping as fortigenic constructs. The following six constructs can be viewed as the core dimensions of the salutogenic individual and are constantly used in research in the field of positive psychology (Antonovsky, 1979): sense of coherence, locus of control, self-efficacy, hardiness, potency, learned resourcefulness.

In order to investigate the positive psychological functioning of employees in the organisation, this study used the constructs of locus of control, sense of coherence and engagement, with the burnout construct representing the other end of the wellness continuum.

In a study conducted on university administrative staff, Cilliers and Ngokha (2006) used the behavioural constructs of sense of coherence, hardiness, self-efficacy, learned resourcefulness and potency to gain a better understanding of the dynamics of salutogenic behaviour. A strong causal relationship between all the constructs indicated a good fit between the conceptualisation and operationalisation of these five salutogenic functioning constructs. These authors maintain that the results indicate the strength of the model in explaining coping behaviour in organisations.

In another study, Cilliers and Kossuth (2004) investigated the reliability and factor structure of three measures of salutogenic functioning: sense of coherence, self-efficacy and locus of control. They concluded that there is a relationship and a meaningful factor structure of these salutogenic constructs, which add to existing knowledge about organisational and individual wellness. Thus, the individual can cope with job, change, transformation and career demands through a higher level of salutogenic functioning.

Salutogenic constructs focus on health as opposed to disease, act as coping mechanisms and equip individuals to deal more effectively with stress (Smith, 2002). Research (Parkes, 1994) has shown that the relationship between salutogenic functioning and various individual and work-related behavioural constructs is significant. Salutogenic functioning persons are more likely to

use the resources potentially at their disposal as they have a positive way of cognitively and effectively appraising work (Antonovsky, 1987).

The literature presented above reveals that the focus of salutogenic constructs is on successful coping (Antonovsky, 1991) and that all positive psychology constructs deal with how people manage stress and stay well (Strümpfer, 1990; Cilliers & Coetzee, 2003).

2.5 CHAPTER SUMMARY

The aim of chapter 2 was to provide a conceptual overview of coping with stress in the organisation. Accordingly, this included the definitions of stress, the dimensions of stress and its symptoms, coping with stress, as well as the concepts of psychofortology, salutogenesis and positive psychological functioning.

CHAPTER 3: POSITIVE PSYCHOLOGY CONSTRUCTS

The aim of this chapter is to conceptualise and define the concepts of locus of control, sense of coherence, engagement and burnout. The origins of the constructs as well as their definitions and dimensions are discussed. Finally the chapter concludes with a summary.

3.1 LOCUS OF CONTROL

Locus of control was originally conceptualised by Rotter (1966) on the basis of the social learning theory. In South Africa, Schepers (1995) based the locus of control theory on the social learning and attribution theories.

3.1.1 Origins of the construct

Leone and Burns (2000) maintain that locus of control is one of the most researched constructs in the field of personality. The concept of locus of control stems from attribution theory, which is mainly concerned with the attribution processes by which individuals interpret behaviour as being a result of certain aspects of the environment (Bothma & Schepers, 1997). Attribution theory is therefore a theory of the relationships between people and internal behaviour. Bothma and Schepers (1997) describe the construct of locus of control as relating to the expectancy regarding the outcome of actions rather than the actions themselves where individuals' behaviour is determined by the discrepancy in their perceptions of internal and external attributes.

Schepers (2004) outlines the perception of locus of control in terms of the Social Learning Theory, as the way in which reinforcement from the social environment takes place and the effect such reinforcement has on future behaviour. Social learning theory in conjunction with attribution theory explains the way in which a person selects information according to inherently stable or invariant characteristics (Schepers, 1995). Researchers agree that locus of control is an important individual difference factor, and can be regarded as a stable personality trait (Lu, Wu & Cooper, 1999).

Attribution of a particular action to either an internal state or an external influence is known as locus of causality (Berg *et al.*, 2004). Schepers (1995) describes internal attribution as dispositional causes, and includes moods, attitudes, personality traits, abilities, health, preferences and wishes as fundamental to this grouping. External attributions or situational causes incorporate environmental factors, such as pressure from others, money or the nature of the social situation (Schepers, 1995).

The construct of locus of control is conceptually rooted in Rotter's (1954) social learning theory, which maintains that behaviour in a specific situation is a function of expectancy and reinforcement value (Rotter, 1966). Rotter originally formulated locus of control as a generalised belief about the contingency between one's action and the actual outcome, brought about through social learning mechanisms (Lu *et al.*, 1999).

3.1.2 Definition of the construct

Bothma and Schepers (1997) define locus of control as a generalised expectancy concerning the extent to which reinforcements are external or internal. This relates to expectancy in terms of the actions rather than the actions themselves.

Locus of control is a global characteristic, is relatively stable over time and can be defined as the extent to which individuals perceive that they have control over a given situation (Rotter, 1966). Rotter (1966) defines external locus of control as a reinforcement perceived by the subject as following some action of his own but which is not entirely contingent upon his own action. This is typically perceived as the result of luck, chance, fate, as under the control of powerful other, or as unpredictable because of the great complexity of the forces surrounding the individual.

For the purposes of this study locus of control is defined as the extent to which individuals expect the reinforcement of their actions to be either external or internal. According to Rotter (1966), the difference between internal and external locus of control lies in the experience of freedom. A

construct closely related to internal control is autonomy which is defined as the tendency to attempt to master or be effective in the environment and to impose the individual's wishes and designs on it (Schepers, 2005).

3.1.3 Dimensions of the construct

The core dimensions that characterise locus of control are autonomy, external control and internal control. These three dimensions of the construct are discussed next.

3.1.3.1 Autonomy

Autonomy is closely related to internal control and it is expected that persons high on autonomy would seek control of situations that offer possibilities of change, would readily accept the challenge of solving complex problems, would take the initiative in situations requiring leadership and would prefer to work on their own and structure their own programme (Schepers, 2005).

According to Schepers (2005), autonomy refers to when the individual practises internal locus of control and prefers working alone. Plug, Meyer, Louw and Gouws (1986) describe the term autonomy as a condition of the independence and self-determination of an individual and add that it also refers to something that is self-regulating and free from external control.

3.1.3.2 External control

External control refers to the degree to which individuals expect that reinforcement or the outcome of events is not contingent upon the individual's action, but upon luck, chance, fate or powerful others (Rotter, 1966). The external individual feels out of control, sees no relationship between own behaviour and events, attributes the cause of events to the environment, others and fate, and feels anxious, frustrated and helpless (Cilliers & Kossuth, 2002).

3.1.3.3 *Internal control*

Internal control refers to the degree to which individuals expect reinforcement or an outcome of their behaviour to be contingent on the individual's own behaviour or personal characteristics (Rotter, 1996). The internal individual feels in control, sees a relationship between own behaviour and outcomes, attributes the cause of events to themselves, feels empowered and masterful and thus experiences less stress (Cilliers & Kossuth, 2002).

3.2 SENSE OF COHERENCE

Sense of coherence was conceptualised by Antonovsky (1979), who maintained that sense of coherence was a major determinant in maintaining one's position on the health ease/disease continuum and of movement toward the healthy end.

3.2.1 Origins of the construct

In 1979, Antonovsky presented a theoretical model designed to advance understanding of the relations among stressors, coping and health (Antonovsky, 1993). He highlighted the inadequacy of the pathogenic orientation which dominated all biomedical and social science disease research, and proposed a salutogenic orientation. Antonovsky (1979) introduced the concept of generalised resistance resources, which that can facilitate effective tension management in any situation of demand. Antonovsky (1979) proposed that all generalised resistance resources have in common the fact that they facilitate making sense of the countless stressors with which people are constantly bombarded. Through repeated experience of such sense-making, a person develops, over time, a strong sense of coherence construct (Antonovsky, 1993).

Antonovsky (1993) maintains that if adaptive coping is the secret of movement toward the healthy end of the health ease/dis-ease continuum, then primary attention must be paid to generalised resistance resources. His concern was a theoretical understanding of why such resources – wealth, ego strength,

cultural stability, social support – promoted health. Resources were seen as leading to life experiences that promoted the development of a strong sense of coherence; a way of seeing the world which facilitated successful coping with the innumerable, complex stressors confronting us in the course of living.

The sense of coherence differs from other coping constructs by focusing on the factors which promote coping and wellbeing, rather than focusing on risk factors contributing to disease (Antonovsky, 1993). The focus of sense of coherence is on the various factors that move individuals towards the healthy end of the sickness/health continuum (Strümpfer, 1990). The sense of coherence thus takes a salutogenic or a health-oriented approach to coping (Strümpfer, 1995).

The sense of coherence construct is central to Antonovsky's (1979) salutogenic model. He proposed that a strong sense of coherence is associated with effective coping, reduced stress, fewer health-damaging behaviours and improved morale, somatic health and social adjustment. While Antonovsky's (1991) writing concerns the relationships between sense of coherence and health, he supported the notion that work has a significant role to play in shaping a person's sense of coherence. Work that is more meaningful when performed in a predictable and supportive work environment strengthens the sense of coherence. Thus, a person's sense of coherence should significantly affect the way in which work is approached and performed.

3.2.2 Definition of the construct

The sense of coherence construct refers to a global orientation to one's inner and outer environments which is hypothesised as being a significant determinant of location and movement on the health ease/dis-ease continuum (Antonovsky, 1991).

Antonovsky (1979) defines sense of coherence as a global orientation that expresses the extent to which one has pervasive, enduring but dynamic feelings of confidence that the stimuli deriving from one's internal and external environments in the course of living are structured, predictable and explicable,

and that resources are available to meet the demands presented by these stimuli. These demands are seen as challenges worthy of investment and engagement.

Antonovsky (1993) maintains that sense of coherence links to such concepts as self-efficacy, internal locus of control, problem-oriented coping, the challenge component of hardiness, and mastery. Sense of coherence is a construct which is universally meaningful and cuts across lines of gender, social class, region and culture (Strümpfer, 1990). It does not refer to a specific type of coping strategy, but to factors that, in all cultures, are always the basis for successful coping with stressors (Strümpfer, 1995).

For the purposes of this study, sense of coherence is defined as a coping resource that is presumed to mitigate life stress by affecting the overall quality of one's cognitive and emotional appraisal of the stimuli that impacts on one, which is presumed to engender, sustain and enhance health, as well as strength at other endpoints (Rothmann *et al.*, 2003; Strümpfer, 2003). Sense of coherence predicts the extent to which the individual feels that there is a probability that things will work out well (Antonovsky, 1979).

3.2.3 Dimensions of the construct

The core dimensions that characterise sense of coherence are comprehensibility, manageability and meaningfulness. These three dimensions of the construct are discussed next.

3.2.3.1 *Comprehensibility*

Antonovsky (1979) defines comprehensibility (comprehension) as the sense that an individual's internal and external environments are viewed as structured, predictable, explicable and consistent. Accordingly, stimuli are perceived as comprehensible and make sense at a cognitive level. Comprehensibility exists when stimuli from the environment are perceived as making cognitive sense. In line with this, information is ordered, consistent,

clear and structured. This also implies that, on the basis of past experience, stimuli will in future also be ordered and even predictable (Strümpfer, 2003).

A person rated high on comprehensibility expects that stimuli encountered in future will be more or less predictable and, even if they are not, they will be orderable and explicable (Antonovsky, 1993).

3.2.3.2 *Manageability*

Manageability is the extent to which the individual copes with stimuli and views the available resources as adequate to meet the demands posed by the various stimuli or the environment (Antonovsky, 1979). Manageability occurs when stimuli are perceived as being under the control of both the individual and legitimate others (such as spouse, friends, professionals, formal authorities, or spiritual figures) (Strümpfer, 2003). Individuals experience life as a series of situations that are endurable or manageable or even as new challenges (Rothmann, Jackson & Kruger, 2003).

A person who has a high sense of manageability will not feel victimised by events or feel that life is treating him/her unfairly. Since bad things do happen in life, the individual will be able to cope without endless complaints.

3.2.3.3 *Meaningfulness*

Antonovsky (1979) sees meaningfulness as the emotional identification with events in the environment and a feeling that life makes sense emotionally and that the individual plays a primary role in determining his or her own daily experiences. The belief that these demands are challenging and worthy of personal investment (Flannery & Flannery, 1990) is also included. Meaningfulness refers to the extent that one feels that life is making sense on an emotional and not just a cognitive level (Rothmann *et al.*, 2003).

Strümpfer (2003) maintains that meaningfulness is experienced when stimuli are perceived as motivationally relevant, in the form of welcome challenges that are worth engaging with and investing oneself in. Meaningfulness for

Antonovsky (1979) is the component that guards against too great an emphasis being placed on the cognitive aspect of the sense of coherence. It also refers to the importance for the individual to be involved in the process of shaping his or her destiny and also daily experience.

3.3 ENGAGEMENT

Engagement as a construct was conceptualised mainly by Schaufeli and Bakker (2003).

3.3.1 Origins of the construct

Maslach, Jackson and Leiter (1997) propose that work engagement and burnout constitute opposite poles of a continuum of work-related wellbeing. Lynch (2007), however, maintains that there are two distinct positions on the exact nature of the relationship between engagement and burnout. Firstly, burnout is viewed as an erosion of engagement with the job, and secondly, engagement is viewed as a distinct construct.

Storm and Rothmann (2003b) also maintain that research on work engagement has taken two paths. In the first path, Maslach, Jackson and Leiter (1997) see burnout as an erosion of engagement with the job. They maintain that work which started out as important, meaningful and challenging becomes unpleasant, unfulfilling and meaningless. According to them, work engagement is assessed by the opposite pattern of scores on the MBI dimensions. Low scores on exhaustion and cynicism and high scores on professional efficacy are indicative of engagement.

In the second path, Schaufeli, Salanova, Gonzales-Roma and Bakker (2002) take a different perspective in order to operationalise engagement in its own right. They consider burnout and work engagement to be opposite concepts that should be measured independently with different instruments.

Schaufeli *et al.* (2002) concur that while engagement is conceptualised as the positive antithesis of burnout, it is operationalised as a construct in its own

right. In line with the growth of positive psychology, there has been a shift in focus towards engagement, which can be seen as a positive affective-motivational state of fulfilment in employees (Freeney & Tiernan, 2006).

Work engagement is significant for the individual. May, Gilson and Harter (2004) see work engagement as including an individual's cognitive, emotional and physical aspects. They maintain that it is closely associated with job involvement and flow.

A model of well being at work that makes it possible to focus on burnout and engagement was developed by Schaufeli and Bakker (2003). According to a study conducted by these authors, some employees, regardless of high job demands and long working hours, were not burned out. They instead seemed to find pleasure in working hard and dealing with job demands. Rothmann (2003) therefore poses the question of whether there are engaged employees who show energy, dedication and absorption in their work, that is, employees who show behaviour that is the opposite of burnout

3.3.2 Definition of the construct

Schaufeli and Bakker (2003) introduced the concept of engagement as the antipode of burnout (Strümpfer, 2003). Moreover, in the view of Maslach, Jackson and Leiter (1997) engagement is characterised by energy, involvement and efficacy, which are considered the direct opposites of the three burnout dimensions, namely exhaustion, cynicism and professional efficacy.

Schaufeli and Bakker (2003) describe engagement as a positive, fulfilling, work-related, state of mind that is characterised by vigour, dedication and absorption. It is not seen as a momentary and specific state but as a more persistent and pervasive affective-cognitive state that is not focused on any particular object, event, individual or behaviour (Schaufeli & Bakker, 2003; Storm & Rothmann, 2003b). Engaged employees have a sense of energetic and effective connection with their work activities and they see themselves as

being able to deal completely with the demands of their job (Schaufeli & Bakker, 2003).

Roberts and Davenport (2002) define work engagement as a person's involvement in his or her job. Individuals who are highly engaged in their jobs identify personally with the job and are motivated by the job itself. They tend to work harder and more productively than others and are more likely to produce the results that their customers and organisations want.

For the purposes of this study, work engagement is defined as an energetic state in which the employee is dedicated to excellent performance at work and is confident of his or her effectiveness. Engaged employees have a sense of energetic and effective connection with their work activities, and they see themselves as able to deal well with the demands of their jobs (Schutte, Toppinen, Kalimo & Schaufeli, 2000).

3.3.3 Dimensions of the construct

The core dimensions that characterise engagement are vigour, dedication and absorption. These three dimensions of the construct are discussed next.

3.3.3.1 *Vigour*

Vigour represents a positive affective response to one's ongoing interactions with significant elements on one's job and work environment, which comprises the connected feelings of physical strength, emotional energy and cognitive liveliness (Rothmann & Jordaan, 2006). Vigour is characterised by high levels of energy and mental resilience while working, the willingness to invest effort in one's work, not being easily fatigued, and persistence even in the face of difficulties (Schaufeli *et al.*, 2002; Storm & Rothmann, 2003b).

3.3.3.2 *Dedication*

Dedication is characterised by deriving a sense of significance in one's work, by feeling enthusiastic about one's job and by feeling inspired and challenged by it (Storm & Rothmann, 2003b). Schaufeli *et al.* (2002) describe dedication

as being characterised by a sense of significance, enthusiasm, inspiration, pride and challenge. Accordingly, dedication is not simply a cognitive or belief state but includes an affective element (Freeney & Tiernan, 2006).

3.3.3.3 Absorption

Absorption is characterised by being fully concentrated and happily engrossed in one's work, whereby time passes quickly and one has difficulty in detaching oneself from work (Freeney & Tiernan, 2006; Schaufeli, Bakker & Salanova, 2006). Absorption approximates the concept of flow, which is defined as an optimal state or experience where focused attention, a clear mind, unison of body and mind, effortless concentration, complete control, loss of self-consciousness, distortion of time and intrinsic enjoyment are experienced (Csikszentmihalyi, 1990).

3.4 BURNOUT

The term burnout was originally conceptualised by Herbert Freudenberger and Christina Maslach, each of whom represents a starting point of a particular approach to burnout (Schaufeli, 2003).

3.4.1 Origins of the construct

Burnout was first proposed as a psychological syndrome in the early 1970s by Herbert Freudenberger, a practising psychiatrist (Lynch, 2007). He used it to describe the symptoms of emotional depletion and a loss of motivation and commitment among volunteers he was working with in an alternative care setting. Burnout thus first emerged as a social problem, not a scholarly construct (Rothmann, 2003).

In the empirical phase, burnout research became more systematic and quantitative in nature (Rothmann, 2003). Maslach, a social psychological researcher, started studying the ways in which people working in stressful jobs cope with their emotional arousal (Lynch, 2007). She identified three key themes: workers who reported feeling emotionally exhausted and drained of

all feelings; workers who reported negative perceptions and feelings about their patients; and workers who experienced crises in professional competence as a result of their emotional turmoil (Lynch, 2007). Maslach subsequently adopted the term burnout to describe her observations (Schaufeli & Enzmann, 1998).

Burnout was typically assumed to occur in individuals who work with people in some capacity, for instance in healthcare, social services or education (Maslach, Jackson & Leiter, 1996). However, nearly a quarter of a century of research and practice has found that burnout also exists outside the realm of human services (Maslach, Jackson & Leiter, 1997). Today, the concept of burnout and its measurement is applied to all employees and not just those who work with people (Schaufeli *et al.*, 2002).

Burnout is a multidimensional and chronic stress reaction that goes beyond the experience of mere exhaustion, and is seen as the final step in a progression of unsuccessful attempts to cope with a variety of negative stress conditions (Bosman, Rothmann & Buitendach, 2005). For the purposes of this research burnout is included as the theoretical opposite of engagement. This reflects the trend towards positive psychology, which focuses on human strengths and optimal functioning rather than on weaknesses and malfunctioning (Seligman & Csikszentmihalyi, 2000). This can yield interesting data towards understanding negative behaviour in the context of the positive psychological functioning of the organisation.

3.4.2 Definition of the construct

According to Schaufeli (2003), definitions of burnout share some common elements such as mental or emotional exhaustion, fatigue and depression. Decreased effectiveness and work performance occur because of negative attitudes and behaviour.

Burnout can be considered as the final stage in a breakdown in adaptation that results from a long-term imbalance in demands and resources that is accompanied by chronic malfunctioning at work (Rothmann *et al.*, 2003). It is

a self-perpetuating process that affects the attainment of professional goals and depletes the resources of the individual in coping with the process of burnout (Rothmann, 2003).

Burnout is defined as a prolonged response or psychological syndrome in response to chronic interpersonal stressors on the job (Maslach, Schaufeli & Leiter, 2001). Maslach and Jackson (1986) define burnout as a three-dimensional syndrome of emotional exhaustion (i.e. the draining of emotional resources because of demanding interpersonal contacts with others), depersonalisation (i.e. negative, callous and cynical attitude towards the recipients of one's care or services) and lack of personal accomplishment (i.e. the tendency to evaluate one's work with recipients negatively). This can occur among individuals who do people work of some kind (Maslach & Jackson, 1986). According to Maslach et al. (1996), burnout includes the dimensions of exhaustion, cynicism and professional efficacy.

Schaufeli and Enzmann (1998) define burnout as a persistent, negative work-related state of mind in normal individuals that is primarily characterised by exhaustion and accompanied by distress, a sense of reduced effectiveness, decreased motivation and the development of dysfunctional attitudes and behaviours at work.

For the purposes of this study burnout is defined as prolonged job stress, which the individual experiences as a result of workplace demands exceeding his or her adaptive responses.

3.4.3 Dimensions of the construct

The dimensions that characterise burnout are exhaustion, cynicism and professional efficacy. These three dimensions of the construct are discussed next.

3.4.3.1 *Exhaustion*

According to Maslach, Schaufeli and Leiter (2001), exhaustion refers to the basic individual stress component of burnout, representing a lack of energy and feelings of being over-extended and depleted of emotional and physical resources. This dimension is characterised by a lack of energy and a feeling that the individuals' emotional resources are used up. This exhaustion can manifest itself in physical characteristics such as waking up just as tired as when going to bed or lacking the required energy to take on another task or face-to-face encounter (Maslach, Jackson & Leiter, 1997).

3.4.3.2 *Cynicism*

Cynicism represents feelings of detachment and unresponsiveness in relation to the job. It refers to the depersonalisation aspect of burnout. This dimension of burnout typically occurs after exhaustion and tends to be a direct response to the stressors of the job (Maru, 2002). It may manifest in treating clients as objects rather than people, displaying emotional callousness, and being cynical towards co-workers, clients and the organisation.

This component represents the interpersonal context dimension of burnout, referring to negative, callously or excessively detached responses to various aspects of the job (Bosman, Rothmann & Buitendach, 2005). According to Cordes and Dougherty (1993), cynicism is viewed as a type of coping that is an acceptable and professional response to a stressful situation.

3.4.3.3 *Professional efficacy*

Professional efficacy refers to the self-evaluation dimension of burnout and is a feeling of incompetence, lack of achievement and productivity at work (Bosman *et al.*, 2005). The individual experiences a reduced ability to do the job, feels incompetent, and feels that there is lack of accomplishment (Rothmann *et al.*, 2003).

Individuals in this dimension of burnout view themselves negatively in terms of both their ability to perform the job and their ability to have personal interactions (Cordes & Dougherty, 1993). According to Maslach, Jackson and

Leiter (1997), individuals experiencing diminished professional efficacy trivialise the things that they are successful at and no longer feel they are able to make a difference through their work or personal interactions. These feelings of inadequacy directly affect an individual's self-efficacy.

3.5 THEORETICAL RELATIONSHIP OF THE CONSTRUCTS

This study theoretically views the constructs of locus of control, sense of coherence and engagement as the salutogenic functioning (wellness) end of the continuum with burnout (illness) at the opposite end.

Salutogenic constructs can differentiate between people who are coping and those who are not (Strümpfer, 1992). Such constructs focus on health as opposed to disease and act as coping mechanisms that equip individuals to deal more effectively with stress (Strümpfer, 1995). Positive psychology encompasses the salutogenic paradigm and it is proposed that the constructs used in this research are relevant for positive psychology. The capacity for individuals to adjust successfully to life's stresses and difficulties and the inherent strengths of individuals are highlighted through the salutogenic model.

Research results increasingly prove the relationship between salutogenic (Strümpfer, 1990) and salutogenic functioning (Strümpfer, 1995) on the one hand and various individual and work-related behavioural constructs on the other. Studies (Rothmann, Steyn & Mostert, 2005; Van der Colff & Rothmann, 2009) indicate that employees with a strong sense of coherence are found to experience less burnout and more work engagement, presumably because stimuli from the environment are perceived as making cognitive sense, as being under the control of both the employee and significant others, and as being motivationally relevant and meaningful. In Cilliers (2003), a study on burnout and salutogenic functioning in nurses confirmed that burnout represents the opposite of salutogenic functioning.

Strümpfer (1990) suggests that there are significant salutogenic strengths, namely sense of coherence, hardiness, learned resourcefulness, potency, internal locus of control and self-efficacy. Strümpfer (1995) contends that, from a fortigenic paradigm, psychological strengths create tendencies contrary to those that produce burnout or are favourable to engagement. These strengths include sense of coherence (Antonovsky, 1987) and internal locus of control (Rothmann, 2003; Rotter, 1966).

In this study, the construct of sense of coherence relates to that of engagement. Engagement resembles the concept of flow (Csikszentmihalyi, 1990), which represents a state of optimal experience that is characterised by focused attention, a clear mind and body unison, effortless concentration, complete control, loss of self-consciousness, distortion of time and intrinsic enjoyment. Flow is more complex and refers to more peak experiences than engagement, which is a more pervasive and persistent state of mind. (Schaufeli & Bakker, 2004). In some individuals, regardless of high job demands and long working hours, symptoms of burnout are not shown; instead, they seem to find pleasure in working hard and dealing with job demands. From a positive psychology perspective (Seligman & Csikszentmihalyi, 2000), such individuals could be described as being engaged in their work.

The focus on engagement in burnout research and the focus on proactive coping in coping research (Schaufeli & Buunk, 2002; Schaufeli, 2003; Schaufeli & Bakker, 2003; Rothmann, 2003) reflect an emerging trend towards a positive psychology that studies human strengths and optimal functioning rather than weaknesses and malfunctioning. Whilst burnt-out workers feel exhausted and cynical, their engaged counterparts feel vigorous and enthusiastic about their work (Rothmann, 2003). Measuring burnout can be seen from different perspectives. From the salutogenic paradigm (Antonovsky, 1987), the focus would be on the origins of health in terms of an ease–disease continuum. From the fortigenic paradigm (Strümpfer, 1995), the focus would be on the strengths of the non-burnt-out employees and the

enhancement of these strengths which are favourable to work engagement. These strengths include sense of coherence, internal locus of control, self-efficacy, optimism and life satisfaction (Rothmann, 2003).

Strümpfer (1990) maintains that a strong sense of coherence in the context of the workplace will result in an individual making cognitive sense of the workplace and perceiving its stimulation as ordered, clear, structured and consistent with predictable information. Work is perceived as consisting of experiences that are bearable, with challenges that can be met by availing oneself of personal resources or resources under the control of legitimate others. The individual makes emotional and motivational sense of work demands by viewing as welcome challenges, worthy of engaging in and investing energy in (Antonovsky, 1993).

A strong sense of coherence might help employees understand stressors and regard them as manageable and meaningful. A weak sense of coherence, on the other hand, might therefore lead to job stress, which in turn could lead to burnout (Van der Colff & Rothmann, 2009). Employees who have a weak sense of coherence may find it difficult to structure their world as understandable, orderly and consistent. They tend to experience life events as unmanageable and perceive that they lack the resources to meet the demands, and they might feel that life does not make sense on an emotional level (Antonovsky, 1987).

Maslach and Leiter (2008) maintain that people's psychological relationships to their jobs have been conceptualised as a continuum between the negative experiences of burnout and the positive experience of engagement. Based on the holistic model of work wellness (Nelson & Simmons, 2003), burnout and work engagement can be regarded as an outcome of job stress and moderating or mediating individual difference variables (e.g. sense of coherence).

This study conceptualised the way in which the positive psychology constructs of locus of control, sense of coherence and engagement, and burnout as the

other end of the wellness continuum, determined how employees adapt and cope in the organisation. According to Gropp, Geldenhuys and Visser (2007), there is a relationship between an individual's inclination to attribute the control of events to themselves or to factors in the external environment, their positive orientation to life crises and their ability to react to stressors in a positive manner and their ability to regulate and cope with the emotions that environmental demands and pressures evoke.

The positive psychology paradigm helps to understand the relationship between work and, more specifically, goal-directed, structured activity and wellbeing (Kelloway & Barling, 1991). This can be seen as part of the challenge to explicate psychological wellbeing within the field of positive psychology (Cilliers & Kossuth, 2002).

The empirical part of this study measured salutogenic functioning through the use of locus of control, sense of coherence, engagement and burnout in order to determine how people adapt and cope.

3.6 CHAPTER SUMMARY

The aim of chapter 3 was to provide a review of the constructs of locus of control, sense of coherence, engagement and burnout. The focus was to provide an overview of each construct and examine their origins and definitions. The dimensions of each construct were also defined. An integration was provided to conclude the literature review.

CHAPTER 4: RESEARCH DESIGN

The aim of this chapter is to discuss the research design of the empirical study. It also describes the research approach and method, as well as the population and sample. Furthermore, the development, description, administration, scoring, interpretation, and reliability and validity of the measuring instruments are discussed. In addition, the data gathering process is described and the data processing and interpretation of the data discussed. Finally the chapter concludes with a summary.

4.1 RESEARCH APPROACH

This study had a quantitative research focus in which the focus is on reliability, that is, the consistent and stable measurement of data as well as replicability (Welman & Kruger, 2001). Quantitative research usually aims for larger numbers of cases and the analysis of results is usually based on statistical significance (Argyrous, 2000). In quantitative research the structure and investigation of the research situation is controlled in order to identify and isolate variables (Durrheim & Painter, 2006). Moreover, specific measurement instruments are used to collect data (Welman, Kruger & Mitchell, 2006).

This study can be viewed as exploratory in that it conducts a survey of people who have had practical experience of stress in the organisation and attempts to gain insight into how they adapt and cope. It is also descriptive (Mouton & Marais, 1996), as it seeks an in-depth description of the individual's ability to adapt and to cope in the organisation.

The purpose of exploratory research is to determine whether or not a phenomenon exists, and to gain familiarity with such a phenomenon. In terms of exploratory research, the survey is a widely used descriptive research technique which represents a probe into a given state of affairs at a given time (Christensen, 1994). Babbie (1995) notes that survey research has the advantage of being economical in the sense that large amounts of data can be collected and the collected data can be standardised. This is a deductive

approach in terms of which the researcher starts with a theoretical or applied research problem and ends with empirical measurement and data analysis (Neuman, 1997).

The choice of this research design allows the researcher to generalise the results to the larger population. The use of the instruments chosen ensures that there is high measurement reliability as well as high construct validity. This design thus allows the researcher to answer the research questions posed in chapter 1.

4.2 RESEARCH METHOD

The research method followed for this study will be discussed in detail in the following sections.

4.2.1 Research participants

The organisation that was used for this study is a government department, where employees are based either at the head office of the department or at the provincial offices. The tenure of employees ranged from five to twenty years. This length of tenure implies that these civil servants have been part of the numerous changes that have taken place in senior management and job conditions over many years.

Employees of the organisation formed the total population ($N = 1100$) for the study. A convenience sample ($n = 235$) was subsequently drawn from the total population. This sample was representative as it included employees of different races, gender, and age groups, as well as the various occupational groups and job levels of the organisation. The final practical sample consisted of $n = 144$ employees.

Choosing a study sample is a vital step in the research project as it is rarely practical, efficient or ethical to study whole populations (Marshall, 1996). Accordingly, convenience sampling involves the selection of the most accessible subjects (Marshall, 1996). The aim of all quantitative sampling

approaches is to draw a representative sample from the population so that the results of studying the sample can then be generalised back to the population.

The sampling frame was compiled on the basis of the accessibility of the respondents. Subsequently, a list was drawn up of possible employees to whom the questionnaires could be administered. The questionnaires were distributed to the representative sample of employees (n = 235). 144 employees responded from the sample which represented a 61.3 percent response rate.

Table 4.1

Summary of biographical data

| RACE | | | |
|--------------------------|------------------|----------------|----------------------|
| | Frequency | Percent | Valid percent |
| Black | 54 | 37.5 | 37.5 |
| White | 65 | 45.1 | 45.1 |
| Coloured | 10 | 6.9 | 6.9 |
| Indian | 15 | 10.4 | 10.4 |
| Total | 144 | 100.0 | 100.0 |
| GENDER | | | |
| | Frequency | Percent | Valid percent |
| Male | 60 | 41.7 | 41.7 |
| Female | 84 | 58.3 | 58.3 |
| Total | 144 | 100.0 | 100.0 |
| AGE | | | |
| | Frequency | Percent | Valid Percent |
| 39 and below | 52 | 36.1 | 36.1 |
| 40-49 | 62 | 43.1 | 43.1 |
| 50+ | 30 | 20.8 | 20.8 |
| Total | 144 | 100.0 | 100.0 |
| OCCUPATIONAL BAND | | | |
| | Frequency | Percent | Valid Percent |
| M&P | 115 | 79.9 | 80.4 |
| G | 28 | 19.4 | 19.6 |
| Total | 143 | 99.3 | 100.0 |
| Missing | 1 | .7 | |
| Total | 144 | 100.0 | |
| TENURE | | | |
| | Frequency | Percent | Valid Percent |
| <5 years | 23 | 16.0 | 16.1 |
| 5-10 years | 38 | 26.4 | 26.6 |
| 11-15 years | 23 | 16.0 | 16.1 |
| 15-20 years | 59 | 41.0 | 41.3 |
| Total | 143 | 99.3 | 100.0 |
| Missing | 1 | .7 | |
| Total | 144 | 100 | |

Descriptive statistics were calculated for the individual biographical variables, namely, race, gender, age, occupational band and tenure. A summary of the biographical data is presented in Table 4.1. above. The frequency distribution of the variables in the sample was found to be representative of the frequency distribution of the total population.

4.2.2 Measuring instruments

In this section the development of the instruments is discussed, a description of them is given and the rationale for using them is explained. The administration of the questionnaire, and the scoring and interpretation of the data, as well as the reliability and validity of the results are also discussed.

The following instruments were used to operationalise the chosen constructs:

- Locus of control: the Locus of Control Inventory (LCI) (Scheepers, 1995)
- Sense of coherence: the Orientation to Life Questionnaire (OLQ) (Antonovsky, 1987)
- Engagement: the Utrecht Work Engagement Scale (UWES) (Schaufeli & Bakker, 2003)
- Burnout: the MBI-General Survey (MBI-GS) (Schaufeli *et al.*, 1996)

A biographical questionnaire was also administered.

4.2.2.1 Locus of Control Inventory (LCI)

Scheepers's (1995) Locus of Control Inventory (LCI) was used to measure locus of control.

- *Development and rationale*

The Locus of control questionnaire was originally developed by Rotter (1966). Subsequently, Scheepers (1995) improved the original instrument (Rotter,

1966) and constructed the first edition of the LCI using attribution and social learning theories as frames of reference (Schepers, 2005). Schepers (1995) explains that the original instrument is inadequately developed on a psychometric level. The forced choice format of the instrument results in ipsative scores which may be used to determine intra-individual strengths. Normative processes are required to measure inter-individual differences (Schepers, 2005). Schepers (1995) maintains that ipsative scoring prevents item and factor analysis from being accomplished.

In South Africa, the LCI (Schepers, 1995) is used more frequently because of its favourable psychometric qualities (Cilliers & Coetzee, 2002). While Rotter (1966) views internal and external control as dependent variables on a continuum, Schepers (1995) postulates that they are independent variables and not bipolar opposites (Cilliers & Coetzee, 2002). The rationale for using this inventory was that it would measure the respondents' levels of locus of control behaviour.

- *Description*

The LCI (Schepers, 1995) deals with a variety of factors and circumstances which to a greater or lesser extent may influence an individual's behaviour. The LCI measures three constructs, namely, (1) autonomy, which is seen as a condition of independence and self-determination; (2) external control which refers to the individual's belief that outcomes are independent of their own behaviour; and (3) internal control which refers to the individual's belief that outcomes are a consequence of their own behaviour (Schaap, Buys & Olckers, 2003).

The questionnaire consists of 88 items covering various matters that measure individual beliefs regarding expectations on how rewards are controlled. The items of the LCI are all in the form of questions and the responses are recorded on a seven-point scale. Only the endpoints of the scales are verbally anchored, and the respondent has to indicate a response by drawing a cross in the appropriate box of the rating scale (Schepers, 2005).

- *Administration and scoring*

The individual is required to read each question carefully and decide how it applies to them. The individual must then look at the descriptions at the end-points of the seven-point scale which follows each question (item) and decide where on the scale to place a response (Schepers, 2005). The total of the three scales gives a comprehensive view of the respondent's locus of control.

- *Interpretation*

According to Schepers (2007), apart from predicting autonomy, and external and internal control, the LCI is also a good predictor of psychological wellbeing. Individuals with high scores on autonomy and internal control and low scores on external control are regarded as well-adapted, healthy individuals who are able to cope effectively with life's stresses. Individuals with high scores on external control tend to blame the environment for non-performance or life crises (Gropp, Geldenhuys & Visser, 2007).

It is expected that persons high on autonomy would seek control of situations that offer possibilities for change, would readily accept the challenge of solving complex problems, would take the initiative in situations requiring leadership and would prefer to work on their own and to structure their own work programme (Schepers, 2005).

A person with high internal control and autonomy scores and a low external control score would be regarded as well adjusted, and the reverse would then be true where a person with such scores might be inclined to hold external factors and the environment responsible for things that go wrong and their own poor work performance.

A person with a high external control score believes that random events, fate, Lady Luck and certain influential people are responsible for their behaviour. They are convinced that the reinforcement of their behaviour has nothing to do with their own achievements, abilities or dedication. They are unable to manage stress in any shape or form and are the direct antithesis to persons

high on autonomy and internal control (Schepers, Gropp & Geldenhuys, 2006). A high external control orientation implies that the individual believes that outcomes are independent of his or her own behaviour (Schepers, 1995).

Individuals who have high internal control believe that outcomes are a consequence of their own behaviour (Schepers, 1995). According to Cilliers and Kossuth (2002), the internal individual feels in control, sees a relationship between own behaviour and outcomes, attributes the cause of events to themselves, feels empowered and masterful and thus experiences less stress. The external individual feels out of control, sees no relationship between own behaviour and events, attributes the cause of events to the environment, others and fate, and feels anxious, frustrated and helpless (Cilliers & Kossuth, 2002).

High autonomy scores are indicative of persons who are forceful, assertive, socially bold, open to change, emotionally stable and self-assured (Schepers, 2005). Persons with high external control scores are seen as emotionally unstable, apprehensive, suspicious, tense and concrete in their thinking. High internal control scores indicate persons who are rule-conscious, dutiful, perfectionistic, well organised and practical (Schepers *et al.*, 2006; Schepers & Hasset, 2006).

- *Reliability and validity*

Schepers (1995) established the Cronbach alpha coefficient of the three locus of control scales as 0.87 for autonomy, 0.84 for external control and 0.83 for internal control. Schepers (1995) also found that the two sub-constructs of external and internal control were independent constructs. Schepers (2005) later found coefficients of 0.88 for autonomy, 0.87 for external control and 0.82 for internal control.

In a validation of the 1995 revised edition of the LCI, Schepers (2007) found that it has a well-defined three-factor structure; consequently, several independent studies conducted with the 1995 edition of the LCI were reviewed

and showed very promising results. The three scales which emerged have highly acceptable Cronbach alpha reliability coefficients (Schepers, 2007).

The criterion-referenced validity of the LCI was clearly demonstrated by Bothma and Schepers (1997). Rothmann and Agathagelou (2000) found that the LCI could be used to identify areas of discontent in the work situation. The construct validity of the LCI has been well established (Schepers, 2007) and the reliabilities of the three scales that were obtained are highly acceptable. The LCI also correlated with numerous other psychological constructs in terms of convergent validity (Schepers, 2007).

4.2.2.2 *Orientation to Life Questionnaire (OLQ)*

Antonovsky's (1987) Orientation to Life Questionnaire (OLQ) was used to measure sense of coherence.

- *Development and rationale*

The OLQ was developed by Antonovsky (1987) and measures sense of coherence in three sub-scales, namely comprehensibility, manageability and meaningfulness. Strümpfer (1990) indicates that sense of coherence is a dispositional orientation and not a state or a trait. It embraces components of perception, memory, information processing and effect in habitual patterns of appraisal and develops through repeated experiences of making sense of the countless stressors in an individual's life (Gropp *et al.*, 2007).

The rationale for this questionnaire was that it would measure a respondent's global orientation to coping as represented by the concept of sense of coherence and then, specifically, also the three key components of comprehensibility, manageability and meaningfulness (Gropp *et al.*, 2007).

- *Description*

The OLQ predicts the extent to which the individual feels that there is a probability that things will work out well (Antonovsky, 1979). Three core personality characteristics are measured, namely (1) comprehensibility, where individuals make sense of the stimuli in the environment; (2) manageability, which refers to coping with the stimuli in view of the available resources; and (3) meaningfulness, which is an emotional identification with the events in the environment (Cilliers & Kossuth, 2002).

The OLQ consists of 29 items using a seven-point Likert scale response format. Thirteen of the items are negatively worded to counteract response styles and these items have to be reverse coded. Each question has seven possible answers with two anchoring phrases. Respondents are asked to select the response most applicable to them and indicate it on the seven-point semantic differential scale.

- *Administration and scoring*

The OLQ is scored by adding the item scores of each sub-scale separately to arrive at a score for each sub-scale. The total score for the OLQ is the sum of the three sub-scale scores. The total score of the three sub-scales of the OLQ gives an indication and a global view of the respondent's sense of coherence. The average score on the OLQ normally fluctuates between 120 and 150 (Antonovsky, 1987), although sub-scales can also be interpreted individually. A low score on one sub-scale indicates that the trait is present only to a lesser extent, whereas a higher score is indicative of the presence of the trait to a greater extent (Antonovsky, 1987).

The 29 items of the sense of coherence scale consist of 11 statements relating to comprehensibility, 10 to manageability and 8 to meaningfulness. Thirteen of the items are formulated negatively and have to be reversed in scoring so that a high score always expresses a strong sense of coherence. The highest possible score for the questionnaire is 203.

- *Interpretation*

The total score gives an indication of the respondent's sense of coherence, with a strong sense of coherence being indicated by a high score (Strümpfer, 1990). Individuals who score significantly higher on the three scales have a strong sense of coherence. Thus, an individual with a strong sense of coherence will be able to comprehend, manage and engage with the nature and dimensions of stressors and will not necessarily succumb to them as would an individual with a weak sense of coherence (Strümpfer, 1990).

Individuals who have a low score on the three scales will reflect their perception that the environment seems less ordered and predictable, tasks appear less manageable, and to a large extent seem meaningless (Van Jaarsveld, 2005). According to Gropp *et al.* (2007) individuals with a high sense of coherence have a greater ability to mobilise and generate resources in their workplace than individuals with a low sense of coherence.

Rothmann *et al.* (2003) found that sense of coherence contributes to the professional efficacy of employees. Amirkhan and Greaves (2003) showed that a strong sense of coherence impacts on perception so that individuals with a strong orientation are likely to view a greater number of events as having coherence. This perceptual process seems to be subtle; it influences individuals' perceptions of stressful events, but it does so without their conscious awareness.

Persons with high sense of coherence scores have a clear perception of the stimuli encountered in a particular situation. They see the stimuli as ordered and consistent and the situation as well structured. Their perceptions thus make cognitive sense (Antonovsky, 1993).

- *Reliability and validity*

The OLQ scale was developed to operationalise sense of coherence, using a facet-theoretical design (Breed *et al.*, 2006). The OLQ has often been used in

South Africa where it has yielded acceptable reliability (Danana, 1989; Strümpfer & Wissing, 1998). Evidence for its internal validity and stability over brief intervals has been established by Frenz, Carey and Jorgensen (1993).

A consistently high correlation coefficient ranging between 0.83 and 0.93 has been reported for the OLQ, indicating internal validity and reliability (Antonovsky, 1993). Internal validity has been confirmed at 0.80 by Rothmann, Jackson and Kruger (2003). According to Cilliers and Kossuth (2004), the instrument has a high level of internal validity and possesses a high test-retest reliability of 0.90.

According to Antonovsky (1993) and Eriksson and Lindstrom (2005) the instrument possesses construct, content, face, consensual, predictive and criterion validity. In addition, Antonovsky (1987) concludes that the sense of coherence score is consistently significantly related to all positive health measures, while being significantly negatively related to illness measures.

4.2.2.3 Utrecht Work Engagement Scale (UWES)

The Utrecht Work Engagement Scale (UWES) (Schaufeli & Bakker, 2003) was used to measure engagement.

- *Development and rationale*

Schaufeli and Bakker (2003) developed the UWES in order to assess work engagement. While Maslach, Jackson and Leiter (1997) state that engagement is adequately measured by the opposite profile of the Maslach Burnout Indicator (MBI) scores, Schaufeli and Bakker (2003) argue that burnout and engagement are two separate constructs whose measurement and structure differ. In the view of Maslach, Jackson and Leiter (1997), engagement is, by implication, assessed by the opposite pattern scores on the three MBI dimensions (Schaufeli & Bakker, 2003).

The rationale for using this questionnaire was that it would measure the three dimensions of engagement, namely, vigour, dedication and absorption.

- *Description*

The UWES is an instrument that measures levels of work engagement. Three dimensions of engagement are measured, namely: (1) vigour, which refers to high levels of energy and resilience at work; (2) dedication, which refers to an attitude of commitment towards the job and the organisation; and (3) absorption, which refers to experiences of being fully focused on the job.

The scale comprises a 17-item self-report questionnaire. The answers have a seven-point frequency rating scale, varying from null (never) to six (daily). Null and six represent the extreme values on the scale while a rating of three on the same scale would indicate that the two statements would be equally applicable to the individual.

- *Administration and scoring*

The respondent is asked to reflect what best describes their experience. The questionnaire is self-administered and takes about 5 to 10 minutes to complete. The mean scale score of the three UWES sub-scales is computed by adding the scores on a particular scale and dividing the sum by the number of items of the sub-scale involved. This calculation is also used for the total score (Schaufeli & Bakker, 2003). High scores indicate work engagement.

- *Interpretation*

A high score on each sub-scale indicates engaged workers who are characterised by high levels of vigour and dedication and elevated levels of absorption. Workers who score high on vigour usually have much energy, zest and stamina when working, whereas those who score low have less energy, zest and stamina as far as their work is concerned. Workers who score high on dedication strongly identify with their work because it is experienced as meaningful, inspiring and challenging. Those who score high on absorption feel that they are usually happily engrossed in their work and have difficulty detaching from it (Schaufeli & Bakker, 2003).

A study done by Mostert and Rothmann (2006) revealed that work engagement was best predicted by conscientiousness, emotional stability, and low stress resulting from job demands. People with a strong sense of coherence were also found to experience more work engagement (Naudé & Rothmann, 2006). This result is consistent with previous findings (Basson & Rothmann, 2002; Schaufeli & Bakker, 2004; Wissing, De Waal & De Beer, 1992). The study by Naudé and Rothmann (2006) also shows that the availability of job resources (i.e. when distress regarding job resources is low) and personal resources (i.e. when the sense of coherence is strong) enhances work engagement levels (Van der Colff & Rothmann, 2009).

- *Reliability and validity*

The UWES was developed to measure work engagement and acceptable reliability has been found for it (Schaufeli & Bakker, 2003). Storm and Rothmann (2003b) and Naudé and Rothmann (2003), studied the internal consistency, factorial validity, structural equivalence and bias of UWES in South Africa (Rothmann, 2003). These authors found evidence for its use as a measuring instrument in South Africa.

The internal consistency of the three scales exceeds the critical Cronbach alpha value of 0.7 with the majority of the values falling between 0.8 and 0.9 (Freeney & Tiernan, 2006). The three dimensions of the UWES appear to be closely related, with the inter-correlations between the three scales exceeding 0.65 (Schaufeli, Salanova, Gonzales-Roma & Bakker, 2002). The high reliability coefficients indicate that the UWES is a psychometrically sound measure (Freely & Tiernan, 2006).

Schaufeli *et al.* (2002) found acceptable reliability and internal consistencies for the UWES. Storm and Rothmann (2003b) and Naudé (2003) found support for a three-factor model through structural equation modelling and high correlations between the three dimensions. Confirmatory factor-analytical studies confirmed the factorial validity of the UWES (Schaufeli, Bakker, Hoogduin, Schaap & Ladler, 2001; Schaufeli *et al.*, 2002), with the findings

showing internally consistent results for the three sub-scales of the instrument.

Storm and Rothmann (2003b) found that a re-specified one-factor model fitted the data best in their random, stratified sample of police members in South Africa ($n = 2\,396$). The internal consistencies of the three sub-scales were determined at 0.78 (vigour), 0.89 (dedication) and 0.78 (absorption). Naudé (2003) found internal consistencies of 0.70 (vigour); 0.83 (dedication) and 0.67 (absorption) in a study conducted among emergency workers.

4.2.2.4 Maslach Burnout Indicator-General Survey (MBI-GS)

The Maslach Burnout Indicator-General Survey (MBI-GS) (Schaufeli *et al.*, 1996) was used to measure burnout.

- *Development and rationale*

Burnout was originally measured using the Maslach-Burnout Inventory (MBI) (Maslach & Jackson, 1986). The MBI is the most accepted instrument for measuring burnout (Rothmann, 2003) and was originally developed to measure burnout as an occupational issue for people providing human services. Alternative versions, including the MBI-GS, have been developed for use with other occupational groups.

The rationale for using the MBI-GS was that it measures exhaustion, cynicism and professional efficacy and focuses on the performance of work in general.

- *Description*

The MBI-GS measures respondents' relationships with their work on a continuum from engagement to burnout (Maslach *et al.*, 1997). The MBI-GS measures the three dimensions of burnout, namely: (1) exhaustion, which represents the basic individual stress component of burnout, and is characterised by a lack of energy and feelings of being depleted of emotional and physical resources; (2) cynicism, which represents the depersonalisation

aspect of burnout with feelings of detachment and unresponsiveness in relation to the job; and (3) professional efficacy, which refers to the self-evaluation dimension of burnout and is a feeling of incompetence, lack of achievement and productivity at work.

Burnout is conceptualised as a continuous variable ranging from low to moderate to high degrees of experienced feeling. It is not viewed as a dichotomous variable which is either present or absent (Maslach & Jackson, 1986). Sixteen items measure the three sub-constructs of emotional exhaustion, cynicism and professional efficacy. These sub-constructs are used to measure engagement or burnout as the individual experiences it in the workplace.

- *Administration and scoring*

The individual is asked to reflect on a 0–6 frequency rating, what best describes their experience of their job. The questionnaire is self-administered and takes about 5 to 10 minutes to complete. The questionnaire is scored by using a scoring key which contains directions for scoring each sub-scale and dimension, which can then be coded as low, moderate or high.

- *Interpretation*

A high degree of burnout is reflected in high scores on exhaustion and cynicism (Demerouti, Mostert & Bakker, 2010) and low scores on professional efficacy (Maslach *et al.*, 1997). A low degree of burnout is reflected in low scores on emotional exhaustion and cynicism and high scores on the professional efficacy sub-scale.

According to Maslach *et al.* (1997), cynicism represents dysfunctional coping where employees develop indifference and cynicism about their work in order to gain distance from its exhausting demands. As cynicism reduces the energy available for performing work and for developing creative solutions to the problems work presents, this reaction is expected to be dysfunctional.

Therefore, cynicism is expected to be positively correlated with exhaustion and negatively correlated with professional efficacy.

Research has shown that burnout is not only related to negative outcomes for the individual, such as depression, a sense of failure, fatigue and loss of motivation, but also to negative outcomes for the organisation, including absenteeism, staff turnover rates and lowered productivity. According to Levert, Lucas and Ortlepp (2000), workers with burnout show a lack of commitment and are less capable of providing adequate services, especially along dimensions of decision making and initiating involvement with clients. Burned out workers are also too depleted to be creative and cooperative (Sammut, 1997).

- *Reliability and validity*

Internal consistencies are found to be satisfactory, ranging from 0.73 for cynicism to 0.91 for exhaustion (Rothmann, 2003). Schutte *et al.* (2000) showed the exhaustion and professional efficacy sub-scales to be sufficiently internally consistent. Studies using South African samples found satisfactory alpha coefficients (Rothmann, 2003), while Storm and Rothmann (2003) found alpha coefficients of 0.88 for exhaustion, 0.78 for cynicism and 0.79 for professional efficacy. On the other hand, Rothmann and Jansen van Vuuren (2002) found satisfactory alpha coefficients of 0.79 for exhaustion and 0.84 for both cynicism and professional efficacy.

Storm and Rothmann (2003a) found that a re-specified one-factor model fitted the data best in their random, stratified sample of police members in South Africa (n = 2 396). The internal consistencies of the three sub-scales were determined at 0.78 (vigour), 0.89 (dedication) and 0.78 (absorption). Naudé (2003), however, found internal consistencies of 0.70 (vigour); 0.83 (dedication) and 0.67 (absorption) in a study conducted among emergency workers.

4.2.2.5 *Biographical questionnaire*

- *Development and rationale*

The rationale for the development of a biographical questionnaire was to make use of an instrument to gather information on the demographic characteristics of the participants in the study. Certain variables, such as the age of participants, can have an effect on the results and therefore a biographical questionnaire was included to control for variables such as race, gender, age, tenure and educational background. This questionnaire was administered in order to acquire information for the statistical analysis of the sample.

- *Description*

The questionnaire consisted of one page where respondents were asked to give their names and surnames, although this section was not compulsory. The compulsory section of the questionnaire asked for information on the following variables: race, gender, age, occupational band, tenure and location.

- *Administration and scoring*

The questionnaire was bound into a booklet containing all the research instruments and was distributed to respondents. It was self-administered and respondents were asked to mark the appropriate box.

- *Interpretation*

The biographical data gathered indicated the race, gender, age, occupational band, tenure and location of respondents in the sample. Biographical statistics were calculated for the individual and job-specific biographical variables and these statistics allowed the researcher to make inferences about the sample.

- *Reliability and validity*

In order to ensure the reliability of the information, each booklet was checked on return to make sure that all the relevant information had been provided.

4.2.3 Research procedure

In order to conduct the research, approval was obtained at senior management level of the organisation to administer the instruments to a sample of employees. On obtaining permission to conduct the study a convenience sample ($n = 235$) was drawn from the total population.

All the instruments were collated and bound together in booklet form. A biographical questionnaire was also included. In addition, a covering letter containing a brief explanation of the study was included in the booklet. The letter also explained the nature of the research and gave instructions for completing the questionnaires. The complete package was then distributed by hand to individuals in the sample who were based at the head office and an electronic version of the booklet was sent to those individuals who were not based at the head office. Respondents were encouraged to participate and to contact the researcher should feedback or clarity be required.

While the respondents were given a deadline for completion, not all adhered to it. The researcher spoke to and visited a number of the respondents to encourage them to complete the questionnaire. The completed questionnaires were collected by hand, or returned electronically and ultimately 144 questionnaires were returned, which constituted the final research sample. The results were then captured electronically for analysis.

4.2.4 Statistical analysis

The statistical analysis was done using the Statistical Program for the Social Sciences (Argyrous, 2009). The work was supervised by a psychologist, Liezel Korf, who specialises in quantitative statistical research.

Reliability is the central consideration of validity in the process of data collection (Mouton & Marais, 1996). Methods used to calculate the internal consistency reliability include the Cronbach alpha coefficient and the mean of item correlations, which were computed for all the sub-scales. The mean and the correlation coefficient can be used as both descriptive statistics to describe a sample and as inferential statistics to estimate features of a population (Durrheim & Painter, 2006).

Frequency distributions give the researcher a picture of the score distribution. Researchers also seek to describe the shape, variability and central tendency of a distribution. Once they know this, they are able to calculate the most useful piece of descriptive information, that is, where an individual lies relative to others in a distribution (Durrheim & Painter, 2006).

Effect sizes can be used to establish whether relationships between two variables are practically significant (important) (Steyn, 2002). An effect size can be established from a sample in order to determine the importance of a statistically significant relationship. Steyn (2002) argues that two situations have to be distinguished: (1) when dealing with a population; and (2) when a random sample is drawn from a population. Only in the second situation is the statistical significance of a relationship appropriate, since the test result obtained from the sample is used to establish whether two variables are related within the population.

The following guidelines are given by Cohen (1988) for judging the importance of a relationship. These cut-off points in terms of the correlation coefficient are recognised as being practically significant (independent of the direction of the relationship) (Steyn, 2002).

- $r = 0.10$: small effect
- $r = 0.30$: medium effect
- $r = 0.50$: large effect

In this study Cronbach alpha coefficients were computed, the mean of item correlations was obtained for all sub-scales and a comparison of groups were made using the Analysis of Variance (ANOVA).

4.2.4.1 Cronbach alpha coefficient

Cronbach alpha (α) coefficients were computed to assess the internal consistency reliability of the measuring instruments and the items used in this study. The correlation coefficient represents the strength of covariation between two variables by means of a number that can range from -1 to 1 (Durrheim & Painter, 2006). Cronbach alpha coefficients were obtained for all sub-scales used in the study.

4.2.4.2 Inter-item correlation

Inter-item correlation coefficients were used to determine whether the internal consistencies of the constructs were too high as this would have affected the validity. Clark and Watson (1995) specify inter-item correlations between 0.15 and 0.50 as being acceptable. The mean of item correlations was obtained for all sub-scales used in the study.

4.2.4.3 Comparison of groups using ANOVA

The ANOVA is a general technique that was used to test the hypothesis that the means among two or more groups are equal, under the assumption that the sampled populations are normally distributed (Argyrous, 2000). This indicates whether the variation between two groups is significant. The ANOVA was computed in this study in order to compare

- means of sub-scales with gender
- means of sub-scales with age groups
- means of sub-scales with tenure
- means of sub-scales with occupational bands

4.3 RESEARCH HYPOTHESIS

According to Kerlinger and Lee (2000) hypotheses give direction to the enquiry. In this study the hypotheses were related to the biographical variables. The following research hypotheses were formulated:

H¹ = There is a significant relationship between tenure in the organisation and the constructs of burnout and engagement.

H² = There is a significant relationship between gender and the constructs of burnout and engagement.

H³ = There is a significant relationship between gender and the constructs of locus of control and sense of coherence.

4.4 CHAPTER SUMMARY

The aim of chapter 4 was to explain how the empirical study was conducted. This was done by describing the population and the sample and discussing the measuring instruments. The instruments were discussed in terms of their development, description, administration, scoring, interpretation, reliability and validity. The data gathering, data processing and interpretation of the data were also discussed.

CHAPTER 5: RESULTS

The aim of this chapter is to report and discuss the results of the empirical study. The biographical and descriptive statistics, the reliability of the instruments, the differences between the subgroups, correlations and regression analysis will also be discussed. In addition, a theoretical integration is provided and an interpretation of the data is presented. Finally the chapter concludes with a summary.

5.1 BIOGRAPHICAL STATISTICS

The demographic profile of the sample is presented below. The biographical information is reported for race, gender, age, occupational band and tenure. The race and gender demographic profiles of the sample are representative of the total population of the organisation.

Table 5.1 shows the racial composition of the sample.

Table 5.1

Racial composition of sample

| | | Frequency | Percent | Valid percent | Cumulative percent |
|--------------|----------|-----------|---------|---------------|--------------------|
| | | | | | |
| Valid | Black | 54 | 37.5 | 37.5 | 37.5 |
| | Coloured | 10 | 6.9 | 6.9 | 44.4 |
| | Indian | 15 | 10.4 | 10.4 | 54.8 |
| | White | 65 | 45.1 | 45.1 | 99.9 |
| | Total | 144 | 100.0 | 100.0 | |

Figure 5.1 shows the graphical representation of race.

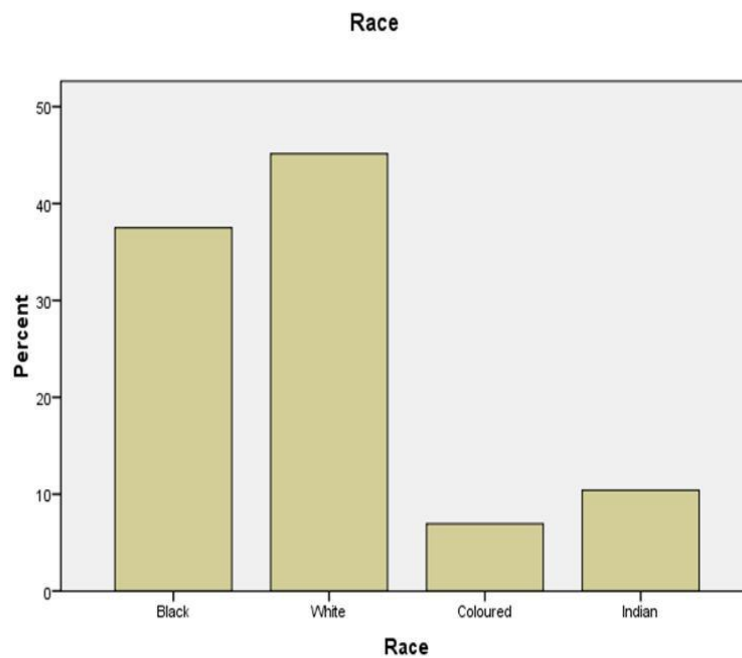


Figure 5.1: Race representation in sample

White respondents were the single largest group (45.1 percent), while black respondents comprised 37.5 percent of the sample. Coloured and Indian respondents comprised 6.9 and 10.4 percent respectively of the sample.

Table 5.2 shows the representation of males and females in the sample.

Table 5.2

Gender composition of the sample

| | | Frequency | Percent | Valid percentage | Cumulative percentage |
|-------|--------|-----------|---------|------------------|-----------------------|
| | Male | 60 | 41.7 | 41.7 | 41.7 |
| Valid | Female | 84 | 58.3 | 58.3 | 100.0 |
| | Total | 144 | 100.0 | 100.0 | |

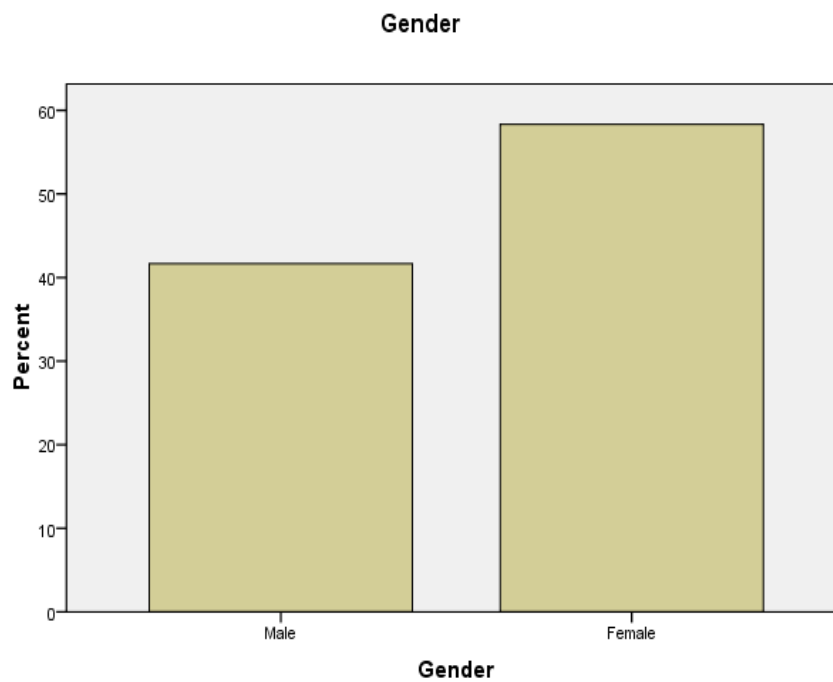


Figure 5.2: Gender representation in sample

Females formed the majority of respondents in the sample (58.3 percent) while the remainder was male.

Table 5.3 indicates the age distribution of the sample.

Table 5.3

Age recoded

| | | Frequency | Percentage | Valid percentage | Cumulative percentage |
|-------|--------------|-----------|------------|------------------|-----------------------|
| Valid | 39 and below | 52 | 36.1 | 36.1 | 36.1 |
| | 40–49 | 62 | 43.1 | 43.1 | 79.2 |
| | 50+ | 30 | 20.8 | 20.8 | 100.0 |
| | Total | 144 | 100.0 | 100.0 | |

Figure 5.3 shows a graphical representation of age.

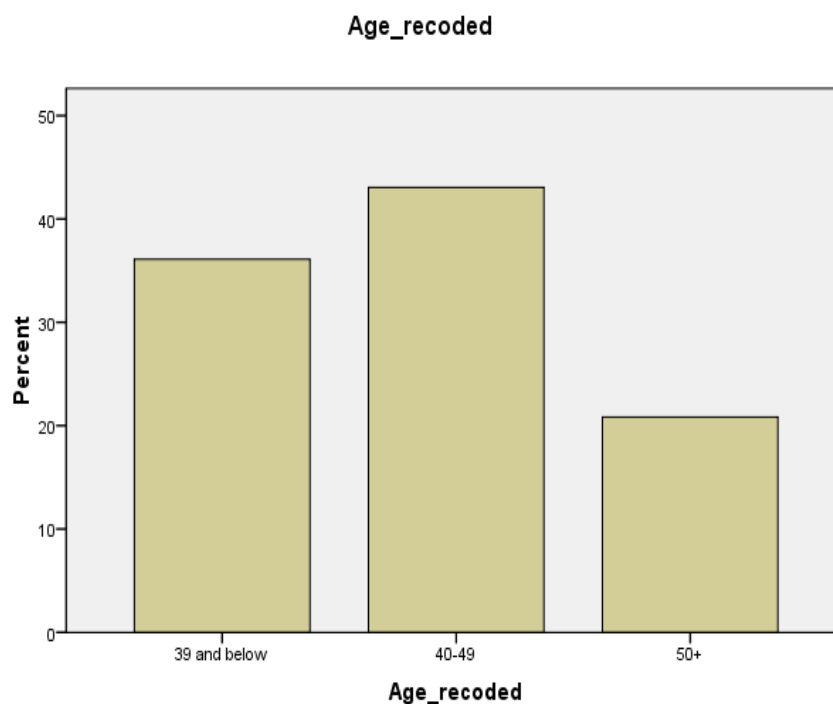


Figure 5.3: Age (recoded) representation in sample

The original categorisation of age included the following groups: 17–24, 25–29 30–39, 40–49 and 50+. This categorisation was, however, recoded owing to the small number of respondents in the younger age groups. The results on the recoded variable showed a fairly even spread between age groups. Just over 43 percent of the sample comprised employees in the 40–49 age group, which formed the largest group in the sample, 36.1 percent of the sample fell into the 39 and below age category while the 50+ age group formed 20.8 percent of the sample.

Table 5.4 shows the occupational bands of the employees.

Table 5.4***Occupational Band recoded***

| | | Frequency | Percentage | Valid percentage | Cumulative percentage |
|---------|--------|-----------|------------|------------------|-----------------------|
| | M&P | 115 | 79.9 | 80.4 | 80.4 |
| Valid | G | 28 | 19.4 | 19.6 | 100.0 |
| | Total | 143 | 99.3 | 100.0 | |
| Missing | System | 1 | 0.7 | | |
| | Total | 144 | 100.0 | | |

Figure 5.4 gives a graphical representation of the recoded occupational bands.

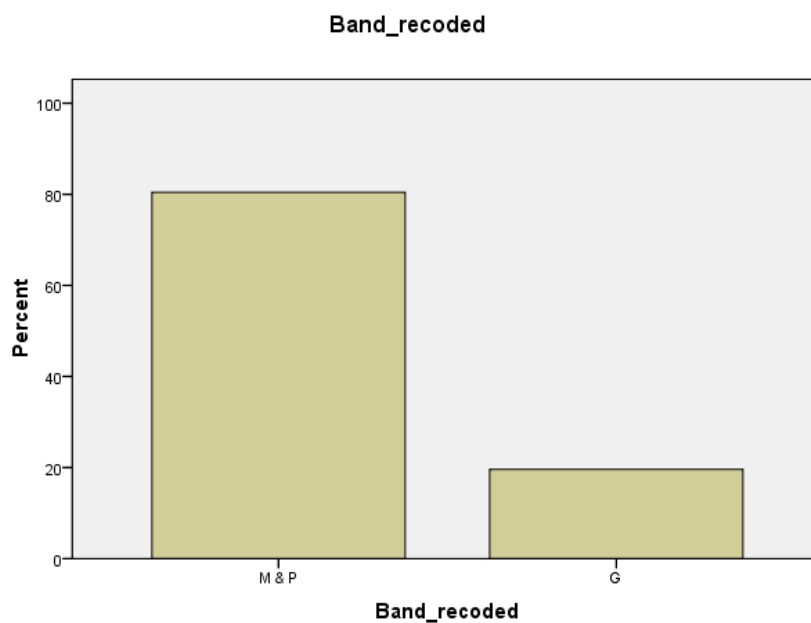


Figure 5.4: Occupational band – recoded

Employees were drawn mainly from the Professional (P) and General (G) bands of the organisation. Owing to the small number of respondents in

Management (M) band, Bands M and P were subsequently combined and the resultant frequencies reported above. The majority of the sample thus fell within the combined M and P occupational bands.

Table 5.5 represents the tenure of the employees.

Table 5.5

Tenure

| | Frequency | Percentage | Valid percentage | Cumulative percentage |
|----------------|------------------|-------------------|-----------------------------|----------------------------------|
| < 5 years | 23 | 16.0 | 16.1 | 16.1 |
| 5–10 years | 38 | 26.4 | 26.6 | 42.7 |
| 11–15 years | 23 | 16.0 | 16.1 | 58.7 |
| 15–20 years | 59 | 41.0 | 41.3 | 100.0 |
| Total | 143 | 99.3 | 100.0 | |
| Missing System | 1 | 0.7 | | |
| Total | 144 | 100.0 | | |

Figure 5.5 is the graphical representation of tenure.

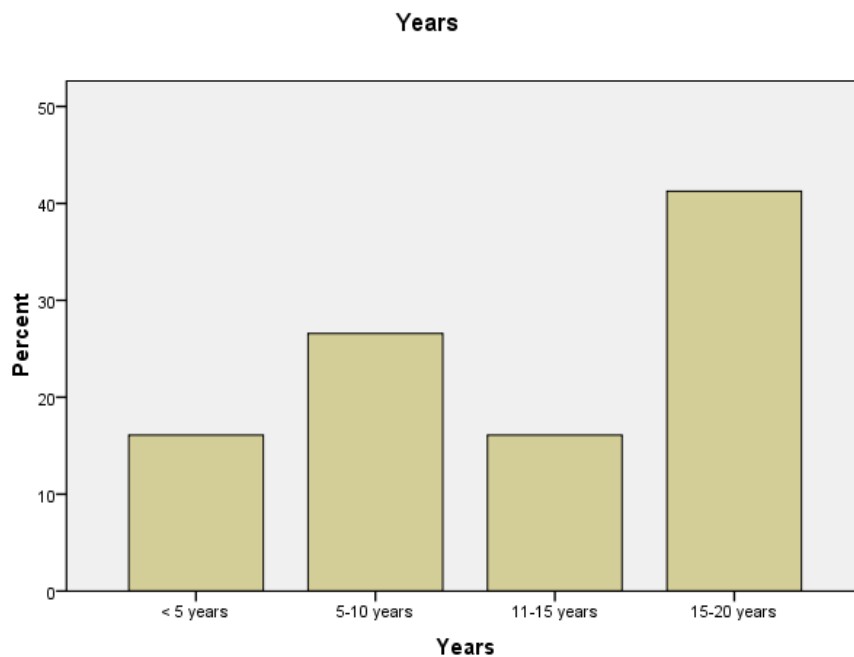


Figure 5.5: Tenure

There was a fairly even spread in terms of the years of service, as can be seen from the table and the graph above. Forty-one per cent of the group comprised employees with 15–20 years of service, which represented the largest group in the sample. Employees with less than five years and between 11 and 15 years of service formed 16 percent each of the sample, and 26.4 percent of the sample had between 10 and 15 years of service.

The biographical information indicated that the typical profile of the sample could be described as white and female in the age group 40–49. These individuals were drawn from the Managerial and Professional occupational groups and had tenure of between 15 to 20 years.

5.2 DESCRIPTIVE STATISTICS OF THE MEASURING INSTRUMENTS

In this section the descriptive statistics obtained for the various instruments used were reported. The mean and standard deviation for these instruments

were computed. The mean is the best known measure of central tendency and indicates what sets of measures are like on average. The standard deviation, on the other hand, indicates the distances that describe the distribution of the individual scores from the mean. The higher the standard deviation, the greater the distances, on average, above or below the mean (Steyn, Smit, Du Toit & Strasheim, 1995).

Table 5.6 shows the descriptive statistics of the measuring instruments.

Table 5.6***Descriptive statistics for the measuring instruments***

| | N | Minimum | Maximum | Mean | Std. deviation |
|-------------------------------------------------|----------|----------------|----------------|-------------|---------------------------|
| LOCUS OF CONTROL INVENTORY | | | | | |
| Autonomy | 137 | 3.41 | 6.76 | 5.3215 | 0.69157 |
| External control | 137 | 1.54 | 6.04 | 3.3708 | 0.93997 |
| Internal control | 137 | 3.50 | 6.85 | 5.7260 | 0.64089 |
| ORIENTATION TO LIFE QUESTIONNAIRE | | | | | |
| Comprehensibility | 144 | 1.55 | 6.55 | 4.3864 | 0.76935 |
| Manageability | 144 | 2.80 | 6.30 | 4.8626 | 0.75369 |
| Meaningfulness | 144 | 2.50 | 7.00 | 5.2209 | 0.95748 |
| Total | 144 | 3.23 | 6.32 | 4.8233 | 0.69835 |
| UTRECHT WORK ENGAGEMENT SCALE | | | | | |
| Vigour | 144 | 1.67 | 7.00 | 4.9818 | 1.17975 |
| Dedication | 144 | 1.40 | 7.00 | 4.8087 | 1.44668 |
| Absorption | 144 | 1.33 | 7.00 | 4.6549 | 1.23308 |
| Total | 144 | 1.91 | 7.00 | 4.8151 | 1.15717 |
| MASLACH BURNOUT INDICATOR-GENERAL SURVEY | | | | | |
| Emotional exhaustion | 143 | 1.00 | 7.00 | 3.4822 | 1.33619 |
| Cynicism | 144 | 1.00 | 6.80 | 3.5649 | 1.32091 |
| Professional efficacy | 144 | 1.00 | 6.17 | 2.4940 | 1.20860 |
| Total | 144 | 1.46 | 6.32 | 3.1788 | 0.99445 |

5.2.1 Locus of Control Inventory

The mean scores of the autonomy and internal control sub-scales indicated that the sample displayed an above average score on these two sub-scales. The mean score for external control was, however, below average. Therefore, high scores were indicated for autonomy and internal control and a low score for external control. The standard deviation indicated that there was only a slight difference from the mean.

The above average score is significant as autonomy is closely related to internal control. It may thus be inferred that the employees in the sample feel in control and see a relationship between their own behaviour and outcomes. Owing to this feeling of being in control, the individual may experience less stress. It can therefore be expected that these individuals will seek control of situations that offer possibilities for change and would prefer to work on their own. Internal locus of control is linked to coping effectively with environmental demands; accordingly, the use of this construct assists in assessing whether salutogenic constructs can differentiate between people who are coping and those who are not.

5.2.2 Orientation to Life Questionnaire

The mean score of comprehensibility was below the average and the mean scores of manageability and meaningfulness were indicated as higher than the average. In addition, the standard deviation did not indicate a marked difference from the mean. The scores therefore indicated that respondents scored higher on the manageability and meaningfulness sub-scales and lower on comprehensibility.

It may therefore be inferred that the respondents do not view their environment as structured and predictable. It is as if employees do not experience consistency or structure in their work environment and that work activities and direction have become less predictable. This is supported by the presence of many changes that have been forced upon the employees through restructuring and the movement of senior management of the

organisation. This has manifested in a work environment that is unstructured and unpredictable.

However, despite this, the individual may be coping with the stimuli received and may view the available resources as adequate to meet the demands presented by the various stimuli or the environment (Antonovsky, 1979).

5.2.3 Utrecht Work Engagement Scale

On this scale, the mean scores of the sub-scales of vigour, dedication and absorption were above average. The mean scores thus indicated that respondents scored high on all three sub-scales. The total engagement score was also above the average. In addition, the standard deviation was higher than for locus of control and sense of coherence.

The high scores are an indication that the respondents are mostly engaged individuals characterised by high levels of vigour and dedication, and by elevated levels of absorption. It may be inferred that these employees are engaged in their jobs. Despite conditions in the organisation, these employees identify personally with their jobs and are therefore possibly motivated by the job itself.

5.2.4 Maslach Burnout Indicator-General Survey

According to this measure, the mean scores indicated for the three sub-scales of burnout were all below average. The standard deviation, however, was slightly higher than scores for locus of control, sense of coherence and engagement. Professional efficacy was indicated as being much lower and may indicate that the respondents experience a reduced ability to do the job, feel incompetent, and experience a lack of accomplishment (Rothmann *et al.*, 2003).

The scores indicated that employees are mostly coping with their jobs and not experiencing high levels of burnout. However, the low professional efficacy scores may be a result of the lack of direction in the organisation, which leads employees to feel that their ability to do the job is reduced.

5.2.5 Integration

A summary of the mean scores for employees in the sample indicated that generally above average scores were obtained for the constructs locus of control, sense of coherence and engagement. Compared to this, the scores obtained for the burnout construct were lower.

It may be inferred that employees with high scores on internal control and autonomy are convinced that success in life depends on their own abilities and dedication. They are sure that they can overcome adverse circumstances and solve complex problems on their own. They are usually cheerful, positive, hopeful and optimistic. They are responsible, dependable individuals with good social skills, who interact and relate well with others (Bar-on, 1997). Moreover, they are calm and work well under pressure and are able to deal effectively with tasks that are stressful or anxiety-provoking or that contain an element of danger (Bar-on, 1997).

Antonovsky (1987; 1993) states that the central core in an individual's coping ability is to have a strong sense of coherence. This does not necessarily refer to a specific type of coping strategy, but to factors which in all cultures are always the basis for coping with stressors successfully. The high sense of coherence scores of the employees in this sample allows one to infer that employees are functioning positively despite the stresses of the organisation. From a positive psychology perspective (Seligman & Csikszentmihalyi, 2000), such individuals could be described as engaged in their work.

5.3 RELIABILITY OF MEASURING INSTRUMENTS

Cronbach alpha (α) coefficients were computed in order to assess the internal consistency and reliability of the measuring instruments and the items used in the study. This is an index that indicates the extent to which all the items in the measuring instruments are measuring the same characteristic, and that the set of variables are consistent within what the instrument is intended to measure (Huysamen, 1998).

Cronbach alpha coefficients (α) and inter-item correlation coefficients are used to assess the reliability and validity of all the instruments (Argyrous, 2000). The reliabilities of the scales used were calculated by making use of Cronbach's alpha. Coefficients were calculated in each case to determine the internal consistency of the measuring instruments. These values, as well as related statistics, are reported below.

Inter-item correlation coefficients are used to determine whether the internal consistencies of the constructs are too high, as this would affect their validity. Clark and Watson (1995) specify inter-item correlations between 0.15 and 0.50 as acceptable.

Table 5.7 indicates the reliabilities of the measuring instruments.

Table 5.7***Reliabilities of the measuring instruments***

| | Valid N | Mean Inter-item correlation | Mean Item total correlation | Alpha |
|-------------------------------------------------|---------|-----------------------------|-----------------------------|-------|
| LOCUS OF CONTROL INVENTORY | | | | |
| Autonomy | 137 | 0.198 | 0.416 | 0.877 |
| External control | 137 | 0.228 | 0.448 | 0.885 |
| Internal control | 137 | 0.199 | 0.410 | 0.855 |
| ORIENTATION TO LIFE QUESTIONNAIRE | | | | |
| Comprehensibility | 144 | 0.185 | 0.358 | 0.704 |
| Manageability | 144 | 0.161 | 0.318 | 0.644 |
| Meaningfulness | 144 | 0.310 | 0.484 | 0.776 |
| Total | 144 | 0.175 | 0.418 | 0.855 |
| UTRECHT WORK ENGAGEMENT SCALE | | | | |
| Vigour | 144 | 0.425 | 0.584 | 0.819 |
| Dedication | 144 | 0.573 | 0.697 | 0.870 |
| Absorption | 144 | 0.343 | 0.496 | 0.774 |
| Total | 144 | 0.420 | 0.623 | 0.924 |
| MASLACH BURNOUT INDICATOR-GENERAL SURVEY | | | | |
| Emotional exhaustion | 143 | 0.508 | 0.641 | 0.836 |
| Cynicism | 144 | 0.331 | 0.570 | 0.716 |
| Professional efficacy | 144 | 0.484 | 0.632 | 0.846 |
| Total | 144 | 0.287 | 0.499 | 0.864 |

5.3.1 Reliability and item analysis of the Locus of Control Inventory

In previous studies, reliabilities of 0.88 for autonomy, 0.87 for external control and 0.82 for internal control have been indicated (Schepers *et al.*, 2006). The locus of control scales in this study demonstrated adequate internal consistency with reliabilities of 0.877 for autonomy, 0.885 for external control and 0.855 for internal control.

The mean item total correlations have been previously indicated as 0.471 for autonomy, 0.472 for external control and 0.428 for internal control, which indicates high internal consistency of the items (Schepers *et al.*, 2006). Scores of 0.416 for autonomy, 0.448 for external control and 0.410 for internal control were obtained in this study which was therefore comparable and indicated a high internal consistency.

5.3.2 Reliability and item analysis of the Orientation to Life Questionnaire

The sense of coherence sub-scales showed adequate reliability compared to the guideline of $\alpha > 0.70$ (Nunnally & Bernstein, 1994). The mean inter-item correlations were within an acceptable range, that is, between $0,15 < r < 0.50$ (Clark & Watson, 1995). The mean item-total correlations obtained in this study suggested that most items showed adequate correlations with the relevant scale total. Item 10 had the lowest item-total correlation of all, both with regard to the comprehension scale (0.125) and the total scale (0.008). Removing this item led to an increase in reliability of 0.017 on the comprehension scale and 0,004 on the total scale. Owing to the magnitude of this increase it was decided to retain item 10 in order to make meaningful comparisons with other studies using the same scales.

Antonovsky (1987) reports internal consistency and reliability coefficients ranging between 0.84 and 0.93. Kalimo and Vuori (1990) found a reliability coefficient of 0.93 for adults ($n = 706$) between the ages of 31 and 44 years. Antonovsky (1993) summarises the most recent reliability and validity results in the various studies and indicates that the average alpha coefficient in 26

research studies range between 0.82 and 0.95. Naudé and Rothmann (2003) found alpha coefficients of 0.93 for the sense of coherence scale.

5.3.3 Reliability and item-analysis of the Utrecht Work Engagement Scale

High reliabilities on the Utrecht Work Engagement Scale (UWES) are indicated when the alpha is $> .7$ (Schaufeli & Bakker, 2003). In this study, reliabilities of 0.819 for vigour, 0.870 for dedication and 0.774 for absorption were reported. This therefore indicated an acceptable reliability.

Meaningful inter-item correlations on the UWES are indicated as > 0.65 (Schaufeli & Bakker, 2003). The engagement scales of this study thus show acceptable levels of alpha coefficients and related measures. Storm and Rothmann (2003) found internal consistencies for the three sub-scales at 0.78 (vigour), 0.89 (dedication) and 0.78 (absorption).

5.3.4 Reliability and item-analysis of the Maslach Burnout Indicator-General Survey

The burnout scales showed acceptable levels of alpha coefficients and related measures. Item 25 appeared to be somewhat problematic and represented the minimum item-total correlation both on the cynicism scale and the total burnout scale. The remainder of the item-total correlations were well within acceptable limits.

5.3.5 Integration

The acceptable levels of alpha coefficients and related measures obtained in the reliability and item-analysis of the instruments show that these instruments may be used to interpret data further. It can be accepted that all the items in the measuring instruments are measuring the same characteristic, and that the set of variables is consistent within what it is intended to measure (Welman & Kruger, 2001).

5.4 DIFFERENCES BETWEEN SUBGROUPS

Potential differences between demographic subgroups were investigated by means of a one-way ANOVA. The practical significance of the results and differences were explored with regard to Gender, Age, Occupational Band and Tenure. These were compared in terms of each of the sub-scales for each construct. The differences between the demographic subgroups provided, fulfil the exploratory research aspect of this study. The results described the status of the sample with regard to a display of the constructs of locus of control, sense of coherence, engagement and burnout. Significant findings, as well as general trends in this regard, are discussed below.

5.4.1 Differences in scores on all sub-scales for the biographical variable Gender

Table 5.8 represents the descriptives for all the sub-scales and the variable Gender.

Table 5.8***Descriptives sub-scales and gender***

| LOCUS OF CONTROL | | | SENSE OF COHERENCE | | | ENGAGEMENT | | | BURNOUT | | |
|--------------------------|-----|--------|---------------------------|-----|--------|-------------------|-----|--------|-----------------------|-----|--------|
| Gender | N | Mean | Gender | N | Mean | Gender | N | Mean | Gender | N | Mean |
| Autonomy | | | Comprehensibility | | | Vigour | | | Emotional exhaustion | | |
| Male | 58 | 5.4194 | Male | 60 | 4.4519 | Male | 60 | 5.0572 | Male | 60 | 3.2058 |
| Female | 79 | 5.2496 | Female | 84 | 4.3397 | Female | 84 | 4.9280 | Female | 83 | 3.6819 |
| Total | 137 | 5.3215 | Total | 144 | 4.3864 | Total | 144 | 4.9818 | Total | 143 | 3.4822 |
| External control | | | Manageability | | | Dedication | | | Cynicism | | |
| Male | 58 | 3.3033 | Male | 60 | 4.9095 | Male | 60 | 4.7842 | Male | 60 | 3.4925 |
| Female | 79 | 3.4204 | Female | 84 | 4.8291 | Female | 84 | 4.8262 | Female | 84 | 3.6167 |
| Total | 137 | 3.3708 | Total | 144 | 4.8626 | Total | 144 | 4.8087 | Total | 144 | 3.5649 |
| Internal control | | | Meaningfulness | | | Absorption | | | Professional efficacy | | |
| Male | 58 | 5.7131 | Male | 60 | 5.2917 | Male | 60 | 4.7089 | Male | 60 | 2.5817 |
| Female | 79 | 5.7356 | Female | 84 | 5.1702 | Female | 84 | 4.6163 | Female | 84 | 2.4313 |
| Total | 137 | 5.7260 | Total | 144 | 5.2209 | Total | 144 | 4.6549 | Total | 144 | 2.4940 |
| Total score not computed | | | Male | 60 | 4.8844 | Male | 60 | 4.8501 | Male | 60 | 3.0933 |
| | | | Total Female | 84 | 4.7797 | Total Female | 84 | 4.7901 | Total Female | 84 | 3.2399 |
| | | | Total | 144 | 4.8233 | Total | 144 | 4.8151 | Total | 144 | 3.1788 |

5.4.1.1 Locus of control

With regard to locus of control, females obtained lower scores on autonomy and internal control, and higher scores on external control. The difference was, however, very slight – 0.07 and 0.11 respectively. However, the sample size of the females was larger than that of the males; therefore this difference can be considered when interpreting the behaviour of the female employee. It can be inferred that some female employees in the organisation feel out of control and see no relationship between their own behaviour and events in the organisation. The male employee, however, may feel more in control and therefore experiences less stress. This is supported by the scores obtained for the burnout construct, where females scored higher than the males.

5.4.1.2 Sense of coherence

While being practically small in effect, female respondents scored lower than males on all the sense of coherence scales. A trend is noted for females to score consistently lower on all such scales. This implies that females may possibly perceive their work as consisting of experiences that are not bearable. Accordingly, they do not see work as meaningful or as being performed in a predictable and supportive work environment.

5.4.1.3 Engagement

It was found that females scored lower than males on the engagement scales as well. The difference is once again regarded as practically small in effect, but shows a definite trend for female respondents to score consistently lower than males on all the engagement scales.

5.4.1.4 Burnout

In terms of burnout, the only statistically significant difference ($p = 0.035$) between male and female respondents was found with regard to emotional exhaustion, with females (Mean = 3.68) scoring significantly higher on

average than males (Mean = 3.20). This difference may be regarded as practically small in effect.

5.4.1.5 Integration

The results in terms of integration showed that male employees scored high on locus of control and sense of coherence, and were regarded as being engaged in their work. The higher score on engagement correlated negatively with the low scores on the burnout construct. Female employees obtained low scores on locus of control and sense of coherence and a higher score on the burnout construct. The higher burnout score was related to the low engagement score.

The biographical data indicated that the majority of the sample of females consisted of white women. The profile of the white female employee indicated that a significant proportion of these women had worked in the organisation for over 15 years. Most have the challenge of balancing the multiple tasks associated with their homemaker and work roles, namely, fulfilling the responsibilities of mother, caregiver, spouse and employee simultaneously (Whitehead & Kotze, 2003). This was also true of their black counterparts. The multiple roles played by these female employees may be a contributing factor to the high score obtained for emotional exhaustion in the burnout construct.

Multiple role-playing has been found to have both positive and negative effects on the mental health and well-being of professional women and has also been found to have a variety of adverse effects on women's mental and physical health (Whitehead & Kotze, 2003). In this study it may be inferred that the demands of the workplace exceed the adaptive responses of the female employee who is not coping as well as her male counterpart in the organisation. Fulfilling multiple roles does not, however, necessarily indicate that the female employees are not performing adequately in their jobs. Indeed, while possibly struggling to cope, they continue to perform to an acceptable standard and meet the norm as far as job requirements are concerned.

According to Schepers (2007), persons with high scores on autonomy and internal control and low scores on external control can be described as emotionally stable, mature, calm, self-assertive, independent, unconventional, socially uninhibited analytical, relaxed and composed. Persons with low scores on autonomy and internal control and high scores on external control generally display the opposite of the above personality attributes.

Rothmann (2001) maintains that high levels of perceived control are associated with high levels of job satisfaction, commitment and involvement, and low levels of stress, absenteeism and turnover. There is some preliminary evidence to show that an external locus of control is associated with burnout among females working in human services (Cordes & Dougherty, 1993). If individuals with internal control are compared to those with external control, it seems that the latter is more exhausted and cynical and experiences reduced feelings of professional efficacy (Schaufeli & Enzmann, 1998). Taylor, Schepers and Crous (2006) found that individuals with an internal locus of control experience less anxiety, while McFarland and Gilbert (2006) confirmed that individuals with an internal locus of control handle pressure better than those with an external locus of control. Rothmann (2001) found that individuals with an external locus of control could not handle the pressure, uncertainty and challenges of a demanding work environment.

Individuals with an internal locus of control will probably feel that they can manage situations in the work context, because these are seen as being within their personal control (Judge *et al.*, 1998). Compared to individuals with an external locus of control, people with internal control will be less inclined to cope with frustrations in organisations by withdrawing or by reacting aggressively (Bothma & Schepers, 1997). Individuals with an external locus of control look to others for direction, while those with an internal locus of control depend on themselves for direction (Bothma & Schepers, 1997).

Rothmann (2005) reports evidence to show that an external locus of control is associated with burnout among females working in human services.

Compared with persons with an internal locus of control, those with an external locus of control are more emotionally exhausted and depersonalised and experience reduced feelings of personal accomplishment (Schaufeli & Enzmann, 1998).

5.4.2 Difference in scores on all sub-scales for the biographical variable age

Table 5.9 represents the descriptives for all the sub-scales and the variable Age.

Table 5.9

Descriptives sub-scales and age

| LOCUS OF CONTROL | | | SENSE OF COHERENCE | | | ENGAGEMENT | | | BURNOUT | | |
|--------------------------|-----|--------|--------------------|-----|--------|------------|-----|--------|-----------------------|-----|--------|
| Age | N | Mean | Age | N | Mean | Age | N | Mean | Age | N | Mean |
| Autonomy | | | Comprehensibility | | | Vigour | | | Emotional exhaustion | | |
| <=39 | 49 | 5.3883 | <=39 | 52 | 4.3063 | <=39 | 52 | 5.1654 | <=39 | 52 | 3.4885 |
| 40-49 | 58 | 5.2378 | 40-49 | 62 | 4.3910 | 40-49 | 62 | 4.7591 | 40-49 | 62 | 3.4734 |
| 50+ | 30 | 5.3740 | 50+ | 30 | 4.5158 | 50+ | 30 | 5.1239 | 50+ | 29 | 3.4897 |
| Total | 137 | 5.3215 | Total | 144 | 4.3864 | Total | 144 | 4.9818 | Total | 143 | 3.4822 |
| External control | | | Manageability | | | Dedication | | | Cynicism | | |
| <=39 | 49 | 3.3419 | <=39 | 52 | 4.9440 | <=39 | 52 | 4.8529 | <=39 | 52 | 3.4740 |
| 40-49 | 58 | 3.4319 | 40-49 | 62 | 4.8100 | 40-49 | 62 | 4.6032 | 40-49 | 62 | 3.7895 |
| 50+ | 30 | 3.3000 | 50+ | 30 | 4.8300 | 50+ | 30 | 5.1567 | 50+ | 30 | 3.2583 |
| Total | 137 | 3.3708 | Total | 144 | 4.8626 | Total | 144 | 4.8087 | Total | 144 | 3.5649 |
| Internal control | | | Meaningfulness | | | Absorption | | | Professional efficacy | | |
| <=39 | 49 | 5.6795 | <=39 | 52 | 5.4894 | <=39 | 52 | 4.6776 | <=39 | 52 | 2.2077 |
| 40-49 | 58 | 5.7388 | 40-49 | 62 | 5.0371 | 40-49 | 62 | 4.4935 | 40-49 | 62 | 2.8524 |
| 50+ | 30 | 5.7774 | 50+ | 30 | 5.1351 | 50+ | 30 | 4.9489 | 50+ | 30 | 2.2494 |
| Total | 137 | 5.7260 | Total | 144 | 5.2209 | Total | 144 | 4.6549 | Total | 144 | 2.4940 |
| Total score not computed | | | <=39 | 52 | 4.9133 | <=39 | 52 | 4.8986 | <=39 | 52 | 3.0567 |
| | | | 40-49 | 62 | 4.7460 | 40-49 | 62 | 4.6186 | 40-49 | 62 | 3.3718 |
| | | | 50+ | 30 | 4.8270 | 50+ | 30 | 5.0765 | 50+ | 30 | 2.9918 |
| | | | Total | 144 | 4.8233 | Total | 144 | 4.8151 | Total | 144 | 3.1788 |

5.4.2.1 *Locus of control*

With regard to autonomy, the age group 40 to 49 years had a noticeably lower score in relation to both the other age groups. This inverse pattern was found with regard to external control, where this age group demonstrated a higher score than both the other age groups. Internal control showed an interesting and different pattern, with the youngest group who showed the lowest level of internal control, followed by the middle group, and the oldest group clearly demonstrated the highest degree of internal control.

5.4.2.2 *Sense of coherence*

Statistically significant differences were found between the different age groups, with regard to meaningfulness ($p = 0.035$). Inspection of the mean scores on meaningfulness showed that respondents below 39 years of age obtained the highest score on these scales, followed by the age group over 50, with the middle category between 40 and 49 obtaining the lowest score. This echoed the pattern found with manageability as well as the total sense of coherence score. On the comprehensibility scale, however, the over-50 age group had the highest score, followed by the 40 to 49 age group, while the age group of below 39 had the lowest score.

5.4.2.3 *Engagement*

The age groups 39 and below and 50+ scored higher on the vigour sub-scale than the 40 to 49 age group. A similar pattern appeared for the absorption sub-scale. For the dedication sub-scale, however, the 50+ age group obtained a higher score than the other two age groups, with the 39 and below age group scoring lowest on this sub-scale. The age group of below 39 and 50+ generally displayed higher scores than the 40 to 49 age category. This implies that employees in these categories are actively engaged in their work and are able to deal well with the demands of the job.

5.4.2.4 *Burnout*

The inverse appears to be true of the burnout scales, with the over 50 age group who consistently demonstrated the lowest burnout scores, and the 40 to 49 age group the highest. The scores of the age group below 39 fell in between. It was only the sub-scale professional efficacy that revealed statistically significant differences between the different age groups ($p = 0.007$). The total scores for burnout were above average and indicate that employees are not suffering from chronic burnout.

5.4.3 Difference in scores on all sub-scales for the biographical variable, occupational band

The occupational bands in the sample refer to Management (M), Professional (P) and General (G). Differences were found with regard to the recoded occupational bands (M&P and G); however, these were not regarded as statistically significant. The following trends may be inferred by analysing the mean scores even though the differences were small in effect:

5.4.3.1 *Locus of control*

M&P bands had a higher sense of autonomy and internal control, with a subsequent lower score on external control.

5.4.3.2 *Sense of coherence*

It is interesting to note that, with regard to the sense of coherence scores, M&P bands had lower scores in meaningfulness and manageability, as well as on the total sense of coherence scale, but had the higher score on comprehensibility.

5.4.3.3 *Engagement*

With regard to engagement, the G band had higher scores than M&P on vigour, dedication, and the total engagement score, but a lower score on absorption.

5.4.3.4 *Burnout*

The G band had higher scores on emotional exhaustion but lower scores on cynicism, professional efficacy and the total burnout scale.

5.4.4 Difference in scores on all sub-scales for the biographical variable Tenure

Table 5.10 represents the descriptives for all the sub-scales and the variable Tenure.

Table 5.10***Descriptives sub-scales and tenure***

| LOCUS OF CONTROL | | | SENSE OF COHERENCE | | | ENGAGEMENT | | | BURNOUT | | |
|-------------------------|-----|--------|---------------------------|-----|--------|-------------------|-----|--------|-----------------------|-----|--------|
| Tenure | N | Mean | Tenure | N | Mean | Tenure | N | Mean | Tenure | N | Mean |
| Autonomy | | | Comprehensibility | | | Vigour | | | Emotional exhaustion | | |
| < 5 years | 22 | 5.3588 | < 5 years | 23 | 4.4373 | < 5 years | 23 | 4.9014 | < 5 years | 23 | 3.6174 |
| 5-10 yrs | 34 | 5.3199 | 5-10 yrs | 38 | 4.3830 | 5-10 yrs | 38 | 5.1575 | 5-10 yrs | 38 | 3.3868 |
| 11-15 yrs | 21 | 5.3551 | 11-15 yrs | 23 | 4.2379 | 11-15 yrs | 23 | 5.0058 | 11-15 yrs | 23 | 3.5935 |
| 15-20 yrs | 59 | 5.2969 | 15-20 yrs | 59 | 4.4078 | 15-20 yrs | 59 | 4.8565 | 15-20 yrs | 58 | 3.4586 |
| Total | 136 | 5.3217 | Total | 143 | 4.3786 | Total | 143 | 4.9677 | Total | 142 | 3.4870 |
| External control | | | Manageability | | | Dedication | | | Cynicism | | |
| < 5 years | 22 | 3.2662 | < 5 years | 23 | 4.9605 | < 5 years | 23 | 4.6261 | < 5 years | 23 | 3.4065 |
| 5-10 yrs | 34 | 3.3273 | 5-10 yrs | 38 | 4.8711 | 5-10 yrs | 38 | 4.9421 | 5-10 yrs | 38 | 3.3447 |
| 11-15 yrs | 21 | 3.5596 | 11-15 yrs | 23 | 4.9087 | 11-15 yrs | 23 | 4.8326 | 11-15 yrs | 23 | 3.8022 |
| 15-20 yrs | 59 | 3.3369 | 15-20 yrs | 59 | 4.7902 | 15-20 yrs | 59 | 4.7475 | 15-20 yrs | 59 | 3.6992 |
| Total | 136 | 3.3574 | Total | 143 | 4.8581 | Total | 143 | 4.7934 | Total | 143 | 3.5745 |
| Internal control | | | Meaningfulness | | | Absorption | | | Professional efficacy | | |
| < 5 years | 22 | 5.7373 | < 5 years | 23 | 5.3674 | < 5 years | 23 | 4.2478 | < 5 years | 23 | 2.7348 |
| 5-10 yrs | 34 | 5.6282 | 5-10 yrs | 38 | 5.4319 | 5-10 yrs | 38 | 4.7193 | 5-10 yrs | 38 | 2.2053 |
| 11-15 yrs | 21 | 5.7103 | 11-15 yrs | 23 | 5.1087 | 11-15 yrs | 23 | 4.6159 | 11-15 yrs | 23 | 2.1667 |
| 15-20 yrs | 59 | 5.7810 | 15-20 yrs | 59 | 5.0478 | 15-20 yrs | 59 | 4.7814 | 15-20 yrs | 59 | 2.7390 |
| Total | 136 | 5.7248 | Total | 143 | 5.2110 | Total | 143 | 4.6524 | Total | 143 | 2.5044 |

No statistically significant differences were found with regard to the groups created by the length of their tenure. The mean scores showed that there was a general tendency for individuals who have worked in the organisation for a shorter period to show a higher sense of coherence than those who have worked in the organisation for a longer period. However, employees with 11 to 15 years of service showed the lowest sense of coherence. As tenure increased, higher levels of sense of coherence were seen again. This appears to support the findings above with regard to age.

The most striking trend with regard to the engagement scales and tenure is that engagement appeared to be the lowest among those with less than 5 years of service. It then increased steadily towards the next category (5–10 years) and then decreased again for respondents with between 11 and 15 years of service. Those with longer tenure once again seemed to have higher levels of engagement relative to the previous group. Inversely, burnout appeared to be higher in those employees with less than 10 years service and those with 11 to 15 years of service, while the groups with 5 to 10 years service as well as 15 to 20 years showed noticeably lower levels of burnout.

According to statistics compiled by the organisation's human resource department, the average age of the organisation is approximately 45 years. The findings are therefore significant, since the 40 to 49 age group had gone through many changes in the organisation and had therefore been exposed to ongoing change and stress for longer periods than those who have just entered the organisation. It can be inferred that although the 50+ age group also underwent these changes they have now settled in comfortably and are therefore able to cope better than their younger counterparts.

5.4.5 Integration for difference between sub-groups

The results indicated that a significant relationship existed between tenure in the organisation and the constructs of burnout and engagement. This supported the first hypothesis (H¹) which was therefore accepted. In addition, a significant relationship was shown to exist between gender and all four

constructs of locus of control, sense of coherence, engagement and burnout. This supported the second and third hypotheses (H²) and (H³).

The results showed that females in the sample scored lower on the locus of control, sense of coherence and engagement constructs and higher on the burnout scale compared with their male counterparts who scored consistently higher on locus of control, sense of coherence and engagement constructs and lower on the burnout scale. The age groups < 39 and 50+ years appear to be more engaged than their counterparts in the 40 to 49 years age group.

Wissing and Van Eeden (2002) found clear differences between young and older individuals on various indexes of psychological wellbeing. Age is one variable that has been most consistently related to burnout (Maslach, Schaufeli & Leiter, 2001; Schaufeli & Enzmann, 1998). Younger employees reported higher burnout levels than those over thirty or forty years of age.

An individual's sense of coherence is characterised by the comprehension of stimuli stemming from the environment as being ordered, clear and structured. Regardless of the challenges imposed by the work environment, it is perceived as remaining manageable and the work provides meaning to the individual. When the task is complex the strength of the person's sense of coherence will determine the successful completion of the task. An internal locus of control enables the individual to function independently and set realistic goals for the future, yet be in contact with the here and now whilst reflecting on past experiences to contribute to current decision making (Van Jaarsveld, 2005).

Thus, employees appear to be functioning positively and coping despite stressors in the organisation. This is in line with other research conducted relating to the structure and meaningful factor relationship of salutogenic constructs, which adds to existing knowledge about organisational and individual wellness. The individual can thus cope with job, change, transformation and career demands through a higher level of salutogenic functioning (Cilliers & Kossuth, 2002; Rothmann & Coetzee, 2005; Rothmann

& Jansen van Vuuren, 2002). The salutogenic person with his or her positive way of appraising the world, cognitively and effectively, will be more likely to show a readiness and willingness to exploit the resources at their potential disposal (Cilliers & Kossuth, 2002).

5.5 CORRELATIONS

Correlation coefficients were used in this study to determine the extent to which one variable is related to another variable. The correlation coefficients are based on the assumption that in the case where two variables fluctuate simultaneously, a correlation or relationship exists between them (Kerlinger & Lee, 2000). If a relationship exists between variables, it can be termed either a positive or negative relationship. In the case where a decrease in the measurement of one variable is associated with a decrease in the other variable, or where an increase in the measurement of one variable is associated with an increase in the other variable, it can be termed a positive relationship. A negative relationship occurs when a decrease in the measurement of one variable leads to an increase in the other variable (Huysamen, 1998).

The correlation coefficient varies between -1.00 and $+1.00$. The closer the absolute value of a correlation coefficient (r) to -1.00 or $+1.00$, the more accurate the prediction that one variable is related to another variable (Huysamen, 1998).

In order to establish whether relationships between two variables are practically significant (important), effect sizes are used (Steyn, 2002). According to Cohen (1988), the following cut-off points in terms of the correlation coefficient are recognised as being practically significant (independent of the direction of the relationship):

- $r = 0.10$ = small effect
- $r = 0.30-0.50$ = medium effect

- $r = > 0.50$ = large effect

In this study a number of significant correlations were reported. The intercorrelations between the scales are reported on below.

5.5.1 Correlation between sense of coherence and engagement

The correlations between the sub-scales of the sense of coherence and engagement constructs were computed.

Table 5.11

Correlations between sense of coherence and engagement

| Sense of coherence | | Vigour | Dedication | Absorption | Total engagement |
|--------------------|-----|---------|------------|------------|------------------|
| | r | 0.324** | 0.278** | 0.190* | 0.294** |
| Comprehensibility | sig | 0.000 | 0.001 | 0.022 | 0.000 |
| | N | 144 | 144 | 144 | 144 |
| | r | 0.354** | 0.318** | 0.211* | 0.328** |
| Manageability | sig | 0.000 | 0.000 | 0.011 | 0.000 |
| | N | 144 | 144 | 144 | 144 |
| | r | 0.528** | 0.519** | 0.379** | 0.530** |
| Meaningfulness | sig | 0.000 | 0.000 | 0.000 | 0.000 |
| | N | 144 | 144 | 144 | 144 |
| | r | 0.488** | 0.454** | 0.319** | 0.468** |
| Total | sig | 0.000 | 0.000 | 0.000 | 0.000 |
| | N | 144 | 144 | 144 | 144 |

*. Correlation is significant at the 0.05 level (2-tailed)

**. Correlation is significant at the 0.01 level (2-tailed)

Table 5.11 above reflects the results of the correlations between sense of coherence and engagement. The correlations showed evidence of positive

correlations with a medium to strong effect between sense of coherence and engagement. Meaningfulness as a sub-scale showed the strongest relationship with engagement. The lowest correlation was found with sense of coherence and the absorption sub-scale of the engagement scale.

5.5.2 Correlation between sense of coherence and burnout

The correlations between the sub-scales of the sense of coherence and burnout constructs were computed.

Table 5.12

Correlations between sense of coherence and burnout

| Sense of coherence | | Emotional exhaustion | Cynicism | Professional efficacy | Total burnout |
|---------------------------|-----|-----------------------------|-----------------|------------------------------|----------------------|
| Comprehensibility | r | -0.381** | -0.252** | -0.246** | -0.381** |
| | sig | 0.000 | 0.002 | 0.003 | 0.000 |
| | N | 143 | 144 | 144 | 144 |
| Manageability | r | -0.387** | -0.350** | -0.316** | -0.454** |
| | sig | 0.000 | 0.000 | 0.000 | 0.000 |
| | N | 143 | 144 | 144 | 144 |
| Meaningfulness | r | -0.505** | -0.464** | -0.532** | -0.645** |
| | sig | 0.000 | 0.000 | 0.000 | 0.000 |
| | N | 143 | 144 | 144 | 144 |
| Total | r | -0.510** | -0.431** | -0.447** | -0.598** |
| | sig | 0.000 | 0.000 | 0.000 | 0.000 |
| | N | 143 | 144 | 144 | 144 |

** . Correlation is significant at the 0.01 level (2-tailed)

* . Correlation is significant at the 0.05 level (2-tailed)

Table 5.12 above reflects the results of the correlations between sense of coherence and burnout. The sense of coherence sub-scales showed consistent negative correlations of a medium to large effect with the burnout sub-scales. It is once again meaningfulness that showed the strongest negative correlation with the burnout sub-scales. This implies that employees in the sample who have a high sense of coherence are less likely to experience burnout. It may be inferred that they are coping through this strong sense of coherence.

In a study by Rothmann *et al.* (2003) which examined the moderating effect of sense of coherence on burnout and job stress in local government, it was found that sense of coherence can be seen to moderate the effect of job stress on exhaustion and professional efficacy. Employees with a strong sense of coherence experience less exhaustion because stimuli from the environment are perceived as making cognitive sense, as being under the control of both the individual and significant others and as motivationally relevant and meaningful.

5.5.3 Correlation between sense of coherence and locus of control

The correlations between the sub-scales of sense of coherence and locus of control constructs were computed.

Table 5.13 reflects the results of the correlations between sense of coherence and locus of control

Table 5.13***Correlations between sense of coherence and locus of control***

| Sense of coherence | | Autonomy | External control | Internal control |
|---------------------------|-----|-----------------|-------------------------|-------------------------|
| Comprehensibility | r | 0.344** | -0.490** | 0.200* |
| | sig | 0.000 | 0.000 | 0.019 |
| | N | 137 | 137 | 137 |
| Manageability | r | 0.484** | -0.427** | 0.307** |
| | sig | 0.000 | 0.000 | 0.000 |
| | N | 137 | 137 | 137 |
| Meaningfulness | r | 0.549** | -0.397** | 0.356** |
| | sig | 0.000 | 0.000 | 0.000 |
| | N | 137 | 137 | 137 |
| Total | r | 0.549** | -0.512** | 0.345** |
| | sig | 0.000 | 0.000 | 0.000 |
| | N | 137 | 137 | 137 |

***. Correlation is significant at the 0.01 level (2-tailed)*

**. Correlation is significant at the 0.05 level (2-tailed)*

The sense of coherence sub-scale showed consistent positive correlations of medium to large effect with the autonomy and internal control sub-scales, and subsequent negative correlations with the external control sub-scales.

5.5.4 Correlation between locus of control and engagement

The correlations between the sub-scales of the locus of control and engagement constructs were computed.

Table 5.14 reflects the results of the correlations between locus of control and engagement.

Table 5.14

Correlations between locus of control and engagement

| Engagement | | Autonomy | External control | Internal control |
|------------------|-----|----------|------------------|------------------|
| Vigour | r | .404** | -.185* | .318** |
| | sig | .000 | .030 | .000 |
| | N | 137 | 137 | 137 |
| Dedication | r | .308** | -.220** | .325** |
| | sig | .000 | .010 | .000 |
| | N | 137 | 137 | 137 |
| Absorption | r | .299** | -.102 | .339** |
| | sig | .000 | .234 | .000 |
| | N | 137 | 137 | 137 |
| Total Engagement | r | .371** | -.191* | .362** |
| | sig | .000 | .026 | .000 |
| | N | 137 | 137 | 137 |

** . Correlation is significant at the 0.01 level (2-tailed)

* . Correlation is significant at the 0.05 level (2-tailed)

Engagement followed the same pattern of correlations with locus of control as sense of coherence did, namely, that positive correlations of medium effect with autonomy and internal control, and negative of mostly small effect correlations with external control were found.

5.5.5 Correlation between locus of control and burnout

The correlations between the sub-scales of the locus of control and burnout constructs were computed.

Table 5.15 reflects the results of the correlations between locus of control and burnout.

Table 5.15

Correlations between locus of control and burnout

| Burnout | | Autonomy | External control | Internal control |
|-----------------------|-----|----------|------------------|------------------|
| Emotional Exhaustion | r | -0.247** | 0.287** | -0.138 |
| | sig | 0.004 | 0.001 | 0.110 |
| | N | 136 | 136 | 136 |
| Cynicism | r | -0.171* | 0.178* | -0.211* |
| | sig | 0.045 | 0.038 | 0.014 |
| | N | 137 | 137 | 137 |
| Professional efficacy | r | -0.450** | 0.131 | -0.409** |
| | sig | .000 | .127 | .000 |
| | N | 137 | 137 | 137 |
| Total Burnout | r | -0.367** | 0.260** | -0.319** |
| | sig | .000 | .002 | .000 |
| | N | 137 | 137 | 137 |

**, Correlation is significant at the 0.01 level (2-tailed)

*, Correlation is significant at the 0.05 level (2-tailed)

The correlations of locus of control with burnout showed an inverse pattern to that of locus of control and engagement. External control is thus associated

with high levels of burnout, while internal control and autonomy relate negatively to burnout.

5.5.5 Integration

The above correlations, which have been reported and analysed, indicate that the sense of coherence construct correlated positively with engagement and the internal control and autonomy sub-constructs of locus of control, but correlated negatively with the burnout construct. Therefore, individuals with a strong sense of coherence are likely to be more engaged in their jobs irrespective of the stressors or organisational circumstances they may encounter.

Recently, burnout has been studied in terms of various salutogenic coping constructs such as sense of coherence (Cilliers, 2003). Various researchers (Basson & Rothmann, 2002; Rothmann & Jansen van Vuuren, 2002; Wissing *et al.*, 1992) report significant negative correlations between burnout and sense of coherence. It is possible that sense of coherence, as a meaning-providing variable (Strümpfer, 2003), may assist in the warding off of burnout, in recovering from it as well as probably in strengthening engagement inclinations (Rothmann, 2003).

The locus of control construct correlated positively with the engagement construct and correlated negatively with the burnout construct. This indicates that employees who display a strong locus of control are more engaged employees. Therefore, employees who display a strong sense of coherence and locus of control may tend to be engaged employees with a low tendency toward burnout.

The internal-external control expectation has a huge impact on the area of behaviour, where internal control is usually seen as a product of adaptive coping. Further studies into the coping skills of individuals show that individuals with an internal locus of control will act in a way that will not aggravate their circumstances. These individuals tend to be more compliant, do not show signs of depression and are usually more actively involved in

their survival than individuals with an external locus of control (Cordes & Dougherty, 1993).

The link between internal locus of control and management performance is well established (Adeyemi-Bello, 2001; Klein & Wasserstein-Warnet, 2000). Individuals with an internal locus of control are likely to have faith in their ability to achieve self-appointed objectives and to transform their environment, they take personal responsibility for their job success, and they display a deep involvement in planning and implementing work projects (Klein & Wasserstein-Warnet, 2000).

Kossuth and Cilliers (2002) maintain that salutogenic functioning is seen as consisting of behaviour on a cognitive, affective and motivational level. On a cognitive level, individuals view stimuli from the environment in a positive and constructive manner and use the information for effective decision making. On an affective level, the individual functions with self-awareness, is confident and self-fulfilled, views stimuli as meaningful and feels committed to life in a mature manner. On the motivational level, the individual has intrinsic motivation, perceives stimuli as a challenge which directs his or her energy to cope, solve problems and achieve results. The interpersonal characteristics entail the capacity to form meaningful and rewarding relationships with others at work and in society (Viviers & Cilliers, 1999).

5.6 REGRESSION ANALYSIS

A linear regression was performed in order to determine the most significant predictors of burnout and engagement respectively.

Table 5.16 reflects the results of the regression analysis.

Table 5.16

Regression analysis: sense of coherence (SOC) with total engagement and total burnout

| | | COEFFICIENTS | | | | |
|--------------------------------------|--------------------|-----------------------------|------------|---------------------------|--------|-------|
| | | Unstandardised coefficients | | Standardised coefficients | | |
| Model | | B | Std. Error | Beta | t | Sig. |
| 1 | (Constant) | 1.439 | 0.471 | | 3.052 | 0.003 |
| | SOC meaningfulness | 0.646 | 0.089 | 0.529 | 7.242 | 0.000 |
| 2 | (Constant) | -0.207 | 0.783 | | -0.264 | 0.792 |
| | SOC meaningfulness | 0.559 | 0.093 | 0.458 | 5.982 | 0.000 |
| | internal control | 0.366 | 0.141 | 0.199 | 2.604 | 0.010 |
| Dependent Variable: Total engagement | | | | | | |
| | | COEFFICIENTS | | | | |
| | | Unstandardised coefficients | | Standardised coefficients | | |
| Model | | B | Std. Error | Beta | t | Sig. |
| 1 | (Constant) | 6.652 | 0.365 | | 18.204 | 0.000 |
| | SOC meaningfulness | -0.664 | 0.069 | -0.637 | -9.602 | 0.000 |
| Dependent Variable: Total burnout | | | | | | |

Table 5.16 above shows the results of the regression analysis where total engagement and total burnout scales were in turn used as dependent variables and the sense of coherence and locus of control sub-scales were entered as predictors. The results in Table 5.16 indicate that the correlations between the predictors range from 0.189 to 0.689, but multicollinearity diagnostics showed that this was not a concern in this analysis. Entering all the predictors at once with engagement as a dependent variable showed that this model could explain 32.7 percent of variance in engagement, which is significant but still allows for a great deal of unexplained variance. Inspection

of the significance of predictors showed that only internal control and meaningfulness were significant predictors of engagement.

The results infer that engagement can be predicted in individuals who display a high score on the meaningfulness sub-scale of the sense of coherence construct and a high score on the internal control sub-scale of the locus of control construct. Individuals with a strong sense of coherence and locus of control are likely to be more engaged in their jobs irrespective of the stressors or organisational circumstances they may encounter (Seligman & Csikszentmihalyi, 2000). This is an indication of the positive psychological functioning of these individuals in the organisation.

Individuals who display high internal control see a relationship between their own behaviour and outcomes. They attribute the cause of events to themselves and feel in control. As individuals begin to feel empowered they experience less stress (Cilliers & Kossuth, 2002). Individuals with a high score on the meaningfulness sub-scale of sense of coherence feel that life is making sense on an emotional and not just a cognitive level. It is important for the individual to be involved in the process of shaping their destiny and daily experience (Rothmann *et al.*, 2003). The individual has the feeling that life makes sense emotionally and that they play a primary role in determining their own daily experiences (Antonovsky, 1979).

Results with regard to the total burnout scale confirmed the above findings. The combination of predictors explained about 42.7 percent of variance in burnout, thus a higher degree of predictive accuracy than engagement, but the majority of variance remained unexplained. In this case only meaningfulness was identified as being a significant predictor of engagement. Stepwise analysis only used meaningfulness in the explanatory model, which already explained 40.1 percent of variance in the burnout scale.

5.7 INTEGRATION

The empirical study provided information on the locus of control, sense of coherence, engagement and burnout constructs. Therefore, the empirical aim to measure and interpret positive psychological functioning among civil service employees in a government department, was achieved. Moreover, there was a meaningful negative relationship between burnout and salutogenic functioning, as measured by the locus of control, sense of coherence and engagement constructs. Therefore we may infer that employees display measures of salutogenic functioning and are coping in the organisation.

The biographical information indicated that the average profile of the sample is white and female and falls into the 40 to 49 age group. These individuals were drawn from the Managerial and Professional occupational groups and had tenure of 15 to 20 years. Results from the study indicated a high score for male employees on the locus of control and sense of coherence scales. In addition, higher scores on engagement correlated negatively with the low scores on the burnout construct. Consequently, these employees are regarded as being engaged in their work. Female employees obtained low locus of control and sense of coherence scores and higher scores on the burnout construct. The higher burnout score was related to the low engagement score.

Some researchers have explored the influence of certain background variables on the process of work engagement (Schaufeli & Bakker, 2003; Sonnentag, 2003; Rothbard, 2001). The variables of age and gender have been frequently linked with work engagement. The broad picture that emerges is that older employees seem to be more engaged in their work. With regard to gender, men seem to be more engaged in their jobs than women (Schaufeli & Bakker, 2003). Schaufeli and Bakker (2003) indicate that men score significantly higher than women on all three aspects of engagement: vigour,

dedication and absorption. However, these differences are relatively small and therefore lack practical significance (Barkhuizen & Rothmann, 2006).

The positive correlation of the sense of coherence construct with engagement, and the internal control and autonomy sub-constructs of locus of control, and the negative correlation with burnout, were significant as this indicated that employees with a strong sense of coherence are likely to be more engaged in their jobs irrespective of the stressors or organisational circumstances they may encounter.

A summary of the mean scores for employees in the sample indicated that generally above average scores were obtained for the constructs locus of control, sense of coherence and engagement, while scores obtained for the burnout construct were lower. Based on the high sense of coherence scores of the employees in this sample it can be inferred that employees are functioning positively despite the stresses of the organisation. From a positive psychology perspective (Seligman & Csikszentmihalyi, 2000), such individuals could be described as engaged in their work.

Rothmann *et al.* (2003) conducted a study on the moderating effect of sense of coherence on burnout and job stress among employees of a local government department in South Africa. It was determined that the higher the stress resulting from job demands and a lack of organisational support reported by employees, the higher the level of exhaustion. When the sense of coherence score was higher, a lower score was reported on exhaustion and a higher score on professional efficacy. Thus, sense of coherence can be seen to moderate the effect of job stress on exhaustion and professional efficacy. Hence, employees with a strong sense of coherence experience less exhaustion because stimuli from the environment are perceived as making cognitive sense, as being under the control of both the individual and significant others and as motivationally relevant and meaningful.

Cilliers and Kossuth (2004) conducted research to investigate the reliability and factor structure of three measures of salutogenic functioning: sense of

coherence, self-efficacy and locus of control. They concluded that there is a relationship and a meaningful factor structure in these salutogenic constructs, which add to existing knowledge about organisational and individual wellness. South African researchers focus more closely on coping behaviour from a salutogenic viewpoint. Thus, the individual can cope with job, change, transformation and career demands through a higher level of salutogenic functioning.

Positive psychology also encompasses the salutogenic paradigm. In an overview of research on positive psychology in South Africa, Viviers and Coetzee (2007) state that coping emerged as a relevant field for investigation in the early eighties which gradually led to investigations into salutogenesis, which was researched in the nineties. Salutogenic constructs focus on health as opposed to disease and act as coping mechanisms that equip individuals to deal more effectively with stress.

Van Jaarsveld (2005) reviewed the coherence between engineers and scientists and the results confirmed a positive relationship between sense of coherence and coping and a negative relationship to burnout. A study conducted by Mostert and Rothmann (2006) on work-related wellbeing in the South African Police Service showed that job stress contributed strongly to burnout. Rothmann *et al.* (2003) propose that it is likely that a strong sense of coherence could provide protection against burnout because it starts developing early in life outside the work environment, and burnout (if it does occur) only occurs after an individual has been employed for a length of time (Strümpfer, 2003). Strümpfer (2003) maintains that sense of coherence, which is regarded as a meaning-providing variable, may assist in warding off burnout.

Cilliers and Ngokha (2006) conducted a study on university administrative staff to gain a better understanding of the dynamics of salutogenic behaviour. They used the behavioural constructs of sense of coherence, hardiness, self-efficacy, learned resourcefulness and potency. The research indicated a good

fit between the conceptualisation and operationalisation of these five salutogenic functioning constructs. Consequently, the authors maintain that the results indicate the strength of the model in explaining coping behaviour in organisations.

A strong sense of coherence is also related to general wellbeing (Feldt, 1997) and emotional stability (Strümpfer & Mlonzi, 2001). This means that employees with high levels of burnout could be expected to demonstrate weaker levels of sense of coherence. According to Antonovsky (1987), a person with a strong sense of coherence selects the particular coping strategy that seems most appropriate to deal with the stressor being confronted.

In this study, internal control and meaningfulness, which are dimensions of the locus of control and sense of coherence constructs respectively, were found to be the most significant predictors of work engagement. Meaningfulness can be seen as an emotional experience and internal control as a motivational experience. This interpretation implies that employees in this organisation will only be engaged in their work and in relationships if they experience emotional meaningfulness, and if they are motivated from within. On the other hand, engagement will not manifest among employees in this organisation if there is no space in the organisational climate for them to experience emotional meaning, or opportunities for them to exercise their internal control and decision making.

This is significant for the organisation, as it can strive to ensure that individuals in the workplace continually experience congruence between emotional identification with events in the work environment (Antonovsky, 1979) and remain motivated by the relationship between their own behaviour and positive outcomes. This congruence allows individuals to be successfully engaged in their work and therefore to function positively in the organisation.

5.8 CHAPTER SUMMARY

The aim of Chapter 5 was to report the results of the study. Apart from reporting the results, results were also interpreted against the backdrop of the literature findings and discussed in terms of similar findings in other studies. The conclusions, limitations and recommendations will be discussed in chapter 6.

CHAPTER 6: CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

The aim of this chapter is to provide the conclusions of the study and to discuss its limitations. This includes making recommendations to the organisation on the basis of the findings of the study, and also in terms of further research that can be conducted. Finally the chapter concludes with a summary.

6.1 CONCLUSIONS

Research conclusions were drawn from the literature review and the results of the empirical study.

The general aim of this study was to explore positive psychological functioning among civil servants. This was addressed from a positive psychology paradigm perspective and investigated through the measurement of the constructs locus of control, sense of coherence and engagement and their relationship to the burnout construct (the former are viewed as the healthy end of the wellness continuum).

6.1.1 Literature review

The specific literature aims were to conceptualise coping with stress in the organisation, and to theoretically integrate the use of the chosen constructs in positive psychology.

In this study, stress was defined as chronic malfunctioning at work which causes people to feel depleted of resources and which consequently affects their ability to cope in the job. It was noted that the individual also experiences stress when expectancy regarding the outcome of events is not met and the individual has little control to change this. In addition, stress is experienced when events in the individual's environment no longer make cognitive sense and the resources needed to handle the situation are inadequate, and when stimuli are not motivationally relevant, resulting in the individual not being able to connect to work activities or engage in work.

Stress in the organisation was depicted on the macroeconomic, organisational and individual levels and various occupational and individual stressors were found to affect workers. The cumulative result of stress in the work environment where the employee is not engaged in work is proposed as leading to burnout. While stress was not a measurable variable in this study, it was proposed as relating to all behaviour assessed in the organisation.

Breed *et al.* (2006) maintain that many positive psychology constructs have been measured and applied in South African organisations since 2000. The operationalisation of these constructs has been used as a way of explaining the manner in which individuals function and develop, as well as cope and adapt, to work and its demands. The salutogenic functioning of the individual is viewed by Breed *et al.* (2006) in the following way:

- On the cognitive level, the individual is able to view stimuli from the environment in a positive and constructive manner, and to use the information for effective decision making.
- On the affective level, the individual functions with self-awareness, confidence and self-fulfilment, viewing stimuli as meaningful and acting with commitment to life in a mature manner.
- On the motivational level, the individual has intrinsic motivation, perceives stimuli as a challenge which directs his or her ability to cope, solve problems and achieve results.

It can thus be inferred that employees who display positive psychological functioning will strive for optimisation, resulting in a proactive approach to life and their work. This individual will be mentally equipped to process and use the omnipresent stressors in life successfully (Viviers, 1998a). Positive psychological functioning in the organisation is conceptualised in terms of the constructs of locus of control, sense of coherence, engagement and burnout, viewed as the healthy end of the wellness continuum. These constructs

explain how employees function positively, and adapt to and cope under stress.

As the study was conducted in a government department, it highlighted the need to understand both the organisational and public impact of stress in an organisation. It is suggested that in order to minimise impact, stressors in the organisation must be acknowledged and dealt with, as perpetuation of the situation will lead to dysfunctional work relationships. If the stressors persist, the organisation is most likely to suffer the consequences of compromised work ethics and loyalty from its employees.

6.1.2 Empirical study

The specific aims for the empirical study were to measure and interpret positive psychological functioning among employees in the civil service and to recommend strategies for the organisation in coping with organisational life.

A summary of the findings are presented below:

1. A meaningful negative relationship existed between burnout and salutogenic functioning as measured by the three constructs of locus of control, sense of coherence and engagement. This indicates that employees display measures of salutogenic functioning and are coping with stress in the organisation.
2. A positive correlation was found between the constructs of sense of coherence, locus of control and engagement. It was found that, in these cases, the employees who displayed high scores on these sub-scales displayed low scores on the burnout construct.
3. A summary of the mean scores for employees in the sample indicated that generally above average scores were obtained for the locus of control, sense of coherence and engagement constructs. The scores obtained for the burnout construct were found to be lower. The high sense of coherence scores of the employees in this sample indicate that employees

are functioning positively despite the stresses of the organisation. From a positive psychology perspective (Seligman & Csikszentmihalyi, 2000), such individuals could be described as engaged in their work.

4. There was a significant relationship between tenure in the organisation and the burnout and engagement constructs. A significant relationship also exists between gender and all four constructs of locus of control, sense of coherence, engagement and burnout. This indicates that employees appeared to be functioning positively and coping despite the stressors in the organisation.
5. There was a positive relationship between the internal control and autonomy sub-constructs of locus of control, sense of coherence and engagement, but a negative correlation with the burnout construct.
6. There was a positive relationship between the locus of control and engagement constructs but a negative correlation with the burnout construct. Employees with a strong locus of control are more engaged employees. These engaged employees display a strong sense of coherence and locus of control and have a low tendency toward burnout.
7. Internal Control and Meaningfulness were the only significant predictors of engagement. This indicates that engagement will manifest in the behaviour of employees in this organisation only if and when they display and/or are allowed to exhibit emotional meaningfulness in their work and their relationships, and when they behave and make decisions from an internal motivation. This implies that a favourable organisational climate is characterised by two factors: (1) the experience of emotional meaning; and (2) making decisions from an internal motivation, which have to be present before employees will show engaging behaviour such as vigour and dedication.

6.2 LIMITATIONS

The following limitations are noted for this study:

1. The sample size was relatively small, which implies that these findings cannot be easily generalised to the whole organisation or to other organisations or government departments.
2. There is a possibility that the sample of convenience that was used may not be representative of the population.
3. The study was quantitative therefore the results were based on statistical significance. In some cases the statistical significance was small which led to inferences being made which would have been more comprehensive if qualitative methods had been used.
4. The sample represented a limited work setting. If other government departments and industries had been used, this might have added more useful data.
5. The nature of the government department in which the study was conducted led to a number of employees being afraid or reluctant to participate for fear of being victimised. This implies the possibility that employees who participated voluntarily, were more positively inclined.
6. There is a time lapse between the originally mentioned stress audit undertaken, and the assessment of the constructs used in this study. Therefore, the experience of stress may be higher due to restructuring fatigue and the confluence of organisational changes.
7. All the questionnaires were administered in English. As many of the respondents were not first-language English speakers this may have impacted on the interpretation of questions.
8. Studies using positive psychology constructs in South African organisations are limited and a larger cross-section is needed. This is

especially true for government departments as studies in this area are limited.

9. The impact of the organisation's culture on the individual cannot be underestimated and this aspect was not taken into account statistically.

6.3 RECOMMENDATIONS

Against the background of the aforementioned conclusions and limitations, a number of recommendations can be formulated regarding further research for the organisation. These recommendations should be viewed in terms of the research questions formulated for this study. The results of the empirical study and the literature review positively infer that employees are coping in and adapting to the organisation. In addition, positive psychological functioning was conceptualised in terms of the constructs of locus of control, sense of coherence, engagement and burnout, which are viewed as the healthy end of the wellness continuum. These constructs can thus predict a person's ability to adapt in the organisation.

The following recommendations, based on the findings, should be considered for further research and implementation:

1. While the results of the Stress Audit conducted in the organisation indicated that employees were despondent, out of energy and had lost hope, the results of the current study indicate that employees are functioning positively despite the stressors in the environment. These positive results should be factored into a positive psychology-based intervention (for example, Appreciative Enquiry) that harnesses the psychological strengths of employees in order to reduce the effects of work stressors.
2. Inputs to the human resources (HR) strategy for the organisation should take cognisance of the affective and motivational roles of the Meaningfulness and Internal Control dimensions of the sense of

coherence and locus of control constructs, as they are significant predictors of work engagement. In this specific government department this can translate into various HR strategies concerning employee development, coaching and mentoring, performance management and retention of employees.

3. The results of the study should be used as a basis from which directed interventions should be implemented in order to move the organisation towards being whole and healthy.
4. In order to limit turnover and a tendency toward burnout in newer employees, consideration should be given to assessing the resilience of the new employee in the potentially stressful environment.
5. Most employees have worked in the civil service for a long period of time and many may have no alternative but to stay in the organisation. Therefore, these individual employees should be taken care of through support systems for their career and wellness.
6. On a primary level interventions should aim to remove the causes of stress as effectively as possible without compromising the optimum functioning of the organisation. This can include role clarification, job-person matching and improving communication between management and employees.
7. On a secondary level, members need to be empowered to deal with inevitable stress in the workplace and in their personal lives by learning stress management techniques. The organisation is encouraged to think about and process its climate urgently and intensely. The evidence suggests that the current climate does not facilitate experiences of emotional meaningfulness among employees. This may manifest in forms of helplessness and hopelessness (as preliminary indications of burnout). The climate may also be experienced as autocratic where employees do not believe that they are allowed to make their own decisions from an

internal motivational point of view. Periodic climate surveys and thoughtful inputs to move behaviour towards more positive psychological functioning are suggested.

8. On a tertiary level, employees who already present with dysfunctional and/or maladaptive behaviour need support, professional counselling and in some cases in-depth therapy.
9. It is recommended that further similar studies be conducted in order to contribute to the knowledge and research field of Industrial Psychology.

6.4 CHAPTER SUMMARY

The aim of this research was to interpret the positive psychological functioning of civil service employees. Based on the research findings chapter 6 reported the results, conclusions and limitations of the study. The chapter concluded with recommendations for further research.

REFERENCES

- Adeyemi-Bello, T. (2001). Validating Rotter's (1996) locus of control scale with a sample of non-for-profit leaders. *Management Research News*, 24(6/7), 25–34.
- Amirkhan, J. H., & Greaves, H. (2003). Sense of coherence and stress: The mechanics of a healthy disposition. *Psychology and Health*, 18(1), 31–62.
- Anisman, H., & Merali, Z. (1999). Stress: Characteristics and caveats. *Alcohol Research and Health*, 23, 241–249.
- Antonovsky, A. (1979). *Health, stress and coping: New perspectives on mental and physical well-being*. New York: Jossey-Bass.
- Antonovsky, A. (1987). *Unravelling the mystery of health: How people manage stress and stay well*. San Francisco: Jossey-Bass.
- Antonovsky, A. (1991). The structural sources of salutogenic strengths. In C. L. Cooper & R. Payne (Eds), *Personality and stress: Individual differences in the stress process*. New York: Wiley.
- Antonovsky, A. (1993). The structure and properties of the sense of coherence scale. *Social Sciences Medical Journal*, 36(6), 125–733.
- Argyrous, G. (2000). *Statistics for social and health research with a guide to SPSS*. London: Sage.
- Aspelmeier, J. E., & Pierce, T. (2009). *SPSS: A user-friendly approach*. New York: Worth.
- Babbie, E. R. (1995). *The practice of social research*. Belmont: Wadsworth.
- Barkhuizen, N., & Rothmann, S. (2006). Work engagement of academic staff in South African higher education institutions. *Management Dynamics*, 15(1), 38–46.

Barling, J., Kelloway, E. K., & Frone, M. R. (2005) *Handbook of work stress*. USA: Sage Publications.

Bar-On, R. (1997). *BarOn Emotional Quotient Inventory-technical Manual*. Toronto: Multihealth System.

Basson, M. J., & Rothmann, S. (2002). Sense of coherence, coping and burnout of pharmacists. *South African Journal of Economic and Management Sciences*, 5(1), 3–62.

Berg, A., Buys, M., Schaap, P., & Olckers, C. (2004). The comparability of the construct validity of Scheper's locus of control inventory for first and second language respondents. *South African Journal of Industrial Psychology*, 30(3), 87–96.

Bhagat, R. S., Ford, D. L., O'Driscoll, M. P., Frey, L., Bakabus, E., & Mahanyele, M. (2001). Do South African managers cope differently from American managers? A cross-cultural investigation. *International Journal of Intercultural Relations*, 25, 301–313.

Bhagat, R. S., Krishnan, B., Nelson, T. A., Leonard, K. M., Ford, D. L. Jr., & Billing, T. K. (2010). A closer look at the moderating influences of coping styles and decision latitude. *Cross Cultural Management: An International Journal*, 17(1), 10–29.

Bosman, J., Rothmann, S., & Buitendach, J. H. (2005). Job insecurity, burnout and work engagement the impact of positive and negative affectivity. *South African Journal of Industrial Psychology*, 31(4), 48–56.

Bothma, A. C., & Schepers, J. M. (1997). The role of locus of control and achievement motivation in the work performance of black managers. *Journal of Industrial Psychology*, 23(3), 44–52.

Breed, M. (1997). *Bepalende persoonlikheidskenmerke in die salutogeniese paradigma*. Unpublished doctoral thesis, University of South Africa, Pretoria.

- Breed, M., Cilliers, F., & Visser, D. (2006). The factor structure of six salutogenic constructs. *South African Journal of Industrial Psychology*, 32(1), 74–87.
- Cartwright, S., & Cooper, C. I. (2002). *ASSET: An organizational stress screening tool – the management guide*. Manchester: RCI.
- Cavanaugh, M. A., Boswell, W. R., Roehling, M. V., & Boudreau, J. W. (2000). An empirical examination of self-reported work stress among US managers. *Journal of Applied Psychology*, 85, 65–74.
- Christensen, L. B. (1994). *Experimental methodology*. USA: Allan & Bacon.
- Cilliers, F. (2003). Burnout and salutogenic functioning of nurses. *Curationis*, 26(1), 62–74.
- Cilliers, F., & Coetzee, S. (2001). Psychofortology: Explaining coping behaviour in organizations. *The Industrial-Organisational Psychologist*, 62–68.
- Cilliers, F., & Coetzee S. C. (2003). The theoretical-empirical fit between three psychological wellness constructs: Sense of coherence, learned resourcefulness and self-actualisation. *South African Journal of Labour Relations*. Autumn, 4–24.
- Cilliers, F., & Kossuth, S. (2002). The relationship between organizational climate and salutogenic functioning. *South African Journal of Industrial Psychology*, 28(1), 8–13.
- Cilliers, F., & Kossuth, S. P. (2004). The reliability and factor structure of three measures of salutogenic functioning. *South African Journal of Labour Relations*, 28(2), 59–76.
- Cilliers, F., & Ngokha, G. (2006). *Confirmatory factor analysis on the measurement of five salutogenic constructs*. Unpublished master's dissertation, Department of Industrial Psychology, University of South Africa, Pretoria, South Africa.

Clark, L. A., & Watson, D. (1995). Constructing validity: Basic issues in objective scale development. *Psychological Assessment*, 7, 309–319.

Coetzee, S., & Viviers, R. (2007). An overview of positive psychology in South Africa. *South African Journal of Psychology*, 37(3), 470–490.

Coetzer, W. J., & Rothmann, S. (2007). A psychometric evaluation of measures of affective well-being in an insurance company. *South African Journal of Industrial Psychology*, 33 (2), 7–15.

Cooper, C. L. (2000). *Theories of organizational stress*. Oxford: University Press.

Cooper, C. L., Dewe, P. J., & O' Driscoll, M. P. (2001). *Organisational stress: A review and critique of theory, research and applications*. Thousand Oaks, CA: Sage.

Cordes, C. L., & Dougherty, T. W. (1993). A review and an 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.

Danana, D. (1989). *Relationships between stressors and outcomes amongst nurses*. Unpublished report, Department of Psychology, University of Cape Town.

De Jonge, J., & Dormann, C. (2006). Stressors, resources, and strain at work: A longitudinal test of the triple-match principle. *Journal of Applied Psychology*, 91(5), 1359–1374.

Demerouti, E., Mostert, K., & Bakker, A. B. (2010). Burnout and work engagement: A thorough investigation of the independency of both constructs. *Journal of Occupational Health Psychology*, 15(3), 209–222.

Dua, J. K. (1994). Job stressors and their effects on physical health, emotional health and job satisfaction in a university. *Journal of Educational Administration*, 32, 59–78.

Du Buisson-Narsai, I. (2005). *The relationship between personal meaning, sense of coherence and organizational commitment*. Unpublished master's dissertation, Department of Industrial Psychology, University of South Africa, Pretoria, South Africa.

Durrheim, K., & Painter, D. (2006). *Research in practice: Applied methods for the social sciences*. Cape Town: UCT Press.

Employee assistance programmes. (2005). *Drug usage survey*. Unpublished report, National government department, Pretoria, South Africa.

Employee assistance programmes. (2006). *Stress audit report*. Unpublished report, National government department, Pretoria, South Africa.

Eriksson, M., & Lindstrom, B. (2005). Validity of Antonovsky's sense of coherence scale: A systematic review. *Journal of Epidemiology and Community Health*, 59(6), 460–466.

Feldt, T. (1997). The role of sense of coherence in well-being at work: Analysis of main and moderator effects. *Work and Stress*, 11, 134–147.

Flannery, R. B., & Flannery, G. J. (1990). Sense of coherence, life stress and psychological distress: A prospective methodological inquiry. *Journal of Clinical Psychology*, 46(4), 415–420.

Fredrickson, B. L. (2009). *Positivity*. New York: Crown.

Freeney, Y., & Tiernan, J. (2006). Employee engagement: An overview of the literature on the proposed antithesis to burnout. *The Irish Journal of Psychology*, 27(3–4), 130–141.

- Frenz, A. W., Carey, M. P., & Jorgensen, R. S. (1993). Psychometric evaluation of Antonovsky's sense of coherence scale. *Psychological Assessment*, 5, 145–153.
- Froman, L. (2010). Positive psychology in the workplace. *Journal of Adult Development*, 17, 59–69 .
- Gable, S. L., & Haidt, J. (2005). What and (why) is positive psychology. *Review of General Psychology*, 9(2), 103–110.
- Gropp, L., Geldenhuys, D., & Visser, D. (2007). Psychological wellness constructs: Relationships and group differences. *South African Journal of Industrial Psychology*, 33(3), 24–34.
- Huysamen, G. K. (1998). *Descriptive statistics for the social and behavioural sciences*. Pretoria: Van Schaik.
- Ivancevich, J.M., & Matteson, M.T. (2002). *Organisational behaviour and management* (6th ed.). Boston: McGraw Hill Irwin.
- Judge, T. A., Locke, E. A., Durham, C. C., & Kluger, A. N. (1998). Dispositional effects of job and life satisfaction: The role of core evaluations. *Journal of Applied Psychology*, 83(1), 17–34.
- Kalimo, R., & Vuori, J. (1990). Work and sense of coherence-resources for competence and life satisfaction. *Behavioural Medicine*, 16, 76–89.
- Kelloway, E. K., & Barling, J. (1991). Job characteristics, role stress and mental health. *Journal of Occupational Psychology*, 63, 291–304.
- Kerlinger, F. N. (1996) *Foundations of behavioural research*. Florida: Holt, Rinehart & Winston.
- Kerlinger, F.N. & Lee, H.B. (2000) *Foundations of behavioural research* (4th ed.) New York: Harcourt College.

Khan, M. (2008). *Your job could kill you*. Available online at <http://www.iol.co.za>.

Kickul, J., & Posig, M. (2001). Supervisory emotional support and burnout: an explanation of reverse buffering effects. *Journal of Managerial Issues*, 13, 328–345.

Klein, J., & Wasserstein-Warnet, M. (2000). Predictive validity of the locus of control test in selection of school administrators. *Journal of Educational Administration*, 38(1), 7–25.

Koeske, G. F., & Kirk, S. A. (1993). Coping with job stress: Which strategies work best? *Journal of Occupational and Organizational Psychology*, 66, 319–355.

Kossuth, S. P., & Cilliers, F. (2002). The relationship between leadership dimensions, cultural beliefs and salutogenic functioning. *South African Journal of Labour Relations*, Autumn.

Lazarus, S. (1988). *The role of the psychologist in South African society: in search of an appropriate community psychology*. Unpublished doctoral thesis, University of Cape Town, Cape Town, South Africa.

Leone, C., & Burns, J. (2000). The measurement of locus of control: Assessing more than meets the eye? *Journal of Psychology*, 134(1), 63–75.

Levert, T., Lucas, M., & Ortlepp, K. (2000). Contributions of the work environment and a sense of coherence. *South African Journal of Psychology*, 30, 36–43.

Linley, P. A., Joseph, S., Harrington, S., & Wood, A. M. (2006). Positive psychology: Past, present and (possible) future. *Journal of Positive Psychology*, 1(1), 3–16.

Lopez, S. J. (2008). *The encyclopaedia of positive psychology*. Hoboken, NJ: Wiley.

Lu, L., Wu, H., & Cooper, C. L. (1999). Perceived work stress and locus of control: A combined quantitative and qualitative approach. *Research and Practice in Human Resource Management*, 7(1), 1–15.

Luthans, F. (2002). *Organisational behaviour* (9th ed.). New York: McGraw-Hill.

Lynch, J. (2007). Burnout and engagement in probationary police officers: A scoping paper. *ACPR Scope* (1).

Marshall, M. N. (1996). Sampling for qualitative research. *Family Practice*, 13(6).

Maru, M. (2002). *Job burnout: A review of recent literature*. Abstracted from the World Wide Web on 23 March 2002. <http://www.geocities.com/rpipsych/jobb~>

Maslach, C., & Jackson, S. E. (1986). *Maslach Burnout Inventory Manual*. Palo Alto, CA: Consulting Psychologists Press.

Maslach, C., Jackson, S. E., & Leiter, M. (1996). *Maslach Burnout Inventory: Manual* (3rd ed). Palo Alto, CA: Consulting Psychologists Press.

Maslach, C., Jackson, S. E., & Leiter, M. (1997). *Maslach Burnout Inventory: Manual* (3rd ed). In C. P. Zalaquett & R. J. Wood. *Evaluating stress: A book of resources*. Lanham, MD: Scarecrow Press.

Maslach, C., & Leiter, M. P. (2008). Early predictors of job burnout and engagement. *Journal of Applied Psychology*, 93(3), 498–512.

Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology*, 52, 397–422.

May, D. R., Gilson, R. L., & Harter, L. M. (2004). The psychological conditions of meaningfulness, safety and availability and engagement of the human spirit at work. *Journal of Occupational and Organisational Psychology*, 77, 11–37.

Mcfarland, J., & Gilbert, J. A. (2006). *The influence of locus of control in responding to stress*. Western Psychological Association Convention Presentation

McKean, E. (2005) *New Oxford American dictionary* (2nd ed.). New York: Oxford University Press.

Meyer, W. F., Moore, C., & Viljoen, H. G. (1995). *Personality theories: From Freud to Frankl*. Johannesburg: Lexicon.

Monat, A., & Lazarus, R. S. (1991). *Stress and coping: An anthology*. New York: Columbia University Press.

Morgan, G. (1980). *Paradigms, metaphors and puzzle solving in organisation theory*. Cornell University: Penguin

Mostert, K., & Rothmann, S. (2006). Work-related well-being in the South African Police Service. *Journal of Criminal Justice*, 34(5), 479–491.

Mouton, J., & Marais, H. C. (1996). *Basic concepts: Methodology of the behavioural sciences* (Rev. ed.). Pretoria: Human Sciences Research Council.

Naudé, J. L. P., & Rothmann, S. (2003). Occupational stress of emergency workers in Gauteng. *South African Journal of Industrial Psychology*, 29(4), 92–100.

Naudé, J. L. P., & Rothmann, S. (2004). The validation of the Maslach Burnout Inventory-human services survey for emergency medical technicians in Gauteng. *South African Journal of Industrial Psychology*, 30(3), 21–28.

Naudé, J. L. P., & Rothmann, S. (2006). Work-related well-being of emergency workers in South Africa. *South African Journal of Industrial Psychology*, 36, 63–81.

Nelson, D. L., & Simmons, B. L. (2003). Health psychology and work stress: a more positive approach. In Tetrick, L. E., & Quick, J. C. (Eds). *Handbook of*

occupational health psychology (2nd ed., pp. 97-119). Washington, DC: American Psychological Association.

Neuman, W.L. (1997). *Social research methods: Qualitative and quantitative approaches* (3rd ed.). Boston, MA: Allyn & Bacon.

Parkes, K. R. (1994). Personality and coping as moderators of work stress processes: Models, methods and measures. *Work and Stress*, 8(2), 110–129.

Peterson, C. (2000). The future of optimism. *American Psychologist*, 55(1), 44–55.

Pienaar, J., & Rothmann, S. (2006). Occupational stress in the South African Police Service. *South African Journal of Industrial Psychology*, 33(3), 72–78.

Plug, C., Meyer, W. F., Louw, D. A., & Gouws, L. A. (1986) *Psigologie woordeboek*. Johannesburg: McGraw-Hill.

Roberts, D. R., & Davenport, T. O. (2002). Job engagement: Why it's important and how to improve it. *Employment Relations Today*, 21–29.

Rosenbaum, M. (Ed.). (1988). *Handbook of life stress, cognition and health*. New York: John Wiley & Sons.

Rothbard, N. P. (2001). Enriching or depleting? The dynamics of engagement in work and family roles. *Administration Science Quarterly*, 46, 655–684.

Rothmann, S. (2001). Sense of coherence, locus of control, self-efficacy and job satisfaction. *Journal of Economic and Management Sciences*, 5, 41–65.

Rothmann, S. (2003). Burnout and engagement: A South African perspective. *South African Journal of Industrial Psychology*, 29(4), 16–25.

Rothmann, S. (2005). Employee health and wellness research in SA. *Work Wellness News*, 1(2).

Rothmann, S. (2007). Job satisfaction, occupational stress, burnout and work engagement as components of work-related wellbeing. *South African Journal of Industrial Psychology*, 34(3), 11–16.

Rothmann, S., & Agathagelou, A. M. (2000). The relationship between locus of control and work satisfaction in senior police personnel. *South African Journal of Industrial Psychology*, 26(2), 20–26.

Rothmann, S., & Coetzee, S. E. (2005). Organisational stress, organisational commitment and ill-health of employees at a higher education institution in South Africa. *South African Journal of Industrial Psychology*, 29(4), 52–60.

Rothmann, S., Jackson, L. T. B., & Kruger, M. M. (2003). Burnout and job stress in a local government: the moderating effect of sense of coherence. *South African Journal of Industrial Psychology*, 31(1), 47–54.

Rothmann, S., & Jansen van Vuuren, J. A. (2002). *Sense of coherence, self-efficacy, locus of control, coping and burnout of senior managers in a manufacturing industry*. Poster session presentation at the 1st South African burnout conference, Potchefstroom.

Rothmann, S., & Jordaan, G. M. E. (2006). Job demands, job resources and work engagement of academic staff in South African higher education institutions. *South African Journal of Industrial Psychology*, 32(4), 87–96.

Rothmann, S., Steyn, L. J., & Mostert, K. (2005). Job stress, sense of coherence and work wellness in an electricity supply organisation. *South African Journal of Business Management*, 36(1), 55–63.

Rotter, J. B. (1966). Generalised expectancies for internal versus external control of reinforcement. *Psychological Monographs*, 80(1), 1–28.

Sammut, R. G. (1997). Psychiatric nurses' satisfaction: The effect of closure of a hospital. *Journal of Advanced Nursing*, 26, 20–24.

Schaap, P., Buys, M. A., & Olckers, C. (2003). The construct validity of Scheper's Locus of Control Inventory for black and white tertiary students. *South African Journal of Industrial Psychology*, 29(1), 32–43.

Schaufeli, W. B. (2003). Past performance and future perspectives of burnout research. *South African Journal of Industrial Psychology*, 29(4), 1–15.

Schaufeli, W. B., & Bakker, A. B. (2003). *Utrecht work engagement scale: preliminary manual, version 1*. Occupational Health Psychology Unit, Utrecht University.

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 Behaviour*, 25, 293–315.

Schaufeli, W. B., Bakker, A. B., Hoogduin, K., Schaap, C., & Kladler, A. (2001). On the clinical validity of the Maslach Burnout Inventory and the burnout measure. *Psychology and Health*, 16, 565–583.

Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The measurement of work engagement with a short questionnaire: a cross-national study. *Educational and Psychological Measurement*, 66(4), 701-716.

Schaufeli, W.B., & Buunk, B.P. (2002). Burnout: an overview of 25 years of research and theorizing. In M.J. Schabracq, J.A.M., Winnubst, C.L. Cooper (Eds), *Handbook of Work and Health Psychology*. p 383-425. Chichester: Wiley.

Schaufeli, W. B., & Enzmann, D. (1998). *The burnout companion to study and practice: A critical analysis*. London: Taylor and Francis.

Schaufeli, W. B., Leiter, M. P., Maslach, C., & Jackson, S. E. (1996). The Maslach Burnout Inventory-General Survey. In C. Maslach, S. E. Jackson, & M. P. Leiter (Eds), *Maslach Burnout Inventory*. Palo Alto, CA: Consulting Psychologists Press.

- Schaufeli, W. B., Salanova, M., Gonzalez-Roma, V., & Bakker, A. B. (2002). The measure of engagement and burnout: A confirmative analytic approach. *Journal of Happiness Studies*, 3, 71–92.
- Schepers, J. M. (1995). *Locus of Control Inventory*. Unpublished report. Rand Afrikaans University.
- Schepers, J. M. (2004). Overcoming the effects of differential skewness of test items in scale construction. *South African Journal of Industrial Psychology*, 30(4), 27– 43.
- Schepers, J. M. (2005). The construction of a normative scale of locus of control. *South African Journal of Industrial Psychology*, 31(3), 1–11.
- Schepers, J. M. (2007). Validation of the revised edition (1995) of the locus of control inventory. *South African Journal of Industrial Psychology*, 33(1), 80–89.
- Schepers, J. M., Gropp, L., & Geldenhuys, D. J. (2006). The factor structure, metrical properties and convergent validity of the third edition (1999) of the Locus of Control Inventory. *South African Journal of Industrial Psychology*, 32(2), 1–8.
- Schepers, J. M., & Hasset, C. F. (2006). The relationship between the 4th edition (2003) of the Locus of Control Inventory and the Sixteen Personality factor Questionnaire (version 5). *South African Journal of Industrial Psychology*, 32(2), 9–18.
- Schutte, N., Toppinen, S., Kalimo, R., & Schaufeli, W. B. (2000 March). The factorial validity of the Maslach Burnout Inventory – General Survey (MBI-GS) across occupational groups and nations. *Journal of Occupational and Organisational Psychology*, 73(1), 53–66.
- Seligman, M. E. P. (1999). The president's address. *American Psychologist*, 54, 559–562.

Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist*, 55, 5–14.

Seligman, M. E. P., Steen, T. A., Park, N., & Peterson, C. (2005). Positive psychology progress: Empirical validation of interventions. *American Psychologist*, 60(5), 410–421.

Sheldon, K. M., & King, L. (2001). Why positive psychology is necessary. *American Psychologist*, 56(3), 216–217.

Smith, D.F. (2002). Functional salutogenic mechanisms of the brain. *Perspectives in Biology and Medicine*, 45, 319–328.

Snyder, C.R. & Lopez, S.J. eds. (2002). *Handbook of Positive Psychology*. Oxford: Oxford University Press.

Snyder, C. R., & Lopez, S. J. (2006). *Positive psychology: The scientific and practical explorations of human strengths*. USA: Sage Publications.

Sommerfield, M. R., & McCrae, R. R. (2000). Stress and coping research: Methodological challenges, theoretical advances and clinical applications. *American Psychologist*, 55, 620–625.

Sonnentag, S. (2003). Recovery, work engagement and proactive behaviours: A new look at the interface between non-work and work. *Journal of Applied Psychology*, 88, 518–528.

Spangenberg, J. J., & Orpen-Lyall, M. R. (2000). Stress and coping strategies in a sample of South African managers involved in post-graduate managerial studies. *Journal of Industrial Psychology*, 26, 6–10.

Spielberger, C. D., Vagg, P. R. & Wasala, C. F. (2003). *Handbook of occupational psychology*. Washington, DC: APA.

Steyn, J. R. (Jr). (2002). Practically significant relationships between two variables. *South African Journal of Industrial Psychology*, 28(3), 10–15.

Steyn, A. G. W., Smit, C. F., Du Toit, S. H. C., & Strasheim, C. (1995). *Modern statistics in practice*. Pretoria: Van Schaik.

Storm, K., & Rothmann, S. (2003a). A psychometric analysis of the Maslach Burnout Inventory-general survey in the South African Police Service. *South African Journal of Psychology*, 33(4), 219–226.

Storm, K., & Rothmann, S. (2003b). A psychometric analysis of the Utrecht work engagement scale in the South African Police Service. *South African Journal of Industrial Psychology*, 29(4), 62–70.

Strümpfer, D. J. W. (1990). Salutogenesis: A new paradigm. *South African Journal of Psychology*, 20(4), 265–276.

Strümpfer, D. J. W. (1995). The origins of health: From “salutogenesis” to “fortigenesis”. *South African Journal of Psychology*, 25(2), 81–89.

Strümpfer, D. J. W. (2002). Psychofortology: review of a new paradigm marching on. Working Paper.

Strümpfer, D. J. W. (2003). Resilience and burnout: A stitch that could save nine. *South African Journal of Psychology*, 33, 69–79.

Strümpfer, D. J. W. (2005). Standing on the shoulders of giants: Notes on early positive psychology (psychofortology). *South African Journal of Psychology*, 35(1), 21–45.

Strümpfer, D. J. W., & Mlonzi, E. N. (2001). Antonovsky's Sense of Coherence scale and job attitudes: Three studies. *South African Journal of Psychology*, 31(2), 30–37.

Strümpfer, D. J. W., & Wissing, M. P. (1998, September). *Review of South African data on the sense of coherence scale as a measure of fortigenesis and salutogenesis*. Paper presented at the Annual Congress of the Psychological Society.

- Suls, J., James, P. D., & Harvey, J. H. (1996). Personality and coping: Three generations of research. *Journal of Personality*, 64(4), 72–735.
- Sutherland, V. J., & Cooper, C. L. (1990). *Understanding stress: A psychological perspective for help professionals*. London: Chapman & Hall.
- Taylor, C. M., Schepers, J. M., & Crous, F. (2006). Locus of control in relation to flow. *South African Journal of Industrial Psychology*, 32(3), 63–67.
- Taylor, S. E. (2007). A positive approach to workplace stress. *Gallup Executive Management Journal*.
- Tetrick, L. E., & Quick, J. C. (Eds). (2010). *Handbook of occupational health psychology* (2nd ed.). Washington, DC: American Psychological Association.
- 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, UK: Oxford University Press.
- Van der Colff, J. J., & Rothmann, S. (2009). Occupational stress, sense of coherence, coping, burnout and work engagement of registered nurses in South Africa. *South African Journal of Industrial Psychology*, 35(1), 1–10.
- Van Jaarsveld, J. (2005). The relationship between burnout, coping and sense of coherence among engineers and scientists. Unpublished master's dissertation, University of South Africa, Pretoria, South Africa.
- Van Zyl, E. S. (2002). The measurement of work stress within South African companies: a luxury or necessity? *South African Journal of Industrial Psychology*, 28(3), 26–31.
- Viviers, A. M., & Cilliers, F. (1999). The relationship between salutogenesis and work orientation. *South African Journal of Psychology*, 25(1), 27–32.

Viviers, A. M., & Coetzee, S. (2007). South African universities, research and positive psychology. *South African Journal of Higher Education*, 21(4), 190–206.

Wainwright, D., & Calnan, M. (2002). *Work stress: The making of a modern epidemic*. San Francisco, CA: Freeman.

Wallace, J. C., Edwards, B. D., Arnold, T., Frazier, M. L., & Finch, D. M. (2009). Work stressors, role-based performance, and the moderating influence of organizational support. *Journal of Applied Psychology*, 94(1), 254–262

Welman J. C., & Kruger, S. J. (2001). *Research methodology*. Cape Town: Oxford University Press Southern Africa.

Welman J. C., & Kruger, S. J., & Mitchell, B. (2006). *Research methodology*. Cape Town: Oxford University Press Southern Africa.

Whitehead, T., & Kotze, M. E. (2003). Career and life-balance of professional women: A South African study. *South African Journal of Human Resource Management*, 1(3), 77–84.

Wiese, L., Rothmann, S., & Storm, K. (2003). Coping, stress and burnout in the South African Police Service in KwaZulu-Natal. *South African Journal of Industrial Psychology*, 29(4), 71–80.

Wissing, M. P., De Waal, M., & De Beer, I. (1992). *Sense of coherence and stress symptomatology*. Paper presented at 25th International Congress of Psychology, Brussels, Belgium.

Wissing, M. P., & Van Eeden, C. (1997). *Psychological well-being: A fortigenic conceptualisation and empirical clarification*. Paper presented at the Annual Congress of Psychological Society of South Africa.

Wissing, M. P., & Van Eeden, C. (2002). Empirical clarification of the nature of psychological well-being. *South African Journal of Psychology*, 32(1), 32–44

<http://www.business.iafrica.com>

<http://www.cstherapy.co.za>.

<http://www.hse.gov.uk/statistics>

<http://www.iol.co.za>

<http://www.stressdirections.com>