

**THE RELATIONSHIP BETWEEN STRESS AND SALUTOGENIC
FUNCTIONING AMONGST EMPLOYEES IN A STATE OWNED
ENTERPRISE**

by

JANINE OOSTHUIZEN

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SUPERVISOR: K. HESLOP

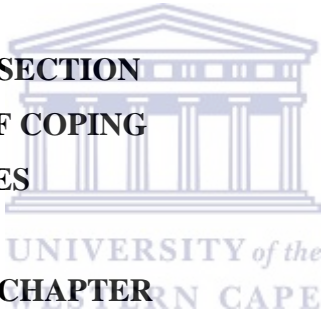
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ABSTRACT

'Human capital' is the buzzword of the 21st century and is becoming the core value of organisations. In South Africa it is estimated that more than R500 million is lost annually through absenteeism and loss of productivity as a result of stress. Employees are key contributors to the bottom-line and should be selected, placed and applied in such a way that the company only benefits from their output. Therefore, if the human element is a crucial element it becomes essential for the organisation to nurture, protect and optimise individuals to their full potential.

There is a fair degree of agreement on the variables that act as organizational stressors, however, studies on stress and salutogenic functioning in a state owned enterprise have not been found. According to the literature, salutogenic factors function as generalised resistance resources and a high score on sense of coherence, as well as an internal locus of control correlates with low scores on stress. The present research has a general aim of exploring the relationship between stress and salutogenic functioning, within a state owned enterprise. The levels of stress were correlated with the presence of high or low levels of sense of coherence and whether the individuals display an internal or an external locus of control. A sample of 240 employees (N=240) was used from the organisation.

The following questionnaires were utilised to measure the range of variables. Levels of stress were measured by the Experience of Work and Life Circumstances Questionnaire (WLQ). Whereas the salutogenic construct, sense of coherence was measured by the Orientation to Life Questionnaire (OLQ) and the second salutogenic construct, locus of

control, was measured by the Locus of Control Inventory (LCI). The statistical analyses included inferential (correlation, t-test and analysis of variance) and descriptive statistics. The results demonstrated significant relationships between low stress levels, sense of coherence and internal locus of control. As such, salutogenic functioning in terms of sense of coherence and locus of control, had a significant correlation with levels of stress.

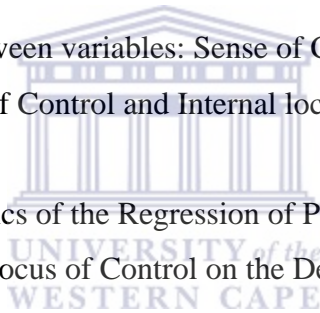
KEY WORDS:

salutogenesis, stress, coping, state, personality, work stress, Antonovsky, employees, wellness, strain, health, emotion, resources, locus of control, sense of coherence, positive psychology, pathogenic.



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CHAPTER 1

ORIENTATION AND SCIENTIFIC BACKGROUND OF THE RESEARCH

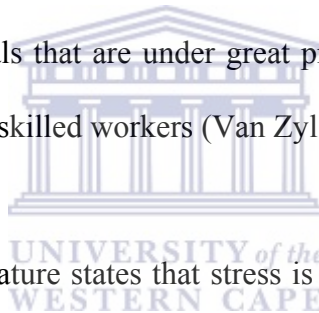
1.1 INTRODUCTION

'Beauty is in the eye of the beholder'. This is an extremely powerful statement/ proverb, which in the researcher's opinion, encapsulates many of the secrets of human functioning. The essence of this statement is *human perception*. *Perception* has the power to create and to destroy. The way human beings view their life, their situation, their accomplishments, their failure, their ability and their inability, determines their future. As stress is a phenomenon that influences the physical, the mental, the spiritual and the emotional parts of people's lives, it can become an overwhelming issue that affects the successful functioning of the human race. Stress is perceived differently by every individual, as such, different elements create different levels of stress, for different people. Having the necessary knowledge, resources, characteristics and acquired skills to approach this phenomenon, people's perception can be modified or changed to empower them to see the "beauty" of the situation in spite of and sometimes because of, the prevailing stress.

This chapter provides a background and rationale for the present study, by focusing on salutogenic functioning and stress and its role in a state owned enterprise. The purpose of the present study, as well as the research aims are outlined and research questions and hypotheses are formulated. The pathogenic and salutogenic paradigms are discussed and an overview of the research limitations is presented. Lastly, a chapter outline of the present study is provided.

1.2 RATIONALE AND BACKGROUND FOR THE PRESENT STUDY

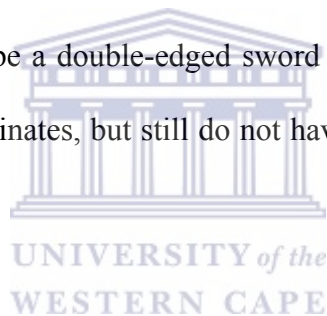
This study aims to investigate the experiences of employees within a state owned enterprise, by focusing specifically on the role that salutogenic personality constructs play in an individual's levels of stress. It is the duty of, the industrial psychology field, to ensure that the workforce functions in an optimal capacity, despite change, by ensuring that managers are cognizant and equipped with the necessary skills to cope with present and future demands (Viviers, 1998a). A gap exists in literature regarding the investigation of stress and salutogenic functioning in a state owned enterprise. According to Van Zyl and Bester (2002) South Africans experience abnormally high levels of stress, which is evident in their physical and emotional behaviour. Within an organisational context, this often seems to occur as a result of a shortage of high-level human resources, managers and professionals that are under great pressure and skill shortages that create unique pressures for technicians and skilled workers (Van Zyl & Bester, 2002).



South African and international literature states that stress is extremely prevalent in the workplace and that it has serious implications for both employers and employees (Atkinson, 2004; Bridson, 1995; Cilliers & Kossuth, 2002; De Beer & Korf, 2004; Dhaniram, 2003; Dua, 1994; Lowe, 2004; Le Feure, Matteny & Kolt, 2003; Recupero, 2003; Sadri, 1997; Spangenberg & Orpen-Lyall, 2000; Van Zyl and Bester, 2002; Wissing & Van Eeden, 2002). The media is also placing increasing focus on this subject, which means stress can no longer be ignored or viewed as something isolated.

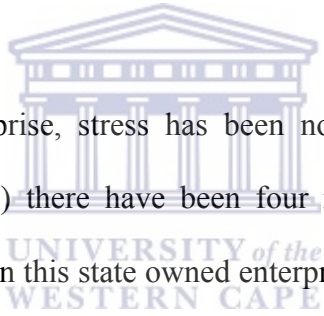
Individuals are faced with stressors on a daily basis in an increasingly high-paced world. They are expected to cope with their vulnerabilities silently and quickly. Organisations require that individuals function on a psychological level, where they provide reliable and valid information through their mental and behavioural skills; values, self-perception, community orientation and

lastly through their motivational composition (Viviers, 1998a). However, this is not equally possible for all individuals. Greer (2005) found that decision-making authority can contribute to stress related illnesses. Lack of authority, in the sense that one has little influence over one's job or no power to make decisions at work, has been labeled as a key determinant of job stress (Greer, 2005). In a five-year follow up study performed with workers in the Danish Work environment, it was found that the employees with low influence at work, low social support and high job insecurity were more likely to experience high psychological distress (Greer, 2005). As such it appears that employees at various job levels may experience different levels of stress and as a result of different causes. Johnson (in Greer, 2005) has noted that many blue-collar workers in high-strain jobs with low control and little authority are at greater risk for developing stress related diseases, such as cardiovascular disease, than individuals working non-manual jobs. Johnson further added that decision-making authority can be a double-edged sword for middle managers. As such, they endure resentment from their subordinates, but still do not have ultimate decision-making power in their positions (Greer, 2005).



Friedman (2005) further notes that individuals need a sense of mastery, not only of the skills needed in the workplace and a deeper understanding of how they fit into the vision and goals of the organisation, but more deeply, a sense of mastery of themselves. They need to become aware of their personal strengths that can enable them to deal with the current challenges of complexity and change. If employees become more in touch with their sources of support both internally and externally, it will ensure resilience and engagement in all aspects of work and life in accordance with personal, deeply held values (Friedman, 2005). As such, the articulation of personal values will engender a sense of coherence in living and increase the capacity to recover from adversity. It is resourcefulness and knowing how to be realistically optimistic that will facilitate the growth in employees, which will exponentially impact on the organisation as a whole (Friedman, 2005).

New legislation, affirmative action and quota systems are creating unique distress among workers from different racial/cultural groups, which is intensified by economic conditions that make life in South Africa an unusually distressful experience (Van Zyl & Bester, 2002, p. 30). The problems are extensive and complex enough to rob people of any hope that there will be significant relief in a future generation. For the above-mentioned reasons, a system of stress measurement, in particular, can help to address these serious issues in a preventive manner. At present, there is also a gap in the literature regarding the research on stress and salutogenic functioning in a state owned enterprise, to which the proposed research endeavours to contribute. The proposed study aims to investigate the experiences of employees within a state owned enterprise from an Industrial Psychological perspective, by focusing specifically on the role that the salutogenic personality constructs, namely, sense of coherence and locus of control, play in relation to stress.



In the proposed state owned enterprise, stress has been noted and found to be an increasing problem. In two years (2002-2004) there have been four reported resignations due to serious depression, as a result of high strain in this state owned enterprise. These are only the incidents that have become known, in many instances this issue is ignored or dealt with by external professionals. Despite the fact that formal studies have not been conducted in the enterprise, both the human resource and employee assistance programme managers have drawn the following inferences based on their knowledge and assessment of the work environment, as well as their experiences and evaluations during several counselling sessions conducted with employees (M. Zinto – EAP Manager, January 24, 2005 & H. Dladla – HR Manager, January 31, 2005). These experiences are supported by the findings of Van Zyl and Bester (2002):

- Stress increases absenteeism – absence due to mild to serious depression can last up to 3 weeks.

- Depression is mostly related to the environment and regards issues such as technology, system management and company changes – due to new demands.
- Stress is usually triggered/ increased by employees not meeting company outputs; poor management of personal finances, resulting in a garnishee order; alcohol/ drug abuse; poor outputs of already stress prone employees, which could snowball when pressure increases.
- Stress is usually ignored by employees, left until its advanced stages, or dealt with inefficiently.
- Undetected stress leads to increased absenteeism (due to re-occurrences/lapses), decreased performance and in turn, to disciplinary hearings/ dismissal and even resignation.

The research on the relationship between stress and salutogenic functioning can provide more distinct information about how individuals cope or do not cope with stressful situations. This would provide authority figures in the public sector with the tools to recognise that individuals function differently regarding stress, that certain personalities cope better in such environments and that structures need to be instituted to address the problem of stress in the workplace. Viviers (1998b) suggests that selection batteries should include instruments that measure salutogenic orientation, as this would identify people who function optimally with a sound philosophy and positive approach to life. Furthermore, service delivery at a low cost and a high quality is very important in rapidly changing economical circumstances. Extremely stressful environments are destructive to employees' well-being. Employee Assistance programmes, could offer web-based programmes that train executives on health risks in the work place and how health can be promoted among employees (Greer, 2005). Training programmes that provide information on the psychosocial elements employees need, such as social support and more decision-making authority over their own jobs, can also be offered. Employee Assistance Programmes can become more cost effective and efficient if it can be established why certain individuals cope better with stress than

others and then include the findings as part of interventions in the Employee Assistance Programmes.

Employees are faced with extreme challenges on a daily basis, as such they will not only be stretched thin, but will begin to suffer the consequences of stress (Friedman, 2005). Stress is an inducer of workplace problems and managers need to make it their responsibility to deal with stress as it contributes to the bottom-line (Campbell, 1995). In South Africa it is estimated that more than R500 million is lost annually through absenteeism and loss of productivity as a result of stress (Spangenberg & Orpen-Lyall, 2000). There are also a large number of individuals who believe that their health has been detrimentally affected by their working environment as a result of globalisation and technology (Friedman, 2005). Occupational stress theorists propose that destructive outcomes for example, psychological distress, absenteeism, physical illness and poor work performance, are caused by a combination of individual traits and environmental characteristics (Spangenberg & Orpen-Lyall, 2000). Therefore specific causes of stress should be identified and specific solutions or coping mechanisms should be taught (Earnshaw & Morrison, 2001). Friedman (2005) is of the opinion that the most logical strategy to deal with this is to provide development opportunity and to capacitate people up front, in order to ensure excess capacity for employees, while at the same time enhancing competitive advantage for the organisation. According to Friedman (2005), various features of individuals that would make for increased commitment and productivity are neglected by the literature. She further claims that personal resilience is the single most important contributor to this capacity (Friedman, 2005). Only once the fundamental aspects of human functioning such as the physical, mental and emotional and spiritual parts of life, are addressed, can one expect full engagement from employees in the workplace (Friedman, 2005).

When authority figures in the occupational field are aware and more informed about the phenomenon of stress, they can become proactive in their actions and prevent serious effects to their company and their employees. This research study will contribute to the existing information regarding stress and salutogenic functioning in the realm of the workplace and will add a different approach, which will emphasise the salutogenic position of how employees in a state owned enterprise cope with the pressures they are exposed to. By determining how salutogenic factors relate to stress, it will become more apparent to managers/ authority figures, what they are required to do, in terms of providing support to their employees.

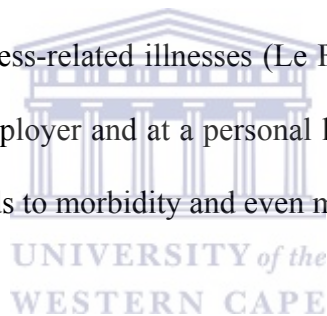
There is a paucity of research on salutogenesis and stress in South African state owned enterprises, therefore the present research will contribute to this limited pool of research. The dearth of South African research on the relationship between stress and salutogenesis is apparent, particularly as it pertains to employees of a state owned enterprise. International literature has paid limited attention to the specific construct of salutogenesis and its direct relation to stress and is more focused on the relationships between stress and the underlying personality constructs of salutogenesis.

In evaluating the symptoms of stress, A. Zinto (personal communication, January 24, 2005) and H. Dladla (personal communication, January 31, 2005) have found it to be contributing to the increase in absenteeism, low morale, decrease in productivity and related physical illnesses in their organisation. This state owned enterprise currently runs a stress programme where the company doctor hosts seminars/ workshops on stress. The majority of the reported acute stress issues are dealt with by the EAP manager (A. Zinto, January 24, 2005). If the problem is of a chronic or more serious nature the function is outsourced to appropriate professionals. Many individuals seek professional assistance outside the company, due to the sensitive nature of stress related illnesses.

1.3 PURPOSE OF THE PRESENT RESEARCH

The purpose of this study is to determine the relationship between stress and salutogenic functioning in terms of the salutogenic constructs: sense of coherence and locus of control, among employees in a state owned enterprise.

Stress has a direct effect on all aspects of human functioning - the physiological, the psychological, the emotional, the social and the spiritual. Serious degrees of stress can lead to dysfunction in everyday life and in extreme cases to death. Stress occurs within any individual and can be triggered by occupational stressors, as well as non-work-related stressors (Fairbrother & Warn, 2003). Stress in the occupational arena has assumed greater importance, in terms of the costs and the legal liability associated with stress-related illnesses (Le Feure, et al., 2003). It is increasingly becoming a financial risk for the employer and at a personal level, employees are experiencing the cost of unmanaged stress, which leads to morbidity and even mortality (Le Feure, et al., 2003).



EAP professionals are not always recognised for their contribution. They can play a major role in reducing the use of medical and mental health services by providing early intervention and helping employees and managers find ways to identify and resolve issues that may have serious, long-term consequences (Boninelli & Meyer, 2004). As development and training is founded upon the theory of salutogenesis, the basic fundamental belief is that people can learn appropriate life skills timeously, such as stress management and life balance (Boninelli & Meyer, 2004, p. 309). The earlier in life a person acquires these skills the more effective a person will be in coping with a variety of life situations. The present research can contribute to the alternative routes that need to be discovered for dealing with stress in the work place, such as recognising individuals who are more likely to function optimally under stress and developing those individuals who are not.

Individuals experience stress in different ways depending on their perception of the specific stressor. There is, however, no single mechanism of influence, however, certain personality types are more vulnerable to stressors, in the sense that they perceive it differently and think differently about the events that happen to them in their daily lives. If organisations start to show more interest and invest more in employees as unique individuals, it will have a positive effect on the employees' approach to their work and could assist individuals in coping with stress and stimulate optimum functioning at work and life in general (Viviers, 1998a). The present research will establish whether individuals with a high sense of coherence and internal locus of control experience stress caused by life and work experiences.

1.4 RESEARCH AIMS



1.4.1 General Aim

The general aim of the proposed research is to report on the relationship between stress and salutogenic functioning in terms of the salutogenic constructs, namely, sense of coherence and locus of control, among employees in a state owned enterprise.

1.4.2 Specific Aims

Literature aims of the research

1. To conceptualise the existing literature on stress and to emphasize stress in the workplace.
2. To conceptualise the existing literature on salutogenic functioning and to select and discuss the salutogenic constructs to be used for the research.

3. To integrate the literature on stress and salutogenic functioning to determine whether salutogenic constructs can differentiate between the levels of stress present in individuals.

Empirical objectives of the research

1. To determine the levels of stress present in employees from a state owned enterprise.
2. To measure the levels of salutogenic functioning in terms of the salutogenic personality constructs, namely, sense of coherence and locus of control among employees from a state owned enterprise.
3. To explore the relationship between stress and salutogenic functioning among employees from a state owned enterprise.
4. To formulate possible recommendations based on the literature, as well as the empirical findings of this research, regarding future research on employees in state owned enterprises.



1.5 PROBLEM FORMULATION/ RESEARCH QUESTIONS

WESTERN CAPE

There are various research questions that pertain to the present study and include the following:

1. How can stress be conceptualised in terms of its behavioural dimensions and symptoms and what are the levels of stress of the employees in the sample?
2. How can coping be conceptualised from a salutogenic point of view, in terms of behavioural constructs and symptoms?
3. Will it be possible to differentiate between individuals with stress and individuals without stress in terms of the salutogenic scores?
4. What future recommendations can be made based on the results?

The proposed problem will be addressed from the salutogenic perspective. The research question is: ‘Do the salutogenic constructs, namely, sense of coherence and locus of control correlate with the levels of stress in employees from a state owned organisation?’

1.6 RESEARCH HYPOTHESES

The following hypotheses were formulated for this research:

Hypothesis 1

Employees with higher stress levels have low salutogenic functioning in terms of sense of coherence and locus of control.

Or

Employees with low stress levels have high salutogenic functioning in terms of sense of coherence and locus of control.



Hypothesis 2

A high sense of coherence correlates with low levels of stress.

Or

A low sense of coherence correlates with high levels of stress.

Hypothesis 3

An internal locus of control results in lower levels/ no presence of stress.

Or

An external locus of control results in higher levels of stress.

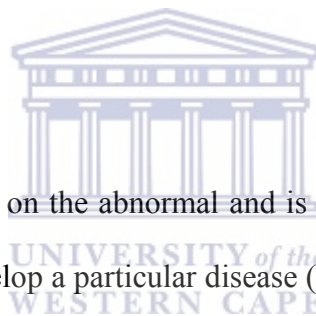
Hypothesis 4

There is no relationship between stress and salutogenic functioning.

1.7 THE PARADIGM PERSPECTIVE OF THE RESEARCH

Two paradigms can be identified in the realm of stress: the pathogenic orientation where the individual is either ill or healthy and the salutogenic paradigm where the individual is neither classified as healthy or unhealthy. In simple terms, salutogenesis is concerned with health and the paradigm of pathogenesis is focused on how disease develops.

1.7.1 The Pathogenic Paradigm

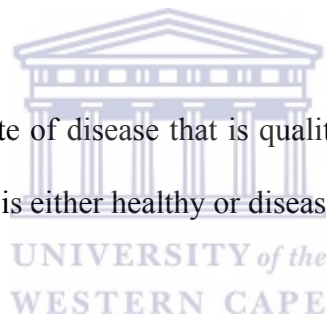


The pathogenic paradigm is focused on the abnormal and is generally directed at discovering why people become ill and why they develop a particular disease (Strümpfer, 1990). This understanding is utilised to find methods of treating and preventing specific diseases. It literally aims to heal and is known as the ‘healing science’ (Strümpfer, 1990). At the core of this paradigm lies the assumption that disease is caused by physical, biochemical, microbiological and psychosocial agents. In its present-day form it applies a multi-factorial approach in terms of risk factors (Strümpfer, 1990). Homeostasis is fundamental to this orientation and implies that the normal state of the human organism is in a semi-constant condition, which could vary, but is maintained by various complex interaction regulating mechanisms (Strümpfer, 1990). If the regulatory mechanisms do not function optimally, homeostasis is disrupted by pathogens and disease is the result.

Pathogenesis is the genesis of pathology, is based on the second law of thermodynamics – which postulates that organised entities including, human bodies, run down and become chaotic, whereas salutogenesis is the genesis of the salutary, the healthful, the complex and organized (Dossy, 1994).

According to Antonovsky (1979) there are three reasons why pathogenesis will handicap the thought process surrounding why illness does not conform to social standards:

1. The pathogenic approach pressures individuals to focus on disease and illness and blinds individuals to the subjective interpretation of the person who is ill – “one limits oneself to asking what has caused the specific disease?” (Antonovsky, 1979, p. 36).
2. Resistance to multiple causation occurs and individuals are pacified with having one magic cure for all diseases. The salutogenic model rather asks questions concerning what maintains health.
3. Pathogenesis postulates a state of disease that is qualitatively different from a state of non-disease, where the individual is either healthy or diseased.



The pathogenic paradigm is based on the system of classification and aims to place individuals in a dichotomous location where they are either, healthy/ non-patient or diseased/ patient. Antonovsky (1979, p. 37) states that pathogenesis asks the question: “Why does this person enter this particular state of pathology?”

1.7.2 The Salutogenic Paradigm

In contrast, Antonovsky (1979; 1987) is the clearest advocate for the salutogenic paradigm. The earliest signs of this paradigm were in Super’s (in Strümpfer, 1990) distinction between hygiene, which is the concern with counselling psychology and refers to normalities, even within the

abnormal individual. He also focussed on personal and social resources, as well as adaptive tendencies, which allow individuals to make effective use of their resources (Strümpfer, 1990). The third force personality theorists such as Maslow (need for self-actualisation); Rogers (actualizing tendency); Goldstein (tendency to ordered behaviour and optimal performance); Rotter (emphasis on social learning); White (competence motivation) and Deci (view of intrinsic motivation emphasizing competence and self-determination) are also very important in the development of this paradigm (Strümpfer, 1990).

According to Strümpfer (1990, p. 267), there are three implications of the salutogenic paradigm:

1. In order to think salutogenically, the dichotomy of people being either diseased or healthy needs to be abandoned and Antonovsky's (1987, p. 3) 'health ease/dis-ease continuum' needs to be embraced. This maintains that individuals fall between the two theoretical poles of total terminal illness and total wellness.
2. The Salutogenic model rejects the assumption that stressors are inherently bad and maintains that stressors may have salutary consequences. In other words, this approach assumes that stressors are neutral in their health consequences and that the consequences depend on the individual's response to the stressor. If tension is managed poorly, it will result in stress and the individual is open to disease, but if managed well the stressor remains neutral or can even enhance health.
3. The third implication of the salutogenic paradigm is that the deviant case should be studied. Hence, research needs to explore what enables some individuals to do well and accept the possibility that stressors may have salutary consequences.

According to Antonovsky (1979, p. 37), salutogenesis asks: "What are the factors pushing this person towards this end or toward that end of the continuum?"

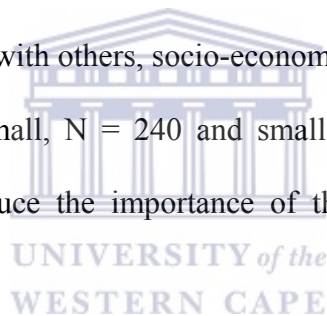
It must be noted that the salutogenic view does not reject the pathogenic approach nor does it advise abandonment thereof, as the benefits within the clinical fields and the research on effects of stressors and the discovery of pathogens is extremely valuable and should continue. The salutogenic and pathogenic paradigms each have their own worth and place in research as they do different things, but often compliment one another in research. Despite this, the paradigms need to maintain independence, as the salutogenic paradigm is of great importance to the new insights and growth in the social sciences (Strümpfer, 1990).

Strümpfer (1995) is of the opinion that emphasising health as the core of a paradigm is limiting to the paradigm and maintains that health should be measured separately from well-being, as it becomes useless for its explanatory purpose when it is used as a metaphor for general well-being. He postulates that the term ‘fortigenesis’ is more descriptive of the salutogenic paradigm. It is derived from Latin: ‘fortis’ meaning strong and ‘fortify’ meaning physical strength, vigour/endurance or to strengthen physically or mentally or morally. Strümpfer (1995) views it as more holistic than salutogenesis. This construct does not deny the search for the origins of health, but emphasises that Antonovsky pointed to the closely related origins of the strength needed to be effective at human functioning. The concept of strength is found in learned resourcefulness, locus of control and hardiness (Strümpfer, 1995).

1.8 LIMITATIONS OF THIS RESEARCH

The recognised limitations of this study are as follows:

1. The actual absence or presence of the stress symptoms may not be sufficient evidence for explaining the individual's salutogenic functioning in terms of sense of coherence and locus of control.
2. The global perspective of the complexities of an individual's functioning in stressful situations might not provide a complete representation, due to the restrictiveness of the quantitative analysis.
3. Salutogenic functioning might not be the only variable that accounts for variance or similarities in individuals' capacity to cope with stress. Other variables might be: influence of environment, relationship with others, socio-economic status et cetera.
4. The sample size is fairly small, $N = 240$ and small sample sizes lack statistical rigour. However, this does not reduce the importance of this study, but merely highlights the necessity for further research.
5. It is possible that the number and type of salutogenic constructs to be used in this study will be insufficient to generalise the findings to how individuals manage stress and remain healthy in the public sector, due to the fact that literature on the salutogenic paradigm is growing.
6. The literature indicates that the concepts of stress and coping are conceptually diverse and have different implications for different people. The lack of definitional clarity could limit empirical testing at a theoretical and methodological level.
7. Varying experiences of stress exist in the public sector and therefore generalisation should be approached with caution.



8. Compared to the amount of literature available on stress, literature on salutogenic functioning is meager.

1.9 CHAPTER OUTLINE OF THE THESIS

An overview of the chapters will be provided by presenting a short layout of the chapters.

Chapter one focuses on the problem statement, the aims and the limitations of the present study.

Chapter two provides an overview of the theoretical background that provides the premise of the study. The concept of stress, salutogenesis and coping is introduced and discussed with reference to the various theories and findings that relate to the present study. It looks at the definitions of the three constructs, namely stress, sense of coherence and locus of control, as well as their theoretical frameworks. The various models of stress are highlighted and the causes and symptoms of stress are also discussed. Various salutogenic constructs are further explained to serve as a background for the two constructs (sense of coherence and locus of control) used in the study. A brief overview for coping with stress is provided as it relates to the present study.

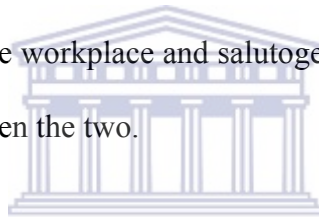
Chapter three delineates the research design used to investigate the research problem with specific reference to the target population, the sample selection and size, data collection methods, as well as data analysis and the statistical techniques utilized.

Chapter four is an exposition of the results of the study, as well as the interpretation thereof.

Chapter five presents a discussion of the most salient results that were evident in the research. It deals with the conclusions and recommendations that became evident from the research.

1.10 SUMMARY

This chapter has provided a contextualisation for the stress phenomenon and how it is experienced by employees. Researchers are of the opinion that stress is a growing phenomenon and is central to the productivity of an organisation. The present study aims to establish the relationship between stress and salutogenic functioning in terms of the constructs sense of coherence and locus of control among employees in a state owned enterprise. In the following chapter the aim will be to provide a theoretical foundation for stress in the workplace and salutogenic functioning in terms of its various constructs and the relationship between the two.



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The next chapter proceeds with an overview of relevant literature relating to the research problem.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

In this chapter an overview of the definitions of the stress concept is provided. Various models of stress are defined and following this, an overview of the aetiology and symptoms of job stress is provided. Thereafter, an integration and conceptualization of the existing literature on salutogenic functioning follows. Furthermore, an overview of the salutogenic paradigm and its history is provided, which is followed by the definition of salutogenesis. The salutogenic constructs that are used in the present study are discussed, as well as other salutogenic constructs in order to provide a background to the study. A section is also dedicated to the identification of a salutogenic functioning individual. This chapter further discusses and integrates coping theory with salutogenesis and stress and it includes a discussion of the definition and the models. The chapter concludes with an integration of the theoretical aspects: stress, salutogenesis and coping.

2.2 THE DEFINITION OF STRESS AS A CONCEPT

Any form of change in an individual's life constitutes stress, whether it is a positive or a negative event. Even the experience of imagining future change, which can be understood as worry, is stress (Burns, 1997). According to Burns (1997), stress causes problems with the brain's positive messages. When life is smooth, the happy messages keep up with demand. However, when too much strain is present, the positive messages struggle to be delivered to the brain. As the stress

continues to increase, the happy messages fail to reach their destination. Important nerve centers then receive mostly negative/ sad messages, and the whole brain becomes distressed. The person enters a state of brain chemical imbalance known as - overstress (Burns, 1997). The individual starts feeling overwhelmed by life and starts feeling depressed, anxious and no longer feels in control of his/ her life (Burns, 1997).

Stress has been defined in various ways such as: a response to challenging events, as an event that places demands on the individual, as an environmental characteristic posing a threat to the individual, and as a realisation by individuals that they are unable to deal adequately with the demands placed upon them (Dua, 1994). According to Dua (1994), the nature and effects of stress might be best understood by proposing that some environmental variables (stressors), when interpreted by the individual, may lead to stress. Stress experienced by an individual, may cause strains and long-term negative effects. The effects of stress depend on the individual's characteristics such as social support, Type A behaviour and coping strategies. Therefore stressors can be viewed as objective events, stress is the subjective experience of the event and strain is the maladaptive response to stress (Dua, 1994).

Stress can be viewed as a psychological phenomenon with a clear physical component and is defined by Jordan (2002), as an adverse reaction the individual has toward excessive pressure, which exceeds the individual's ability to cope. A working definition suggested by Anisman and Merali (1999), is that a stressor is a situation or event, judged as being aversive in the sense that a stress response is elicited, takes a toll on an individual's physiological resources and possibly provokes a subjective state of physical and mental tension.

Sanderlin (2004) conducted a study on employee difficulties with stress within organisations that continually introduce new technology into the work environment. The findings indicated that a rapid introduction of such technology causes employees to suffer from fatigue and aversion and that this constant introduction has a human price in the form of 'techno-stress', which is an inability to cope with new technology in a healthy way (Sanderlin, 2004). Sanderlin (2004) defines stress as a holistic concept that includes stimuli that cause stress responses, the actual responses of the individual and the various interventions or coping strategies (Sanderlin, 2004).

Matteson and Ivancevich (1982), define stress in two basic ways, the one is the *stimulus* definition and the other is the definition of stress as a *response*. The stimulus definition suggests that stress is the *stimulus* or drive, which affects the individual in a specific way (Matteson & Ivancevich, 1982). The response definition defines stress as a *response* to a stimulus, stress then becomes *strain* and stress defined as the stimulus now becomes the *stressor* (Matteson & Ivancevich, 1982). In this definition stress becomes the “physiological or psychological response you make to an external event or condition called a stressor” (Matteson & Ivancevich, 1982, p. 9)

Stressors are viewed as factors that influence the mechanisms through which an individual responds to stressful situations. Anisman and Merali (1999) suggest that general stressors may be of pure psychological origin (psychogenic) or they may be neurogenic stressors, which involve a physical stimulus, such as headache, bodily injury or recovery from surgery. Environmental stressors can be processive, which require high level cognitive processing of incoming sensory information and they can also be systemic stressors that are of physical origin, for example, disturbances of normal bodily metabolism (Anisman & Merali, 1999). An individual's response to a specific stressor may be controlled by available coping strategies and the perceived controllability the individual has over the situation.

2.2.1 Job Stress

Work-related stress is becoming a growing concern to organisations, due to the fact that it has significant economic implications caused by employee dissatisfaction, lowered productivity and lowered emotional and physical health of employees (Dua, 1994). Stress is viewed as a response to the environment, therefore it is triggered by change and change is an essentially unavoidable part of everyday life.

Strains caused by stress include: lower emotional health (in the form of psychological distress, depression and anxiety); lower physical health (manifested as heart disease, insomnia, headaches, and infections) and organisational symptoms (including job dissatisfaction, absenteeism, lower productivity, and poor work quality) (Dua, 1994). The majority of the work force is not coping with the prevalent stress that relates to change and uncertainty. However, there are some individuals that function better under stress than without it. Often stress is viewed as a requirement for optimal functioning, however, this is only the case with individuals that cope with stress and deal with it optimally (Viviers, 1998b). It is of extreme importance that the impact of stress on the salutogenic functioning of the individual employee should be acknowledged and addressed, as mechanisms to help individuals cope with stress and address this growing phenomenon.

Deary, Blenkin, Agius, Endler, Zeally and Wood (1996) studied the outcomes of feelings of job-related stress and personal achievement in a large sample of consultant doctors working in Scotland. They found that the way individuals respond to stressors are influenced by the individual's inclination to use various mechanisms of coping, for example, problem-focused or emotion-orientated coping (Deary et al., 1996). They support the transactional model of stress as the results show that the effect of personality characteristics on stressful situations is partially indirect, through

the constructs of coping and appraisal. In addition to this finding, personal factors and factors in the occupational environment have an impact on the amount of stress that the individuals reported (Deary et al, 1996). The strength of the association between negative appraisals of organisational changes (narrow stress appraisal) and overall job stress (general work related stress appraisal) is strong and especially noteworthy. The effect of these appraisals was modestly influenced by personality and work environment factors (Deary et al., 1996).

2.2.2 Stress Tolerance

'Stress tolerance' refers to the amount of stress individuals can endure before a malfunction occurs, and is set in their genetic inheritance. The majority of individuals have inherited enough stress tolerance to function normally in everyday life (Burns, 1997). However, all people experience short periods of brain chemical imbalances at some period in their lives, with one in ten individuals having inherited a low stress tolerance. A person with low stress tolerance will almost permanently be functioning on the level of overstress. Symptoms of such functioning would be: sleep disturbances, aches and pains, fatigue, depressions, mood swings, anxiety attacks, and even drug addiction (Burns, 1997).

2.3 THEORETICAL FRAMEWORK

According to the Transactional Model, stress is primarily the result of an individual's perception of risk factors in the environment and the assessment of whether personal resources will allow them to meet the environmental challenges or whether they will become overwhelmed by environmental threats (Spangenberg & Orpen-Lyall, 2000). The same workplace factors are not consistently

related to stress in all workplaces and Fairbrother and Warn (2003) propose that salient workplace dimensions should rather be identified than a broad approach.

Most modern approaches to stress use the 'Stressor-Strain Approach' to understand the phenomenon of workplace stress in terms of the causes and symptoms of stress (Jordan, 2002). This implies that individuals, who describe themselves as stressed, are actually referring to strain, which is the symptom of stress and includes physiological, psychological, emotional and external aspects (Jordan, 2002). The recognition of stress in an individual is usually based on the strain that they are showing. This reaction of the individual to stress is usually dependent on how they interpret the level of significance of a harmful/ challenging event and whether they have resources to cope with it (Anisman & Merali, 1999; Jordan, 2002).

A large number of individuals believe that their health has been detrimentally affected by their working environment (Jinks & Daniels, 1999). Therefore, specific causes of stress should be identified and specific solutions or coping mechanisms should be taught (Campbell, 1995; Earnshaw & Morrison, 2001). Human assets may be the essential determinant of an organisation's success and therefore alleviation of stress in the workplace should be the key priority for organisations, presently and in future (Johnson, 2004).

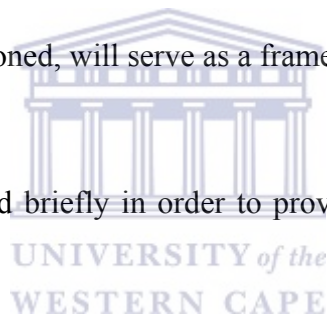
2.4 MODELS OF STRESS

According to Le Feure et al. (2003), stress is the response to stressors in the environment, and stress, by definition, is either eustress or distress or a combination of the two. Stressors can be identified by a series of characteristics: the timing of the stressor, the source of the stressor, the

perceived control over the stressor, and the perceived desirability of the stressor. Whether a stressor would result in eustress or distress would depend on the individual's interpretation.

There are several models and theories of occupational stress (Le Feure, et al, 2003). Person-Environment Fit Theory, Cybernetic Theory and Control Theory are three models central to the literature on occupational stress and they are representative of the range of theories in that they tend to emphasize different sources and interactional models for the induction of stress, and different outcome measures for the management of stressors (Le Feure et al., 2003). Various historical and current stress models as well as a new stress model called; The Model of Conservation of Resources will also be presented. There are other stress models/ approaches that have functioned as a guide for research and thinking on stress in its historical form, however, for the purpose of the present study only the models that are mentioned, will serve as a framework for the study.

The 8 models will only be discussed briefly in order to provide a contextual background for this study.



2.4.1 Person-Environment Fit Theory

In the Person-Environment Fit (P-E fit) theory, stress and stressors are not defined in terms of either the individual or the environment but rather in terms of the degree to which there is "misfit" between the two (Le Feure et al., 2003). The P-E Fit Theory suggests a lack of fit may result in physiological stress or psychological stress or both (Sadri, 1997).

There are two types of fit between the environment and the individual. The first is the extent to which the person's skills and abilities match the demands and requirements of the job and the

second is the extent to which the job environment provides supplies to meet the individual's needs (Van Harrison, 1978). A misfit between either of these types will result in health strain. In this theory, individuals are differentiated from the environment that surrounds them and a distinction is made between objects and events as they exist independently from the perception of a specific individual and as they are subjectively perceived by a specific individual (Van Harrison, 1978).

2.4.2 Cybernetic Theory of Occupational Stress

Cybernetic Theory deals with the response of systems to information, using feedback. It is based on the idea that systems, in this case individuals, seek to maintain some equilibrium state, and will act to re-establish equilibrium when some external force disturbs it (Sadri, 1997).

2.4.3 Control Theory of Occupational Stress

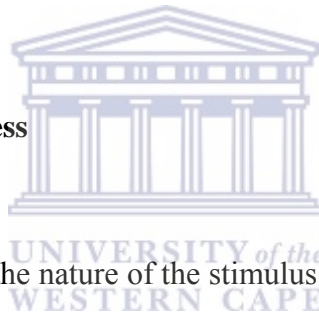


Control theory is based on the idea that the degree to which individuals perceive that they have control over the variables that have potential to cause stress in their environment, affects the likelihood that they will experience stress (Sadri, 1997).

Le Feure et al. (2003) proposed a model for occupational stress, referred to as the Control Theory of Occupational Stress, which places individuals in the key role as interpreters of stress. It provides adequate scope for characterising stressors and to identify stress as a construct divided into 'eustress' ('the optimal level of stress') and 'distress' (demands placed on the body exceeds its capacity of maintaining homeostasis).

2.4.4 The Cannon-Selye Tradition

Cannon (in Hobfoll, 1989) was concerned with the effects of cold, lack of oxygen and other environmental stressors on organisms. His emphasis of stress as response was continued by Hans Selye (in Hobfoll, 1989), who described stress as an orchestrated defense operated by physiological systems designed to protect the body from environmental challenge to bodily processes. Selye was criticized for his ideas that individual's reactions to stress are uniform and for employing illogical deductive reasoning (Hobfoll, 1989). Selye (in Hobfoll, 1989) views stress in terms of its outcome – an individual is perceived as under stress only when the general adaptation sequence is occurring. This means that predicting the causes of stress is not possible as the outcome needs to be assessed in order to know whether stress will occur (Hobfoll, 1989).



2.4.5 Stimulus Definitions of Stress

This approach identifies stress from the nature of the stimulus as opposed to the response. Eliot and Eisdorfer (in Hobfoll, 1989) outline four types of stressors:

- a) Acute, time-limited stressors – a visit to the dentist, a wasp flying and entering the car while driving or a woman waiting for a breast biopsy;
- b) Stressor sequences – divorce, bereavement or job loss;
- c) Chronic, intermittent stressors – examinations for students, business meetings with disliked associates or visits to a physician for painful treatments;
- d) Chronic stressors – debilitating illness, prolonged marital dysfunction or occupational hazards.

Events are considered stressful based on whether they normally lead to stress, such as emotional and psychological distress or physical deterioration. Caplan and Eric (in Hobfoll, 1989) were one of the first to introduce a psychological view of stress, as opposed to Selye's physiological view. They did not view psychological distress as necessarily occurrences due to deep-rooted personality disturbances, but as a possible product of confrontation with specific stressful events in work, personal and social worlds. In this approach, perceptions are important determinants of stress, but these perceptions are not unique as there is a broad agreement as to what is stressful (Hobfoll, 1989).

2.4.6 Event-Perception Viewpoints

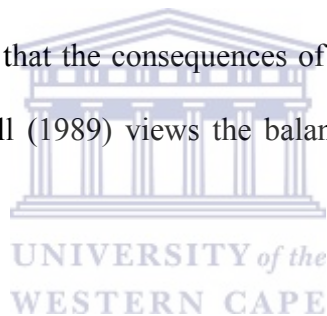
This perspective focused on the category of stressor events and the individual differences in the appraisal of those events. It further emphasised the event and the individual's reaction to the event (Hobfoll, 1989). Spielberger (in Hobfoll, 1989) who supported this approach suggested that events are stressful if they are viewed as threats to the physical self or the phenomenological self. These physical threats were named ego-threats. In this approach the stimulus and the appraisal are not important in their separate entities, but rather the interaction between the stimulus and the appraisal are important (Hobfoll, 1989).

Sarason (in Hobfoll, 1989) has suggested that relative sensitivity to stress is a product of personality. This perspective is important as it demonstrates that individuals are different regarding their degree of reactivity to normatively stressful events (Hobfoll, 1989). This personality trait is fairly stable and is independent of other sensitivities. Spielberger and Sarason's approach is more complex than merely the role of perception and includes an intricate three-part emphasis on

appraisal, known environmental threats and personality traits, which “represented a conceptual leap for stress researchers” (Hobfoll, 1989, p. 515).

2.4.7 Homeostatic and Transactional Models

The homeostatic approach is a commonly adopted model of stress. McGrath (in Hobfoll, 1989, p. 515) defined stress as a “substantial imbalance between environmental demand and the response capability of the focal organism.” More recently it was defined by Lazarus and Folkman (in Hobfoll, 1989, p. 515) as “a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his/ her well-being”. Implicit in these definitions is that stress is a product of the perception of objective demands and response capacity and that the consequences of failing to cope must be perceived as important to the individual. Hobfoll (1989) views the balance model as tautological and overly complex.



2.4.8 The Conservation of Resources (COR): A New Stress Model

Hobfoll (1989) presents a new stress model that could bridge the gap between environmental and cognitive viewpoints. It functions as a general stress model and encompasses several stress theories (Grandey & Cropanzano, 1999). Hobfoll’s (1989) Model of Conservation of Resources is a useful guide for understanding and integrating the stress literature in relation to the present study, as it provides a framework for reflection.

The conservation of resources model proposes that individuals seek to acquire and maintain resources. The basic tenet on which the model is based states that individuals’ strive to retain,

protect and build resources. What threatens them is the potential or actual loss of these valued resources (Hobfoll, 1989). According to this model psychological stress is “a reaction to the environment in which there is (a) the threat of a net loss of resources, (b) the net loss of resources, or (c) a lack of an expected resource gain, following the investment of resources” (Hobfoll, 1989, p. 516). Both the actual loss and the perceived loss or lack of gain is viewed as sufficient for producing stress and leads to a negative ‘state of being’ which may include physiological tension, depression or anxiety (Grandey & Cropanzano, 1999; Hobfoll, 1989).

Grandey and Cropanzano (1999) assessed the relationships of work and family stressors with outcomes of work, family and life distress, physical health and turnover intentions. Predictions for a sample of American university professors were made founded on past research and Hobfoll’s (1989) Conservation of Resources Theory. According to this model individual differences can be treated as resources. These differences in levels of resources could effect how individuals react to stress (or loss of resources) (Grandey & Cropanzano, 1999).

Resources are central to understanding stress in this framework and are defined as objects, personal characteristics, conditions or energies valued by the individual or serve as means of attainment of these elements (Hobfoll, 1989). Various types of behaviour are needed to replace or protect the threatened resources as they may become so depleted that a severe stress reaction occurs (Grandey & Cropanzano, 1999). Examples of resources amongst others, are learned resourcefulness, hardiness and sense of coherence. The environment is often the cause of the exhaustion of individual’s resources, as they threaten the individual’s status, economic stability, self-esteem, basic beliefs or loved ones (Hobfoll, 1989).

The Model of Conservation of Resources improves upon previous models as it inherently differentiates the behaviour of individuals when confronted with stress and their behaviour when not confronted with stressors (Hobfoll, 1989). The other theories do not address the predicting of psychological or behavioural action when people are not confronted with stressors. This model states that people strive to develop resource excesses in order to experience positive well-being (eustress) and to compensate for the possibility of future loss (Hobfoll, 1989). The individuals who are not well equipped to gain resources are more vulnerable and lean toward self-protective styles (prevention of resource loss). This model implies that people take a long-term perspective toward conserving resources. The COR model explains stress for intra-role and inter-role stress and proposes that inter-role conflict leads to stress because resources are lost in the process of juggling work and family roles (Grandey & Cropanzano, 1999).

The model acknowledges four types of resources and the loss or gain of these resources result in stress or eustress (well-being) (Hobfoll, 1989):

- *object resources* – valued due to their physical nature or acquire secondary value because of their rarity or expense;
- *conditions* – they are resources due to the fact that they are valued and sought after, for example, marriage and seniority;
- *personal characteristics* – they generally aid stress resistance, e.g. general resistance resources (Antonovsky, 1979), personal traits and skills;
- *energies* – these resources are valued because they aid in the acquisition of other types of resources for example, time, money and knowledge.

Social support does not fit in any of these categories, but is also a resource as it provides preservation of the valued resources (Antonovsky, 1987). However, social support can detract from resources when it does not provide for situational needs (Hobfoll, 1989).

The Model of Conservation of Resources maintains that the loss of resources is stressful, but individuals can compensate for this with other resources, through direct, indirect or symbolic replacement of the resources (Hobfoll, 1989). Often individuals lack the necessary resources for coping with stress and they attempt to utilise the only resources they have, which often leads to self-defeating consequences (Hobfoll, 1989).

Appraisal / perception plays an important role in this model, however, it should be noted that normative tendencies regarding how resources are evaluated and what constitutes loss of resources, functions as a guide for the individual's assessment of his/ her environment and the self (Hobfoll, 1989). Individuals are able to conserve resources by reinterpreting the threat/ stressor as a challenge, by focusing on what they might gain and not on what they might lose. However, many stressors are more tragic, such as death of a spouse and are clearly not positive (Hobfoll, 1989). Another way of conserving resources is by re-assessing the value of resources that are threatened or that have been lost, by altering their interpretation of events and consequences. This could however, challenge the individual's basic sense of self, because the way individuals perceive their world is inherent in their sense of self (Hobfoll, 1989). Minor reappraisals could benefit the individual, however, reappraisals of the basic aspects of the self and the environment are likely to "backfire against the individual", causing insecurity and despair (Hobfoll, 1989, p. 520).

The Model of Conservation of Resources also identifies what individuals do when not faced by stressors – specifically they are motivated to gain resources in order to enrich their resource pool. This enhances their self-esteem, love, possession or status and functions as protection from future losses (Hobfoll, 1989). It also states that if the investment in the resources does not provide a good return, the individual experiences this as a loss of expected gain. According to Hobfoll (1989),

research has shown that depression is likely to occur if investment of resources fails to resolve a conflict.

2.5 THE CAUSES OF STRESS

Stress is a fact of life, this has always been the case and if stress is left unchecked it will increase costs for the organisation as well as for the employee (Morris, 2003). Stress and its impact on the organisation's bottom line is increasing and employers are urgently seeking the causes (Morris, 2003). According to Morris (2003), the four most common sources of stress are: economy, family, war/ terrorism and the job. Researchers have presented evidence that general stress and work-related stress lead to poor physical health, poor emotional and mental health and low morale (Dua, 1994). The reason for increased workplace stress seems to be due to the work environment that has become more physically and psychologically demanding through the years. While stress is an inevitable consequence of the human condition, employers need to distinguish between the sources of stress they can control and implement interventions to reduce such causes (Morris, 2003).

2.5.1 Organisational Causes

There is a fair degree of agreement on the variables that act as organisational stressors. According to Dua (1994), intrinsic job factors (for example, poor working conditions and work overload), nature of the organizations (for example, extent of role conflict and role ambiguity), career development (for example, lack of promotion policies and job security), poor relationships at work and organizational culture (for example, politics in organizations and lack of participation in

decision-making) can be identified as organisational stressors. Aspects that happen outside the work environment also have an impact on the individual employee.

Jinks and Daniels (1999) investigated workplace health concerns of groups of healthcare workers in the UK and identified several causes of workplace stress, as well as potentially potent stressors for NHS-workers (National Health Care Services), namely, dealing with death and dying on a regular basis, workload, nature of work, staffing levels, volume of work, management styles and general work environments. Other health related topics were also identified such as motivation, health, status, nutrition, weight control, alcohol consumption and drug misuse, smoking physical exercise and particular health and safety issues.

The same workplace factors are not consistently related to stress in all workplaces and salient workplace dimensions should rather be identified than a broad approach, when seeking workplace associations with stress (Fairbrother & Warn, 2003). A further organisational cause was identified by Firth-Cozens (1992). Her research involved a detailed examination of the personal meanings of job stress for one individual manager in psychodynamic psychotherapy. The results illustrated ways in which personal meanings of a particular job can create occupational stress and how individual therapy can benefit the person as well as the organisation.

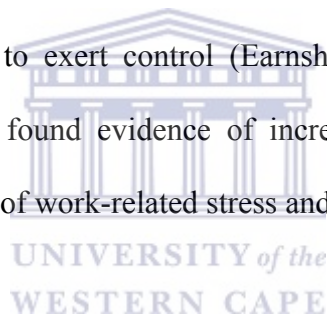
2.5.2 Socio-Political and Economic Causes

Extra-organisational stressors include factors such as family problems, personal problems, socio-economic/ financial problems and social problems (Dua, 1994).

2.5.3 Individual Causes

According to the Transactional Model, coping with stress requires that the individual constantly changes cognitive and behavioural efforts to cope with internal and external stressors that are judged as overwhelming to their personal resources (Spangenberg & Orpen-Lyall, 2000).

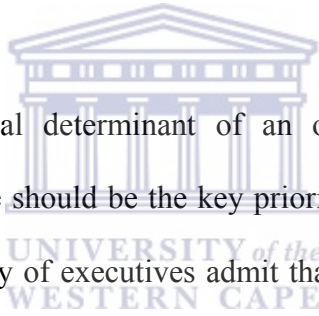
The Health and Safety Executives (HSEs), in the UK have published a booklet called: 'Stress at Work - A guide for Employers', which seeks to promote a practical commonsense approach to stress, due to the complex nature of the causes of stress and the variation in individual reactions (Bridson, 1995). Several studies have shown the links between stress/ over work and mental breakdown; high responsibility and ill- health, as well as stress and prolonged conflicting demands over which individuals are unable to exert control (Earnshaw & Morrison, 2001). Regarding emotional health, researchers have found evidence of increased depression, anxiety and lower psychological well-being, as a result of work-related stress and general stress (Dua, 1994).



2.6 SYMPTOMS OF STRESS

Stress is an omnipresent element with various definitions and implications. It is derived from the Stressor-Strain Approach, that the outcome of stress is rooted in the perception of the individual experiencing the stressor, as cognitive appraisal of the stressors is essential in understanding the causes of stress (Jordan, 2002). Stress is about what the individual believes to be a threat and whether the individual believes that he/she can cope with that situation. Therefore it is also necessary that the assessment of stress must be a measure of the perception of a threat by an individual (Jordan, 2002).

Unchecked stress leads to stress-related problems. Problems of this nature are categorised into five types: *behavioural effects* (for example, gaining/ losing weight, drinking or smoking habits); *subjective/ psychological effects* (for example, feelings of anxiety, fear, depression, fatigue, guilt, moodiness and loneliness); *cognitive effects* (for example, difficulties with making decisions, with concentration, forgetfulness and distortions or misinterpretations of situations); *physiological effects* (for example, increased heart rate, blood pressure, sweating, dry mouth and sleep disturbances.) and *organizational effects* (for example, absenteeism, poor productivity, high accident rates and high turnover rates) (Sanderlin, 2004). Job stress is related to a feeling of high responsibility and loss of control and the best workers are usually the individuals that have a tendency to develop job stress (Sanderlin, 2004).



Human assets may be the essential determinant of an organisation's success and therefore alleviation of stress in the workplace should be the key priority for organisations, presently and in future (Johnson, 2004). The majority of executives admit that stress is a significant complication, but very few admit its potentially devastating long-term effects (Atkinson, 2004). A healthy organisation is one that includes an organisational climate in which employees feel valued and are able to resolve conflicts among themselves, in other words, they are placed in control of the stressor (Lowe, 2004). Prevention methods/ stress management is of extreme importance when considering the high cost of stress. Employees need to be educated regarding the nature and sources of stress, the effects of stress on health and personal coping skills to deal with the specific stressors (Recupero, 2003).

2.7 SUMMARY OF THE SECTION

It is clear from the literature review, that stress is an extremely relevant issue in the every day functioning of individuals. The complete absence of stress seems to be just as harmful as the presence of excessive stress. Optimal levels of stress are therefore the answer. Various definitions of the concept were provided and were followed by a discussion about stress models. The section concluded with an overview of the causes and symptoms of stress.

In the next section, salutogenic functioning is discussed, specifically focusing on the history, definition and explanation of salutogenic constructs unrelated and related to the present study.

2.8 THE DEFINITION OF SALUTOGENESIS/ SALUTOGENIC FUNCTIONING



Antonovsky (1979) proposed that a third of the world's population of any industrial society is characterised by a particular pathological condition and that this is a normal state of the human condition. He suggests that the omnipresence of pathogens, whether microbiological, chemical, physical, psychological, social or cultural should cause all individuals to surrender to a depressed state and even constantly be in a state of demise. However, he discovered that many individuals survive and even thrive under extremely difficult circumstances (Antonovsky, 1979).

Salutogenesis is comprised of the Latin word, 'salus' = *health* and the Greek word 'genesis' = *origins*. Salutogenesis seeks to focus on the origins of health as opposed to the pathogenic model, which seeks to explain illness/ disease (Antonovsky, 1979). This paradigm explores why some individuals are located towards the positive end of the health ease/ disease continuum, irrespective

of their location at a given time. Salutogenesis compels the formulation and advancement of the theory of coping (Dhaniram, 2003).

Salutogenesis is about how individuals learn to live well with stressors and turn their struggle into an advantage for themselves (Antonovsky, 1979). Salutogenesis recognises the inevitability of stressors and that the human being has a need to control this stress. It also recognises that it is possible for individuals to take responsibility for their health, if their environment allows them to act autonomously and to cope with the stress inducing factors that have a negative impact on their lives (Dhaniram, 2003). Viviers (1998a) proposes that many physiological and psychological illnesses can be controlled/ prevented by making the individual aware of optimal functioning, while they are faced with coping with stress at work and at home. He also believes that by developing a salutogenic orientation, the employees and the organisation will benefit. The salutogenic orientation will be to the advantage of the organisation in its selection processes, organisational and management development, career planning, performance appraisal, evaluation and morale (Viviers, 1998a). Employees with a salutogenic personality profile will strive towards optimisation, which will result in a pro-active approach to life and to their work. The salutogenic individual will be mentally equipped with the mechanisms and will successfully process and utilise the omnipresent stressors in life (Viviers, 1998a).

In South Africa (Dhaniram, 2003; Strümpfer, 1990, 1995; Viviers, 1998a; 1998b; Viviers & Cilliers, 1999) limited research has been done on salutogenesis. According to Viviers and Cilliers (1999, p. 27), optimal functioning in terms of salutogenesis refers to the optimal handling and processing of stress, as experienced by individuals in their daily existence – to be exact the maximum coping-behaviour that can be generated by individuals in their handling and processing of stressors. In Viviers and Cilliers's (1999) investigation of the relationship between salutogenesis

and work orientation as two constructs of work optimisation, they found that sense of coherence, hardiness and learned resourcefulness are significantly inter-correlated and are manifested meaningfully from salutogenesis as a construct. They also found that salutogenesis and work orientation can be regarded as independent, but related latent constructs. These outcomes applied to all groups in the South African context.

Antonovsky's view of salutogenesis is a systems view according to Dossy (1994, p. 14), "in which 'information' can originate anywhere in the natural hierarchy of a human being - from atoms, molecules, organs, whole bodies, families, and entire societies and can be transmitted anywhere, making a difference in the overall functioning of the organism." Dossy (1994, p. 14) stated: "There is no question, in my view, of the general correctness of Antonovsky's perspective." "...Antonovsky should be acknowledged and honored as one of the earliest architects of the biopsychosocial framework and for his concept of salutogenesis, which helped break the stranglehold of purely physical models of health." (Dossy, 1994, p. 15). Dossy (1994) believes that we cannot begin to comprehend the origins of health and illness if we do not consider factors such as education status, literacy, level of job dissatisfaction, religious practices, nutritional preferences, economic and social status, and the effects of racial and gender bias.

Gruman (1994) criticises Antonovsky's salutogenic perspective for not giving individuals an incentive to act – no suggestion of constructive action or specified steps to achieve the goal. He says Antonovsky (1979; 1987) does not provide the tools with which individuals can improve possibilities surrounding the internal and external factors that affect health (Gruman, 1994).

2.9 THEORETICAL FRAMEWORK OF SALUTOGENESIS

The proposed research is informed by Antonovsky's proposed theory on salutogenesis. Salutogenesis concerns how individuals learn to live well with stressors and turn their struggle into an advantage for themselves (Antonovsky, 1979). Two paradigms can be identified in the realm of stress: the pathogenic orientation where the individual is either ill or healthy and salutogenesis where the individual is neither classified as healthy or unhealthy. In simple terms, salutogenesis is concerned with health and the paradigm of pathogenesis is focused on how disease develops.

According to Smith (2002), the brain has processes, such as functional salutogenic mechanisms which enable individuals' outlook on life to benefit their health. An example of this would be a belief that things will work out as well as can reasonably be expected. This is an essential perception of individuals who tend to stay healthy/ positive despite potentially stressful situations. Beliefs do not have to be realistic or rational to be salutogenic and evidence attesting to this would be faith healing and the placebo effect (Smith, 2002). Other examples of salutogenic perceptions/ outlooks are: believing in God, feeling happy, being mutually in love, and expecting things to change for the better (Smith, 2002). The brain responds to stimuli and interprets them, mainly without one's awareness, in ways that can enhance one's well-being. Beliefs do not have to be realistic or rational to be salutogenic. According to Viviers (1998b), a person who has developed a salutogenic approach to stressors is less likely to develop physical and mental illnesses, due to a homeostatic balance that is restored through the use of coping mechanisms. In turn, this will result in optimisation under stress.

2.10 THE SALUTOGENIC MODEL

According to Antonovsky (1979), the salutogenic model is a cyclical process that focuses on the origins of health and wellness and answers the question of how individuals survive (successfully) when all odds are against them. Individuals are placed along a continuum from one pole (ease) to the other pole (disease). Health-ease is at the optimal end of the continuum and dis-ease is at the negative end. The individual's position along this continuum is determined by the interplay of opposing forces of environmental threat (stressors), the individual's resistance (generalised resistance resources) and the strength of their sense of coherence (SOC).

The salutogenic model is also about the location and development of personal and social resources and adaptive tendencies, which relate to an individual's disposition, which allows them to select appropriate strategies to deal with confronting stressors (Antonovsky, 1987). The main premise of this model is that stressors are universal and pervasive in human functioning and despite this fact many people endure and even thrive under these circumstances (Antonovsky, 1979). Strümpfer (1990) speculated about a possible correlation between salutogenesis and certain aspects of work and that stressors are omnipresent, rather than the exception. As such it is an occurrence that is familiar to most individuals in the workplace.

2.10.1 Generalised Resistance Resources

The answer to how individuals maintain psychological health is expressed in the concept of generalised resistance resources (GRRs), a term invented by Antonovsky (1979). Antonovsky (1979) claims that generalised resistance resources (GRRs) are developed through life experience and can be a characteristic of an individual, group, subgroup or society that enables effective stress

management. GRRs enable the avoidance or resolution of stressors. The availability of GRRs also play a role in the individual's positioning on the health ease/ disease continuum, which can either enhance the salutogenic construct or not, depending on the individual's past experiences with stressors (Antonovsky, 1979).

2.10.2 Salutogenic Functioning

A salutogenic orientation has implications for the employee as a person in that it enables the individual to function holistically, which will in turn promote balance and a well-adjusted employee (Viviers, 1998a). Salutogenic functioning is viewed as consisting of the following behaviour: On the *cognitive level* individuals can 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 (Kossuth & Cilliers, 2002). It is seemingly clear that the individuals' salutogenic coping skills form a solid basis for effective leadership and creating a supportive culture, which will indirectly lead to a more constructive experience of stressors (Kossuth & Cilliers, 2002).

According to Harman (1994, p. 1), Antonovsky presents a systematic framework that clarifies the 'structural sources of salutogenic strengths'. It consists of five elements: The individual is linked to or isolated from suprasystems (for example, family or workplace), from which information and noise are received (for example, messages of love and support or messages that cause low worth). These messages are internally deciphered and integrated by the individual, who sends messages

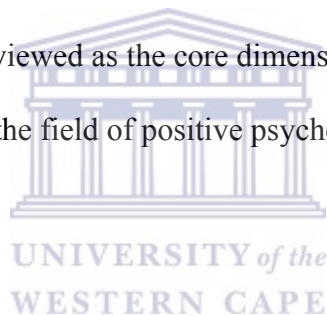
(information or noise) to the suprasystems. The suprasystems then ignore the message or provide feedback.

Harman (1994) believes that the social structural sources, which are non-salutogenic (that cause illness), should be confronted. He suggests that these sources are imbedded in individuals' suprasystems (e.g. work, family and school) and have an extensive impact on their functioning. These institutions/ suprasystems are based on assumptions, which need to be confronted by individuals and challenged for not supporting the salutogenic perspective (Harman, 1994).

2.10.3 The Salutogenic Individual

The following six constructs can be viewed as the core dimensions of the salutogenic individual and are continuously used in research in the field of positive psychology (Antonovsky, 1979):

1. Sense of coherence
2. Locus of control
3. Self-efficacy
4. Hardiness
5. Potency
6. Learned resourcefulness

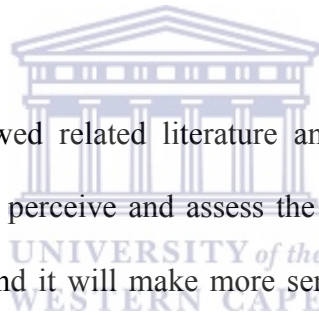


The salutogenic individual (De Beer & Korf, 2004) can be described as:

- having an optimistic life view
- experiencing the environment as understandable and meaningful
- actively engaging with the environment as understandable and meaningful
- willing to tackle challenges

- viewing demands as an aspect to be handled against available resources
- viewing resources as an aspect under own control or under the control of meaningful others
- convinced of his/ her own ability to control/ influence events

Research (Parkes, 1994) has shown that the relationship between salutogenic functioning and various individual and work related behavioural constructs is significant. It could be hypothesised that salutogenic persons with a positive way of cognitively and effectively appraising work will be more likely to use the resources potentially at their disposal (Antonovsky, 1987). This was especially important in Cilliers and Kossuth's (2002) study on the SA mining industry where focus was on how the existing climate is perceived by the individual employee with regard to salutogenic functioning.



Cilliers and Kossuth (2002), reviewed related literature and concluded that an employee who functions in a salutogenic way, will perceive and assess the organisational climate positively and will understand the nature thereof and it will make more sense to the individual. These types of employees will act from an internal motivation and will believe in their own abilities to have a positive influence on the environment. They also found that the individual's experience of a positive organisational climate relates to a high level of salutogenic functioning.

Regarding employee relations management, it is proposed by Kossuth and Cilliers (2002) that the salutogenic functioning individual will demonstrate the appropriate psychological strength to cope with conflict between people, will act constructively as a leader in negotiations and will at the same time be aware of the differences in cultural beliefs that influence individuals' perceptions of work performance, satisfaction and productivity.

Adler and Matthews (1994) are highly concerned with the type of individuals that become ill and the reasons for their illness. They maintain that the variables that affect the health of individuals are situated in the social environment and within the individual. Therefore, the person-environment fit is important as the dispositions of individuals can predispose them to environmental stressors, which can impact on them contracting various diseases (Adler & Matthews, 1994). Men in low reward and high effort jobs show a significant risk for disease and according to Adler and Matthews (1994), several studies have indicated the link between strain and coronary heart disease.

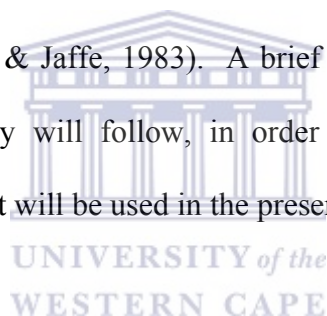
The degree of connectedness to others can also influence an individual's health. Adler and Matthews (1994) are of the opinion that individuals who receive more support during their stressful experiences, can be expected not to engage in health-damaging behaviours as often as individuals who lack a support network. Furthermore, they propose that various social networks can facilitate healthy behaviours through the constructive support offered. They state that psychological factors have been found to have an impact on cardiovascular and immune function, however, it is not yet clear that psychologically induced alterations in cardiac and immune function are predictive of disease or health status.

2.11 SALUTOGENIC CONSTRUCTS

Salutogenic constructs act as coping mechanisms in stress and focus on health as opposed to disease. They equip individuals to deal more effectively with stress and include factors such as hardiness, coping, social support, religion, happiness, humour, love and selective perception (Smith, 2002). According to Dhaniram (2003), there are four specific constructs suggested to be the most prevalent in current research, they include sense of coherence (Antonovsky, 1979), hardiness

(Kobasa, 1979), locus of control (Rotter, 1966) and learned resourcefulness (Rosenbaum, 1988), and collectively form part of a relatively new positive psychology paradigm (Kossuth & Cilliers, 2002).

However, for the purpose of this study, two of the four constructs will be utilised, they are: *sense of coherence (SOC)* and *locus of control*. The reason for this is that the two constructs relate more specifically to this study. A high sense of coherence results in a feeling of confidence in coping with life stress. It functions as a mitigator of life stress by addressing general quality of an individual's behaviour and not the specific responses to specific behaviour (Flannery & Flannery, 1990). Locus of control is also significant to this study as control enhances stress resistance and in terms of coping, a sense of control will lead to actions that aim at transforming events into something more stable (Rosenbaum & Jaffe, 1983). A brief overview of the four most important constructs according to Antonovsky will follow, in order to provide a lucid illustration and background to the two constructs that will be used in the present study.



2.11.1 Sense of Coherence

Antonovsky and his colleagues proposed that a key factor for salutogenesis is a person's sense of coherence (SOC). SOC can be defined as “a global orientation that expresses the extent to which one has a pervasive, enduring though dynamic feeling of confidence that one's internal and external environments are predictable and that there is a high probability that things will work out as well as can reasonably be expected” (Antonovsky, 1979, p. 123).

It also includes that the stimuli deriving from the individual's internal/ external environments in the course of living, are structured, predictable, explicable and that the resources available to meet these

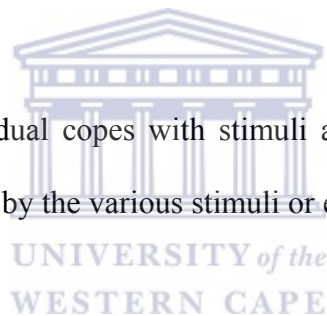
demands are challenges worthy of investment and engagement (Bengel, Strittmatter & Willman, 1999). In general, sense of coherence is important to one's health and consists of 3 related components (Antonovsky, 1979):

2.11.1.1 Comprehensibility

This is the sense that an individual's internal and external environments are viewed as structured, predictable, explicable and consistent and occurring events are also viewed as making sense (Antonovsky, 1979).

2.11.1.2 Manageability

It 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 environment (Antonovsky, 1979).



2.11.1.3 Meaningfulness

It is 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/ her own daily experiences (Antonovsky, 1979). It includes the belief that these demands are challenging and worthy of personal investment (Flannery & Flannery, 1990).

2.11.2. Generalised Resistance Resources

The sense of coherence is connected to a variety of coping mechanisms called generalised resistance resources (GRRs), which are defined as any characteristic of the individual, the group or the environment that facilitates effective stress management (Antonovsky, 1979). Antonovsky (1987) supported the notion that work plays a significant role in moulding the individual's sense of self-coherence. A predictable and manageable work environment that allows the individual to participate in decision-making and provides the employee with a voice, will lead to productive performance, recognition, reward and promotion. In turn, these experiences will become work-related generalised resistance resources (GRRs) that will strengthen the individual's sense of coherence to a further degree (Kossuth & Cilliers, 2002).



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2.11.3 Hardiness

This construct is based on the degree to which an individual has a sense of control and has the ability to control the pace of events. According to this construct, individuals behave in ways that are characteristic to themselves, by making conscious decisions to recognise and act on their environments (Kobasa, Maddi & Kahn, 1982). Florian, Mikulincer and Taubman (1995) defined this construct as follows “It is a constellation of personality characteristics that function as a resistance resource during the encounter with stressful life events.” They have found extensive evidence that suggests the positive relation of hardiness to physical and mental health and that it reduces the negative outcomes of stress (Florian et al., 1995).

Smith (2002) proposes that the outlook of people who tend to stay healthy in stressful situations consists of three factors: *control*, *commitment*, and *challenge*. *Control* includes that individuals believe that they are able to influence the course of events. *Commitment* includes the person's curiosity of life and their sense of meaningfulness of life. Lastly, *challenge* implies the person's expectation that it is normal for life to change and that this is to their advantage. Hardiness is manifest in 3 behaviours:

2.11.3.1 Control

Control is the person's belief that they are able to influence the course of events. It is not a naive expectation of complete power over their destiny, but an acknowledgement of their own role and influence through imagination, knowledge and choice (Kobasa, et al., 1982).



2.11.3.2 Commitment

Commitment is the person's curiosity about life and its sense of meaningfulness and includes a generalised sense of purpose and ability to find importance in their own circumstances (Kobasa, 1979; Kobasa, et al., 1982).

2.11.3.3 Challenge

Challenge captures the person's expectation that change is normal and beneficial. Change is perceived as stimulating, instead of a threat (Kobasa, et al., 1982).

According to Smith (2002), perception of a situation plays an essential role in psychological and physical well-being. A salutogenic appraisal would relieve negative emotions and provides an opportunity for coping effectively with the specific situation, whereas a pathogenic appraisal can encourage a vicious malignant circle of stress.

Kobasa et al. (1982) tested the hypothesis that hardiness, together with its underlying personality constructs, functions to decrease the effect of stressful life events in producing illness symptoms. Hardy individuals make optimistic cognitive appraisals and stressful events are kept in perspective, through decisive coping actions. They will also have the ability to transform stressful events into less stressful forms, by appraising the events as less stressful and remaining positive about the stimulus (Florian et al., 1995). “Hardiness alters two appraisal components: it reduces the appraisal of threat and increases the expectations of successful coping” (Florian et al., 1995, p. 694). However, individuals that are low in hardiness feel threatened or unstimulated by the environment and feel powerless when confronted with overwhelming forces. They dislike disruptive changes and are passive in their interaction with the environment. They do not rely on positive appraisals or decisive actions, therefore their personalities provide no buffer to the stressful events and they are vulnerable to debilitating effects on their health (Kobasa, Maddi, Puccetti & Zola, 1985).

Eighty-five (85) male executives from the UK, who are continuously exposed to highly stressful events, were assessed for the three resistance resources: personality hardiness, exercise and social support (Kobasa et al., 1985). The findings indicated that a combination of resistance resources are more effective in buffering illness, than any combination of fewer resources and the more resources individuals possesses, the less vulnerable they are to illness – “If you could have only one resistance resource, hardiness would be the best” (Kobasa et al., 1985 p. 532). Hardiness proved to be the most effective buffer between social support and exercise and “provides substantial protection

against most concurrent and future illness” (Kobasa et al., 1985, p. 531). The effects of stress are buffered by hardiness through the increase of health-protective behaviours (Hannah, 1988). Hardiness leads to the transformation of events into less stressful forms, therefore it has a strong buffering effect in the long run (Kobasa et al., 1985).

Research examining the relationship between the Type A behaviour pattern and personality hardiness predicted an interaction between the two and suggests that hardiness protects health and that Type A individuals who are low in hardiness are the sickest under highly stressful circumstances (Kobasa, Maddi & Zola, 1983). This study, at the same time, confirms other reports regarding hardiness as a protector of health and as buffering construct of stress and claims that health and illness are multi-determined phenomena (Hannah, 1988; Kobasa et al., 1982).

“Individuals with a high health concern are more likely to engage in appropriate health behavior if they are at the same time high in hardiness”, to be exact, hardiness constitutes health protective behaviour (Hannah, 1988, p. 61). Hannah’s (1988) investigation of the relationship between hardiness and health behaviour found that individuals’ health behaviour was “a function of the multiplicative interaction between hardiness and health concern” (Hannah, 1988, p. 62).

2.11.4. Similarities between SOC and Hardiness

Kravetz, Drory and Florian (1993) examined the relation between Antonovsky’s Sense of coherence and Kobasa’s health proneness construct of hardiness in Israel, with 164 male patients with coronary heart disease. They found that salutogenesis and hardiness are parallel but independent models and overlap regarding their positive orientation, their focus on an individual’s internal sources of health and how an individual sees the world as a crucial factor in coping and health outcome (Antonovsky, 1987). Kravetz et al. (1993) accept that hardiness and SOC reduce the

negative emotional consequences produced by strain and therefore these constructs reduce illness. The results of this study confirm the central premise of the hardiness and SOC approach. It states that the psychological phenomena included in these constructs are different from the negative and positive aspects of well-being to which they are related and therefore the constructs of hardiness and SOC are not viewed as redundant. Due to this research the importance of sense of coherence was recognised and because of various similarities, it was decided to focus only on SOC for the purpose of the present research.

2.11.5 Locus of Control (LOC)

Locus of control is a global characteristic, is relatively stable across time and place and can be defined as the extent to which individuals perceive that they have control over a given situation and the difference between internal and external LOC lies in the experience of freedom (Rotter, 1966). It derives from the social learning theory with its focus on reinforcement in the acquisition of knowledge and skills and maintains that behaviour in a specific situation is a function of expectation and reinforcement value (Rotter, 1966; 1990).

Internal control refers to the degree to which persons expect that a reinforcement or an outcome of their behaviour is contingent on their own behaviour or personal characteristics (Rotter, 1990). In contrast, external control refers to the degree to which persons expect that reinforcement or outcome is a function of chance, luck or fate and is under the control of powerful others, or that reinforcement is simply unpredictable (Rotter, 1990).

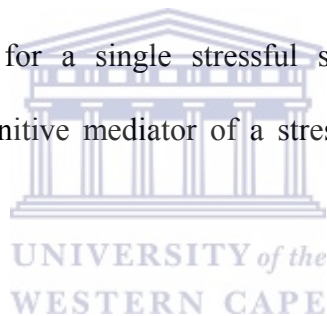
The individual that functions externally feels out of control, sees no relationship between own behaviour and events and attributes the cause of events to the environment, others and fate (Cilliers & Kossuth, 2002). Such individuals feel anxious, frustrated and helpless. Internal functioning individuals feel in control, see a relationship between their own behaviour and outcomes and attribute it to themselves. Internal functioning individuals feel empowered and masterful and therefore experience less stress (Cilliers & Kossuth, 2002).

Rotter's (1966) report summarised several experiments which define group differences in behaviour regarding whether reinforcement is dependent on own behaviour, chance or experimenter control and the broad findings were as follows: *research in human learning should be understood with the consideration that individuals will perceive tasks and procedures on a continuum of internal to external*. Individuals were also found to differ regarding the way they interpret the same situation, which in turn, influences their generalised expectancy (Rotter, 1966). He also found a series of studies that provided significant support for the hypotheses that: "the individual who has a strong belief that he/ she can control his/ her own destiny is likely to: (a) be more alert to those aspects of the environment which provide useful information for his/ her future behaviour; (b) take steps to improve his/ her environmental conditions; (c) place greater value on skill or achievement reinforcements and generally be more concerned with his/ her ability, particularly his/ her failures and (d) be resistive to subtle attempts to influence him/ her" (Rotter, 1966, p. 25).

The complex relationships between controllability of an event (personal control) and its impact on stress and the fact that the uncontrollability of an event does not necessarily lead to a negative outcome, was investigated by Folkman (1984). This was done from a perspective of a cognitively oriented theory of stress and coping, developed by Lazarus and his colleagues (Folkman, 1984). This theory includes two processes, cognitive appraisal and coping, which function as mediators of

stressful encounters. In the cognitive oriented theory of coping and stress, 'control' can be identified as "a generalised belief of an individual concerning the extent to which he/she can control outcomes of importance and as a situational appraisal of the possibilities for control in a specific stressful encounter" (Folkman, 1984, p. 839).

The complex relationships between personal control, appraisal, coping and outcome have been considered by Folkman (1984) and she emphasises that perceptions of control need to be investigated in the context of specific occurrences, whether the perceptions are shaped by generalised beliefs or by situational contingencies. This will facilitate the discovery of the true meaning of control for the specific individual in the specific situation and what the costs/benefits of control will be. Folkman (1984) also states the importance of recognizing personal control as a construct with multiple functions for a single stressful situation. In summary, she states: "...control can be viewed as a cognitive mediator of a stressful transaction and its adaptational outcome" (Folkman, 1984, p. 850).



2.11.6 Learned Resourcefulness

This salutogenic construct is based on the importance of coping skills training, through self-regulation and it is an acquired repertoire of behaviours and skills through which an individual self-regulates internal responses (e.g. emotions, cognitions or pain) that interfere with the smooth performance of desired behaviour (Rosenbaum & Ben-Ari, 1985; Rosenbaum & Jaffe, 1983). It is possible for individuals to change their perceptions of the condition, once coping skills have been acquired. It can be changed from learned helplessness to learned resourcefulness. In essence, it is a set of complex behaviours, cognitions and effects in constant interaction with individuals' physical and social environment (Rosenbaum, 1988). It is learned from birth and serves as a coping skill in

stressful situations and also provides a framework for further learning (Rosenbaum, 1980). Learned resourcefulness can include several enabling skills such as self-monitoring of internal events, self-evaluative skills and ability to verbalise and label feelings (Rosenbaum & Jaffe, 1983).

The learned-helplessness model focuses on the individual's actual or perceived control over external events, whereas the self-control models focuses on the individual's actual or perceived control over their own behaviour (Rosenbaum & Ben-Ari, 1985). According to the learned-helplessness model, subjects learn that it is futile to respond in uncontrollable situations and they generalise this to controllable situations. This generalisation is a result of attributing their lack of control to internal, stable and global factors. Individuals also learn to respond in such a way that it interferes with effective behaviour in controllable situations (Rosenbaum & Ben-Ari, 1985).

Rosenbaum and Ben-Ari (1985) designed two experiments in order to investigate the role of self-control processes in learned-helplessness studies. This was done by assessing the differential reactions to uncontrollability of subjects from Israel, who either had a rich/high resourceful (HR) or poor/low resourceful (LR) repertoire of self-control skills. The purpose was to investigate the role of self-regulation in development and generalization of learned helplessness. Compared to LR subjects, HR subjects frequently checked their positive self-evaluation statements and task-oriented thoughts and less frequently checked negative self-evaluations during their exposure to uncontrollability (Rosenbaum & Ben-Ari, 1985). Their findings suggested that positive self-evaluations lead to more effective coping with failures than negative self-evaluations and that there are reliable differences between HR and LR subjects in how they cope with noncontingent events (Rosenbaum & Ben-Ari, 1983). LR subjects used more negative self-statements and HR subjects rewarded themselves for success (Rosenbaum & Ben-Ari, 1985).

There is significant evidence that HR subjects use more effective self-regulatory methods than LR subjects, as LR subjects search mainly for reasons for their failure (Rosenbaum & Ben-Ari, 1985; Rosenbaum & Jaffe, 1983). The self-control model was found to be best for subjects' self-reactions during failure or uncontrollability and the learned-helplessness model accounts for the generalisation of helplessness from uncontrollable situations to controllable ones (Rosenbaum & Ben-Ari, 1985).

According to Rosenbaum and Jaffe (1983) learned, helplessness as a construct that interferes with new learning, only appears in LR subjects not in HR subjects. The learned-helplessness hypothesis was reformulated by Abramson (in Rosenbaum & Jaffe, 1983, p. 215) and "according to this reformulation once the individuals perceive non-contingency, they make an attribution about the cause of their helplessness. The kind of attribution made determines whether expectations of future helplessness will be chronic or acute, general or specific and whether helplessness will lower self-esteem or not. The new model predicts that performance deficits, following an experience with an uncontrollable event, would be most pronounced if a person attributed his/her failure to stable, global and internal factors such as general ability. On the other hand, persons would be least affected by their failures if they attributed it to unstable, specific and external factors such as bad luck. Success would have a facilitating effect on subsequent performance if it were attributed to internal, stable and global causes.

According to Rosenbaum and Jaffe (1983), there is a large amount of literature that supports the notion that individuals can be trained to self-regulate their emotions and thoughts, when they find themselves in uncontrollable situations. They found that HR subjects have more trust in their ability to control their emotions and cognitions in complex situations, than LR subjects. HR

subjects also have higher expectation for coping effectively with distressing environmental stimuli (Rosenbaum & Jaffe, 1983).

2.12 ORGANISATIONAL CLIMATE AND SALUTOGENIC FUNCTIONING

Organisational climate can be described as a psychological atmosphere and correlates significantly with sense of coherence and locus of control. It can be defined in many different ways, but there is consensus that it includes three behavioural levels: individual, interpersonal and the organisational. An individual's sense of perception as well as their frame of reference influences their view and reaction to the climate (Cilliers & Kossuth, 2002). It is recommended that psychologists act as facilitators of improving the organisational climate by enhancing the level of salutogenic functioning amongst staff and managers, through interventions (Cilliers & Kossuth, 2002).

Cilliers and Kossuth (2002) concluded that organisational climate is significantly influenced by an employee's salutogenic functioning in the sense that a high sense of coherence and locus of control facilitates a more positive and realistic perception and effect on climate, which is supported by the individual's level of self-efficacy in a secondary way. It was also found that the nature of the organisational climate has an influence on the individual's salutogenic functioning, which could explain how a negative climate can immobilise employees and visa versa (Cilliers & Kossuth, 2002).

2.13 SALUTOGENIC CONSTRUCTS AS COPING MECHANISMS

The following literature demonstrates that the salutogenic constructs assist individuals in coping more effectively with stressful events.

2.13.1 Sense of Coherence

Flannery and Flannery (1990) investigated the association of sense of coherence (SOC) with life stress and associated symptoms. The purpose of the study was to address the need for a prospective assessment of SOC in its relationship with life stress and psychological distress. In this American study, SOC was correlated negatively with life stress and psychological symptomatology in a group of older, young adults and appeared to mitigate the impact of life stress for specific stressors. It was also established that coping resources for specific stressors would reduce the impact of life stress (Flannery & Flannery, 1990). Antonovsky's (1987) sense of coherence is a basic orientation that enables the individual to consider the best coping strategy for a specific problem. SOC is not a buffer variable for stress, but functions as a mitigator of life stress, by addressing the general quality of an individual's behaviour and not the specific responses to specific behaviours (Flannery & Flannery, 1990). A high SOC results in a feeling of confidence in coping with life stress.

2.13.2 Locus of Control

Control enhances stress resistance and in terms of coping, a sense of control will lead to actions that aim at transforming events into something more stable. Control facilitates the development of an extensive repertoire of responses to stress, which can be utilised in the most threatening situations (Rosenbaum & Jaffe, 1983).

Fontaine, Manstead and Wagner (1993) conducted a study to examine the ability of the expectancy-based personality dimensions, dispositional optimism and perceived control over stress, in order to predict the ways in which people characteristically attempt to cope with stress. Four hundred and twenty UK based undergraduate students completed the Life Orientation Test (LOT) and the COPE Inventory. Perceived control was suggested as a significant contributing component of the optimism construct, especially within stressful situations where the perception of personal control may take on added significance, due to the fact that effective coping is thought to involve an accurate match between demands and resources (Fontaine et al., 1993).

Optimism was positively associated with the utilisation of active coping, growth and positive reinterpretation and a moderate yet positive correlation was found between optimism and the perceived control over stress (Fontaine et al., 1993). Optimism correlated positively with problem-focused and cognitive coping and Fontaine et al. (1993) were able to distinguish optimists and pessimists in terms of coping tactics that they employ when under stress. Optimism was negatively correlated with coping efforts, which include distancing oneself from the situation and the preoccupation with distressing emotions.

Fontaine et al. (1993) found that optimism may have a reliable association with some of the coping strategies used in stressful situations. Due to the fact that optimists expect positive rather than negative outcomes they tend to engage in active coping efforts, which are sustained in threatening situations. Evidence was found that suggests a positive association between optimism and the use of strategies designed to intervene directly in an attempt to alleviate the source of stress. Optimism relates to the construct of locus of control as a factor that is reliably associated with the use of certain forms of coping (Fontaine et al., 1993).

2.13.3 Learned Resourcefulness

The following literature supports that highly resourceful subjects cope more effectively with stressful events than low resourceful subjects. Rosenbaum (1988) found that highly resourceful subjects tolerated the cold stressor longer than low resourceful subjects. This indicates that highly resourceful subjects overcome interfering effects of pain on performance of a targeted behaviour better than low resourceful subjects. As such high resourceful individuals should cope better with stressors than low resourceful subjects.

Meichenbaum (in Rosenbaum & Jaffe, 1983) applied learned resourcefulness in the arena of coping skills training and states that clients who acquire coping skills change their perceptions of their condition from learned helplessness to learned resourcefulness.

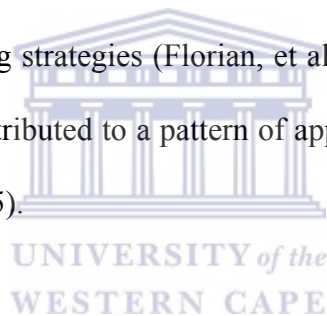
According to Rosenbaum and Ben-Ari (1985), success in cognitive behaviour therapy indicates that highly resourceful clients do not differ in their ability to learn self-control skills from low resourceful clients, but highly resourceful subjects indicate a better ability to implement these skills on a long-term basis.

2.13.4 Hardiness

In coping behaviours, challenge guides individuals through a personal transformation process with the goal of growth, instead of the conservation of their former existence (Rosenbaum & Jaffe, 1983). According to Rosenbaum and Jaffe's research, the tendency toward commitment, control and challenge functions as a resistance resource and hardiness has the best health-preserving effect during stressful life events. Hardy individuals rely on transformational coping. This method of

coping transforms the stressor into a harmless threat through problem-focused strategies (Florian et al., 1995). The individual with low hardiness generally uses regressive coping strategies, such as cognitive and behavioural withdrawal and denial. These methods are not a solution and could enhance maladjustment of the individual (Florian et al., 1995).

Israeli recruits were assessed for hardiness appraisal, coping strategies and mental health during a demanding four month combat training period. This real-life stressful situation delivered findings that some of the components of hardiness contribute positively to mental health through coping and appraisal mechanisms (Florian, et al., 1995). After analysis this study revealed that some hardiness components could possibly predispose individuals to appraise combat training (a stressful situation) in less threatening terms, by viewing themselves as more capable of coping and using more problem-focused and support seeking strategies (Florian, et al., 1995). They also found that better mental health outcomes, could be attributed to a pattern of appraisals and coping that are related to higher hardiness (Florian, et al., 1995).



Florian et al. (1995) warn that hardiness components, such as the ‘challenge component’ should be treated as a separate entity during assessment, rather than within the unified construct, as it shows no association with other hardiness components and could lead to the assessment of a different psychological construct. However, this statement needs to be researched further. In general it was concluded from this study that hardiness as a stress resistance resource leads to positive mental health through the processes of appraisal and coping and that some aspects of low hardiness are “partial manifestations of negative affect” (Florian, et al., 1995, p. 695).

2.14 SUMMARY OF THE SECTION

The previous section examined the history, definition and the theoretical framework of salutogenesis. The salutogenic model was explained and the generalised resistance resources were highlighted. A thorough explanation of the various constructs was offered in order to provide a theoretical background for the two constructs that were used in the present study; sense of coherence and locus of control.

The next section will proceed to discuss the concept of coping. It will define coping and provide a brief overview of coping strategies.

2.15 THE DEFINITION OF COPING



Coping is a multidimensional construct and has a wide range of behavioural and cognitive strategies which can be directed towards changing, assessing or avoiding stressful situations. A number of coping dimensions have been identified, but specific broad categories of coping are found in many approaches such as: problem-oriented strategies, positive reappraisal, seeking emotional and/or instrumental support, acceptance/resignation, avoidance and expressing of emotions (Parkes, 1994).

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. It is viewed as strategies implemented to assist the individual with handling stressors in the environment (Koeske & Kirk, 1993). According to Heim (1991), coping is always related to a specific situation and is goal directed, striving to maintain an emotional and/ or physiological

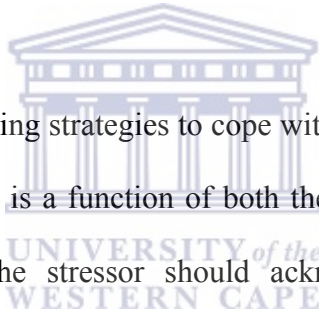
balance, which maintains health. One can distinguish between intellectual, psychological and social assets in coping behaviour (De Beer & Korf, 2004). Individuals engage in various activities to reduce stress and coping should ideally involve flexibility and access to various coping strategies suited to the specific situation (De Beer & Korf, 2004).

Moos and Billings (in Shaw, Fields, Thacker & Fisher, 1993, p. 231) define coping resources as “a complex set of personality, attitudinal and cognitive factors that provide the psychological context for coping.” Such resources are relatively stable dispositional characteristics that affect coping and are affected by the outcome of the process of coping.

Coping as part of the transactional process acts as a mediator, preventing the negative impact of stress. The transactional framework implies that coping should be explored from an intra-individual perspective, by assessing the same individuals or groups in order to discover individual patterns of coping in various situations (Parkes, 1994). Coping is strongly influenced by the intrinsic or extrinsic resources of the person, and also depends on situational factors (for example stressors) (Heim, 1991). According to Lazarus and his colleagues (in Parkes, 1994), coping depends on the successive processes of cognitive appraisal and reappraisal and on associated emotional states, which is the result of person and environment factors. There is a continuous interplay between appraisal, coping and emotion during the development of a stressful episode, each element changing at its own pace as the transaction continues (Parkes, 1994). Coping is not always successful and could be bad or unfavourable (Heim, 1991; Hobfoll, 1989).

Parkes (1994) examined mechanisms by which personality and coping could be implicated in stress-health relations, in the context of a general model of work stress. She postulates that individual differences in personality and abilities have broad implications for occupational

performance and that few personality dimensions have been identified as moderators of the relationship between work stress and its impact on health (Parkes, 1994). She views personality as influencing stress-outcome in various ways of which one, is different methods of coping. She assigns particular coping patterns to various personality traits and agrees that coping acts as a mediator between personality and health. Therefore the direct measurement of coping behaviour can substitute the use of personality measures in explaining the differences in health outcomes (Parkes, 1994). Coping-measures directly assess the strategies that individuals use in their attempts to manage stress, whereas personality is measured with reference to general attitudes, beliefs and behaviours (Parkes, 1994). The dispositional approach implies that coping responses are primarily determined by personal characteristics and that situational and environmental factors play a minor role.



All individuals use specific basic coping strategies to cope with various levels of stress in their lives in order to prevent ill-health. Stress is a function of both the individual and his/her environment, therefore attempts to cope with the stressor should acknowledge the environment and the individual's personal composition (Sadri, 1997). Coping has received much attention from researchers as a result of the recent movement from pathogenic functioning to a salutogenic paradigm, which includes the potential to maintain and enhance the psychological well-being within the context of a stressful environment (Spangenberg & Orpen-Lyall, 2000). It involves handling stress that inevitably occurs due to the nature of the job, the characteristics of the individual and the individual's specific repertoire of behaviours to prevent stress (Kirkaldy & Furnham, 1999). Publications regarding coping with stress and emphasising the detrimental effect of destructive coping techniques, could possibly encourage managers to actively manage the risks of occupational stress (Spangenberg & Orpen-Lyall, 2000).

2.16 COPING STRATEGIES

Coping strategies can be generally classified as being *problem-focused* (which is directed towards managing a stressful situation) or *emotion-focused* (which deal with the associated level of emotional distress, for example avoidant behaviour) (Spangenberg & Orpen-Lyall, 2000). Avoidance is a destructive coping strategy, which creates stress as a result of inevitable poor work performance and accumulation of problems, due to the avoidance of issues, instead of constructively confronting it (Spangenberg & Orpen-Lyall, 2000). In order to become psychologically fit in coping with the bombardment of demanding and negative stimuli, the individual needs to confront internal and external stimuli and handle the daily stressors in an effective manner (Viviers & Cilliers, 1999).

Viviers and Cilliers (1999) state that, mechanisms used by individuals, who function optimally, enable them to manage stress in an effective way, through creative energy sources, which lead to a healthy/optimal life style. The healthy coping strategies of active confrontation of problem situations and the mobilizing of social support in the workplace should be emphasized in an appropriate way. Coping can further be divided into several subtypes/sub-strategies (Anisman & Merali, 1999):

- Emotion-focused coping
- Problem-focused coping
- Social support seeking
- Cognitive restructuring
- Problem-solving

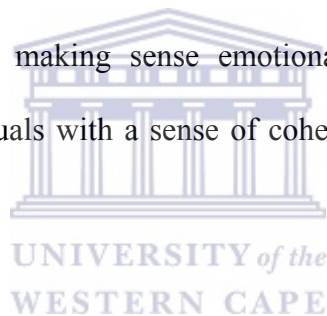
The effectiveness of a coping strategy will depend on the combination and type of stressor and the most effective way of approaching coping is to maintain flexibility and to use varying strategies (Anisman & Merali, 1999). Stressors do not always lead to stress, because the specific individual might have the ability to absorb and cope with pressure. Such individuals have proactive personal coping styles that assist in managing stress (Jordan, 2002). They also live healthy lifestyles that protect and gear them for stressful circumstances. Many companies see the advantage of acting proactively by providing stress management programmes, to teach coping techniques and explore coping styles.

Learnt coping skills and individual traits are synonymous with a decreased predisposition to stress and most studies perceive selected individual qualities, as moderators of the relationship between stressors and stress symptoms (Fairbrother & Warn, 2003).

Koeske and Kirk (1993) measured the coping styles of case managers (human services) hired to work with extreme mentally ill clients at entry into the job and found that coping with job induced strain in the field of human services is similar to coping strategies used in general. Their approach assumes that individuals develop stable situation-specific reports of how they have reacted to specific stressors. An overview of the results suggests that control coping strategies are commonly used and facilitate the ability to handle difficult and challenging work obligations. Cohen (in Koeske & Kirk, 1993) suggests that utilising many different strategies and applying flexibility is essential to effective coping. Koeske and Kirk's (1993) research indicates that paying attention to and shaping coping patterns can benefit workers (human service workers) confronted with challenging circumstances.

Latack and colleagues (in Ito & Brotheridge, 2003) identified two general strategies used by individuals to cope with stressful situations. The first is the control strategy and is concerned with addressing the situation and the second is the escape strategy, which is used to avoid problems. The abovementioned strategies can be behavioural (for example, devoting more energy in trying to keep away from the type of situation) or cognitive (for example, defining the situation as a learning experience as opposed to, acceptance of the situation) (Ito & Brotheridge, 2003).

According to Viviers (1998a), the sense of coherence approach finds expression in a salutogenic orientation. It maintains that coping evolves around a sense of coherence as the focal point. From this point of view stressors are viewed as understandable in terms of structured and logical information. Stress becomes manageable, as events are experienced as bearable and challenging and individuals experience life as making sense emotionally, rather than cognitively. This orientation presupposes that individuals with a sense of coherence function at an optimal level in their lives and at work.



Parkes (1994) espouses the view that the number of strategies available to the individual and the ability of the individual to use the various strategies appropriately for the specific situation and with correct timing, are the factors that are relevant to effective coping. The larger the repertoire of coping strategies, the more effective the coping response will be for the specific stressful situation. Perceived control is very important in judging the situation for the choice of the correct coping response and individual differences in control beliefs may influence the use of problem-focused coping as it requires a degree of personal control over the situation (Parkes, 1994). Coping behaviour varies across time and place, therefore treating coping as a static personal characteristic, oversimplifies the integrated, complex factors which determine the various strategies used by individuals when stressful events occur (Parkes, 1994). Parkes (1994) states that personality and

coping moderates stressor outcomes in work settings, however, the extent of the effect of individual differences on work stress-outcome needs further research.

Amirkhan (1994) conducted a methodological exploration utilizing demographic variables as person-related predictors of coping. Two studies were conducted to relate personality variables to coping – to determine the role of person-related factors as determinants of the nature of the coping response. The study was based on the concept of consistency, which was operationalised in terms of coping behaviour. Consistency of response to stressful situations was recognised as an important dimension for describing individual differences in coping. Amirkhan (1994) found that the groups of consistent copers who were privileged in terms of income/education, rejected avoidant strategies for coping. This suggests that possessing material/informational resources is a prerequisite for dealing directly with problems. The individuals who were most lacking in resources, decided to withdraw or distract themselves from their difficulties and used the only means of coping at their disposal (Amirkhan, 1994). In this study it was determined that situational characteristics can predict the response of the coper who uses inconsistent methods to deal with stressful situations.

Shaw, et al., (1993) conducted a study to examine the relationships among personal coping resources, social support, external coping resources, job stressors and job strains in a sample of 110 American telephone and telegraph employees undergoing major organisational restructuring. They found major relationships between job stressors and strains and the personal coping resources, social support and external coping resources available. External resources are an important factor for determining job stressors and strain levels during organisational restructuring and are therefore valuable variables to consider in future studies of employee stress (Shaw et al., 1993). It was found that personal coping resources acted directly upon perceived levels of job stressors and strain. It

was also noted that managers should assist employees in developing a perceived sense of personal control and provide them with social support from superiors (Shaw et al., 1993).

Heim's (1991) study was aimed at clarifying the interdependence of four classical dimensions in the process of dealing with job stressors in Swiss nurses: 1) demographic characteristics, 2) job stressors, 3) coping and 4) job satisfaction. It was found that the most stressful areas were the areas that contributed most to job satisfaction. Individual strategies, personality and coping play a significant role in the influence of work conditions and the psychosocial environment, on mental and physical health. Individual differences determine how work stressors will influence health (Parkes, 1994).

In order to propose and test relationships between resources possessed by employees and their coping strategies and emotional exhaustion, Ito and Brotheridge (2003) employed the conservation of resources theory and used 600 Canadian full-time government officials in their study. Ito and Brotheridge (2003) employed a model in their research that proposes that resources have a direct influence on strain, as well as an indirect influence on strain through coping strategies. They also suggest that Individuals may employ many different types of resources when coping with workplace situations.

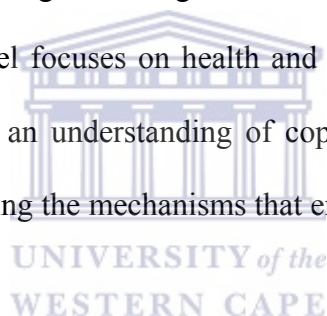
Their findings suggest that resources predict coping strategy, but different combinations of resources predict specific strategies; that resources and coping strategies are associated with emotional exhaustion; individuals who possess resources choose active coping strategies and avoid passive ones and some resources play a more important role than others in the use of coping strategies (Ito & Brotheridge, 2003). However, the relationships are often more complex, than they are presented in stress models, for example coping strategies may have different effects on

emotional exhaustion and active approaches may resolve difficulties and at the same time protect resources used to cope (Ito & Brotheridge, 2003).

2.17 CONCLUSION

The conceptualisation of salutogenesis provides a critical perspective on how individuals manage to stay psychologically and physically healthy in the organisational context as well as life in general.

The salutogenic paradigm was presented as an antithesis of the pathogenic paradigm. The salutogenic paradigm is clearly a paradigm with significant utilisation potential in the field of stress management. The salutogenic model focuses on health and emphasises factors that contribute to health-ease and therefore facilitates an understanding of coping. The resolve to the salutogenic question therefore lies in understanding the mechanisms that enable individuals to cope successfully with stressful events.



Stress is primarily initiated by a stressor (event), however, various individuals experience stressors differently. What is stressful for one individual at a certain time might not be stressful for another at the same time, or at a different time. According to the salutogenic perspective, individuals that cope with high levels of stress without becoming ill, possess personality structures that differentiate them from others who do not experience stress in such a positive light.

The salutogenic constructs function as an application of coping theory in the sense that it focuses on the role of personality constructs in moderating the stressors that lead to disease. The four salutogenic constructs (sense of coherence, hardiness, learned resourcefulness and locus of control)

demonstrated how individuals manage stress and stay healthy. The constructs measure generalised personality orientations and serve as a guide for successful coping. The various roles that the constructs play in coping with a stressful life event were discussed.

According to the transactional model of stress and coping, all the salutogenic constructs share the assumption that the individual's perception of his/her world is essential in coping with a stressful occurrence. In this approach coping reflects an interaction between personal and environmental factors.

From the integration of the literature review the following is confirmed:

- Personality as a variable plays an important role in stress;
- Salutogenic constructs were found to act as coping mechanisms in the face of stress and;
- It is possible to differentiate between copers and non-copers.



2.18 SUMMARY OF THE CHAPTER

A review of the literature pertaining to the concept of stress, causes of stress, salutogenesis as a concept and coping as a theoretical construct, as pertaining to the research question has been provided. The concept of stress was introduced and explained in terms of stress and health, processes of stress development, categories of theories of stress, sources of stress, signs of stress and coping. Various internal and external stressors have an impact on employee wellness. From the literature review it is clear that stress is a highly relevant issue in the general work environment and contributes to various illnesses. It has also become evident that certain individuals cope better with stress as a result of inherent characteristics. The literature has also emphasised the importance of

looking at ‘healthy’ individuals to find a solution and method to cope with the increasing levels of stress in the workplace. It is also evident that there is an infinite amount of literature on stress and coping. However, literature on salutogenesis is sparse and particularly literature related to state owned enterprises.

The next chapter proceeds with an overview of the research design and includes a discussion on the objectives, hypotheses, the target population and the sample. The method of data collection, as well as the various measuring instruments will also be discussed.



CHAPTER 3

METHOD OF RESEARCH

3.1 INTRODUCTION

This chapter focuses on the method of research and deals with the manner in which the research question was probed. It refers specifically to the method of sampling, the data collection instruments as well as the statistical techniques applied.

3.2 RESEARCH HYPOTHESES (Statistical Hypotheses)

With reference to chapter 1, the integration of the main variables indicated that certain relationships existed between stress and salutogenic functioning in terms of sense of coherence and locus of control. The purpose of the central hypothesis is thus to confirm this relationship empirically and to indicate it actually exists. The central hypothesis serves as a guideline for the present study and is as follows:

Hypothesis 1

There is an inverse relationship between stress levels and salutogenic functioning in terms of the constructs, sense of coherence and locus of control.

The following hypotheses were formulated from this central research hypothesis.

Sub-Hypothesis 1

There is an inverse relationship between stress levels and sense of coherence.

Sub-Hypothesis 2

A high level of stress is associated with an external locus of control.

Sub-Hypothesis 3

A low level of stress is associated with an internal locus of control.

3.3 POPULATION AND SAMPLE

3.3.1 Population

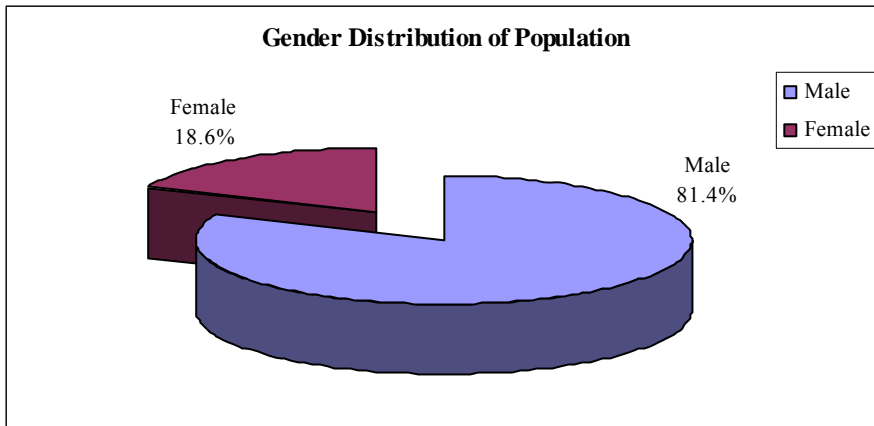


The research was done in the transport industry, within a state owned enterprise in the Western Cape. The population (N =677) consist of South African employees (male and female) and covers all departments within the organisation, from senior management, to junior staff.

The biographical statistics obtained from the enterprise's human resource audit, indicate that there are 677 employees in the target population. Various population characteristics are presented in graphical format and explained. Figure 3.1 indicates that 81.4% (N = 551) of the population are male and 18.6% (N = 126) are female.

Figure 3.1 Gender Distribution of the Target Population of State Owned Enterprise

Employees



As illustrated in Figure 3.2 the racial composition of the population comprises of a majority of Coloured individuals (33.4%, N = 226), closely following are White individuals (32.8 %, N =222) and African individuals (32.5%, N = 220) and the Indian individuals are in the minority at 1.3% (N = 9).

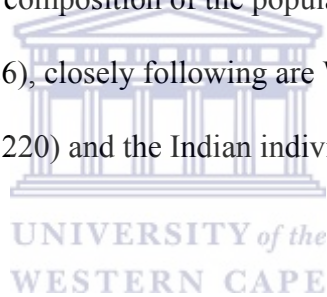
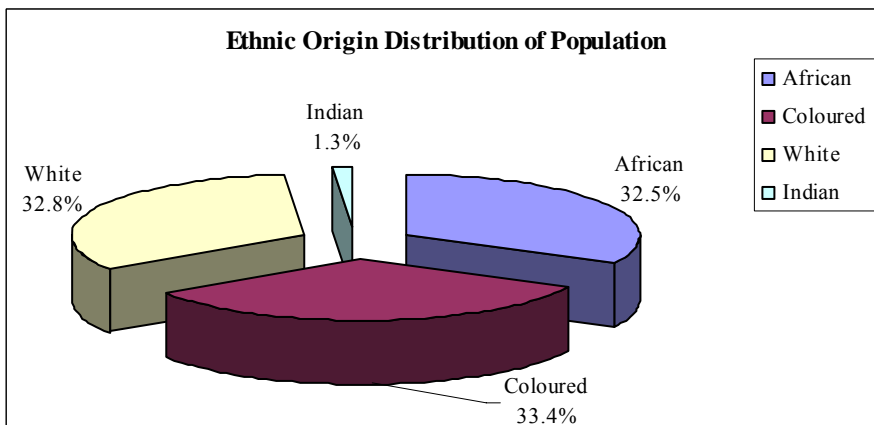


Figure 3.2 Racial Composition of the Target Population of State Owned Enterprise

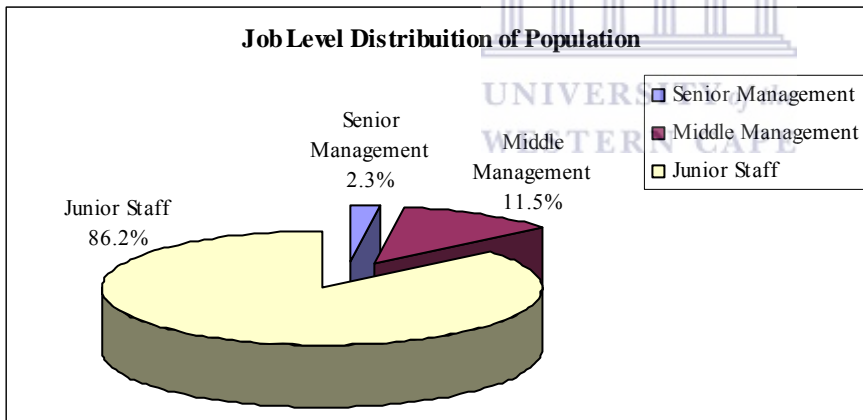
Employees



In Figure 3.3 the job levels of the sample are depicted. It should be noted that the specific state owned enterprise has a relatively complicated division of levels. There are three main job levels which further consist of sub-levels. The exco-management mentioned in the sample is part of senior management and the supervisors form part of middle management. Statistics are only available for the three main job levels. Junior staff are in the majority at 583 (86.2%), whereas the minority of the population are senior managers at 16 (2.3%). The remainder of the population falls into middle management, which are 78 (11.5%).

Figure 3.3 Job Level Distribution of the Target Population of State Owned Enterprise

Employees



3.3.2 Sample

3.3.2.1 Sampling Method

Ideally it is important to use a random sample from the population and the sample framework should ideally be compiled in such a way that it is representative of the total population from which the sample is drawn in order to make inferences about the population. Initially the aim was to draw the sample from the sampling frame, which is the complete and correct list of population members only (Cooper & Schindler, 2003). Probability sampling would have been used to randomly select employees employed by this organisation. Stratified random sampling was appropriate for the present study as it increases the sample's statistical significance, provides adequate data to analyse the subpopulations and it also enables the possibility of using different research methods in different strata, if required (Cooper & Schindler, 2003). The aim was to divide the population into 5 strata: Senior Management, Exco-Management, Middle Management, Supervisors and Junior Staff. A simple random sample could be taken within each stratum, thereafter sampling results could be weighted and combined into appropriate population estimates (Cooper & Schindler, 2003).

However, in the present research it was difficult to use scientifically formulated methods, such as stratified random sampling, due to the length and number of questionnaires and the level of cooperation and the culture of the organisation. As such the questionnaires were given to the entire population and the sample was drawn based on the returned questionnaires. The three questionnaires were therefore administered cross-sectionally and statistical particulars were calculated accordingly.

Despite the fact that the data may change over time (as is the case with most data), it is sufficient for this study, to only collect the data cross-sectionally. Therefore data was collected at a single occasion. There were 677 questionnaires distributed of which 240 were returned. Admittedly there was a level of bias in the sampling, however, the data is convincingly reflective of the population and is sufficient to draw inferences from.

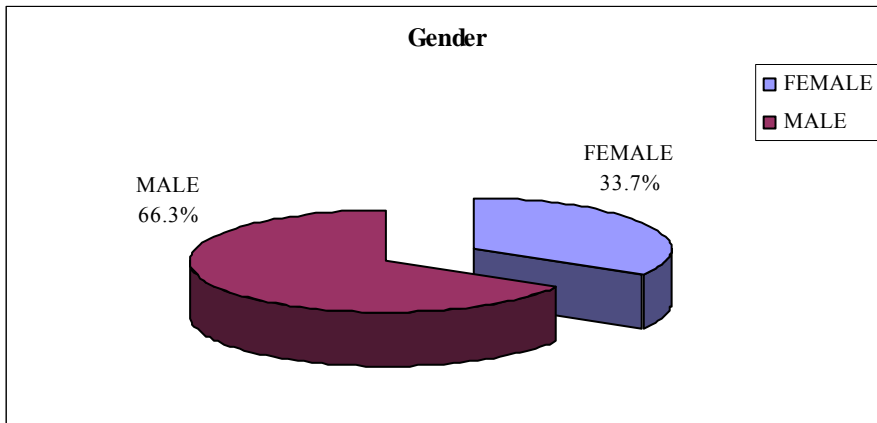
3.3.2.2 Sample Size

The sample size comprised approximately 35% of the population, which rounds off to a sample of 240 employees. The rule of thumb is that a sampling ratio of about 30% for a small population of approximately 1000 should be drawn. The percentage was upped by 5% to compensate for the smaller figure and to correspond with the recommendation from Sekaran (2000, p. 295) that a sample of 234 should be drawn from a population of 600. The sample included 240 participants. Race, gender and age were not focused on in this study. Based on the tables provided of the distribution of the population, it is evident that the results of the questionnaires can be interpreted as accurate representations of the entire population.

3.3.2.3 Sample Characteristics

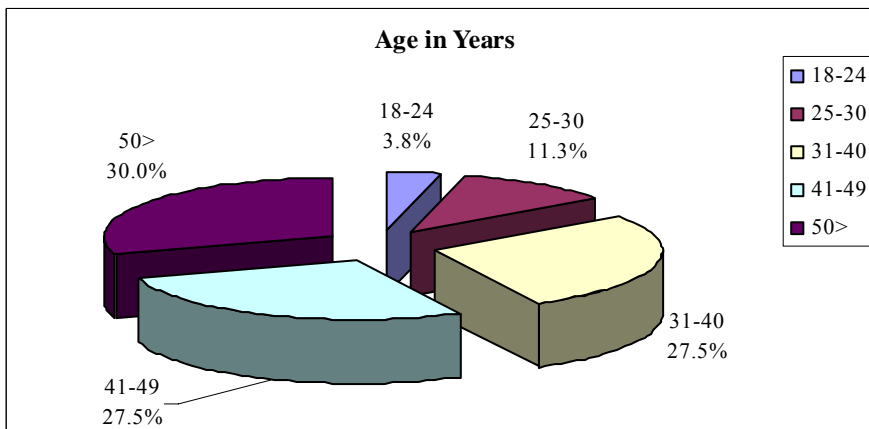
The biographical information of 240 employees of a state owned enterprise who participated in the study is presented in graphical format and explained. Figure 3.4 indicates that 66.3% (N = 159) of the respondents in the sample are male and 33.7% (N = 81) of the respondents are female.

Figure 3.4 Gender Distribution of the Sample



It is indicated in Figure 3.5 that the majority of respondents (30.0%; N = 72) fall in the age group 50 years and above. Twenty-seven (27) respondents, that is 11.3%, fall in the age group 25-30 years. Sixty-six (66) respondents or 27.5%, fall in the age group 31-40 years as well as in the age group 41-49 years. The minimum number of respondents (3.8%; N =9) falls in the age group 18-24 years.

Figure 3.5 Age Distribution of the Sample



As illustrated in Figure 3.6 the racial composition of the sample comprises of a majority of White respondents (48.3 %, N = 116) and the Indian respondents are in the minority at 2.1% (N=5). The composition further included African respondents, 19.2% (N = 46) Coloured respondents, 29.2% (N = 70) and a total of 1.3% (N = 3) did not indicate their racial group.

Figure 3.6 Racial Composition of the Sample

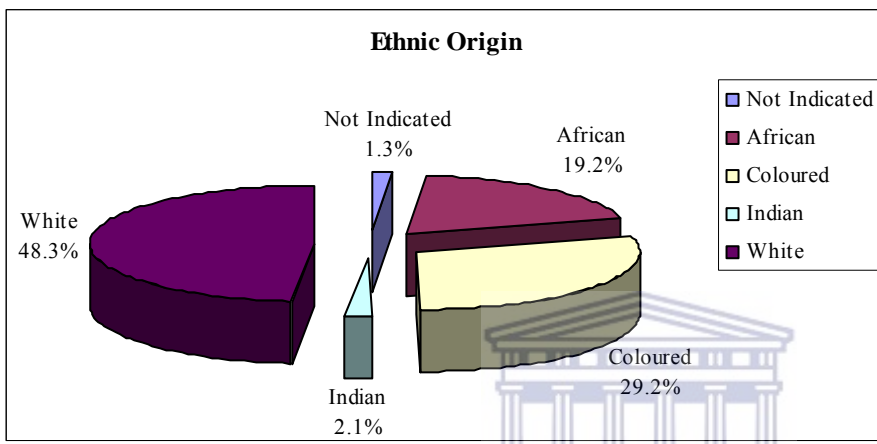
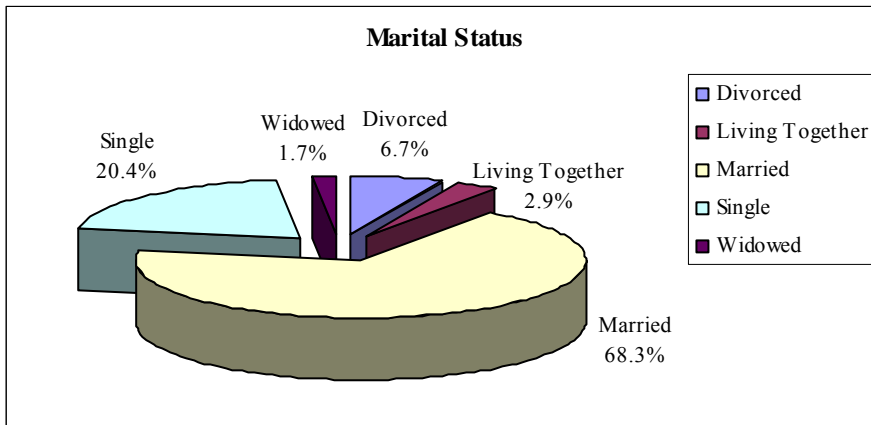


Figure 3.7 illustrates that 164 of the respondents (68.3%) are married and that 16 of the respondents (6.7%) are divorced. A total of 49 respondents (20.4%) are single, 7 respondents (2.9%) are living together and 4 respondents (1.7%) are widowed.

Figure 3.7 Marital Status of the Sample



In Figure 3.8 the job levels of the sample are depicted. It can be noted that 146 of the respondents (60.8%) are junior staff, whereas 6 of the respondents (2.5%) are supervisors. Exco-management comprised of 7 respondents (2.9%) and there are 58 middle managers (24.2%). Senior management is furthermore represented by 23 respondents (9.6%).

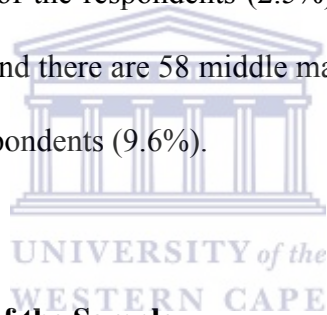
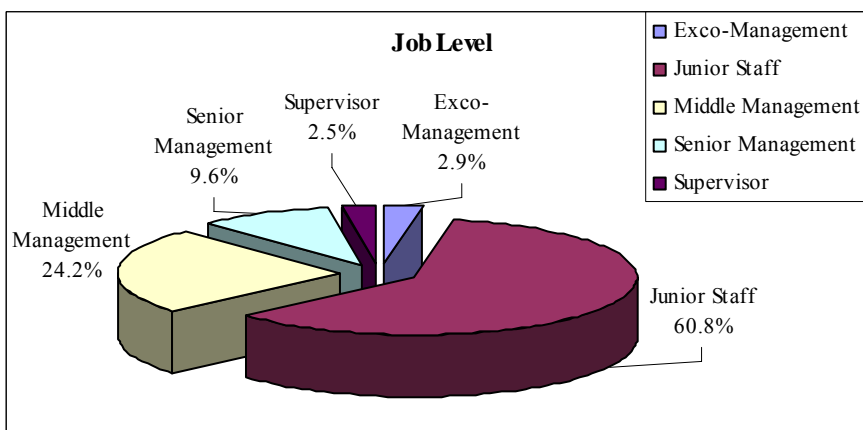


Figure 3.8 Job Level Distribution of the Sample



3.4 RESEARCH DESIGN

3.4.1 Data Collection Method

3.4.1.1 Procedure

An appointment to meet the employees was made and data was collected through the use of three self-administered questionnaires, which measure the construct of stress, and salutogenic functioning as indicated by the constructs sense of coherence and locus of control. The data collection instruments used included: a biographical questionnaire adapted for the purpose of this study and three self-administered questionnaires, namely the Experience of Work and Life Circumstances Questionnaire (WLQ), the Orientation to Life Questionnaire (OLQ) and the Locus of Control Inventory (LCI). The 677 questionnaires were administered individually, in small group settings as the employees were available at the enterprise. For those participants who were not available at the time due to work commitments, the researcher personally delivered the questionnaires to the supervisors and managers of the various divisions, who distributed the questionnaires to their subordinates. The respondents were then requested to complete the various questionnaires in their own time and the completed questionnaires were returned after four weeks to the designated contact persons. The participants were all informed of the confidentiality and anonymity of their questionnaires through e-mail communication, as well as an ethics and confidentiality clause included on the cover page. Instructions and guidelines for completing the questionnaires were provided on the cover page, as prescribed by the various manuals. No time restrictions were enforced for the questionnaires and the answer sheets were hand scored and double checked for accuracy.

3.4.1.2 Ethical Considerations/ Ethics Statement

The study was conducted with the voluntary participation of the employees and informed consent was obtained. Measuring instruments were carefully structured/formatted and investigated for reliability and validity evidence, in order to prevent harm to employees. The human rights and welfare of the participants were acknowledged and protected throughout the entire project. Confidentiality and anonymity remained priority to the researcher and identities of the participants of this research were continuously protected and remained confidential. This research was strictly conducted according to the ethical code of psychologists, as stipulated by the Professional Board for Psychology.

3.4.1.3 Measuring Instruments



The measuring battery that was used for the purpose of this study included quantitative instruments. The one instrument measured stress as a construct and the other two instruments measured the specific salutogenic constructs. Acceptable levels of reliability and validity on all three of the instruments are reported (Kossuth & Cilliers, 2002; Schepers, 2005). The advantages of using questionnaires are as follows (Breakwell, Hammond & Fife-Shawl, 1998):

- ◆ They can be administered to large numbers of individuals
- ◆ The method also allows anonymity
- ◆ They are relatively more economical to use

The specific instruments were chosen because of their psychometric qualities as well as their conceptual correspondence to the constructs that were measured. The following three instruments were used.

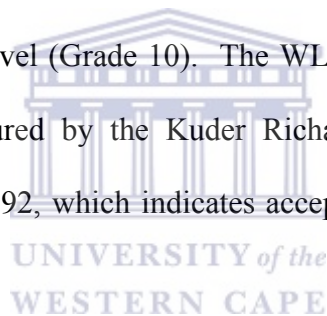
3.4.1.4 Biographical Questionnaire

The biographical questionnaire required respondents to provide personal information regarding their gender, age, ethnic origin, marital status, number of children and their job level.

3.4.1.5 The Experience of Work and Life Circumstances Questionnaire (WLQ)

3.4.1.5.1 Rationale

The WLQ is a stress questionnaire that has been standardised for South African conditions. The WLQ was developed to measure the level and causes of stress of an individual whose reading and writing ability is at least at Std. 8 level (Grade 10). The WLQ has construct and content validity. Reliability coefficients were measured by the Kuder Richardson Formula 8 and test-retesting methods varied between 0.62 and 0.92, which indicates acceptable reliability (Van Zyl & van der Walt, 1991).



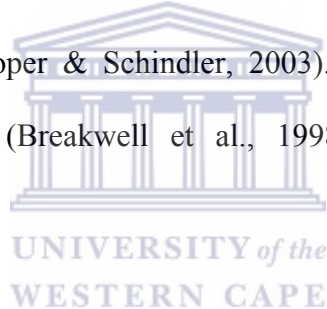
3.4.1.5.2 Description

The WLQ is a self-rating questionnaire for use in the work situation. It gives an indication of the level of stress and its possible causes from within and outside the work environment. The questionnaire comprises two sections namely experience of work and circumstances and expectations (Van Zyl & van der Walt, 1994). The *experience of work section* is utilised to establish the respondent's level of stress, which is categorised as normal, high or very high and it comprises of 40 items. To determine the frequency of certain feelings a five-point scale is employed. The **circumstances and expectations section** aims to examine the causes for a

respondent's level of stress and comprises 76 items and a five-point scale is used to determine the frequency of certain aspects of stress. The **circumstances part** (23 items), deals specifically with the following areas: *Outside work environment*: (16 items) and *Inside the work environment* (7 items). The **expectation part** (53 items) deals with organisational functioning, task aspects, physical working conditions and work equipment, career prospects, social aspects and salary, benefits and personnel policies (Van Zyl & van der Walt, 1994).

3.4.1.5.3 Reliability

Reliability refers to the accuracy of a test, consistency of scores obtained by the same individuals, when re-tested on the same test on a different occasion or different sets of equivalent items or variable examining conditions (Cooper & Schindler, 2003). When determining reliability two major components are important (Breakwell et al., 1998): Internal consistency and Time consistency.



The reliability coefficients of the Kuder-Richardson 8 range from 0.83 to 0.92 for the WLQ and measures internal consistency. The test-retest reliability coefficients vary from 0.62 to 0.80 and focuses on correspondence between the first and second measurement, which was done with a four-week interval (Van Zyl & van der Walt, 1991). The reliability of the WLQ is regarded as satisfactory and when measured against reliability coefficients for the 16PF it compares favourably (Van Zyl & van der Walt, 1994).

3.4.1.5.4 Validity

Content Validity

In general validity is an indicator of whether a test measures what it purports to measure. Content validity refers to whether the content of the test is relevant to the characteristic being measured and face validity and logical validity are indicators of content validity (Cooper & Schindler, 2003). Face validity is a subjective evaluation of the relevance of the test items and indicates the degree to which a test appears to be valid and refers to what the questionnaire apparently measures (Breakwell et al., 1998).

The WLQ is assumed to have face validity as the items in the questionnaire were developed according to a theoretical model and evaluated by a panel of experts (Van Zyl & van der Walt, 1991). According to Smith (cited in Van Zyl & van der Walt, 1994, p. 22), logical validity has three requirements:

- A clear definition (in behavioural terms) of the traits/ behavioural aspects covered in the questionnaire.
- Analysis of behavioural aspects in the parts, which it represents.
- Evaluation of the question – do items have adequate discrimination value.

According to Van Zyl and van der Walt (1994), the WLQ was subjected to the above logical validity requirements, during its development. Based on obtained results by Van Zyl and van der Walt (1994) the assumption is that the questionnaire has logical validity.

Construct Validity

Construct validity concerns the extent to which a test/questionnaire measures a theoretical construct/ trait (Cooper & Schindler, 2003). The intra-test and inter-test methods were used to obtain information regarding the construct validity (Van Zyl & van der Walt, 1991). The various fields or scales of the WLQ indicated a fairly significant relation between them, which supports the construct validity of the questionnaire. Correlations between the: WLQ and the 16PF Questionnaire, the Personal, Home, Social and Family (PHSF) Relations Questionnaire and the Reaction to Demands and Life Questionnaire, were obtained by Van Zyl and Van der Walt (1994) and the results displayed expected correlations with applicable personality tests, which support the construct validity of the WLQ.

3.4.1.5.5 Justification



The questionnaire has satisfactory validity and reliability and is an appropriate instrument for the proposed research (Van Zyl & van der Walt, 1991). The information gained from this questionnaire can be used to identify employees with varying stress levels, in order to determine the relationship between stress levels and salutogenic functioning. It can also be applied to equip them to cope with work demands and for identifying undesirable work characteristics.

3.4.6 Orientation to Life Questionnaire (OLQ)

3.4.6.1 Rationale

The OLQ is used to measure an individual's sense of coherence. The sense of coherence is an essential element in the position and variation of an individual's state of wellness along the health-disease continuum. The higher the score on the OLQ, the stronger the sense of coherence of the respondent (Antonovsky, 1987).

3.4.6.2 Description

The OLQ is a self-report instrument, with the goal of evaluating an individual's tendency to apply coping mechanisms successfully (Antonovsky, 1987). This questionnaire has 29 five-facet items rated on a seven point, bipolar graphic rating scale. Comprehensibility is measured by 11 items, manageability by 10 items and 8 items to measure meaningfulness. The extent of agreement or disagreement is indicated by the respondent (Antonovsky, 1987). Individuals with a strong sense of coherence have the ability to perceive stressors as manageable, meaningful and comprehensible (Dhaniram, 2003).

3.4.6.3 Reliability

Antonovsky (1987) reports high levels of internal consistence and reliability for this measure, cross-culturally, with Cronbach's alpha ranging from 0.84 to 0.93. He also reports that the OLQ makes considerable distinctions among members from different populations (Antonovsky, 1987, p. 79).

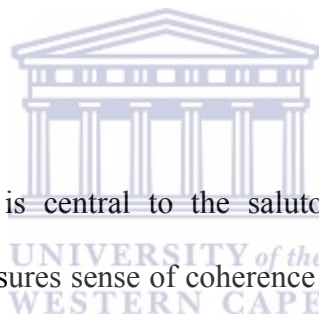
Studies on the test-retest reliability produced a reliability coefficient of 0.41 and 0.97 and Cronbach's alpha coefficient is 0.91 and 0.85 for 29 studies that were reviewed (Dhaniram, 2003).

3.4.6.4 Validity

In general, Dhaniram (2003) has found that the studies on the OLQ support the validity of the scale. It was verified by numerous studies regarding the construct validity of the OLQ that a negative relationship exists between the OLQ and stress experienced by the individual. The sense of coherence score related to positive health measures in a significant and continuous way, while at the same time relating significantly and negatively to all illness measures (Dhaniram, 2003).

3.4.6.5 Justification

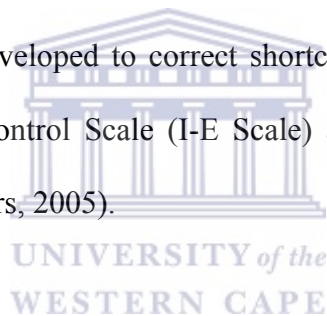
The sense of coherence construct is central to the salutogenic model on a conceptual level (Antonovsky, 1979). The OLQ measures sense of coherence the best, due to the operationalisation of the concept in terms of its definition and its key strengths. It is meaningful and can be utilised across gender, social class, religion and culture (Dhaniram, 2003). This instrument has normative data from around the world and was found to be valid and reliable, grounded in solid theory, having sound psychometric properties and was empirically tested on a large scale (Dhaniram, 2003)



3.4.7 Locus of Control Inventory (LCI)

3.4.7.1 Rationale

The LCI is a South African developed tool, available in English, Afrikaans and Zulu. It is a psychological test designed to measure the degree to which individuals perceive their ability to influence/ control the world that surrounds them (Schepers, 2005). In other words, locus of control is the tendency to explain events in terms of oneself versus the environment. It is considered that a certain degree of perceived influence is essential to a variety of jobs and activities. The research on which the Inventory is based indicates that people with an internal locus of control tend to differ from people with an external locus of control in their responses to the items on the Inventory (Schepers, 2005). The LCI was developed to correct shortcomings of other instruments such as Rotter's (1966) Internal-External Control Scale (I-E Scale) and to establish a reliable and valid instrument for use on adults (Schepers, 2005).



3.4.7.2 Description

Conceptually the LCI is based on attribution theory and social learning theory (Schepers, 2005). The LCI consists of 80 statements on which respondents react, according to a seven-point Likert Scale. Schepers found that external and internal control are not bipolar opposites, but independent constructs (Jackson & Rothmann, 2001). The Inventory measures three dimensions, namely, (Schepers, 2005):

- Internal locus of control
- External locus of control

- Autonomy

3.4.7.3 Reliability

The reliabilities of the scales were established by means of Cronbach's alpha coefficient in the following way: Factor 1: Internal Control – Cronbach's alpha = 0,84; Factor 2: External Control – Cronbach's alpha = 0,88; Factor 3: Autonomy – Cronbach's alpha = 0,87. Pretorius (2004) calculated split-half and alpha reliability estimates for the LCI, where the Spearman-Brown correction yielded a reliability coefficient for unequal length of 0,71 (Pretorius, 2004).

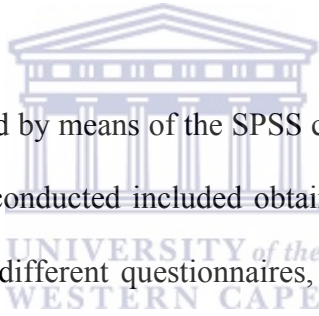
3.4.7.4 Validity

The construct validity of the Locus of Control Inventory was also determined by means of a factor analysis. The content of the questions classified under the 3 factors relate to each of the constructs (internal, external and autonomy), which confirms the construct validity of the LCI (Pretorius, 2004). Schepers (2005) identified two distinct clusters after completing a cluster analysis: (a) Cluster 1: Low on autonomy and internal control. High on external control and (b) Cluster 2: High on autonomy and internal control. Low on external control. The clusters were then compared with the 16 Personality Profile, Jung Personality Questionnaire, Career Development Questionnaire, 19-Field Interest Inventory, Senior Aptitude Test and SSHA and statistically significant different means between the 2 clusters were found for most of the variables (Schepers, 2005). Schepers (2005) indicates that the LCI is therefore both a reliable and valid scale.

3.4.7.5 Justification

One of the most currently studied variables in psychology is locus of control. Few locus of control studies have been conducted in the environment of work and limited numbers are concerned with work demands and their health related outcomes (Dhaniram, 2003). The proposed study will contribute to the limited body of knowledge regarding locus of control in the workplace. The reliability and validity reports in Jackson and Rothman, (2001), Pretorius (2004) and Schepers (2005) further supported the use of this scale for this specific research.

3.5 DATA ANALYSIS



The statistical analysis was conducted by means of the SPSS computer package (Statistical Package for Social Sciences). The analysis conducted included obtaining descriptive results, investigating the psychometric properties for the different questionnaires, reviewing inter-correlations between various scales and dimensions of performing factor analysis. The data for each of the three measuring tools were analysed separately in terms of item-test reliability and Cronbach's alphas. The strength of the relationship between the dimensions was calculated with the Pearson-product moment correlation coefficient. The statistical hypothesis being tested is that there is a significant relationship between stress and the salutogenic constructs: sense of coherence and locus of control. The statistical techniques used in the research will now be discussed briefly. The chapter on results features two forms of statistics: descriptive and inferential statistics. In particular the chapter will focus on ANOVA, t-tests, Multiple Regression Analysis and correlation techniques.

3.5.1 Statistical Techniques

3.5.1.1 Descriptive Statistics

Descriptive statistics are utilised to apply data in a more meaningful way and is used to analyse data for classifying and summarizing numerical data (Sekaran, 2000). Descriptive statistics can consist of tabular or graphical representations of the evidence. It includes the analysis of data using frequencies, dispersions of dependent and independent variables and measures of central tendency. Descriptive statistics facilitate initial data analysis. However, the researcher is also concerned with making statistical inferences about the population from the sample. Therefore the inferential statistics are used to present the data in a statistical format in order to deduce significant patterns and relationships to make the analysis more meaningful. For the purpose of the present study descriptive statistics such as frequencies, measures of central tendency and measures of dispersion were used to analyse the data. Means convert the individual measures of all the respondents to a single measure, while standard deviation indicates the extent to which the respondents' individual measures are distributed around the mean, if it is a normal distribution (Howell, 1999).

Frequency tables are also used and indicate the amount or frequency of respondents that fall in each category. Furthermore, it indicates the percentage of respondents in each category, as well as the cumulative percentage. A frequency table provides a quick indication of the centrality and distribution of respondents. Refer to the population and sample characteristics in section 3.4.

Descriptive statistics such as means, standard deviations, frequencies and percentages were calculated for the subscales of the WLQ. Descriptive statistics were also calculated for both

salutogenic constructs, sense of coherence and locus of control, as well as their respective subscales. A total score was further calculated for the OLQ and WLQ questionnaires.

3.5.1.2 Inferential Statistics

Inferential statistics are techniques utilizing sample data to make statements about the population that the sample came from (Breakwell et al., 1998). Inferential statistics can be classified as parametric or non-parametric and allows the researcher to draw inferences from a sample to the population (Sekaran, 2000, p. 259). It is used to indicate how justified one is in concluding something about the population based on the data provided by the sample. The analytical procedures that allow the process of extrapolating from findings based on sample data (statistical inference) is referred to as inferential statistics (Breakwell et al., 1998). According to Babbie (1998, p. 431), inferential statistics are used to estimate the generalisability of findings arrived at, through the analysis of a sample to the larger population from which the sample has been selected. Some inferential statistics estimate the single variable characteristics of the population, others estimate the relationships between variables in the population.

The use of statistics in the present study was to test the null hypothesis. The statistical tests applied in the study include correlations, t-tests, Multiple Regression Analysis and one-way ANOVA. Whilst a detailed theoretical discussion of the various statistical techniques is beyond the scope of this chapter, the appropriate tests used for the analysis of data are mentioned and briefly described.

3.5.2 Statistical Tests Used in the Present Study

3.5.2.1 The Pearson Product-Moment Correlation

Correlation in its general sense refers to the relationship between variables and the measure of the degree of strength of this relationship is represented by a correlation coefficient (Howell, 1999). When variables are continuous, the appropriate statistic to compute is the Pearson's Product Moment correlation statistic. This statistic varies from -1 (a perfect negative linear relationship) through zero (no linear relationship) to +1 (a perfect positive linear relationship) (Field, 2000).

Correlations were interpreted in the following manner:

- If the correlation is negative, it is indicative that higher scores on one variable will result in lower scores on another variable.
- If the correlation is positive, then the higher the scores on one variable, the higher the scores on the other variable.

This method was used as part of the item-analysis of the three questionnaires.

3.5.2.2 Multiple Regression Analysis

In general, regression refers to the prediction of one variable from knowledge of one or more other variables (Howell, 1999, p. 173). According to Babbie (1998, p. 431), regression analysis represents the relationships between variables in the form of equations, which can be used to predict the values of a dependent variable on the basis of values of one or more independent variables. A multiple regression analysis results in a regression equation, which estimates the values of a dependent variable from the values of several independent variables (Babbie, 1998, p. 432).

This statistical method will be used to determine whether sense of coherence and locus of control contribute significantly to the variance in stress levels.

3.5.2.3 Analysis of Variance (ANOVA)

ANOVA or analysis of variance deals with differences between sample means, but has no restriction on the number of means (Howell, 1999). Furthermore, it allows one to deal with two or more independent variables simultaneously. It focuses on the individual effects of each variable, but also on the interacting effects of two or more variables (Howell, 1999). ANOVA produces an *F*-Statistic, which compares the amount of systematic variance in the data to the amount of unsystematic variance (Field, 2000). Furthermore, it tests for an overall experimental effect and provides information about the general success of the experimental manipulation, but does not provide specific information about which groups were affected. As such it indicates an effect, but does not indicate where the effect was. The *F*-statistic merely states that the means of the samples are not equal (Field, 2000). In order to explore the data for any in-between-group differences, post hoc tests (Scheffe's Test) were used to compare all different combinations of the treatment groups. This method will be used to determine if statistically significant differences in stress levels, sense of coherence and locus of control exist between the different job levels.

3.5.2.4 T-Tests

The t-scores were calculated to assess whether the sample was experiencing significant levels of stress or not. This was done in order to compare the means of the two groups – to analyse their difference on the assumption that the two groups belong to the same population or to two populations with the same mean.

This method will be used to determine if statistically significant differences in stress levels, sense of coherence and locus of control exist between the different gender groups.

3.6 SUMMARY OF THE CHAPTER

In this chapter the method of research was described. The research strategy, measuring instruments and target population were briefly discussed, as well as the sample size and characteristics and the method of data collection. Lastly a description of the statistical processing of data was provided, which indicated the use of descriptive and inferential statistics.

In chapter 4 the results and findings that were obtained from the statistical processing and analysis will be provided.

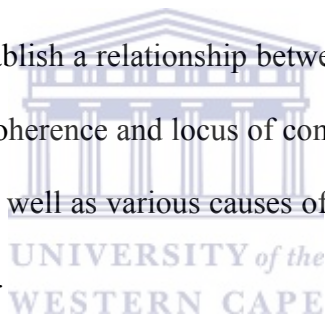


CHAPTER 4

RESULTS AND FINDINGS

4.1 INTRODUCTION

In the previous chapter the research methodology utilised during the study was discussed. In this chapter the empirical results and findings of the research are presented. Statistical analyses involved descriptive and inferential statistics, such as: Pearson-Product-Moment Correlation, One-way ANOVA, Multiple Regression Analysis, Scheffé's Multiple comparison and t-tests. The Statistical Package for Social Sciences (SPSS) was used for all the statistical calculations. As stated earlier, the aim of the study is to establish a relationship between stress and salutogenic functioning in terms of the constructs, sense of coherence and locus of control. The stress levels among various job levels will also be focused on, as well as various causes of stress among employees on different job levels in a state owned enterprise.



4.2 RESULTS

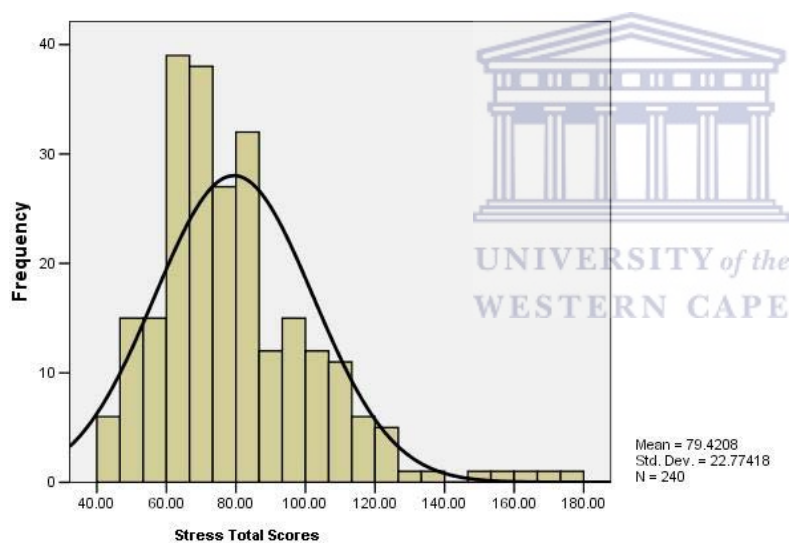
The results of the statistical analyses are presented below. The discussion commences with the findings of the individual scales, the relationships among the variables, the comparison of job levels in terms of stress levels and salutogenic constructs, as well as the comparison of sources of stress as it relates to job levels.

4.3 FINDINGS OF THE INDIVIDUAL SCALES AND THE LEVELS OF STRESS

4.3.1 Experience of Work and Life Circumstances Questionnaire (WLQ)

The WLQ (40 items) was used to measure the total stress levels of the sample, of whom 229 employees responded. The reliability was measured with Cronbach's Alpha ($\alpha = 0.94$; standardised alpha is 0.95). The mean of the scale was 78.56 and standard deviation was 21.02.

Figure 4.1 The Distribution and Descriptive Statistics of the Total Scores on Stress Levels



The stress scores of the entire sample are summarised in Figure 4.1 and descriptive statistics are given in Table 4.1. The mean stress score for the 240 participants is 79.42, with a standard deviation of 22.77. A score of 80 or above is considered to be high as the distribution is skewed to the right (skewness = 1.25). Most of the participants have a relatively low level of stress.

Table 4.1 Descriptive Statistics for the Stress Variable

Stress Levels Total Score	
N	240
Mean	79.4208
Median	75.5000
Mode	64.00
Std. Deviation	22.77418
Skewness	1.250
Std. Error of Skewness	.157
Kurtosis	2.490
Std. Error of Kurtosis	.313
Range	135.00
Minimum	40.00
Maximum	175.00

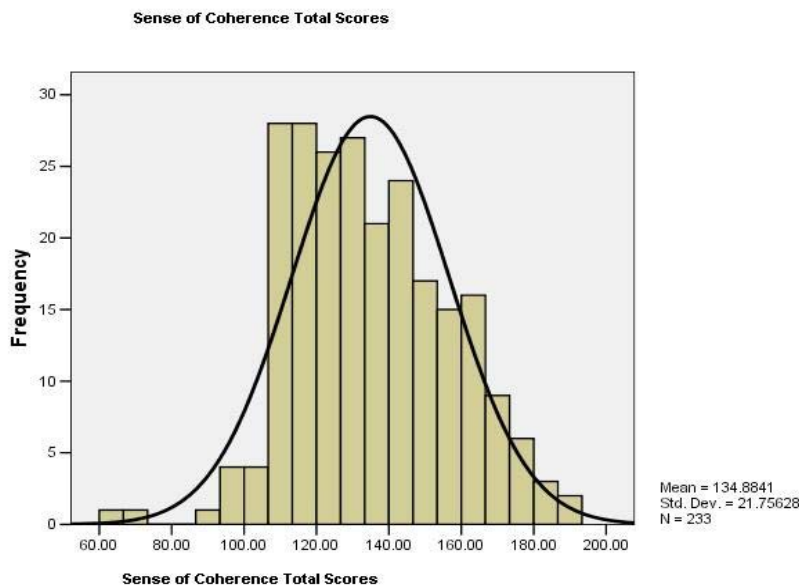
4.3.2 Salutogenic Functioning



4.3.2.1 Orientation to Life Questionnaire (OLQ)

The OLQ (29 items) was used to measure the sense of coherence of the sample of whom 233 responded. The reliability was measured with Cronbach's Alpha ($\alpha = 0.87$; standardised alpha is 0.87). The mean of the scale was 134.88, the standard deviation was 21.76 (See figure 4.2).

Figure 4.2 The Distribution of Sense of Coherence Total Scores



The sense of coherence scores of the entire sample are summarised in Figure 4.2. The theoretical range of scores on the OLQ is 29 to 203. Scores are clustered on the high side of the distribution (for descriptive statistics see Table 4.2). Jackson and Rothmann (2001) present normative data on sense of coherence, with means and standard deviations of samples from a variety of industries against which comparisons can be made. The Health Services Institution, of Jackson and Rothmann's (2001) study, which represents the organisation closest to the one in the present study, had a mean sense of coherence score of 131.20, and a standard deviation of 20.62, for the 100 participants. As such the sample of employees from the state owned enterprise compares favourably.

Table 4.2 Descriptive Statistics for the Sense of Coherence Variable

Sense of Coherence	
N	233
Mean	134.8841
Median	133.0000
Mode	131.00
Std. Deviation	21.75628
Skewness	.167
Std. Error of Skewness	.159
Kurtosis	-.071
Std. Error of Kurtosis	.318
Range	125.00
Minimum	63.00
Maximum	188.00

4.3.2.2 Locus of Control Inventory

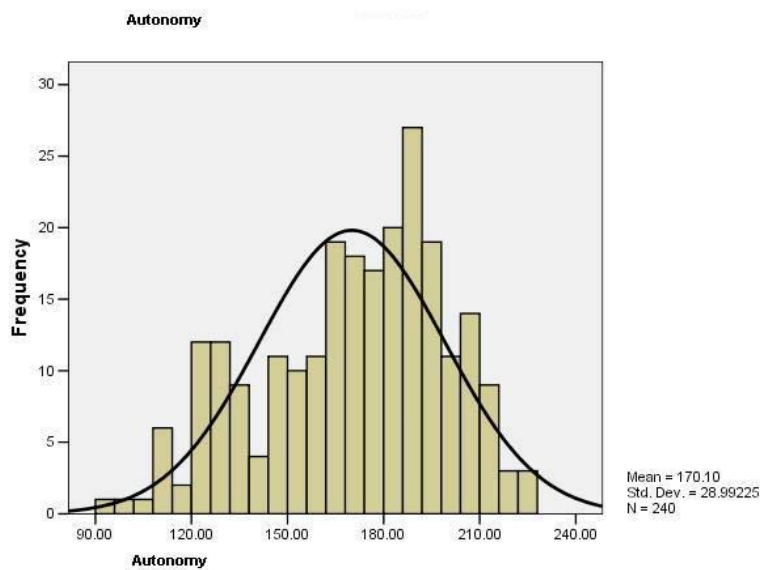
4.3.2.2.1 Subscales of the LCI



(a) Autonomy

The Autonomy subscale of the LCI (34 items) was used to measure the level of autonomy of the sample of whom 228 responded. The reliability was measured with Cronbach's Alpha ($\alpha = 0.93$; standardised alpha is 0.93). The mean of the scale was 170.10. The standard deviation was 28.99.

Figure 4.3 The Distribution of Autonomy Scores



The autonomy scores of the entire sample are summarised in Figure 4.3. The present sample of employees from a state owned enterprise were compared to Schepers' (2005) norm group (n = 3033) of first-year university students with a mean of 148.90 and a standard deviation of 16.73 for the autonomy scale. Furthermore the Police Service of Jackson and Rothmann's (2001) study, which represents another organisation similar to the one in the present study, has a mean of 141.73 for the Autonomy scale and a standard deviation for 13.10, for the 101 participants. As such it is evident that the sample of employees from the state owned enterprise has a higher autonomy score than the abovementioned samples.

Table 4.3 Descriptive Statistics for the Autonomy Variable

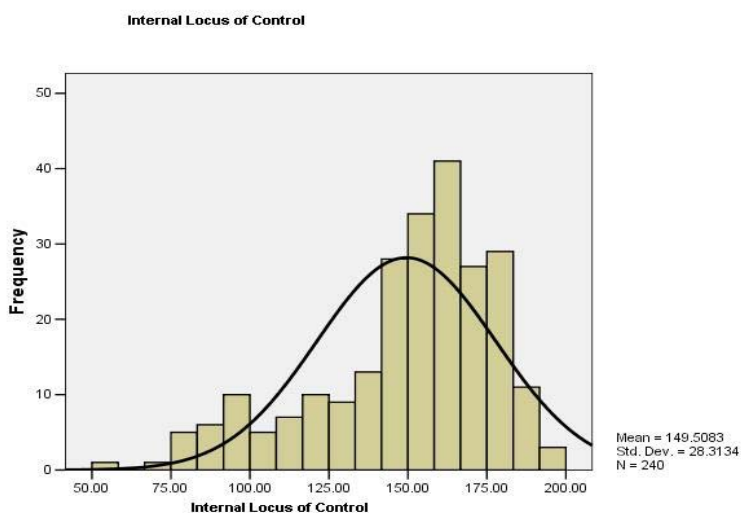
Autonomy	
N	240
Mean	170.1000
Median	175.0000
Mode	190.00
Std. Deviation	28.99225
Skewness	-.458
Std. Error of Skewness	.157
Kurtosis	-.625
Std. Error of Kurtosis	.313
Range	129.00
Minimum	95.00
Maximum	224.00



(b) Internal Locus of Control

The Internal Locus of Control subscale of the LCI (28 items) was used to measure the level of internal locus of control of the sample of whom 233 responded. The reliability was measured with Cronbach's Alpha ($\alpha = 0.95$; standardised alpha is 0.95). The mean of the scale was 149.51. The standard deviation was 28.31.

Figure 4.4 The Distribution of Internal Locus of Control Scores



The internal locus of control scores of the entire sample are summarised in Figure 4.4. The present sample of employees from a state owned enterprise were compared to Schepers' (2005) norm group (n = 3033) of first-year university students with a mean of 184.12 and a standard deviation of 14.39 for the internal locus of control scale. Furthermore the Police Service of Jackson and Rothmans's (2001) study, which represents another organisation similar to the one in the present study, had a mean of 148.91 for the internal locus of control scale and a standard deviation of 13.62, for the 101 participants. As such compared to Schepers' (2005) norm group, the present study has a relatively lower score on the internal locus of control scale. However, compared to the Police Service sample of Jackson and Rothman (2001) and several of the other industries mentioned in their study, the sample of employees from the state owned enterprise compares favourably regarding the internal locus of control scale.

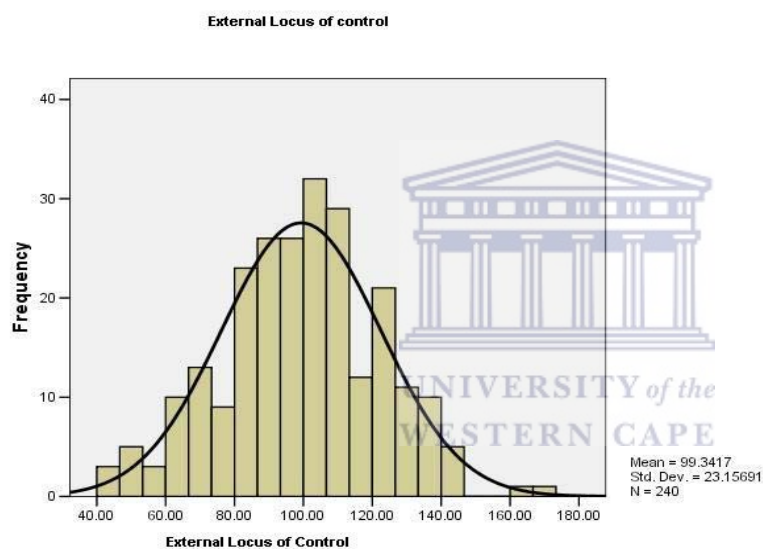
Table 4.4 Descriptive Statistics for the Internal Locus of Control Variable

Internal Locus of Control	
N	240
Mean	149.5083
Median	156.0000
Mode	177.00
Std. Deviation	28.31340
Skewness	-.970
Std. Error of Skewness	.157
Kurtosis	.428
Std. Error of Kurtosis	.313
Range	143.00
Minimum	53.00
Maximum	196.00

(c) *External Locus of Control*

The External Locus of Control subscale of the LCI (26 items) was used to measure the level of external locus of control of the sample of whom 234 responded. The reliability was measured with Cronbach's Alpha ($\alpha = 0.88$; standardised alpha is 0.88). The mean of the scale was 99.34. The standard deviation was 23.16.

Figure 4.5 The Distribution of External Locus of Control Scores



The external locus of control scores of the entire sample are summarised in Figure 4.5. The present sample of employees from a state owned enterprise were compared to Schepers' (2005) norm group ($n = 3033$) of first-year university students with a mean of 97.91 and a standard deviation of 21.46 for the external locus of control scale. Furthermore the Police Service of Jackson and Rothmann's (2001) study, which represents another organisation, similar to the one in the present study, had a mean of 85.79 for the external locus of control scale and a standard deviation of 19.16, for the 101

participants. As such the sample of employees from the state owned enterprise compares favourably with a noticeably higher score on the external locus of control scale.

Table 4.5 Descriptive Statistics for the External Locus of Control Variable

External Locus of Control	
N	240
Mean	99.3417
Median	100.0000
Mode	109.00
Std. Deviation	23.15691
Skewness	-.086
Std. Error of Skewness	.157
Kurtosis	-.047
Std. Error of Kurtosis	.313
Range	129.00
Minimum	41.00
Maximum	170.00



4.4 RELATIONSHIPS AMONG THE VARIABLES

The following hypotheses were tested by investigating the correlations between the relevant variables. Correlations have proven to be significant, therefore the all null hypotheses are rejected.

Main Hypothesis 1

There is an inverse relationship between stress levels and salutogenic functioning in terms of the constructs sense of coherence and locus of control. From this main hypothesis the following sub-hypotheses were tested.

Sub Hypothesis 1

There is an inverse relationship between stress levels and sense of coherence. The product moment correlation between stress and sense of coherence was found to be significant ($r = -.581, p < .001, N = 233$).

Sub Hypothesis 2

There is an inverse relationship between stress levels and autonomy. The product moment correlation between stress and autonomy was found to be significant ($r = -.359, p < .001, N = 240$).

Sub Hypothesis 3

There is a direct relationship between stress levels and external locus of control. The product moment correlation between stress and external locus of control was found to be significant ($r = .345, p < .001, N = 240$).



Sub Hypothesis 4

There is an inverse relationship between stress levels and internal locus of control. The product moment correlation between stress and internal locus of control was found to be significant ($r = -.218, p < .001, N = 240$).

Table 4.6 Correlations between variables: Sense Of Coherence, Autonomy, External Locus of Control and Internal Locus Of Control

Independent Variables	Stress		
	<i>r</i>	<i>p</i> *	<i>n</i>
Sense of Coherence	-.581	.000	233
Autonomy	-.359	.000	240
External Locus of Control	.345	.000	240
Internal Locus of Control	-.218	.001	240

*Note: All p levels are two-tailed.

Multiple regression analysis was used to test the main hypothesis. The summary of the results is provided in Table 4.7

Table 4.7 Summary Statistics of the Regression of Predictors Sense of Coherence and Locus of Control on the Dependent Variable Stress

Model	R	R ²	Adjusted R ²	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R ² Change	F Change	df1	df2	Sig. F Change	
1	.587(a)	.345	.342	18.60733	.345	121.571	1	231	.000	
2	.602(b)	.362	.357	18.39546	.018	6.352	1	230	.012	1.812

a Predictors: (Constant), Sense of Coherence
b Predictors: (Constant), Sense of Coherence, External Locus of Control
c Dependent Variable: Stress

Both the predictors, sense of coherence ($F(1, 231) = 121.57, p < .0001$) and external locus of control ($F(1, 230) = 6.35, p = .012$) contribute significantly to the variance of the independent variable, stress. Sense of coherence explains about 34% (adjusted $R^2 = .342$) of the variability in stress. By adding external locus of control to the model about 36% (adjusted $R^2 = .357$) of the

variability in stress is explained. A Durbin-Watson statistic of 1.812, being within acceptable limits from a value of 2, means that the residuals are uncorrelated and thus the model does not violate the assumptions of regression analysis (Field, 2000).

4.5 COMPARISONS OF JOB LEVELS IN TERMS OF STRESS LEVELS

A one –way ANOVA was used to compare the stress levels of the five different job levels. The overall $F(4, 235) = 5.184$, $p < .001$ was found to be significant. The different groups were compared using the Sheffé's test and it was found that only junior staff and middle management differed significantly (Mean difference = 11.90, $p = .018$).



4.6 COMPARISONS OF JOB LEVELS IN TERMS OF SENSE OF COHERENCE

A one –way ANOVA was used to compare the sense of coherence of the five different job levels. The overall $F(4, 228) = 10.882$, $p < .001$ was found to be significant. The different groups were compared using the Sheffé's test and it was found that only junior and senior management (Mean difference = -14.91, $p = .030$), junior and middle management (Mean difference = -19.22, $p < .001$) differed significantly.

4.7 COMPARISONS OF JOB LEVELS IN TERMS OF AUTONOMY, INTERNAL AND EXTERNAL LOCUS OF CONTROL

A one –way ANOVA was used to compare autonomy of the five different job levels. The overall $F(4,235) = 10.414$; $p < .001$ was found to be significant. The different groups were compared using the Sheffé's test and it was found that only junior and middle management (Mean difference = -25.16, $p < .001$) differed significantly.

A one –way ANOVA was used to compare internal locus of control of the five different job levels. The overall $F(4,235) = 4.689$; $p < .001$ was found to be significant. The different groups were compared using the Sheffé's test and it was found that only junior and middle management (Mean difference = -16.97, $p = .004$) differed significantly.

A one –way ANOVA was used to compare external locus of control of the five different job levels. The overall $F(4,235) = 4.290$; $p = .002$ was found to be significant. The different groups were compared using the Sheffé's test and it was found that only junior and middle management (Mean difference = 12.32, $p = .016$) differed significantly.

4.8 GENDER DIFFERENCES IN TERMS OF STRESS LEVELS

T- tests were used to compare the stress levels of the two gender groups. The $t(238) = 1.941$, $p = .053$ was found to be not significant with the mean of the females = 83.40 and that of the males = 77.40.

4.9 GENDER DIFFERENCES IN TERMS OF SENSE OF COHERENCE

T- tests were used to compare sense of coherence of the two gender groups. The $t(231) = 2.075$, $p = .039$ was found to be significant with the mean of the females = 130.74 and that of the males = 136.97.

4.10 GENDER DIFFERENCES IN TERMS OF LOCUS OF CONTROL

T- tests were used to compare the autonomy of the two gender groups. The $t(238) = 1.549$, $p = .123$ was found to be not significant.

T- tests were used to compare the internal locus of control of the two gender groups. The $t(238) = -.023$, $p = .981$ was found to be not significant.



T- tests were used to compare the external locus of control of the two gender groups. The $t(238) = -.014$, $p = .989$ was found to be not significant.

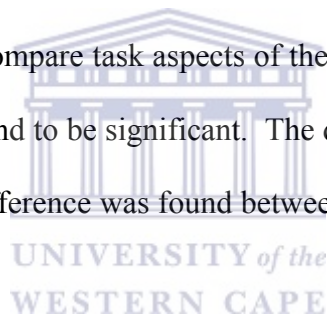
4.11 COMPARISON OF SOURCES OF STRESS AND JOB LEVELS

4.11.1 Organisational Functioning

A one –way ANOVA was used to compare organisational functioning of the five different job levels. The overall $F(4, 231) = 3.096$, $p = .017$ was found to be significant. However, when the different groups were compared using the Sheffé's test, no significant differences were found between the different job levels.

4.11.2 Task Characteristics/Aspects

A one –way ANOVA was used to compare task aspects of the five different job levels. The overall $F(4, 231) = 4.750$, $p = .001$ was found to be significant. The different groups were compared using the Sheffé's test and a significant difference was found between junior staff and senior management (Mean difference = -7.35, $p = .034$).



4.11.3 Physical Working Conditions and Work Equipment

A one –way ANOVA was used to compare physical working conditions and work equipment of the five different job levels. The overall $F(4, 231) = 6.626$, $p < .001$ was found to be significant. The different groups were compared using the Sheffé's test and a significant difference was found between junior staff and senior management (Mean difference = -6.98, $p = .001$).

4.11.4 Career Prospects

A one –way ANOVA was used to compare career prospects of the five different job levels. The overall $F(4, 231) = 4.468$, $p = .002$ was found to be significant. The different groups were compared using the Sheffé’s test and a significant difference was found between junior staff and senior management (Mean difference = 4.93, $p = .036$).

4.11.5 Social Aspects

A one –way ANOVA was used to compare social aspects of the five different job levels. The overall $F(4, 231) = 4.238$; $p = .002$ was found to be significant. The different groups were compared using the Sheffé’s test and a significant difference was found between junior staff and senior management (Mean difference = -4.37, $p = .024$).

4.11.6 Salary, Benefits and Personnel Policies

A one –way ANOVA was used to compare salary, benefits and personnel policies of the five different job levels. The overall $F(4, 228) = 4.018$; $p = .004$ was found to be significant. The different groups were compared using the Sheffé’s test and a significant difference was found between junior staff and senior management (Mean difference = -6.39, $p = .034$).

4.11.7 Extra-Organisational Factors

A one –way ANOVA was used to compare extra-organisational factors of the five different job levels. The overall $F(4, 231) = 7.695$; $p < .001$ was found to be significant. The different groups

were compared using the Sheffé's test and a significant difference was found between junior staff and middle management (Mean difference = 7.57, $p < .001$).

4.12 SUMMARY OF CHAPTER

Descriptive statistics and inferential statistics were used in chapter 4 to describe and establish the relationship between stress and salutogenic functioning. In the next chapter, conclusions are made and criticism is offered against the present research. Furthermore, recommendations will be made based on the prior results.



CHAPTER 5

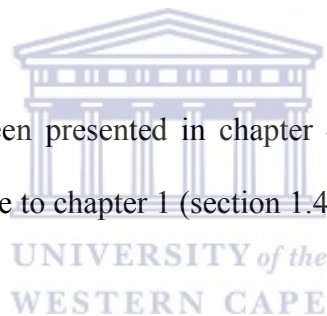
DISCUSSION, CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

In this chapter the results and conclusions will be discussed based on the statistical findings, as presented in chapter 4. To conclude the chapter, the focus will be placed upon the limitations of the research, as well as various recommendations that can be made with reference to the present study.

5.2 DISCUSSION AND INTEGRATION OF EMPIRICAL FINDINGS

The results of the research have been presented in chapter 4. The empirical objectives will be integrated accordingly, with reference to chapter 1 (section 1.4).



5.2.1 Empirical Objective 1

To determine the levels of stress present in employees from a state owned enterprise.

Human assets may be the essential determinant of an organisation's success and therefore alleviation of stress in the workplace should be the key priority for organisations, presently and in future (Johnson, 2004). If stress is left unchecked it will increase costs for the organisation, as well as for the employee (Morris, 2004). According to the literature, workplace factors are not consistently related to stress in all workplaces and one should rather identify salient workplace dimensions than a broad approach when seeking workplace associations with stress (Fairbrother & Warn, 2003).

The literature further indicates that selected individual qualities are viewed as moderators of the relationship between stressors and stress symptoms. Stressors are always present in the work environment and life in general and general resistance resources (GRR) assist individuals in maintaining psychological health (Antonovsky, 1987). GRR's are developed through experience and characteristics of an individual/ group/ sub-group/ society, which enables effective stress management (Antonovsky, 1979).

Stress is mostly a psychological phenomenon with a clear physical component (Jordan, 2002). As such it becomes the physiological and psychological response an individual makes to an external event or condition, called a stressor (Matteson & Ivancevich, 1982, p. 9). Stress is about the perception and how individuals respond to the situation. The focal point is the individual's interpretation of the challenging/ harmful event and whether the individual has resources to cope with it (Anisman & Merali, 1999). Stress is viewed as a response to the environment, therefore it is triggered by change and change is an essentially unavoidable part of everyday life. Furthermore, it was found that at times stress is a requirement for optimal functioning for some individuals, however, this is only the case with individuals that cope with stress and deal with it optimally, through methods such as salutogenic functioning (Viviers, 1998b).

The results identified that the present sample of employees from a state-owned enterprise is experiencing relatively moderate levels of stress ($M = 75.5$, $n = 240$, $SD = 22.77$). According to Van Zyl and van der Walt (1991) a score of 40-79 is viewed as normal, a score of 80 or above is an indication of high stress and a score of 98 -200 is viewed as very high. The distribution of scores is positively skewed, thus most employees reflected normal stress levels. However, it should be noted that the categories only serve as guidelines and should not be regarded as absolute limits in this regard (Van Zyl & van der Walt, 1991).

It was proposed that middle management and junior staff are likely to have higher levels of stress, as a result of their limited amount of authority in decision-making. Middle management may have some degree of control, but not the “ultimate” level of control and may be frustrated by this aspect (Greer, 2005). Antonovsky (1987) supported the notion that work plays a significant role in molding the individual’s sense of self-coherence. A predictable and manageable work environment that allows the individual to participate in decision-making and provides the employee with a voice, will lead to productive performance, recognition, reward and promotion (Kossuth & Cilliers, 2002). In turn, these experiences will become work related GRR’s that will strengthen the individual’s sense of coherence to a further degree (Kossuth & Cilliers, 2002).

When comparing the various job levels with stress levels it was found that junior staff had significantly higher levels of stress than senior management. When the job levels were compared regarding the sources of stress it was found that junior staff, in comparison with senior management, indicated that task characteristics; physical working conditions and job equipment; social aspects; salary, benefits and personnel policies, were significant sources of stress.

In comparison with junior staff, it was found that senior management feels that career prospects are a significant source of stress. Furthermore, middle management presented higher levels of stress as a result of extra-organisational factors. In comparison with junior staff it was found that middle management revealed that extra-organisational factors are a significant source of stress.

Stress and its impact on the organisation’s bottom line is increasing and employers are urgently seeking the causes (Morris, 2003). While stress is an inevitable consequence of the human condition, employers need to distinguish between the sources of stress they can control and implement interventions to reduce such causes (Morris, 2003). According to Dua (1994), intrinsic

job factors, nature of the organisation, career development, poor relationships at work and organisational culture can be identified as organisational stressors. Aspects outside the work environment also have an impact on the individual employee. The literature further stressed that stress is an inducer of workplace problems and managers need to make it their responsibility to deal with stress as it contributes to the bottom-line (Morris, 2003).

Regarding gender it was found that males and females did not differ significantly regarding their stress levels.

5.2.2 Empirical Objective 2

To measure the levels of salutogenic functioning in terms of the salutogenic personality

constructs: sense of coherence and locus of control amongst employees from a state owned enterprise.



5.2.2.1 Sense of Coherence

Antonovsky (1979) proposed that a key factor for salutogenesis is a person's sense of coherence and in general sense of coherence is important to one's health. It further enables the individual to consider the best coping strategy for a specific problem. Sense of coherence functions as a mitigator of life stress by addressing the general quality of individual behaviour and not the specific responses to specific behaviours (Flannery & Flannery, 1990). The literature further indicated that sense of coherence reduces the negative emotional consequences produced by strain and therefore these constructs reduce illness and enhance a feeling of confidence in coping with life stress (Kravetz & Florian, 1993).

According to the results (chapter 4), it was found that levels of salutogenic functioning are distributed more or less normally among employees of the state owned enterprise, with a mean of 34.9 and a median of 33. Regarding the various job levels it was found that junior staff had significantly lower sense of coherence than both senior management and middle management. Furthermore the results indicated that males of this sample generally have higher sense of coherence than females. As such it was found that employees from a state owned enterprise have relatively high sense of coherence functioning. A high sense of coherence results in a feeling of confidence in coping with life stress. It functions as a mitigator of life stress by addressing the general quality of an individual's behaviour (Flannery & Flannery, 1990).

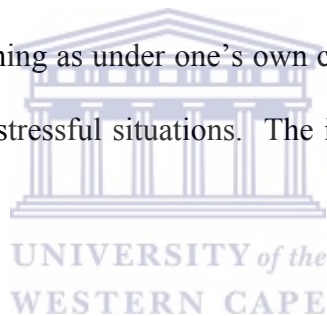
The above-mentioned results confirm the literature which indicates that coping evolves around a sense of coherence as a focal point (Viviers, 1998a). Stress becomes manageable as events are experienced as bearable and challenging (Viviers, 1998a). This orientation presupposes that individuals with a relatively high sense of coherence, function at an optimal level in their lives and at work (Viviers, 1998a). Literature further indicates that sense of coherence correlates negatively with life stress and psychological symptomatology and appears to mitigate the impact of life stress for specific stressors (Flannery & Flannery, 1990).

Interpretation and perception of the stressor, is key to the present study. If one functions salutogenically, one will tend to have a more positive perception of situations or experiences (Dua, 1994). Stressors can be viewed as objective events and stress is the subjective experience of the event and strain is the maladaptive response to stress (Dua, 1994). The experience of stress further depends on individual characteristics such as coping strategies and salutogenic functioning is a coping strategy. As a result salutogenic functioning individuals, should have a different perception based on their sense of coherence and will therefore respond with lower levels of strain.

5.2.2.2 Locus of Control

Folkman (1984, p. 850) states that "...control can be viewed as a cognitive mediator of a stressful transaction and its adaptational outcome."

Literature indicates that managers need to assist employees in developing a perceived sense of personal control and provide them with social support from supervisors. Individuals with perceived control seem able to deal better with stressful situations, than individuals without a sense of control. This links to internal locus of control, where individuals perceive that they have control over the situation and that the outcome is contingent upon their own behaviour or personal characteristics. Control can thus be viewed as a cognitive mediator of a stressful transaction and its altered outcome (Folkman, 1984). Perceiving something as under one's own control can promote a healthy outlook on life and a positive perception of stressful situations. The individual takes responsibility for the outcome of a situation or experience.



Perceived control is important in judging the situation. As such, if individuals have an internal locus of control, the level of authority they have on an external level, would not necessarily affect the way they perceive the stressful situation, due to the fact that their perception of control of the situation will be directly linked to their sense of coherence and internal locus of control. However, if they are not equipped with an internal locus of control, external levels of control will be of great importance to them.

The results indicated that junior staff has significantly higher external locus of control than middle management. Junior staff also has higher levels of stress than middle management. Furthermore it was found, with regression analysis, that external locus of control contributes to the variance in

stress levels. There was further no significant difference regarding the autonomy, internal locus of control and external locus of control of the two gender groups.

According to the literature, control enhances stress resistance and in terms of coping, a sense of control will lead to actions that aim at transforming events into something more stable (Rosenbaum & Jaffe, 1983). As such individuals with an internal locus of control and a high sense of coherence are likely to have lower levels of stress, which indicates a presence of salutogenic functioning. This was found to be the case with middle and senior management, however, the opposite is evident for junior staff from the state owned enterprise. A salutogenic functioning individual possesses the mediating aspects to prevent the negative impact of stress. As such it functions as an intrinsic resource of the person (Heim, 1991; Shaw et al., 1993).

5.2.3 Empirical Objective 3

To explore the relationship between stress and salutogenic functioning among employees from a state owned enterprise.



From the results of the regression analysis (chapter 4) and the interpretation in chapter 5 (section 5.2.), it has become evident that sense of coherence and an external locus of control are predictors of the stress levels among employees from a state owned enterprise. There are also significant inverse relationships between autonomy and stress and internal locus of control and stress. These relationships imply that the higher the levels of autonomy and internal locus of control, the lower stress levels of all the participants.

According to Parkes (1994), individual differences in personality and ability, have broad implications for occupational performance. As salutogenic functioning is a form of coping it is

likely to act as a mediator between stressors and the impact of stress on the individual. Furthermore coping depends on the successive processes of cognitive appraisal and reappraisal. Salutogenic functions influence the way one approaches stress, which will in turn allow successful coping with stressors. The salutogenic paradigm includes the potential to maintain and enhance the psychological well-being within the context of a stressful environment (Spangenberg & Orpen-Lyall, 2000).

According to the literature on the salutogenic perspective, individuals with a high sense of coherence and an internal locus of control are likely to possess low levels of stress and can be expected to remain healthy – i.e. have low levels of stress. Furthermore, salutogenic functioning is viewed as an advantage to the organisation in its selection processes, organisational and management development, career planning, performance appraisal, evaluation and morale enhancement (Viviers, 1999). According to Kossuth and Cilliers' (2000) research, it is seemingly clear that the individual's salutogenic coping skills form a solid basis for effective leadership and creating a supportive culture, which will indirectly lead to a more constructive experience of stressors. Furthermore, salutogenic functioning affects the way individuals perceive the environment/ situation (Cilliers & Kossuth, 2002). As such a salutogenically functioning employee, will perceive and assess the organisational climate positively and will understand the nature thereof - it will make more sense to the individual (Cilliers & Kossuth, 2002). Cilliers and Kossuth (2002) further found that the individual's experience of a positive organisational climate relates to a high level of salutogenic functioning.

According to Smith (2002), the brain has processes such as functional salutogenic mechanisms, which enable an individual's outlook on life to benefit his/ her health. As such an individual who has developed a salutogenic approach to stressors is less likely to develop physical and mental

illnesses, due to a homeostatic balance that is restored through the use of coping mechanisms and will result in optimisation under stress (Viviers, 1998b). Perceiving things as positive and understanding the nature thereof, will in turn allow the individual to make more sense of the situation. As such individuals acting from an internal motivation will believe in their own ability to have a positive influence on the environment. Salutogenic appraisals of a situation would relieve negative emotions and provide an opportunity for coping effectively, whereas a pathogenic appraisal can encourage a vicious, malignant, downward spiral of negative perceptions that increase the experience of stress.

5.2.4 Empirical Objective 4

To formulate possible recommendations based on the literature, as well as the empirical findings of this research, regarding future research on employees in state owned enterprises

This empirical objective will be discussed in the recommendations section (section 5.5)



5.3 CONCLUSIONS

Stress occurs in all organisations. The extent and causes of elevated stress levels makes coping with stress a crucial issue for management to address, through EAP stress management programmes. Stress can no longer be ignored and effective handling thereof is crucial to the productivity of organisations. As such possessing a high sense of coherence and an internal locus of control will assist in acquiring a healthy perception of stressors, which will result in the successful handling of stress.

From the results it is clear that salutogenic functioning in terms of sense of coherence and locus of control, have a significant relationship. Although stress levels are moderate within this particular state owned enterprise it may not be a true reflection of the levels of stress in the organisation. It is also clear that individuals who display a high sense of coherence and an internal locus of control have lower levels of stress.

The literature review has indicated and confirmed that stress is a universal phenomenon with both positive and negative results, depending on the individual's perception and interpretation of the specific situation or occurrences. However, the negative outcomes of stress related situations should be limited. This can be done by using alternative resources and coping mechanisms, such as a high sense of coherence or an internal locus of control to allow individuals to interpret the situation as comprehensible, manageable and meaningful.

As stress is an increasing reality of the work environment, resulting in negative implications for the individual as well as the organisation, it has become a crucial part of research. Stress-related problems should be addressed and solutions need to be found. Establishing the relationship between stress and salutogenic functioning within a state owned enterprise will lay the foundation for further research which can enhance awareness, highlight important issues and provide solutions in the form of training programmes, development initiatives and workshops. There are strategies for positive stress management, however, organisations need to consider the specific individuals and their available resources for coping with stress.

5.4 LIMITATIONS OF THE PRESENT STUDY

Each research study has shortcomings and it is of great importance to make the reader aware of such aspects. The first criticism of the study is the sample size. Although enough questionnaires were received to do statistical analysis, a larger sample would have been to the benefit of the study, as it is a better representation of the study. Size does not reduce the importance of the study, but rather highlights the necessity for further research.

Furthermore the researcher had no control over the number of respondents from the different job levels that volunteered to respond. Due to the length and number of questionnaires, as well as the culture of the organisation, it was extremely difficult to find respondents to complete the questionnaires. Individuals in the general work environment neither have the time, nor the motivation to fit such questionnaires into their already overfull schedules. Therefore random sampling could not be accomplished. As such the sample consisted of respondents who voluntarily opted to answer the questionnaires. As a result the employees who decided to respond, may or may not represent the population of employees precisely, with regard to levels of stress or salutogenic functioning.

The present research was a quantitative analysis and as such the full picture of the complex nature of individual functioning in stressful situations may not be provided, as it is to some extent restrictive. By including a qualitative analysis a different dimension can be added to the research.

Other variables besides salutogenic functioning may account for the variance or similarities in individuals' capacity to cope with stress.

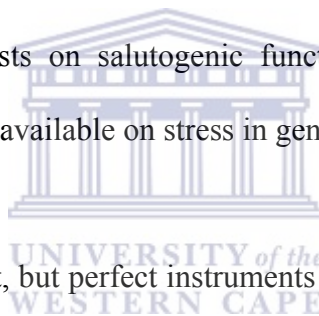
The number of salutogenic constructs may have been insufficient to generalise the findings to, how individuals manage stress and remain healthy in state owned enterprises. However, the two constructs (sense of coherence and locus of control) used in the study were imperative for establishing the importance of perception and interpretation when coping with stressful situations.

The lack of definitional clarity of the concepts stress and coping may have limited empirical testing at a theoretical and methodological level.

Due to the fact that individuals in the particular state owned enterprise, experience stress in varying degrees, generalisation to the wider public sector should be approached with caution.

A limited amount of literature exists on salutogenic functioning in a state owned enterprise, compared to the amount of literature available on stress in general, as well as in the workplace.

The WLQ is not a perfect instrument, but perfect instruments do not exist. In future research it can rather be utilised as a supplementary measuring instrument to an instrument that assesses stress management.



5.5 RECOMMENDATIONS

It is recommended that more salutogenic constructs be included in future studies on the relationship between stress and salutogenic functioning in the workplace. Furthermore, a comparative study between various state owned enterprises and their employees' level of salutogenic functioning can be recommended for future research.

Regarding the LCI, it should be noted that the subscales are not placed on the same continuum, but rather present as separate constructs. This may be questionable, as one would like to measure locus of control as a single construct of salutogenic functioning.

Due to the nature of the human being and the culture of the specific state owned enterprise, it is recommended that a single instrument be developed to assess the various salutogenic constructs, instead of utilizing separate questionnaires that measure all the various constructs independently. Perhaps constructs with common characteristics can be assessed with a distinct measure of salutogenic functioning.

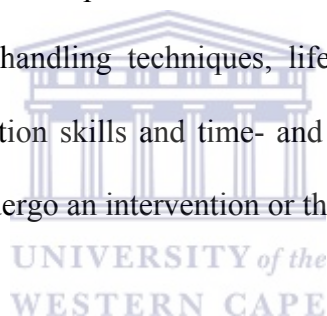
Regarding the WLQ, it does not have to be administered in its entirety. If the purpose is to assess stress levels, the section regarding the experience of stress can be administered. However, if the purpose is to determine the type of problems experienced in the work environment, the section relating to expectations within the work can be administered. As such one can select the appropriate section and administer it accordingly.

It should be noted that respondents' scores on the WLQ can fluctuate over time, as a result of experiences and causes of stress that can vary according to the situation. It is therefore

recommended that the WLQ be administered on more than one occasion to obtain an accurate picture of an individual's level of stress, as well as the causes thereof.

It is clear from the literature review that stress is a part of human existence and as such a result of life style and approach to work. If individuals experience elevated levels of stress the necessary support should be provided to ensure successful living and productivity within the work environment. Organisations need to pay attention to and recognise the stressors in order to change the way employees perceive and interpret such situations. This may be a long and difficult process, however, it empowers individuals to confront, rather than avoid the inevitable occurrence of stress.

At the same time individuals should be exposed to an EAP stress management programme which addresses aspects such as: stress handling techniques, life style changes, perception changes, behaviour modification, communication skills and time- and self-management. If the high stress levels persist, employees need to undergo an intervention or therapeutic treatment.



Salutogenic functioning can be beneficial to all who have developed this skill or coping strategy. It could further be supported, if authority figures acknowledge stress as a very serious and rapidly growing phenomenon. If the correct training programmes, structures and strategies are in place, the workforce can be educated in acquiring the skill of salutogenic functioning. Some individuals may have a natural inclination toward salutogenic functioning, as a result of genetics, conditioning and environmental influences, while others will need to make a more concerted effort to change their way of thinking.

5.6 CONCLUDING REMARK

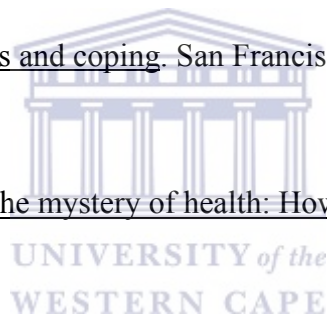
One should always be mindful of the fact that stress is omnipresent and part of every individual's life to a greater or lesser extent. The increase in stress over the past few years is a result of globalisation, as well as modern life styles and work methods currently applied. Individuals with elevated stress levels should obtain the necessary support and assistance to lead a happy, productive life. However, individuals who succeed to acquire and maintain an internal locus of control and a high sense of coherence, may overcome the harmful effects of stress and in turn reduce their levels of stress.

It is the researcher's opinion that external aids to stress are merely pacifiers for the psyche and do not address the actual daily struggle with the stress phenomenon. Once individuals find their internal support and control, they should be able to function successfully in any given circumstance, be that negative or positive. If the experience is perceived as comprehensible, manageable, meaningful and within reasonable bounds of their control, individuals can overcome the harmful effects of stress and in turn reduce their levels of strain. As such individuals experience freedom in the belief that they have control over the situation. Perception is an extremely powerful tool in finding success. If employees are provided with the responsibility and freedom to acknowledge their share and significance in the workplace, they may come to believe that they have control of the stressful situation and that they have the means by which to change it.

The findings from this research could serve as a foundation for further research to understand the complex relationship between stress and salutogenic functioning among employees in a state owned enterprise and to what extent the employees' perception of their control, based on their job level, will affect how they deal with stress.

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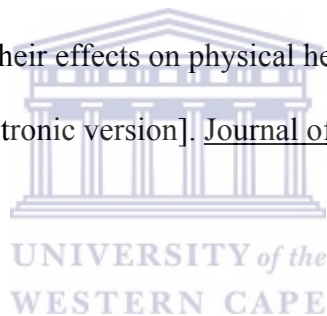
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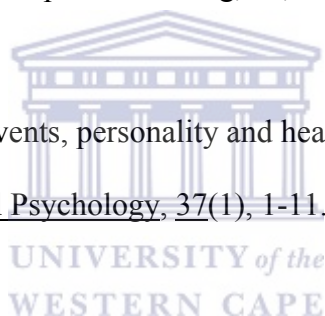


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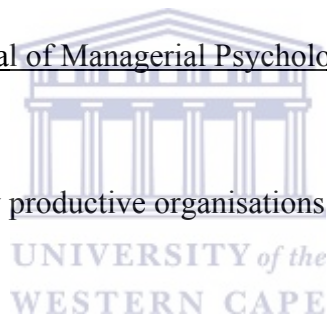
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