

**SALUTOGENIC FUNCTIONING AMONGST UNIVERSITY
ADMINISTRATIVE STAFF**

by

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DECLARATION

I the undersigned declare that this dissertation, titled "*Salutogenic functioning amongst university administrative staff*", is my own work and that all the sources used or quoted, have been indicated and acknowledged by means of complete reference.

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“One of the saddest things is that the only thing man can do for eight hours a day, is work. You can’t eat eight hours a day, nor make love for eight hours”

-William Faulkner (American Novelist)

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ABSTRACT

This study provides an orientation towards coping with stress management through salutogenic functioning. Six constructs, namely, sense of coherence, hardiness, self-efficacy, potency, learned resourcefulness and locus of control, were studied as it manifest amongst random sampled university administrative staff.

The literature review focused on salutogenic functioning, coping and stress, integrated in the salutogenic personality profile.

The results from the research revealed positive correlations between external locus of control and self-efficacy and meaningfulness, autonomy and self control, internal locus of control and meaningfulness, internal locus of control and meaningfulness, challenge and meaningfulness. Negative correlations existed between autonomy and self-efficacy and comprehensibility, potency and all locus of control dimensions, males and females differed in their self control and external control, black africans had the lowest score on external control, and there was no relationship between age and the constructs.

Conclusions and recommendations were made regarding the optimisation of salutogenic functioning among university administrative staff.

KEY TERMS:

Positive psychology paradigm, salutogenic model, compound model of stress, sense of coherence, hardiness, self-efficacy, potency, learned resourcefulness, locus of control

CHAPTER 1

SCIENTIFIC INTRODUCTION TO THE STUDY

In an attempt to investigate whether University Administrative staff do employ coping methods within the sphere of salutogenic perspective to minimise the impact of work related stress, this chapter begins by outlining the background to the research and identifying the problem statements.

The objectives of the research were formulated within the paradigm perspective, followed by the study design, then the research methodology, and concluded with the outline of chapters.

1.1 BACKGROUND TO THE RESEARCH

Ivancevich and Matteson (1988) stated that the exceptional managerial concern about the harmful effects of stress continues to grow and for Karasek and Theorell (1990) it is unlikely to subside. According to Latack and Havlovic (1992), this concern is fuelled by the widely-publicised estimates that stress costs American industry over \$150 million annually in lost of work time, accidents and medical costs. The costs of stress and the pressing need for research based interventions were highlighted again by American Psychologist which devoted the majority of the October 1990 issue to workplace stress (Keita & Jones, 1990).

In approximately 10 years later, "The Work and well-being: An Agenda for the 90's", (Latack & Havlovic, 1992) found yet another slot in 2000' volume (55,1) of the American Psychologist (Cilliers & Coetzee, 2003). This time as positive psychology, which is referred to as the science of positive

subjective experience (Seligman & Csikszentmihalyi, 2000). South Africa is not immune from the above challenges as the International Labour Organisation (ILO) in a survey released predicts that workplace stress will be a bigger threat to global productivity than HIV/AIDS by 2020 (Sunday Times, 2004). This assertion is further supported by the recent Sunday Times news paper, article on “Sickies the new epidemic: worker absenteeism cost South African firms R7 billion a year and it is getting worse (Naidoo, 2006).

In South African research there seems to be more focus on studying coping behaviours from the salutogenic perspective (Strümpfer, 1998). This paradigm was introduced by Antonovsky (1979), its central thesis is that stressors are omnipresent in human existence, yet even with a high stressor load; many people survive and even cope well, whilst others do not (Cilliers, Viviers & Marias, 1998).

It should be recognised though that the paradigm shift to positive psychology – as it studies constructs such as quality of life, happiness, optimism, flow, hope, wisdom, talent and creativity (Snyder & Lopez, 2002), will facilitate an understanding of the amount and types of stressors involved in psychological well being to complement the more traditional focus on pathology (Cilliers & Coetzee, 2003).

1.2 PROBLEM STATEMENT

It is evident from the above-mentioned background to the research that stress challenges the individual’s cognitive, affective, conative and interpersonal capabilities (these will be discussed in detail as integration to the salutogenic personality profile), and thus needs to be managed and controlled. Since there is limited control over extrinsic, the focus shifts to

the relationship between the intrinsic factors (inherent qualities to the individual), stress and coping (Bredell, 2004).

According to Kobasa (1982) and Rosenbaum (1988), the inherent qualities to the individual are those internal driving forces that enable an individual to stay well, succeed, thrive in the midst of stressful circumstances and strenuous experiences in life, these are referred to as salutogenic functioning.

The study therefore focuses on how university administrative staff can make best use of their salutogenic functioning and thereby increase in coping and hopefully decrease in harmful stress in their daily work activities.

From Occupational Psychology, a great deal of knowledge has been gained on how stress affects such groups as physicians, teachers, social workers, blue-collar workers, researchers, policeman, traffic officers, librarians, nurses and engineers (Leung, 1984). Most of these study groupings have been on coping with stress at a general level, few have been on the salutogenic functioning of late on such groups and their strong correlations between salutogenic functioning and their work outcomes (see, Baloyi, 2000; Bredell, 2004; Cilliers, 2002; Cilliers & Coetzee, 2003; Cope, 2004; Dhaniran, 2003; Du Toit, 2003; Du Toit, Coetzee & Visser, 2005; Ganyane, 2005; Jackson & Rothmann, 2001; Mc Guire, 2003; Motshela, 2001; Van Jaarsveld, 2005). This study is to contribute to this body of knowledge.

Lastly, it is with realisation that salutogenic functioning within positive psychology will facilitate the understanding, not only in enabling the individual to cope effectively, but also to perform optimally in terms of work orientations (Bredell, 2004; Cilliers & Coetzee, 2003; Jackson & Rothmann, 2001). The understanding will be shared from workplace

diversity, career management, employee wellness programs, and skills development counselling to self management.

1.3 OBJECTIVES OF THE RESEARCH

The general objective of the research is to study salutogenic functioning amongst university administrative staff.

The specific theoretical objectives are to investigate coping with stress (as a contextual perspective to the research), the chosen salutogenic constructs relevant to this research and to integrate the salutogenic functioning profile which served as basis for the empirical hypothesis.

The specific empirical objective is to calculate and report on the relationship between the salutogenic functioning constructs. And to formulate recommendations to the South African universities in terms of training, career management, counselling and self management, as well as future research.

1.4 PARADIGM PERSPECTIVE

The research model of Mouton and Marais (1993) serves as a framework in this research. It is based upon certain scientific achievements that are acknowledged and accepted by a given scientific community as the basis for further research. These are referred to as paradigms. The research has a salutogenesis outlook. It should be stated that around 2000, the evolution of many of the theories on optimal psychological development, functioning and well-being was grounded to what has become known as the *positive psychology paradigm* (Aspinwall & Staudinger, 2003; Keys & Haidt, 2003; Snyder & Lopez, 2002). This paradigm is defined as the

scientific study of ordinary, positive, subjective, human strength, virtues, experience and functioning (Seligman & Csikszentmihalyi, 2000).

Positive psychology studies at the individual level, *individual characteristics* such as coping (Somerfield & Mc Crae, 2000), well-being (Lynbomirsky, 2001), creativity (Nakamura & Csikszentmihalyi, 2001; Simonton, 2000), resilience (Masten, 2001; Strümpfer, 2000), wisdom (Baltes & Staudinger, 2000), giftedness (Winner, 2000), *human strengths* such as problem solving, emotional intelligence, self-efficacy, satisfaction, locus of control (Lopez & Snyder, 2003) and engagement (Rothmann, 2002), *emotional experiences* in the present such as sensual pleasures, happiness (Buss, 2000; Diener, 2000), flow, joy, love, humour, positive emotion (Fredrickson, 2001), positive affect (Folkman & Moskowitz, 2000), courage, gratitude (Lopez & Snyder, 2003) and *constructive cognitions* is about the future such as hope, faith and optimism (Peterson, 2000; Schneider, 2001). On the group level, Seligman and Csikszentmihalyi (2000) states that the focus is on qualities that move the individuals and institutions towards involved citizenship with responsibility, nurturance, altruism, civility, moderation, tolerance and an appropriate work ethic.

The measurement of these constructs is used increasingly to explain the way in which individual employees develop and function, for instance, how to cope with stress in such a manner that health is maintained and make the best use of work functioning (Bredell, 2004; Cilliers & Coetzee, 2003).

South African research has been substantially reported in this context, focusing on salutogenesis, fortigenesis (Strümpfer, 1990, 1995) and psychofortology (Coetzee & Cilliers, 2001). According to Strümpfer (1990),

it has become something trivial to state that psychology is following 'the medical model', sometimes with rather limited insight to the cliché. However, one way in which the individual has customarily and quite clearly followed this traditional way of thinking is in his/her pathogenic orientation to psychological phenomena, emphasizing the abnormal (Antonovsky, 1979).

The pathogenic orientation is directed, generally, at finding out *why people fall ill* and, in the specific, at *why they develop particular disease entities*. Such understanding is rooted from the pathogenic paradigm, under assumptions that diseases are caused by, physical, biochemical, microbiological and psychosocial agents (Strümpfer, 1990).

Unlike pathogenic paradigm, a paradigm of **salutogenesis** seems to be present in a variety of writings and when defined, *is defined as the study of why and how people stay well* (Antonovsky, 1979). Staying well has to do with how individuals manage tension. Tension is defined as an individual's response to stressors. If tension is managed appropriately, salutogenesis is thus enhanced. The salutogenesis model focuses on the origin of health (salus - health; genesis - origin) while the normal pathological orientation seeks to explain why people get sick (Antonovsky, 1987: 47). For Strümpfer (1995), the term fortigenesis (from Latin: fortis = strong and Greek: genesis = origin) seems to be more descriptive (embracing, more holistic) of the field of study than the term salutogenesis.

Strümpfer (1995) argues that introducing the construct is not to deny the need to search for the origins of health but to point to the closely related origins of the strength needed to be effective at the other end-points of human functioning. In other words salutogenesis would be better served if

called fortigenesis because the focus is more on the enhancement of strength in the individual in general than in the why and how people stay well.

Thinking salutogenically, firstly, do away with the [dichotomy] of people being either diseased or healthy, in favor of what Antonovsky has labeled the 'health ease / disease continuum' (1987, p.3). Antonovsky (1979, 1987) argues that through life experiences, individuals develop '*generalised resistance resources*' (GRR), which he defines as any characteristic of the individual, group, subculture or society that facilitate avoiding or combating a wide variety of stressors. Examples of *anti-factual material* GRR's are wealth, which can buy food and clothing, but also bring power, status and a wide pattern of services. *Cognitive* GRR's are factors such as intelligence-knowledge, *interpersonal-relation* GRR's is factors such as social embeddedness and social support; and the *macro-socio-cultural* GRR's are factors such as rituals and religions.

When an individual regularly experiences the availability of GRR's, a personality construct develops which Antonovsky (1979, p.143) calls *sense of coherence* and for Kobasa (1979) in *Hardiness*, among other salutogenic constructs, these constructs manifest themselves in three directional format. Firstly, by mobilising the GRR's at the individual's disposal, a strong sense of coherence and hardiness can prevent the individual from being subjected to some stressors. Secondly, define some stimuli as welcome, which others might perceive as stressors. Thirdly, an individual will move on the health ease/disease continuum which are operated decisively. Thus there is a feedback loop from the GRR's to strong salutogenic constructs which feeds back to the GRR's which depending on previous experience of overcoming stressors, enhances the salutogenic construct.

The implication of the salutogenic model is that it steered away from the pathogenic model or orientation, which has been directed, generally, at finding out why people fall ill and, in the specific, at why they develop particular disease entities. Such understanding is then used to find ways of combating and preventing each of the disease in turn, (Strümpfer, 1990, p260). Where the pathogenic model is irrevocably wedded to a notion of disease rather than health, the salutogenic model is radically different, (Antonovsky, 1987a). For instance, the writing of Handy (1990) shows very well the move from the positivist theoretical paradigm, which permeates the rest of psychology, in three areas. Firstly, unlike the mechanistic model of human behaviour where human beings are dealt with as unconscious and reactive objects operating within a mechanistic and unchanging environment, human beings are regarded as proactive, self-aware subjects, internationally intervening within a socially constructed world.

Secondly, salutogenesis assumes that society is unstable and that human subjectivity and action may alter simultaneously, in contrast to the universal laws of the natural sciences. Thirdly, importance is placed on the social context within which an individual functions. This means that human behaviour is predominantly governed by the social rules which people generate to understand their world instead of being an oversimplification of a limited range of proximal variables which are easier to measure and control (Hardy, 1990).

The salutogenic model reflects the emphasis on health, rather than on illness. It strives to promote positive health by understanding those factors that enable health to flourish (Kelly, 1989).

On the **meta-theoretical level**, the concepts stress, coping and salutogenic functioning will be defined as follows:

Stress according to Fried (1982), may range from catastrophic stress (which results from disasters and affects the entire regions or population), acute stress (which is the consequence of crises or stressful events which affect individuals or populations with an urgency that necessitates immediate responses), to endemic stress ('a condition of continuous and manifold changes, demands, threats, or deprivations, frequently small in scale and embedded in daily events', p5). Occupational stress may be defined as a state of tension that is created when a person responds to the demands and pressures that come from work, family and other external sources, as well as those that are internally generated from self imposed demands, obligations and self-criticism (Cooper & Bramwell, 1992; Ivancevich & Matteson, 1996)

Coping may be viewed as a technique to efforts, both cognitive and behavioural, to manage environmental and internal demands and conflicts affecting an individual that tax or exceed a person's resources (Coyne, Aldwin & Lazarus, 1981). The rationale behind coping behaviour is to allow the individual to reduce stress or to deal with a situation without experiencing excessive stress (Sutherland, 1995)

Salutogenic functioning, salutogenesis is a study of how individuals, despite the omnipresence of stressors, manage tension and stress in their daily lives and stay well (Strümpfer, 1995). This is referred to as salutogenic functioning according to (Bredell, 2004). Whilst for Kobasa (1992) and Rosenbaum (1988), the inherent qualities to the individual are those internal driving forces that enable an individual to stay well, succeed, thrive in the midst of stressful circumstances and strenuous experiences in life.

Salutogenic constructs, salutogenesis as a concept developed from number of independent constructs that can be traced through the literature, Rotter (1966) “locus of control”; Bandura (1982, 1989) and O’Leary (1985), among others, have studied “self-efficacy”; Bauman and Udry (1972) “powerless”; Ben-Sira (1985) “potency”; Boyce, Scheaper and Uitti (1985) “sense of permanence”; Cohen; (1980) “predictability”; Colerick (1985) “Stamina”; Frankl (1959) “freedom of will, will to meaning, and meaning of life”; Fromm (1947) “productive orientation”; James (1911) “strenuousness”; Kobasa (1982) “hardiness”; Kahn and Schooler (1993) “self-directedness”; Libassi and Maluccio (1986) and White earlier, “competence”; Moos (1984) “domains of social climate”; Rosenbaum (1988) “learned resourcefulness”; and later “learned optimism” Seligman(1990); Senge (1990) “personal mastery”; Thomas (1981) “stamina”; Werner and Smith (1982) “invincibility”.

The list of the salutogenic constructs has been extended from time to time since Antonovsky’s original identification of some constructs. However, what the different constructs have in common is that they focus on how individuals characteristically handle stressors and still remain healthy. The constructs focus primarily on factors such as ability to control and resolve stressful situations successfully. They include a generalised set of beliefs about oneself and about one’s world, which shapes one’s appraisal of a given stressor situation (Antonovsky 1991).

Six salutogenic constructs were selected for the purpose of this research and they are discussed in-depth in chapter 3, namely, sense of coherence by Antonovsky (1979, 1987), hardiness by Kobasa (1979), locus of control by Rotter (1966), self-efficacy by Bandura (1982), potency by Ben-Sira (1985) and learned resourcefulness by Rosenbaum (1988).

Motivation for inclusion to the study, sense of coherence, hardiness, locus of control and self-efficacy were included for they form part of what Antonovsky called “generalised personality orientation” which was studied in relation to successful coping and salutogenic outcomes (1991, p.69). It is important for the purpose of this research as it will indicate the extent an individual views himself or herself as powerless or helpless within the stress domain.

Potency has been included with its strong indication of the emotional coping abilities of respondents alongside self-efficacy. Further to that, the potency construct also includes the interaction between an individual and his or her environment, which includes the commitment to society (Ben-Sira, 1985). Employees can not be viewed in isolation from their environment within the stress sphere; the incorporation of this construct adds an important dimension to the study.

Learned resourcefulness has been recommended for the reason that this construct include not only ‘beliefs’, but also ‘skills’, which all individuals learn from the moment of birth (Strümpfer, 1990). Learned resourcefulness serves as an indication to what extent an individual will employ various skills to minimize the effect of anxiety. The employment of ‘skill’ is not a personality trait according to Strümpfer, but rather a “personality repertoire”, which is a set of complex behaviors; cognition’s and effects (1990). The inclusion of learned resourcefulness will serve as an indication to what extent individuals will take action to minimize the effects of stress.

According to Antonovsky (1991), the salutogenic constructs identified should share the thesis that being high on these personality orientations facilitates successful coping and thus contributes to health. It is with the above conclusion that the six constructs were selected and studied.

1.5 STUDY DESIGN

Next, the type of research, validity and reliability of the research project and the dependent and independent variables are discussed.

1.5.1 Type of the research

Mouton and Marias (1993) distinguish between three basic types of research goals: exploratory, descriptive and explanatory. For the purpose of this research, the goal pursued is partly descriptive for its presentation of the various salutogenic functioning constructs and the relevant theoretical models. Its consideration is to collect accurate information on the domain phenomena during the in-depth investigation.

The research is also partly explanatory. It focuses on how university administrative staff optimises their salutogenic functions and thereby increase coping and hopefully decreasing harmful stress. This is partly explanatory for it indicates causal links between variables or events, and therefore attempts to explain a given phenomenon in terms of specific causes (Mouton & Marais, 1993).

With reference to the said types of research, it is evident that their combination enables the research to gain understanding and therefore be in a position to answer questions raised in this research.

1.5.2 The validity of the research project

The understanding of reality according to the aim of social sciences research is not merely to understand phenomena, but to provide a validity and reliability of reality (Mouton & Marias, 1993). Since the theoretical validity is characterized by distinctness, range and method, internal

validity will be ensured by the use of cross-reference of topics involved. The use of valid instruments (i.e. questionnaires) to measure the salutogenic personality constructs of administrators.

1.5.3 The reliability of the research project

The central consideration of validity in the process of data collection is the reliability of the process. Reliability requires that the application of a valid measuring instrument to different groups under different sets of circumstances should lead to the same observation (Mouton & Marais, 1993). To ensure reliability is maximised, the researcher will make use of valid and structured instruments. The administrative staff who participated in the study is males and females working in one organisation, exposed to more or less the same conditions. The research is conducted at a specific time to enhance the reliability of the research.

1.5.4 Independent and dependent variables

The salutogenic construct shall be considered the independent variable in this research and the dependent variable is the coping mechanism of the administrative staff, which will be measured, described and interpreted in terms of the research problem.

1.6 RESEARCH METHODOLOGY

The research is presented as follows:

Phase 1- Literature review

Step 1 Literature review on coping with stress

- Step 2 Literature review on the selected salutogenic constructs
- Step 3 Integration of coping mechanisms, within the domain of stress, with the salutogenic constructs and salutogenic personality profile
- Phase 2- Empirical Study
- Step 1 Selecting the population and the sample
- Step 2 Motivation for the measuring instruments
- Step 3 Discussion of the procedures and statistical techniques
- Step 4 Formulating a central hypothesis
- Step 5 Reporting and interpretation of the results
- Step 6 Formulation of the conclusions
- Step 7 Discussing the limitations of the research
- Step 8 Formulation of the recommendations of the research

1.7 OUTLINE OF CHAPTERS

The chapters of this research are presented as follows:

Chapter 2: Coping with Stress

Chapter 3: The salutogenic constructs

Chapter 4: Empirical study

Chapter 5: Research results

Chapter 6: Conclusions, limitations and recommendations

1.8 CHAPTER SUMMARY

In an attempt to investigate whether university administrative staff do employ coping methods within the sphere of salutogenic perspective to minimise the impact of work related stress, this chapter presented the background to the research and identified the problem statement.

The objectives of the research were formulated within the paradigm perspective, followed by the study design, then the research methodology and concluded with the outline of chapters.

In chapter 2, coping with stress will be discussed.

CHAPTER 2

COPING WITH STRESS

The objective of this chapter is to define and explore coping with stress as meta-theoretical construct in this research. Stress is defined, a compound model of stress is presented and coping mechanisms are described. The chapter end with a summary.

2.1 CONCEPTUALISATION OF STRESS

Stress is defined as a state of tension that is created when a person responds to the demands and pressures that come from work, family and other external sources, as well as those that are internally generated from self imposed demands, obligations and self-criticism (Barling, Kelloway & Frone, 2005; Cooper & Bramwell, 1992; Ivancevich & Matteson, 1998, 1996).

Stress has been viewed variably in the stress literature, ranging from stimulus (Sulsky, 2004) as a feeling which result from excessive pressures and environmental stimulation (Priest & Welsch, 1998) as the person's response to disturbing or noxious environments (Cooper, 2000; Sutherland, 2000) and as a general interaction between a person and his/her environment (Strümpfer & Louw, 1989).

Warren and Toll (1997) describes stress as the feelings associated with the individuals' pressure, such as anger, anxiety, fear, depression, tension, exhaustion despair, isolation and resentment and the implications in the individuals' busy life, both in and out of work. Stress has come to mean both the causes and the effects of feelings of pressure.

Occupational stress is a response to the perceived relationship between the demands on the individual, the pressures from work, family, other external sources and/or those that are internally generated from self imposed demands, obligations and self-criticism and the ability to cope (Cooper & Bramwell, 1992; Ivancevich & Matteson, 1996; Warren & Toll, 1997).

The described definitions provide an account of evidence that events which produce feelings of pressure or stimulation are likely to cause the individual to experience a feeling of either under stress or overstress (Warren & Toll, 1997). The causes of occupational stress are divided into setbacks, hassles and challenges.

- *Setbacks*

There are setbacks, which are significant life events about which there is often little that can be done about (Priest & Welsch, 1998). Examples of setbacks include serious illness to those close to being without a job.

Robinson and Griffiths (2005) investigated the relationship between stress and ill health. They interviewed a large sample of people about life events and linked these to their medical records. While it is difficult to make generalisations about the stress levels in any given individual, Robinson and Griffiths (2005) were able to produce an estimate called the Social Readjustment Rating Scale, as shown in table 2.1.

Table 2.1

Life events from social readjustment rating scale

Event	Rating
Death of a spouse	100%
Divorce	73%
Marital separation	65%
Jail term	63%
Death of a close family member	63%
Personal injury or illness	53%
Marriage	50%
Sacked from job	47%
Marital reconciliation	45%
Retirement	45%

Paton (2004) also found that prior to serious illness by the individual; she/he was often marked by a cluster of significant life events. The conclusion was that high points score increased the statistical chances of becoming ill. He therefore, recommended that two or more major life events in any one-year should be avoided where possible.

- *Hassles*

These are situations in which an individual has not been proactive in bringing about peace. In many cases, hassles are situations at which the individual most definitely wish they were not happening. These cover a wide range of situations from the hard disk on a computer crashing to the organisation announcing a far-reaching change program (Priest & Welsch, 1997).

The stress inducers called hassles can be usefully subdivided into those connected with the environment and those connected to the culture the individual is working in (Folkman & Lazarus; 1980, Paton, 2004).

- *Challenges*

Challenges are largely sought after or welcomed (Priest & Welsch, 1997). An example might be an interview for a new exciting and well-paying job. It is something that an individual has actively wanted but it is nevertheless going to put the individual into a situation that is full of pressure.

Priest and Welsch (1997) identified four questions to clarify the different aspects of challenges which the individual is faced with within the occupational settings; these are detailed as follows:

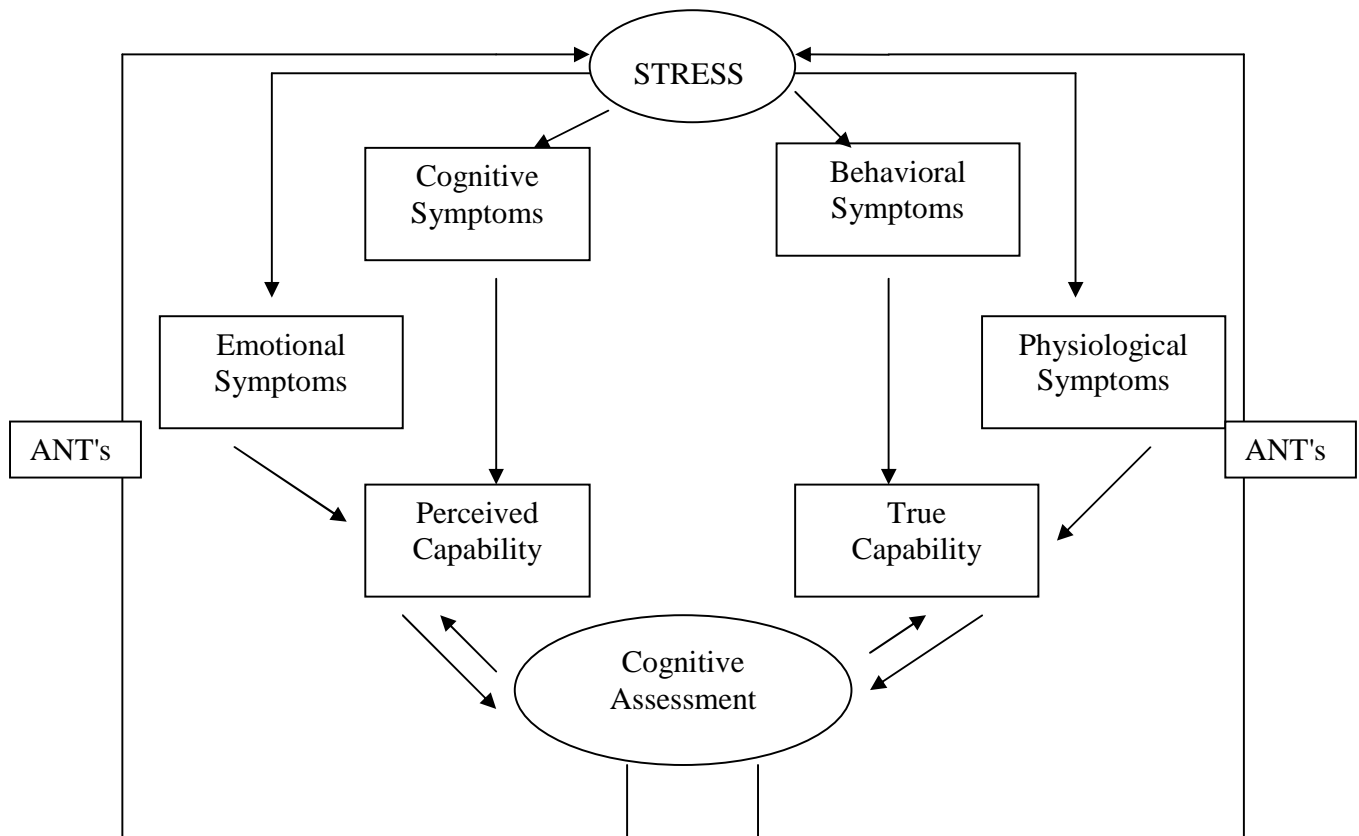
- ◆ To what extent is it an emotional challenge? Involving close personal relationships, presenting one to new people in new situations, forming and reforming relationships at work.
- ◆ Is there a physical element to this challenge? Short-term challenges pushing us to our limits, long-term demands on an individual's staying power and substantial travel.
- ◆ Is it an intellectual challenge? Stretching the individual's mental capabilities. Learning new skills and coping with large amounts of information.
- ◆ What meaning does the challenge have? Another routine project, a critical step towards promotion, a chance to make up for the past mistakes, an opportunity to prove a point and an important expression of the individual's personal value system.

2.2 THE COMPOUND MODEL OF STRESS

The potential for stress comes from everyday situations that happen in every environment. The setbacks, hassles and challenges are ever present for the potential of stress. Crucially so, it is the way the individual thinks about these situations, which will determine whether the individual actually become stressed.

Figure 2.1.

The Compound Model of stress



(Abridged and amended from the Transactional Model of stress by Cox and Mackay, Priest and Welsch, 1997, p141).

Susky (2004) and Barling, Kelloway and Frone (2005), defined stress broadly to mean imbalances between perceived demands. That is internal demands and external demands) and perceived capability to meet the demand. Following the standard intersectional approach, the definition underlines that stress is an individual perceptual phenomenon rooted in psychological process (Cooper, 2000). Further, the stress system highlights feedback components, which mean that it is cyclical rather than linear. It provides a clear way to appraise the individuals own capability. Figure 2.1 above illustrates some of the key features.

2.2.1 Symptoms of Occupational Stress

In their 'Professional Stress Syndrome', Gardner and Hall (1981) displayed the physiological, emotional, cognitive (Priest & Welsch, 1997) and behavioral symptoms. The four categories are described as follows:

2.2.1.1 Physiological Symptoms

Many physiological symptoms arise from a part of the brain known as the motor cortex, which increases the neural stimulation to the muscles. This excessive stimulation often leads to tension, back pain, neck pain, headaches, nervous twitches and stuttering. Other complaints can often be understood in terms of changes in hormone levels and these might include skin irritation, changes in heart rate and blood pressure, stomach upsets and depletion of the body's immune (defense) system which results in a susceptibility to a range of everyday viruses and infections (Cooper & Marshall, 1980).

A person suffering from severe physiological symptoms will either be less effective in work or will be absent from work. The symptom rather than

the underlying problem is likely to appear as the person's reason for absence (Gardner & Hall, 1981).

2.2.1.2 Emotional Symptoms

Anger is often used as a physiological 'defense' against anxiety and depression due to the attraction of its hormonal 'buzz' and energizing capacity (Cooper, 1998).

Emotional defenses are hard to sustain. Stress is characterised by a wide range of emotional symptoms such as mood swings, hostility, anxiety, apathy, withdrawal and feelings of hopelessness (Cooper, 1998, 2000).

Not only do the emotional symptoms reduce the persons effectiveness but also the person difficult to work with and even more difficult to help (Cooper, 2000).

2.2.1.3 Cognitive Symptoms

Cognitive symptoms affect the way the person thinks. In this domain symptoms result from the person's attempt to process information faster to keep abreast of increased task demand. Inevitably it becomes hard to sustain attention control and retain focus which is exacerbated by intrusive or irrelevant thoughts.

At this stage the person may attempt to reduce the amount of information to be dealt with by opting for a simplified belief system which denies the true complexity of the issues involved. Typically this might entail a move towards polarised problem solving with a simplistic yes/no or right/wrong analysis (Cooper, 2000; Olivier, 2004).

This diminished judgement can involve an increased personalisation of issues or a hostile egocentricity. In this case the sufferer can only see their limited viewpoint and begins to feel persecuted, interpreting neutral events as being directed at them (Wallace, 1992).

Lack of balance is completed by magnification and minimisation whereby trivial are given undue emphasis whilst key factors are played down or ignored. This unsupportable level of cognition eventually leads to fatigue and a state of under-alertness, characterised by forgetfulness, foggy thinking and disorganisation which may be wrongly attributed to a lack of motivation (Ivancevich, Matteson, Freedson & Phillips, 1990).

It will be clear that over-alertness is the brain's valiant attempt to meet increasing demands and that under-alertness is the inevitable exhaustion that follows. Polarised or simplistic thinking is the brain's way of trying to save mental energy. What should be significant for any organisation is that individuals under stress produce a lower quality of thinking than normal (Warren & Toll, 1997).

2.2.1.4 Behavioural Symptoms

The fourth group of symptoms relate to aspects of behaviour at first, increased arousal due to stress produces a sense of urgency and generally higher levels of activity, including talking too fast or too much, which can be unsettling for others (Gardner & Hall, 1981).

There may be a heightened startle reaction and almost inevitably sleep disturbances. At this time individuals suffering from this behaviour also tend to lose their social interests, withdrawing from friends and family as well as neglecting stress – relieving hobbies. They may attempt to 'escape' by seeking comfort in food, gambling, smoking, alcohol or drugs, which

may help in soothing short-term feelings, but soon complicate the original difficulties (Somerfield & McCrae, 2000).

Over-alertness is the individual's attempt to behave in a way which will meet the increasing demands at hand. Similarly the stage of under-alertness is the exhaustion which follows. In some instances, there is a tendency to exhibit distorted behaviour designed to make the individual feel temporarily better (Holroyd & Lazarus, 1982).

2.2.2 Breaking the Gap: The management of stress

The compound model in figure 2.1, demonstrates that not only is stress caused by a perception gap but the symptoms themselves contribute to making the gap wider and the problem worse. Once the individual has started to experience the symptoms, the individual's subsequent cognitive assessment is likely to be more negative and then the stress becomes worse. More symptoms develop and so the cycle continues compounding itself in a vicious circle (Cooper, 2000; Holohan & Moos, 1990).

This is a circle, which must be broken because stress is not an illness, which might run its course and go away. It is the individual's brain and body response to excessive environmental stimulation or pressure. Stress will not go away until the effects of those excessive pressures are removed and active intervention is needed in order to achieve this (Tung, 1980; Underwood, 1992; Wallace, 1992).

It is important to bear in mind that the individual subject to this is often in the worst position to make the necessary changes. Someone close to that person may need to step in to break the cycle. It may well be that a family member, a friend and peers can assist, especially if some of the

causes lie outside work. The manager is likely to be in an important position to help (Cooper, 1998, 2000; Moss, 1981).

This may be difficult since the symptoms, stressed people manifest, can make them too hard. If the person is withdrawn it will be difficult to assess the problem or the potential solutions. If the person is hostile they may try to push help away. If they are personalising everything they can surely personalise this. If they are angry depressed or drunk they will not be very pleasant to be with (Spielberger & Turnage, 1991).

In other words the symptoms might encourage the individual and everyone else to avoid them and their problems, but it is likely that they are ill equipped to do anything constructive for themselves. Having said this there are recurring examples of competent employees suddenly becoming ill with stress, without any obvious built-up of symptoms at work (Spielberger & Turnage, 1991).

2.3 COPING MECHANISMS

This section discusses the aspects of coping with ever-present stressors – not only to survive, but also to thrive to reach the upper most potential. The definitions of coping mechanism, coping model, coping resources and coping options followed by the role of emotions in coping mechanism are discussed.

2.3.1 Definitions of Coping

Schuler (1986) referred to coping mechanisms as any process of analysis and evaluation to determine how to protect oneself against the adverse effects of any stressor and its positive outcomes. Aldwin and Revenson (1987) defined coping as encompassing cognitive and behavioural

strategies used to manage a stressful situation (problem-focused coping) and the attendant negative emotions (emotion-focused coping). Where individuals overtly attempts to alleviate or respond to stressful conditions at work, Parasuraman and Cleek (1984), defined conceptually as coping behaviours. Whilst Perrewe and Ganster (2006), refers to any response to external life strains that serves to prevent, prevent, avoid, or control emotional distress. Stone and Naeale (1984), view those behaviours and thoughts which are consciously used by an individual to handle or control the effects of anticipating or experiencing a stressful situation.

According to Lazarus and Folkman, (1984, p141) coping is "... a constant changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person". In other words, this broad definition allows for various specified coping targets that are internal (e.g. emotional reactions) or external (e.g. the situational). Furthermore the definition can include more specific dimensions of what an individual will find 'taxing', such as uncertainty and important consequences (Latack & Havlovic, 1992).

From an integrative point of view as spelt out by Latack and Havlovic (1992), the definition merits the discussion because it permits us to make three key distinctions, important to research on job stress. Coping behaviours or processes that are more appropriate focus on stable coping styles. Coping is separate from coping effectiveness; and coping applies to challenges as well as harm and threat situations.

The focus is on coping behaviours or processes rather than a stable coping style or personality trait (Burke & Weir, 1980; Fleming, Baum & Singer, 1984; Folkman, 1982). This focus is important for ultimate application of research findings to managerial interventions and training. If coping is conceptualised as a personality trait relatively stable across

situations, coping research would have little practical value for managers except perhaps in selection or placement decisions. If, on the other hand coping is subject to behavioural or structural intervention and training, new tools for stress management can be identified.

This definition also distinguishes coping from coping effectiveness. That is, it defines coping in terms of what people do in specific situations without reference to whether or not it works. Definitions that cast coping in terms of its effects such as preventing, avoiding or controlling emotional distress, contain implicit effectiveness criteria. That is, coping is effective if it prevents, avoids or controls individual distress (Perrewe & Ganster, 2006).

Although avoidance or control of individual distress one effectiveness measures, though a critical one, organisations are interested in other effectiveness measures as well, such as performance or intention to quit. The wording of the conceptual definition of coping should not be confounded with effectiveness criteria (Latack & Havlovic, 1992). The integrative definition offered by Folkman et al. (1986) does not imply any criteria for coping effectiveness. Coping effectiveness is appropriate to the interest of organisational stress because its focus does not bias researchers regarding what constitutes effective coping. Accordingly, coping can be examined in terms of influence on a range of dependant variables including effectiveness criteria.

Finally this conceptual definition applies to stress that takes a form of challenge as well as harm or threat. Although much of the coping literature emphasises situations of harm or threat, it has been argued that the motivational or opportunity aspect of stress must be considered in job stress situations (Schuler, 1985). From an organisational point of view, it is valuable to conceptualise coping in a manner that allows for

development stress that can stimulate organisational productivity and innovation.

2.3.2 Stages of Coping

According to Lazarus and Folkman (1984), there are three stages identified that an individual go through in coping with a difficult situation (such as three exams, two papers, a speech, and an important date – all within two days); namely primary appraisal, secondary appraisal and coping.

2.3.2.1 Primary appraisal

First, the individual engages in primary of the stressor (or cluster of stressor). Primary appraisal is the ongoing process by which a person decides whether or not a situation is potentially threatening, and it occurs at a superficial level of analysis. Here the person decides, if they are in trouble, whether their knowledge of themselves and the situation is sufficient to deal with the stressor. In other words, is this worth being concerned about the stressor? If the situation is judged to be irrelevant or trivial, the coping process ends. If the circumstance is meaningful and potentially threatening, the stress coping process continues.

2.3.2.2 Secondary appraisal

The next is to assess the resources for dealing with the stressor. As Holroyd and Lazarus (1982, p23) stated that this assessment is influenced by “previous experiences in similar situations, generalised beliefs about the self and the environment and the availability of personal (e.g. physical strength or problem-solving skills) and environmental (e.g. social support or money) resources”. Important to this secondary appraisal is an

assessment of how much control does the individual have over the situation. The less the perceived control, the more threatening the situation will be and the greater the probability of mental and physical distress.

2.3.2.3 Coping

At this stage the individual takes whatever actions seem appropriate. This response might involve action or a cognitive adjustment – redefining the situation through self-talk or both (Frese, 1986; Krohne, 1986; Laux, 1986).

Primary and secondary appraisal influence a person's relationships with the environment in particular encounters, and interact in determining the degree of stress experienced and the strength and quality of the emotional reaction. The effect of stress on well-being, and on the relationship between person and environment, therefore varies as a function of both processes (Lazarus & Folkman, 1984). These stages cause individual differences in the ability to cope, and such differences arise from the discrepancy between the individual's perception of demands and his/her ability to cope.

Perception of ability to cope is not, however, synonymous with actual coping. Perception partly determines whether or not stress is experienced, whilst actual coping is the result of the experience of stress (Perrewe & Ganster, 2006). The success or failure of attempts to cope influences a person's perception of his/her ability to cope and his/her overall appraisal of the stressful situation.

2.3.3 Coping resources

Lazarus and Folkman (1984) noted that a wide variety of personal and environmental coping resources are potentially available as the individual appraise their options. Antonosky (1979, 1987) refers to these as generalised resistance resource, such as exercise, situational self-talk skills, positive beliefs, sense of coherence. (Stressors are seen as comprehensive, manageable and meaningful), hardiness (sense of challenge, commitment and control), optimism, problem-solving skills, communication skills, social support, material resources and community services.

2.3.4 Deliberate vs. scripted coping responses

The individual's reaction to stressful events, including his/her own temporary distresses, deliberates or scripted. If the individual react with little awareness or deliberate choice, he/she would probably behave with *scripted coping responses*. Many people cope in the same ways as their parents without realising it, handling stressful events much like they did as children. Others respond with thoughtfulness and intention – with *deliberate coping responses* (Billings & Moos, 1981; Holroyd & Lazarus, 1982; Krohne, 1986).

Unless the individual becomes aware of his/her own coping style, he/she may be seriously limited by his/her life script – a blue print for thinking, feeling, and acting that usually emerges from adolescence as a result of repeated early messages and early decisions (Perrewe & Ganster, 2006). As an actor follows a stage script, people most often spend their lives blindly living out their own life script. Included in the script are directives related to; “how to be masculine or feminine? How to get love and attention? How to feel good about yourself? How to feel good about

others? How to spend time? Whether to and how to succeed or fail? How to cope with stressful events?”

Maturity and independence include freedom from one’s life script, especially if it keeps one bound to old, destructive, maladaptive patterns (Latack & Havlovic, 1992; Perrewe & Ganster, 2006).

2.3.5 Adaptive vs. maladaptive response

Coping can be *adaptive*, helping the individual deal effectively with stressful events and minimising distress. Or it can be *maladaptive*, resulting in unnecessary distress for the self or others. Positive coping outcomes depend on having a range of options available on accurate linkage of options with the situation (Billings & Moss, 1981).

Adaptive coping options, especially when part of a broader positive coping style (Cluster of coping habits) contribute to wellness – good health, productivity, life satisfaction, and personal growth. Maladaptive coping options erode wellness.

2.3.6 Coping options

Literally, hundreds of *coping options* are available to the individual, dealing with specific stressful events and circumstance (Schaefer & Gard 1988). The following coping categories have been identified.

2.3.6.1 Emotion focus vs. problem solving focus

Schaefer & Gard (1988) identified two broad coping options; namely

- (a) *Emotion-focused coping*, in which the focus is dealing with the individuals own fear, anger, or guilt as he/she react to the situation.
- (b) *Problem-focused coping*, in which the focus is attempting to deal constructively with the stressor or circumstance itself.

Both these options can be adaptive or maladaptive, table 2.2 shows the possibilities:

Table 2.2.

Target and outcome of coping

OUTCOME OF COPING	TARGET OF COPING	
	STRESSOR	SELF
ADAPTING	Put communication problem on agenda for next meeting.	Share frustrations with friend
MALADAPTING	Blow up at boss	Drink away frustrations.

(as abridged from, Schaefer, 1996, p.328)

2.3.6.2 Coping Strategies

Taylor (1986) proposed five optional strategies for confronting a stressful event.

- (a) *Information-seeking*: What is the noise level at different neighbourhood locations throughout the day?

- (b) *Direct action*: Circulate petition among neighbours
- (c) *Inhibition of action*: Control the urge to shoot down the next noisy air-plane
- (d) *Intrapsychic efforts*: Use self-talk tolerate the noise
- (e) *Turning to others*: Share frustration with neighbours, working together to circulate petitions and to confront officials.

2.3.6.3 *Transformational vs. Regressive Coping*

Maddi and Kobasa (1984) maintain that hardiness is likely to lead to *transformational coping*, taking constructive action to change the stressor. This coping option emerges from a sense of internal control, a sense of challenge, and a sense of commitment. Fundamentally it is based on optimism.

Regressive coping is thinking pessimistically and avoiding the stressor (Strümpfer, 1995).

2.3.7 The role of emotions in coping mechanism(s)

In most coping situations, emotions, thoughts and behaviour are interwoven in an intricate, complex web. The parts can be separated only for purposes of discussion and analysis; in reality they are together (Holohan, Moos and Schaefer, 1996), whilst the focus is on the immediate stress situation like presenting in an organisation. A key assumption made by Holohan, Moos & Schaefer (1996) is that although emotions, thinking, body and behaviour are interwoven and inseparable; there is a tendency to use key targets, such as controlling interpretation of the stressor, controlling physical stress response and controlling the behaviour or coping response

This excludes emotions which does not mean that emotions are unimportant or to be denied. To the contrary, they are valuable, central part of human experience, during stress and all other parts of life. But emotions occur and change largely in response to what the individual think, do and experience in his/her body. While the individual gives attention to feelings, he/she assumes that they can best be controlled or altered by regulating what the individual think and do, and by regulating his/her body (Holohan, Moos & Schaefer, 1996).

This view is consistent with Lazarus (1982) who emphasised the role of mental and behavioural coping in determining emotions. It is noted that this analysis reverses the usual wisdom that coping always follows the emotional behavior or is caused by it and suggests that coping can precede and even influence its form and intensity.

Perrewe and Ganster (2006) expressed a similar view within their holistic response system framework. In the human response system model, emotions do not precipitate problems. Rather problems or maladaptive responses lead to emotional upset and disturbance. Human responses such as disordered thinking habits can precipitate anger in frustrating situations. A nervous system that is easily aroused by threatening life events can produce a state of chronic anxiety and tension. Behavioural habits such as procrastination can induce deep states of depression. In summary, habits of living are seen as the instigators of emotional reactions.

2.4 THEORETICAL INTEGRATION

Stress as part life is almost unavoidable. As long as individuals make a conscious decision to remain an effective member of this environment,

gaining understanding of the individual's own personality as well as the characteristics of the environment, will remain critical to cope effectively with negative stress. If it is not well managed, it results in excessive and cumulative distress, whilst if it is well managed it results in productive eu-stress.

Like stress, coping can be constructive or destructive, deliberated or scripted, inner-directed or outwards directed, focused on merely surviving or on reaching higher potentials. Central to any effective coping style must be positive or realistic self-talk, rational beliefs and sense of meaning and direction. Factors influencing the choice of coping strategies were considered, as was the influence of the social desirability factor in choice of coping strategy.

The literature review presented a number of research findings in support of the approach adopted from this study. That stress can be examined in terms of setbacks, hassles and challenges. Furthermore, that one can assess the choice of coping mechanism from the different coping strategies presented above. Post their identifying from the compound model of stress if the individual is suffering from cognitive, emotional, behavioral, or physiological symptoms.

Like Breed (1997), controversy in the literature review suggests that future research should agree upon effective means of defining and measuring these multifaceted meta-theoretical concepts. As accorded by Folkman and Meskowitz (2000) that coping theory and research need to consider the positive outcomes as well as not the almost exclusive focus on negative outcomes in the stress processes. This means that psychologists still have a great deal to learn about how coping mechanisms affect diverse outcomes.

2.5 CHAPTER SUMMARY

The objective of this chapter was to define and explore coping with stress as meta-theoretical construct in this research. Stress was defined, a compound model of stress was presented and coping mechanisms were also described. The chapter ended with a theoretical integration.

This concludes step 1 of the literature review.

CHAPTER 3

SALUTOGENIC CONSTRUCTS

The objective of this chapter is to present and integrate the salutogenic constructs chosen for the research project as presented in chapter 1. For each construct conceptualisation, relationships with other constructs as well as the salutogenic personality profile are given.

3.1 SENSE OF COHERENCE

Sense of coherence (SOC) will be discussed with reference to its conceptualisation and relationship with other constructs.

3.1.1 Conceptualisation

The sense of coherence has been defined as “a global orientation that expresses the extent to which one has a pervasive, enduring though dynamic feeling of confidence that 1) the stimuli deriving from one’s internal and external environments in the course of living are structured, predictable, and explicable (*comprehensibility*)’ 2) the resources are available to one to meet the demands posed by these stimuli (*manageability*); 3) these demands are challenges, worthy of investment and engagement (*meaningfulness*)” (Antonovsky, 1987, p.19).

Sense of coherence is developed through the process of coming to understand one’s life experiences, and is thus rooted in the particular historical and socio-cultural context of the individual life span. It is internalised when life experiences are characterised by participation in shaping outcomes, and a balance between punishment and reward,

success and failure (Sullivan, 1993). SOC has three sub-components namely comprehensibility, manageability and meaningfulness.

- *Comprehensibility*

This refers to the extent to which individuals perceived the stimuli that confronts them as making cognitive sense. Information should be clear, consistent, ordered and structured rather than noisy, disordered, random, chaotic, accidental and unpredictable (Antonovsky, 1984). The fact that individuals perceive events as comprehensive does not mean that they are totally predictable. This means that the individual find a certain logic in the sequence of events, that there is a degree of consistency from one experience to another and that in general, inexplicable events do not occur (Sullivan, 1993).

- *Manageability*

A good load balance, that is an under load vs. overload balance in life experience, provides the manageability component. Under load refers to when there is not enough direction, or when the individual is seldom called on to exercise his/her abilities or to actualize his/her potential. Overload refers to the individual setting a pace too rapid for demanded development, or never having enough time and energy to do everything, or not having enough resources to do something. Manageability refers to the extent to which one perceives that the resources at one's disposal are adequate to meet the demands posed by the stimuli that bombard one. In other words, there is load balance, and no under load or overload. According to Antonovsky (1987), "at one's disposal" may refer to resources under one's own control or to resources controlled by legitimate others. The legitimate others could be friends, one's spouse, God, a political party, a doctor or anybody one feels they can count on and trust. The

person who has a high sense of manageability will not feel victimised by events or feel that life is treating him/her unfairly, and will be able to cope without endless complaints.

- *Meaningfulness*

This component refers to the extent to which one feels that life makes sense emotionally. This means that at least some of the problems and demands posed by living are worth investing energy in or are worthy of commitment and engagement. This also means that some challenges are seen as welcome rather than new burdens that one would much rather do without (Antonovsky, 1987). Thus, people who function high on meaningfulness feel that life makes sense emotionally. Meaningfulness is the emotional counterpart to comprehensibility (Antonovsky, 1984).

3.1.2 Relationship with other constructs

In their study, Ruiselova and Korcova (2000) compared the salutogenesis of coping with factors of the 5 factor personality model. Results showed a significant relationship between conscientiousness, agreeableness, and extroversion. The findings suggest that SOC is a broader characteristic than is personality. Van Jaarsveld (2005) reviewed the coherence amongst engineers and scientists and the results confirmed the positive relationship between sense of coherence, and coping and negative relationship with burnout.

From the above findings, it is evident that sense of coherence has the potential to influence the individual cognitively and emotionally to such an extent as to ensure an individual's successful coping with stressors and thus predict the quality of his or her well-being (Antonovsky, 1987).

3.2 HARDINESS

Hardiness will be discussed with reference to its conceptualisation and relationship with other constructs.

3.2.1 Conceptualisation

Hardiness is defined as a constellation of interlocking personality characteristics that function as a resistance resource in the encounter with stress (Kobasa, 1982). Hardiness has three personality dispositions, which are commitment, control and challenge.

- *Commitment*

Commitment (vs. alienation) incorporates the recognition of one's own goals and priorities, allowing for a valid assessment of one's self in terms of values and ability. Rather than feeling alienated, committed individuals feel an integral and important part of the situation they find themselves in because they identify with, and appreciate the meaning of events and the environment which they have become actively involved (Kobasa, Maddi & Kahn, 1982).

- *Control*

Control (vs. powerless) refers to hardy individuals who believe and act as if they influence the course of events (Kobasa et al; 1982). Hardy individuals have a feeling of responsibility for what is happening around them and see events as consequence of their own actions. Even if an event or situation is not under their control, they incorporate the event, through processes and actions, into a longer term plan and, as such, the situation seems consistent with their view of life (Kobasa, 1979).

- *Challenge*

Challenge (vs. threat) involves seeing change as a necessary and integral part of life. Hardy individuals find transformation exciting and each change just a temporary hurdle in which they must readjust so as to prove self worth and allow for growth (Kobasa, 1982). They are stimulated by, rather than afraid of, the unknown for they are sufficiently aware of their own environment and where to turn for needed resources (Kobasa, 1979). They are continually setting personal goals and aims by actively involving themselves in problem solving, they are always utilising their skills of appraisal and integration. Hardiness has been shown to have moderating effects of the negative consequences of inter role conflict in marital adjustment (Barling, 1986) and has a buffering effect on life stress because hardy individuals are more likely to perceive events as desirable and controllable (Rhodewalt & Augustusclottir, 1984).

3.2.2 Relationship with other constructs

Sergay (1990) conducted a study on the moderator effects of hardiness and social support on the person environment interface. The findings revealed that hardiness and supervisor support have significant effect on psychological distress and organisational commitment. Hardiness had a significant effect on propensity to leave and supervisor support exerted a significant direct effect on propensity to leave.

Hardiness encapsulates the idea of resilience, determination, optimism, persistence, assertiveness, adaptation and so forth. It is an intangible personality trait that may have possible positive health effects for the individual who possess it in its various forms (Bredell, 2004).

3.3 SELF-EFFICACY

Self-efficacy will be discussed with reference to its conceptualisation and relationship with other constructs.

3.3.1 Conceptualisation

Bandura (1988) refers to self-efficacy as an individuals' belief in their capacity to mobilize cognition resources and to take action to exercise control over task demands. Thus self-efficacy is concerned with how individuals judge their capabilities and how, through their self-perception of efficacy, they affect their motivation and behaviour. The basic phenomenon being addressed relies on individuals' sense of personal efficacy to produce and regulate events in their lives. The individuals have unique capacities such as symbolizing, vicarious learning, forethought, self-regulation and self-reflection. According to Bandura (1986), these capacities may be used to achieve high levels of self-efficacy in the following ways, through performance attainments, vicarious experiences, verbal persuasion and social influence, and psychological state.

- *Performance attainments*

Performance attainments refer to doing something competently (Antonovsky, 1991). There is no possibility of learning from a mastery experience if an individual is simply not allowed to engage in the experience by whomever or whatever is the gatekeeper of such experiences. The mastery experience, as source information to build self-efficacy, will be determined not only by the availability of appropriate sources to be successful in that activity, but also by the absence of barriers to engage in a given activity.

- *Vicarious Experiences*

The vicarious experiences refer to the performance of those with whom we associate in our daily lives and their relative status are guidelines for most of us, most of the time, for what we believe we can do” (Antonovsky, 1991, p.76). Observers benefit from seeing their role models overcome difficulties by determined coping efforts. Alternatively, seeing people similar to one succeed by sustained effort raises observers’ beliefs about their own efficacy (Bandura, 1988).

- *Verbal Persuasion and Social Influences*

Here the emphasis is, as per Bandura (1986), on the decisive role of those who seek to persuade others about their capabilities of performing a task. When a persuader is an expert in the matter, his/her credibility is very well accepted. If the persuader is far from reality, this could be a disaster. Rather, persuaders or reference groups should have a normative function such as giving the message, thus the crucial issue conveyed by the mass media and reference groups, is that societal norms can only be ignored at one’s own desire (Antonovsky, 1991).

- *Physiological States*

Emotions (fear, anger, and tension), both distressful and positive, result from real, anticipated, recollected or imagined outcomes of power and status relations. These tend to bring the memory network into play; this could be so, especially of anxiety and stress reactions to unfamiliar or potentially aversive events. If this is the case, perceptions of self-efficacy will affect emotional reactions as well as behaviour and the coping success, resulting in the new situation being likely to be a predictive of

high self-efficacy (Bandura, 1982). Therefore emotions may be the proximal source of self-efficacy information.

3.3.2 Relationship with other constructs

Studies found that self-efficacy is related to organisational commitment and to job satisfaction (McDonald & Siegall, 1992). Whilst in contrast, Jackson and Rothmann (2001) found a lower relationship between self-efficacy and job satisfaction. Self-efficacy related high with sense of coherence and locus of control. Results from Spangenberg (2004) displayed a positive relationship between self-efficacy and resonance leadership.

It is evident that self-efficacy is one of the important skills to be developed by individuals to draw deeper from their potential. This is of benefit to the individual not only to meet organisational expectations and demands, but also to enable the individual to cope with the magnitude of these expectations and demands on an intra-personal level (Bandura, 1991; Bredell, 2004).

3.4 POTENCY

Potency will be discussed with reference to its conceptualisation and relationship with other constructs.

3.4.1 Conceptualisation

Ben-Sira (1985) coined this construct as implying that an individuals enduring confidence in his own capacities as well as confidence in and commitment to his/her social environment, which is perceived as being

characterised by a basically meaningful and predictable order and by a reliable and just distribution of rewards.

Potency is viewed, according to Ben-Sira (1985) as a mechanism that prevents the tension, which follows occasional inadequate coping, from turning into a lasting stress. It is the outcome of successful past experiences of coping and hence comprises mastery and self-appreciation, weak potency, on the other hand, results from a history of unsuccessful coping experiences. These same alternatives of experience contribute to either a view of society as meaningful and ordered, or an orientation of anomie, which in turn, are related to either commitment to society or alienation.

From the above analogy of potency, one can assume that potency is similar to *coherence*, *hardiness*, *mastery* and *locus of control*. While potency differs from these concepts in the sense that the central characteristic, an underlying basic sense of self-confidence in one's capacity to overcome the demands of life, is not viewed in isolation from the environment. Coping has to be considered as a product of interaction between the individual and his/her environment (Ben-Sira, 1985). It comprises the mechanisms of self-appreciation, on the one hand, and commitment to society as well as a perception of society as meaningful and ordered, on the other.

3.4.2 Relationship with other constructs

Marais (1997) studied salutogenesis as a paradigm in change management, included in this study as constructs were sense of coherence, learned resourcefulness, hardiness and locus of control, self-efficacy and potency. Results showed that potency co-related well with the other batteries and also contributed towards measuring coping with

change behaviour and in explaining the difference between ineffective versus effective coping. Results from Viviers and Cilliers (1999) also concurred with these results.

3.5 LEARNED RESOURCEFULNESS

Learned resourcefulness will be discussed with reference to its conceptualisation and relationship with other constructs.

3.5.1 Conceptualisation

The term 'learned resourcefulness' was first used by Meichenbaun in 1977 to describe the belief of people who have been trained in stress inoculation, that they can deal effectively with manageable levels of stress (Rosenbaum, 1989). Then, Rosenbaum extended the construct to include not only beliefs, but also skills and self-control behaviours, which all people learn in different degrees through informal training from the moment of birth. He suggested that individuals may differ in the extent to which they are able and willing to self-regulate internal responses (such as emotions, pain and cognition's) that interfere with the smooth execution of target behaviour (Rosenbaum & Palmon, 1984).

To Rosenbaum (1988) learned resourcefulness is not a personality trait, but a '*personality repertoire*', which is a set of complex behaviours, cognition's and effects that are in constant interaction with the person's physical and social environment and are evoked by many situations, but which also provide the basis for further learning.

The specific skills are employed when the individual is confronted with stressful events as all coping with stressful event calls for attempts at self-regulation, or self-control. The conditions that activate the self-regulatory

process are similar to those that have been recognised by stress researchers as conditions of stress (Rosenbaum, 1988). The process of self-regulation, according to Rosenbaum's model consists of three phases namely (Strümpfer, 1990, p273):

- *Representation*, during which the individual experiences, without any conscious effort, a cognitive and / or emotional reaction to changes within him/herself or the environment;
- *Evaluation of the changes*, first, as desirable or threatening, then, if threat is appraised, evaluation whether anything can be done about it;
- *Action (or coping)* to immunize negative effects if the internal or external changes.

The individual who is high on learned resourcefulness is thus able to deal with stressors by means of problem focused strategies. Negative thoughts and emotions are minimised during the coping process. This enables the individual to focus on dealing with the specific stressor and to persist as gratification of personal needs is delayed. The perception of the self as effective and efficient furthermore aids the individual in persisting with the task (Rosenbaum, 1983).

The individual who does not demonstrate learned resourcefulness is not goal oriented and focused on problem solving when dealing with a stressor. Negative internal responses are not checked and contained, which hinders persistence in dealing with the external demands. This ineffectivity leads to evaluations of inefficiency and helplessness.

3.5.2 Relationship with other constructs

In Bredell (2004) research on the developmental program in salutogenic functioning, learned resourcefulness related high with other constructs; i.e. sense of coherence, locus of control, and self-efficacy. Findings further showed that learned resourcefulness also contributed to the programs optimization both cognitively and affectively. Other results indicated that this construct contributed towards explaining ineffective versus effective coping (Baloyi, 2000; Marais, 1997; Viviers & Cilliers, 1999). Gintner, West and Zarski (1989) examined whether persons who reported a broad repertoire of coping skills varied their coping efforts as a function of situational factors. Subjects with low resourcefulness reported significantly more stress symptoms than subjects high in resourcefulness.

From the above on learned resourcefulness, it is evident that this construct has a predictive nature to be able to identify individuals who can cope better with distress. This can be of great help when an organisation is to design effective programmes with enduring results, to counter the effect of harmful stress.

3.6 LOCUS OF CONTROL

Locus of control will be discussed with reference to its conceptualisation and relationship with other constructs.

3.6.1 Conceptualisation

Locus of control refers to beliefs about the link between behaviour and outcome (Rotter, 1966). There are internal and external beliefs, which are, generalised expectations that reflect the consistent individual differences between individuals to the degree in which they perceive independence

between their behaviour and their subsequent events. Individuals who perceive that situational outcomes are dependent upon their own actions are said to have an internal focus of control, while those who perceive situational outcomes as dependent on chances, fate or actions of others are said to have an external focus of control (Antonovsky, 1991; Rotter, 1966).

When Antonovsky (1991) analysed Rotter's locus of control, he came with the following conclusions, which are relevant to this study. He places the systematic analysis of the structural origins of the internal locus of control into four headings described below.

- *Internality as a reflection of the objective situation*

When an individual's world is overwhelmingly controlled by hostile powerful situations or others such as in concentration camps, then, because it becomes truly functional in the long run, he/she comes to have externalised beliefs. He/she learns that such beliefs really facilitate survival (Antonovsky, 1991). Rotter (1966) confirms that objective situations such as severe traumatic events clearly form part of the origin of locus of control, but the attribution of external or internal causality involves something more than just expectations that an individual can or cannot control events.

- *Internality on Culture*

Cultures often lay down rules with later results that individuals believe that if they follow the rule, whatever their substance, things will work out well. Some cultures which could be labeled as *traditional* do not only foster, but even reprimand internality as it is understood in Western society (Antonovsky, 1991). Whilst, in other cultures there is surely room,

for the individual to affect his/her environment and fate (Antonovsky, 1991).

- *The concept of powerful others*

Individuals often feel unable to control their own destiny because they see themselves as a small component in a big picture and at the mercy of forces too strong to control (Rotter, 1966). According to Antonovsky (1991) there are some family structures, religious and health care settings, which encourage proactive or passive behaviour, say acknowledging parents, God or the doctor have special authority or knowledge. Growing up and living in such socio-cultural settings might well foster strong powerful others beliefs, which correlate positively externality and culture.

- *Responsive versus defensive internality*

Responsive versus defensive internality asks the question “Which is the cognitive foundation of internal well-being? A sense of personal responsibility or a sense of self justification?” (Antonovsky, 1991, p85). Logically internality could facilitate coping with stressors because it means taking credit for good outcomes while rejecting blame for unfortunate ones. It could also do so because it expresses a willingness to assume responsibility, whatever the outcome. On the other hand, the absence of control over outcomes could enhance externality (Antonovsky, 1991). Subsequently, according to Rotter (1966), there are the defensive externals who are individuals who verbally give external reasons for past failures but who clearly act as if their behaviour will determine outcomes.

3.6.2 Relationship with other constructs

Bothma and Scheepers (1997) studied the role of locus of control and achievement motivation in the work performance of black managers in supervisory and senior positions in a diversified and geographically detached chemical company. The results showed that locus of control are a better predictor of work performance than achievement motivation, meaning that this construct could be used successfully as a selection in a selection process. In other studies, Spector (1986) found high levels of perceived control was associated with high levels of job satisfaction, commitment and involvement, and low levels of stress, absenteeism and turnover. The study of Garson and Stanwyk (1997) confirmed a relationship between internal locus of control and job satisfaction. An individual with an internal locus of control is expected to be more satisfied with his or her job because of his or her perceived ability to control situations.

Locus of control is an important personality trait that could help unlock organisational dead locks such as it could be a useful tool to predict turnover, be useful in selection processes and explain behaviours in a number of organisational settings (Jackson & Rothmann, 2001).

3.7 SALUTOGENIC PERSONALITY FUNCTIONING

The integrated literature regards harmful stress as a negative psychological experience, breaking down the individuals self, ability and their daily work activities. Becoming aware of this situation and symptoms, stimulate the individual to seek for ways in which they can first cope leading to more action oriented coping mechanisms, functioning as stress buffers such as challenge and social support. The assumption is that a certain level of stress is necessary for effective performance

(Antonovsky, 1979; 1987), which leads to a focus on the relationship between coping behavior and various constructs (Strümpfer, 1990; 1995). Most studies have asserted that the strong correlation that exist between salutogenic functioning, psychological well-being and the work outcomes have a positive impact on the individual (Antonovsky, 1979,1988; Baloyi, 2000; Bredell, 2004; Cilliers & Coetzee, 2003; Cilliers, Viviers, & Marais, 1998; Ludik, 1996; Marais, 1997; Strümpfer, 1990,1995; van Jaarsveld, 2005; Viviers, 1999; Wising & Van Eeden, 2002). Hence the study to benefit South Africa's university administrative staff to tap into the salutogenic profile to rise above the long toll of harmful stress.

The above literature is integrated into the following personality profile of the salutogenic person. For the purpose of this study, the personality profile has been abridged from Baloyi (2000), Cilliers and Coetzee (2003), Ludik, (1996), Marais (1997) and Viviers (1999). These will be outlined briefly according to cognitive, affective, motivational and interpersonal characteristics to form the behavioral basis of the study.

- **Cognitive characteristics:** this refers to the extent to which the individual experiences internal and external stimuli as ordered, structured and consistent. The individual has the ability to regulate internal responses by means of cognitive control and by making use of self-regulating mechanisms.
- **Affective characteristics:** the individual experiences life as emotionally meaningful and believes that there is a purpose in all life's events. It is acceptable to perceive the environment's reaction and to allow the conscious emotions to be expressed in a natural and spontaneous way. Commitment to life through belief and value system is a key factor.

- ***Motivational characteristics:*** the individual is task oriented, manages life events in a flexible way, experiences change as a challenge and has a sense of self control.
- ***Interpersonal characteristic:*** the individual uses a social support system to deal with stressful situations and is interdependent with interpersonal relations.

3.8 CHAPTER SUMMARY

In this chapter the salutogenic constructs were presented by giving its conceptualisation, including its dimensions and its relationship with other constructs. The chapter ended with an integrated salutogenic personality profile.

This concludes step 2 of the literature review.

CHAPTER 4

EMPIRICAL STUDY

The objective of this chapter was to report on the research design and method as referred to in chapter 1 (phase 2). To accomplish this, the chapter is discussed in the following manner: the selection of the population and sample of for the research was discussed followed by the compilation, discussion and motivation for the measuring instruments. The procedures and statistical techniques were then discussed and concluded with the formulation of the research hypothesis and a chapter summary.

4.1 THE POPULATION AND SAMPLE

The study was conducted at the University of Cape Town. The university employs just under 4 300 people, 56% of whom are administrative staff, and 44% of whom are academic and research staff. The research population consists of 2150 administrators.

A random sampling of 200 was used, defined by Howell (1995, p.6) and Mwanje and Gotu (2001, p.6) to be “a sample in which each member of the population has an equal chance of inclusion”.

4.2 DISCUSSION OF MEASURING INSTRUMENTS

The measuring instruments used for the purpose of this study are the following quantitative instruments measuring the six discussed salutogenic constructs: the Orientation to Life questionnaire (OLQ) for Sense of Coherence, Personality Views Survey (PVS) for Hardiness, Self-Efficacy Scale for Self-Efficacy, Potency Scale for Potency, Self-Control

Schedule (SCS) for Learned Resourcefulness, Internal-External Control (I-E Scale) for Locus of Control. These instruments are discussed in terms of their objectives, administration, analysis, interpretation, reliability, validity and justification for use in this research.

4.2.1 Orientation to Life Questionnaire (OLQ)

The OLQ was used to measure sense of coherence (Antonovsky, 1979, 1987).

- ◆ *Objective:* It measures the individual's enduring tendency to see his/her life space as more or less ordered, predictable and manageable (Antonovsky & Sagy, 1986). The OLQ measures the location of the individual on the health ease/disease continuum (Antonovsky, 1987).
- ◆ *Administration:* The questionnaire consists of 29 questions on various aspects of life and each question has seven possible answers (Antonovsky, 1987). The participant is requested to mark the number which best express the extent to which the statements are applicable to him/her ranging, from 1 to 7 being the extreme answers.
- ◆ *Analysis:* The instrument is to be scored as follows (Antonovsky, 1987):-

Step 1: Thirteen of the items (1,4,5,6,7,11,13,14,16,20,23,25,27) are formulated "negatively" and have to be reversed in scoring, so that the high scores always express a strong sense of coherence.

Step 2: The values of the following items are added for the score on comprehensibility: c= 1,3,5,10,12,15,17,19,21,24,26.

Step 3: The values of the following items are added for the score on manageability: ma = 2,6,9,13,18,20,23,25,27,29

Step 4: The values of the following items are added for the score on meaningfulness: me = 4,7,8,11,14,16,22,18

- ◆ *Interpretation:* A high score represents a strong sense of coherence. Such an individual will be able to comprehend, manage and engage with the nature and dimensions of stressors as one to which the individual need not succumb, as opposed to the individual with a weak sense of coherence (Strümpfer, 1990).

- ◆ *Reliability:* A consistently high correlation coefficient ranging between 0,83 and 0,93 has been reported, indicating an internal consistency and reliability of the OLQ (Antonovsky, 1993). For Jackson and Rothmann (2001) internal consistency was confirmed at 0,80 whilst for Baloyi (2000) it was satisfactorily high. According to Cilliers and Kossuth (2004) the instrument has a high level of internal consistency and possesses high test-retest reliability of 0,90.

- ◆ *Validity:* Antonovsky (1993) reported construct validity varying between 0,38 and 0,72. Despite the report, Frenz, Carey and Jorgensen (1993) found that there is an inverted relationship between the OLQ and stress experienced. The OLQ correlates negatively with the “State-Trait Anxiety Inventory-Trait” and the “Beck Depression Inventory”. According to Antonovsky (1993) and later by Vahtera and Nurmi (2000), confirmed that the instrument possesses construct, content, face, consensual, predictive and criterion validity.

- ◆ *Justification for use in this research:* The OLQ is based on empirical evidence to be a good theory, a sound instrument and tested on a large scale. It cuts across gender lines, social class, region and culture (Antonovsky, 1993).

4.2.2 Personal Views Survey (PVS)

The PVS was used to measure hardiness (Kobasa, 1979).

- ◆ *Objective:* The hardiness construct was developed to assess the individual's resistance to illness caused by stressful events (Manning, Williams & Wolfe, 1988). The instrument measures individual's ability to believe that they can control or influence the events of their experience, the ability to feel committed to the activities of their lives and to anticipate change as an exciting challenge (Kobasa, 1979).
- ◆ *Administration:* The PVS consists of 50 items. Each question posed in the instrument has four possible answers ranging from 0 (not at all true) to 3 (completely true). The respondents are requested to answer all statements, but only one answer to each question.
- ◆ *Analysis:* The instrument is an additive one and can be scored by the following steps:-
 - Step 1:* Reverse items 1, 2, 3, 4, 5, 22, 23, 25, 26, 27
 - Step 2:* The following items are added for their score
 - Commitment:* 1, 8, 11, 14, 17, 20, 23, 26, 29, 32, 38, 39, 44, 47, 50
 - Control:* 3, 4, 5, 7, 10, 13, 16, 19, 22, 25, 28, 31, 34, 35, 42, 45, 48
 - Challenge:* 2, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 37, 40, 41, 43, 46, 49

- ◆ *Interpretation:* According to Kobasa et al. (1982), the respondent with a high score on hardiness will experience a strong sense of buffering stress and illness. The individual with high score is more likely than someone with low score to involve themselves actively in many situations in life, to influence the events of their lives through what they imagine; say or do and to view changing circumstances as an exciting challenge to further personal development.
- ◆ *Reliability:* Kobasa (1982) reported a significant correlation of 0,85 for commitment, 0,68 for control and 0,70 for challenge, which is consistent with most of the available research reports. This instrument is reported to have adequate internal consistency and test-retest stability (Cilliers, 2003).
- ◆ *Validity:* According to Kobasa et al. (1982), the PVS show a significant internal validity of 0,85 for commitment, 0,70 for control and 0,71 for challenge. Cilliers (2003) confirmed that this is a valid measuring instrument as it possesses construct validity.
- ◆ *Justification for use in this research:* The PVS is accepted in literature as the best measure for the hardiness concept and it is based on a sound theoretical framework. Cilliers (2003) confirmed Maddi and Kobasa's (1984) assertion that the instrument is used extensively in organisations to assess coping behaviour, health, morale and effectiveness of employees.

4.2.3 Self-Efficacy Scale

The Self-Efficacy scale was used to measure Self-Efficacy (Bandura, 1977, 1989).

- ◆ *Objective:* The scale was designed to measure how people judge their capabilities and how self-perception of efficacy affects their motivation and behaviour. The stronger the perceived self efficacy, the more active the coping effect will be.

- ◆ *Administration:* The scale consists of 27 items based on the respondent's attitude to and feelings they might have about a variety of tasks. A response is required to the extent to which they agree or disagree on a scale of 1(agree completely) to 7(disagree completely).

- ◆ *Analysis:* The scale is scored as follows:-
 - Step 1:* Reverse items: 1, 2, 9, 10, 11, 12, 22, 25, 26
 - Step 2:* Add all the scores in all the items and use only the total score for interpretation
 - Step 3:* When interpreting, the total score is used as an indication of self-efficacy. Low scores refer to a high self-efficacy

- ◆ *Interpretation:* According to Bandura (1989), the stronger the sense of self-efficacy, the bolder the behaviour of the individual will be. An individual who is strong in self-efficacy is more likely than someone with a weak perception of self-efficacy to be motivated to do things completely. To withstand failures rather than concentrating on shortfalls, to employ effort to the demands of a given situation and to view obstacles as challenges.

- ◆ *Reliability:* The Cronbach alpha reliability coefficient yielded 0,70 and 0,86 (Kossuth, 1998), whilst Marais (1997) and Stanley and Murphy (1997) obtained Cronbach alpha coefficient of 0,71 and 0,83

respectively – indicating the instruments reliability, and 0, 70 (Baloyi, 2000).

- ◆ *Validity*: Items were constructed to cover the range of behavioural implications of self-efficacy, assuring content validity. Results confirmed the hypothesised relationship between scores on the self-efficacy sub-scales and other personality construct, as well as criteria of past successes in a variety of areas. These results provide evidence of the construct and criterion validity of the scale (Marais, 1997).
- ◆ *Justification for use in this research*: Antonovsky (1991) emphasised that self-efficacy focuses on coping and a high score will indicate successful coping. Thus, its underlying theory has been effectively generalised to many domains such as that of psychotherapy, the educational field, racial behaviour as well as the industrial field (Gist, 1987).

4.2.4 Potency Scale

Potency scale was used to measure potency (Ben-Sira, 1985).

- ◆ *Objective*: The scale has been developed to measure self-appreciation, mastery and commitment to society. These factors are significant determinants of location and movement in the coping-stress-disease relationship (Ben-Sira, 1985).
- ◆ *Administration*: The scale has 2 sections. Section 1 consists of 19 items and measures self-confidence, commitment to society and meaningfulness. Each question has six possible answers ranging from 1 (strongly agree) to 6 (strongly disagree). In section 2 dealing with a

list of 15 disease or conditions pertaining to the individual's health, was not used as it was not part of the central thesis of this study.

- ◆ *Analysis:* The following steps are to be followed to establish the total score:-

Step 1: Reverse items 3, 5 and 9

Step 2: Add all the scores in section 1.

Step 3: In section 2 "yes" receives one point, and "no" two. Then all the scores in both sections 1 and 2 are added

- ◆ *Interpretation:* According to Ben-Sira (1985), this instrument combines self-confidence, sense of mastery and confidence with the reliability, predictability meaningfulness of the social environment, serves as a predictor of homeostasis- stabilising and stress buffering function. The higher the score on the potency scale the stronger the potency of the respondent.
- ◆ *Reliability:* Ben-Sira (1985) reports a correlation of 0,40 between potency and coping and between potency and homeostasis of 0,43, which is moderate for the reliability of the scale. The scale between coping and potency was found to be 0,79 and 0,92 for potency and homeostasis was 0,92 (Baloyi, 2000).
- ◆ *Validity:* According to Ben-Sira (1985), there is no doubt that further longitudinal studies are required to verify the inference of the Potency Scale. Marias (1997) states that for the fact that a longitudinal study is required to verify the inferences of the potency scale it shows its weakness.

- ◆ *Justification for use in this research:* As individuals rely on external resources such as socio-emotional support and those coming from supportive societies tend to rely on active coping strategies (Callan, 1993). In Kossuth (1998) the instrument was used extensively in assessing coping behaviour in many different scenarios such as the introduction of change in organisations. This quality makes the scale to be of importance to broaden the scope of its existence.

4.2.5 Self Control Schedule (SCS)

The SCS was used to measure learned resourcefulness (Rosenbaum, 1980, 1989).

- ◆ *Objective:* According to Rosenbaum (1980, 1989), the SCS was developed to assess individuals tendencies to apply self control methods to the solution of distressing situations. Later Rosenbaum & Palmon (1984) concluded that the SCS includes the use of cognition to control emotional and psychological responses, the application of problem solving strategies, the ability to delay immediate gratification and a general belief on ones ability to self-regulate internal events.
- ◆ *Administration:* The SCS is a self-report instrument rated on a six-point scale. Scores range from +3 (extremely descriptive) to -3 (extremely undescriptive and uncharacteristic).
- ◆ *Analysis:* The following steps are to be followed to establish the total score:-
 - Step 1:* Reverse items, so that the high score always expresses strong self-control behaviour 4, 6, 8, 9, 14, 16, 18, 19, 21, 29, 35

Step 2: Add all scores of which the sum total is the total score on self-control behaviour.

- ◆ *Interpretation:* According to Rosenbaum (1980, 1989), a high score represents a strong tendency of the respondent to apply self-management methods (self control) to the solution of common distressing situations.
- ◆ *Reliability:* Rosenbaum and Palmon (1984) established a test-retest reliability yielding $r = 0,96$ which was stable over time. An alpha coefficient computed on six different samples of subjects ranged from 0,78 to 0,86 indicating high internal consistency among the items. Baloyi (2000) reported 0,71 and Cilliers (2003) reported 0,80 reliability.
- ◆ *Validity:* Criterion related validity was determined by comparing test scores with scores of experiments that were run by experiments not associated with the actual development of the instrument, and in a context unrelated to previous experiments. The SCS was found to be a valid instrument for assessing learned resourcefulness (Rosenbaum & Palmon, 1984). Cilliers (2003) reports the instrument possesses construct validity.
- ◆ *Justification for use in this research:* Rosenbaum (1980) says that results indicate that the SCS may be useful to the researcher who wishes to assess individual differences in the tendency to employ self-control methods. As these methods refer to certain coping skills, they thus appear to be a useful instrument to assess the individual differences in terms of the use of coping skills to cope with stress.

4.2.6 Locus of Control Questionnaire (LOC)

Schepers (1995) LOC was used to measure locus of control.

◆ *Objective:* The LOC measures internal control, external control and autonomy. External control measures the extent to which the respondent attributes performance to forces outside his or her control (such as luck, fate, circumstances or influential people). Internal control measures whether the respondent attributes performance to causes within his or her control (such as personal abilities, behaviour or personal characteristics). Autonomy measures whether the respondent's believes in his or her abilities, acts independently with self-confidence, and decides on and takes action to solve problems.

◆ *Administration:* The LOC scale has 88 questions about various matters. Respondents place their responses on the seven-point scale.

◆ *Analysis:* The following steps are to be followed to establish the total score:-

Step 1: reflect items 1, 11, 15, 21, 39, 71 and 73 by subtracting score from eight.

Step 2: The following items are added for their scores

Autonomy: 2, 3, 5, 13, 14, 16, 17, 22, 23, 24, 25, 28, 29, 30, 44, 46, 62, 64, 66, 67, 68, 70, 74, 78, 81, 82 and 83.

External control: 4, 9, 12, 20, 34, 35, 36, 38, 41, 43, 45, 47, 50, 51, 52, 53, 56, 57, 58, 65, 72, 77, 79, 80, 84 and 88

Internal control: 6, 7, 8, 10, 18, 19, 26, 27, 31, 32, 33, 37, 40, 42, 48, 49, 54, 55, 59, 60, 61, 63, 69, 75, 76, 85, 86 and 87

- ◆ *Interpretation:* Individuals who firmly believe that they can control their own destiny, score high on internal control and are more alert to those aspects of the environment that provide useful information for future behaviour. The opposite is true for external control and autonomous individuals (Scheepers, 1995)

- ◆ *Reliability:* An item analysis of the three scales revealed reliability scores higher than 0,80. Research by Scheepers (1995) established the Cronbach alpha coefficient of the three scales of the LOC at 0,83 (internal control), 0,84 (external control) and 0,87 (autonomy). Scheepers (1995) also found that the external control and internal control are not bipolar opposites, but independent constructs. Later Scheepers (2001) found autonomy at 0,88; external control at 0,87 and internal control at 0,82.

- ◆ *Validity:* Criterion validity has been found that it correlates with that of a composite criterion of job success ($r = 0,62$) (Bothma & Scheepers, 1997). And later, construct validity was also confirmed (Scheepers, 2001).

- ◆ *Justification for use in this research:* Locus of control is probably the most cited construct in psychology (Antonovsky, 1991), with an exceptionally strong theoretical base. Though its original instrument was later improved by Scheepers (1995) from (Rotter, 1966) it was later tested again for its psychometric qualities which were even better (Bothma & Scheepers, 1997).

4.3 DATA GATHERING

The 950 sample (of the total of 2150) were designated to complete the measuring instruments. Of these, 200 were received back without omitted items and which constituted the research sample. This represents 21% of the random sample.

To obtain the data, a covering letter permitting the execution of the research project from the Executive Director of the Human Resources Department was attached to the six salutogenic instruments. All the questionnaires and answer sheets were book bounded. It was then hand delivered to the different offices of each of the chosen individuals in the sample.

The letter explained the nature of the research and the importance of the respondents' participation. The contact details of the researcher were provided in case further clarity was required. A month's deadline was set for all individual responses to have reached the researcher's office. The participants were asked to complete all the questions and to send the whole book back in a supplied self-addressed envelope. The envelope was marked with a number for identification for the biographical data, which was later provided by the Human Resources Department.

4.4 DATA ANALYSIS

The data analysis were performed on the biographical data, the reliability of the six salutogenic instruments, the correlations between constructs and the comparison of race and gender groups.

All statistical analysis in the present study was computed using the Statistical Package for the Social Sciences (SPSS), windows version (Field, 2005).

4.4.1 Biographical data

Descriptive statistics were calculated for the individual biographical variables namely gender, ethnic orientation and age, and job related variables namely departmental distribution, pay scale, part/full time employee distribution, and tenure. The data was presented in the next chapter in the form of pie diagrams, histograms and tables.

4.4.2 Reliability of the measuring instruments

Reliability is defined as the consistency or stability, whether the measurement can be repeated and confirmed by further competent measurements (Rosnow & Rosenthal, 1999, p123). The "Internal-consistency reliability" is the degree of relatedness of the individual items in one factor or scale (Rosnow & Rosenthal, 1999, p124).

Methods of calculating the internal consistency reliability include the Cronbach Alpha and the K-R20 tests. As the K-R20 test is used when items are scored dichotomously (0 or 1), and the items in the current study ranged from 1-5 (very dissatisfied to very satisfied), the Cronbach alpha was calculated for the current study (SPSS, 2004).

The Cronbach Alpha has a range of 0-1, where 0 is no internal consistency and 1 is the maximum internal consistency (Terre Blanch & Durrheim, 1999). Although it depends on what is being measured, according to Terre Blanch and Durrheim, a rule of thumb of 0, 75 are set for an acceptable level for the Cronbach Alpha. Nunnally (1970) for

instance set the level at 0, 7, and therefore these are values to guide one in deciding on the degree of reliability.

To establish the reliability of each of the constructs tested, the Cronbach Alpha coefficient was calculated. The Cronbach Alpha measures the internal reliability consistency which reflects the degree to which item content (of the items in the scale) is similar (Mwanje & Gotu, 2001).

In addition to testing the overall reliability of each construct an item analysis was also performed for each construct. An item analysis contains the contribution of each item in that scale/construct to the overall reliability of the construct. The item analysis provides the recalculated Cronbach Alpha of the test/construct should an item have been excluded from the test.

The item analysis would point out any items that were to be problematic and should ideally be excluded from the construct or included in another construct. As it is **not** the purpose of the current study to delve into the construct validity of the measurements, these problems were to be highlighted, should they exist.

4.4.3 Pearson correlation analysis

A correlation is used when describing the degree of relationship between the two variables. It indicates a linear relationship between variables. The sign of the correlation coefficient (+, -) defines the direction of the relationship, a positive correlation coefficient means that as the value of one variable increases, the value of the other variable increases; as one decreases the other decreases. A negative correlation coefficient indicates that as one variable increases, the other decreases, and vice-versa (Cohen, 1998; Field, 2005; Shaughnessy, Zechmeister & Zechmeister, 2003).

Descriptive statistics were calculated for the six salutogenic instruments, followed by the Pearson product-moment correlation coefficients, these were for the six salutogenic constructs as well as for the selected biographical variables.

The Pearson correlation analysis was presented in the next chapter in a single correlation matrix indicating the correlation as well as the p-value.

4.4.4 Effect size

Effect size is simply an objective and standardised measure of the magnitude of the observed effect. The fact that the measure is standardized just means that we can compare effect sizes (d) across different studies that have measured different variables. Many measures of effect size has been proposed, the most common of which is Cohen's d and the Pearson correlation coefficient (r), (Cohen, 1998).

Cohen (1998) presents the following guidelines for interpreting the size of the effect:

R = 0,1 (Small effect) – explains 1% of total variance

R = 0,3 (medium effect) – explains 9% of total variance

R = 0,5 (large effect) – explains 25% of total variance

The guidelines above were used to assess the importance of the effects, regardless of the significance of the test statistics (Field, 2005).

The effect size was administered in the correlation between salutogenic constructs and selected biographical variables. The results were presented and interpreted in the next chapter.

4.4.5 Comparison of groups

The appropriate inferential test when comparing two means obtained from different groups. The t-test for independent groups is defined as the difference between the sample means divided by the standard error of the mean difference. According to Shaughnessy et al. (2003) the p-value represents the probability of error involved in accepting the research hypothesis concerning the existence of a difference. The null hypothesis is that of no difference between the two categories of observations.

Shaughnessy et al. (2003) further suggest that if the difference is in the predicted direction, one can consider only one half (one tail) of the probability distribution and thus divide the standard p-value with a t-test (a two tailed probability) by two. Whilst other researchers suggest the standard two tailed t-test probability.

The groups were compared with regards to their mean scores on the various instrument to determine how the groups differ with regards to their salutogenic functioning.

4.4.5.1 Comparison of two groups: t-test

This is a commonly used test to measure the significance of the difference between two means based on two independent, unrelated groups (Salkind, 2000, p173). “Independence” is defined by Rosnow and Rosenthal (1996, p.271) as that the results in one group are not influenced by the results in the other group.

4.4.5.2 Comparison of three or more groups: ANOVA

Analysis of variance (ANOVA) tests the null hypothesis that all the population means are equal: $H_0: \mu_1 = \mu_2 = \dots = \mu_a$ by comparing estimates of variance. The analysis of variance (ANOVA) test is used when testing for significant differences between means of more than two groups.

The one way analysis of variance (F-test) was used to determine whether differences between the groups regarding their mean test scores are of statistical significance (Mwanje & Gotu, 2001). The various groups (independent variables) which were compared are:

- Groups with different race
- Groups with different race and gender

4.5 RESEARCH HYPOTHESIS

With reference to the above discussed research methodology, the following research hypothesis was formulated:

There is no relationship between the demographic variables and the salutogenic scores amongst the university administrative staff.

The null hypothesis *expects to find no relationship between the demographic variables and the salutogenic scores*. The alternative would be that such a relationship exists. A correlation test was applied to test the null hypothesis.

4.6 CHAPTER SUMMARY

The chapter began by outlining the selection of the population and sample, followed by a compilation and a discussion of the measuring instruments. These instruments were discussed in terms of their objectives, administration, analysis, interpretation, reliability, validity and their justification for use in this research. The data gathering and data analysis were outlined and the chapter was concluded with the formulation of the research hypothesis.

This concludes steps 1-4 of the empirical study. In the following chapter, the research results are reported and interpreted.

CHAPTER 5

RESEARCH RESULTS

The purpose of this chapter is to report and interpret the findings of the empirical study. The biographical data of the respondents will be discussed in the first section followed by the presentation of the reliability of the measuring instruments. Then the correlations between the salutogenic constructs. Further, the correlation between the salutogenic constructs and the selected biographical data to differences between groups were also reported and interpreted. The chapter will conclude with the integration of results.

5.1. BIOGRAPHICAL DATA

The biographical data will be presented in their *individual* biographical data (gender, ethnic orientation and age) and *job* categories (departmental distribution, pay scale, part/full time employee distribution, and tenure).

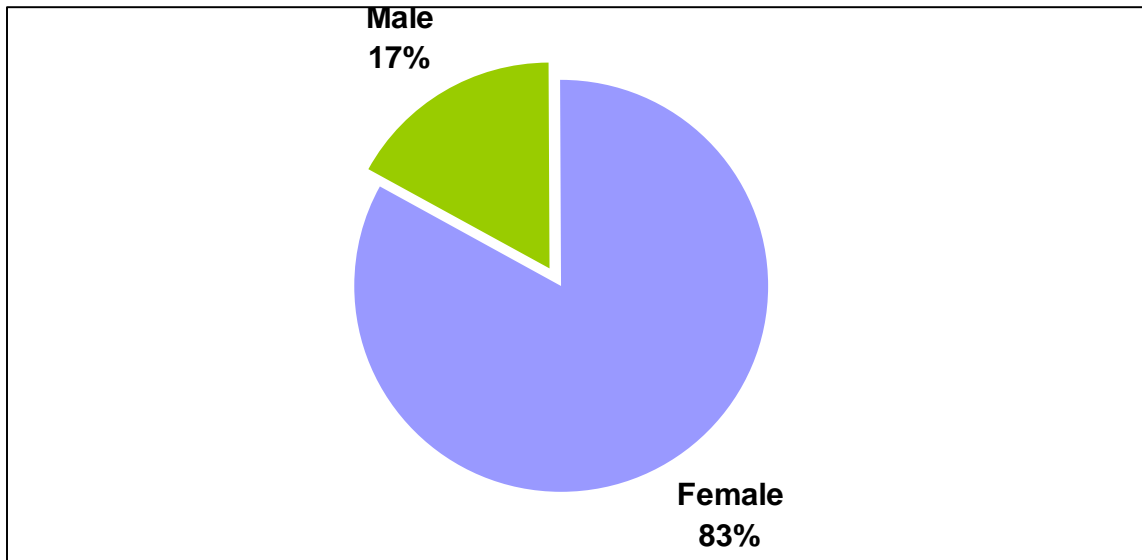
5.1.1 Individual

The individual biographical data was presented for gender, ethnic orientation and age.

5.1.1.1 Gender

The gender composition of the sample is given in Figure 5.1. The sample is predominated by females consisting 83% of the total sample.

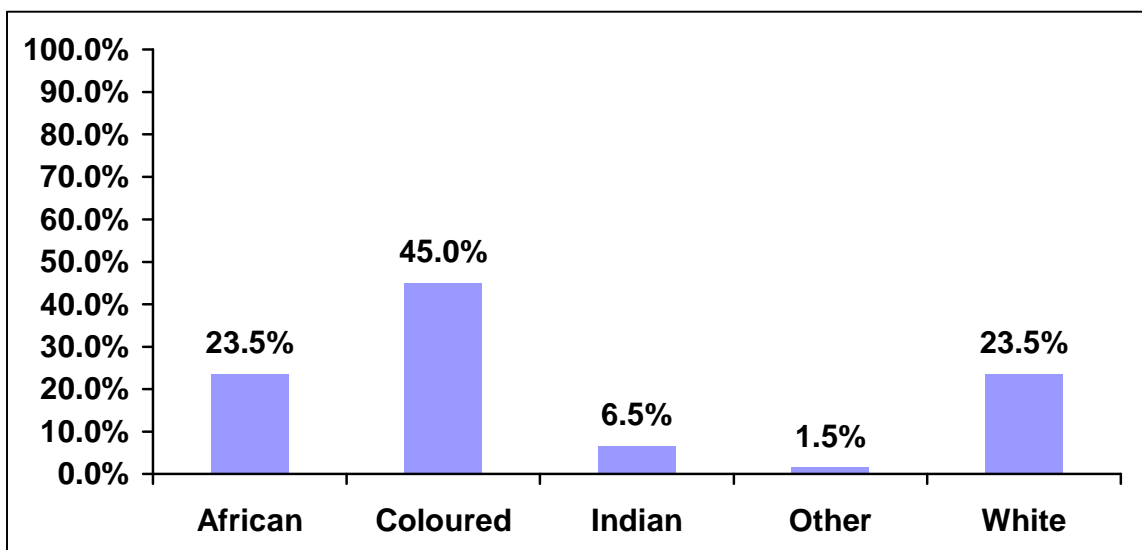
Figure 5.1 Gender (n = 200)



5.1.1.2 Ethnic orientation

Figure 5.2 presents the distribution across the different ethnic groups. A large percentage of the sample are coloured (45%). The relatively high percentage coloured respondents are consistent with population distribution of the Western Cape.

Figure 5.2 Ethnic orientation (n = 200)



5.1.1.3 Age

Respondents' age were recorded and the table below provides the average age, the standard deviation from the average, the minimum (youngest) and maximum (oldest) values.

Table 5.1 Descriptive information for age (n = 200)

	Number	Minimum	Maximum	Mean	Std. Deviation
AGE	200	22	61	39.185	8.08

On average, respondents are 39 years old. The standard deviation of 8 indicates that 66% of the sample lies between the ages of 31 and 47. The youngest respondent was 22 years of age while the oldest was 61. The sample was, in general, an older sample.

5.1.2 Job

The jobs are presented according to departmental distribution, part/full time employee distribution, tenure, and pay scale.

5.1.2.1 Departmental distribution

Table 5.2 below indicates the distribution of the sample across the different departments and/or business units.

Table 5.2 Departments (n = 200)

	Frequency	Percentage
Communication & Development	3	1.5
Faculty of Commerce	15	7.5
Faculty of Eng & Built Env	22	11
Faculty of Health Sciences	38	19
Faculty of Humanities	23	11,5
Faculty of Law	11	5,5
Faculty of Science	27	13,5
Finance	24	12
Graduate School of Business	9	4,5
Human Resources	10	5
ICTS	2	1
Office of the Registrar	1	0,5
Office of the Vice Chancellor	3	1,5
University Libraries	12	6

5.1.2.2 *Payscale distribution*

Table 5.3 below indicates the distribution of the sample across the different pay scales.

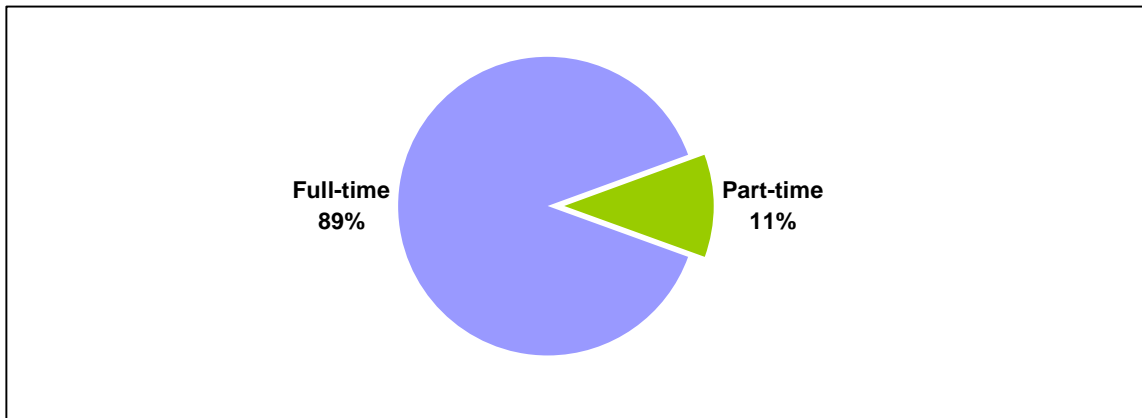
Table 5.3 Payscale (n = 200)

	Frequency	Percentage
Pay class 06	53	26,5
Pay class 07	93	46,5
Pay class 08	54	27

5.1.2.3 Part-time, full-time distribution

Figure 5.3 below illustrates that nearly the entire sample (89%) consists of full-time employees.

Figure 5.3 Part-time, Full-time distribution (n = 200)



5.1.2.4 Tenure

Table 5.4 provides the descriptive information for the length of time (tenure) that the respondents had been employed at the university.

Table 5.4 Tenure (n = 200)

	Number	Minimum	Maximum	Mean	Std. Deviation
Tenure	200	2	35	10,44	6,68

One respondent has worked at the university for 35 years. The least number of years employed was 2. On average, respondents have been working for the university for 10 years.

5.2 DESCRIPTIVE STATISTICS AND ANALYSIS OF INSTRUMENTS

This section begins with the presentation of the descriptive statistics of the measuring instrument, followed by the analysis of items and the reliability of each measuring instruments. These were presented in relation to their applicability to the current study and their consistency with prior or other studies.

5.2.1 Descriptive statistics for measuring instruments

Descriptive data regarding the measuring instruments is presented in table 5.5.

Table 5.5 Descriptive statistics for measuring instruments

Instrument	N	Minimum	Maximum	Mean	Std. Deviation
Comprehensibility	200	1,55	6,21	4,02	0,86
Manageability	200	2,40	6,70	4,95	0,71
Meaningfulness	200	2,64	6,75	5,00	0,84
SOC	200	2,19	6,56	4,67	2,42
Commitment	200	0	1,80	0,84	0,42
Control	200	0,11	1,71	0,80	0,34
Challenge	200	0,47	1,88	1,26	0,29
Hardy	200	0,18	1,79	0,97	1,07
Self-Efficacy Scale	200	2,16	4,04	3,06	0,43
Potency Scale	200	2,10	5,05	3,69	0,65
Self control	200	0,34	2,34	1,07	0,65
Autonomy	200	3,88	6,61	5,26	0,61
External	200	1,88	4,92	3,40	0,59
Internal	200	4,39	6,78	5,56	0,52
LOC	200	3,35	6,11	4,72	1,72

The SOC, hardy, self-efficacy, potency, self control and LOC, and their subscales were presented (N200), in table 5.5. What was noted was the total number of all mean scores and the standard deviations, they were consistent with studies of (Baloyi, 2000; Cilliers and Coetzee, 2003; Ludik, 1996; Marais, 1997; Viviers, 1999; Wising & Van Eeden, 2002).

This means according to Strümpfer (1990), Cilliers and Coetzee (2003) that the measuring instruments deal with how people manage stress and stay well. From the mean scores and the standard deviation scores it was evident that the higher the individuals scores, the higher their ability to cope, the better for the individual to minimise and manage stressful events.

5.2.2 Reliability of the measuring instruments

The reliability of the six salutogenic measuring instruments are presented below with their dimensions.

5.2.2.1 Reliability and item analysis of sense of coherence

The Cronbach Alphas of the three different dimensions in Antonovsky's sense of coherence instrument are given below in Table 5.6. While not extremely high, they were not particularly low either and were classified as moderately reliable.

Table 5.6 Reliability for sense of coherence

Dimensions	Cronbach Alpha
Comprehensibility	0.704
Manageability	0.638
Meaningfulness	0.698

The item analysis given in table 5.7 indicates the value of the alpha for the construct should an item be left out of the analysis. For instance, for the construct “Comprehensibility”, by leaving item 4 out of the test; the reliability will go from 0,70 to 0,73. This however is not a particularly big improvement, though consistent with study done by (Jackson & Rothman, 2001).

Table 5.7 Item analysis for Sense of coherence

Comprehensibility		Manageability		Meaningfulness	
Item	Cronbach's Alpha if Item Deleted	Item	Cronbach's Alpha if Item Deleted	Item	Cronbach's Alpha if Item Deleted
3	0.692	2	0.626	4	0.737
5	0.730	6	0.615	7	0.656
10	0.669	9	0.596	8	0.659
12	0.675	13	0.590	11	0.623
15	0.640	18	0.649	14	0.665
17	0.661	20	0.641	16	0.701
19	0.673	23	0.600	22	0.640
21	0.674	25	0.605	28	0.662
24	0.686	27	0.608		
		29	0.599		

None of the items in any of the dimensions would justify being excluded from the tests, with the possible exception of item 4 in the “Meaningfulness” construct. By excluding this one item the reliability of the test will jump from 0,698 to 0,737. The researcher decided not to

exclude the item, since it will not make a big improvement. Previous studies also included an item under similar circumstances (Baloyi, 2000; Kossuth, 2004).

5.2.2.2 *Reliability and item analysis for hardiness*

The personal views survey consists of three dimensions; commitment, control and challenge. Hardiness reliability with its dimensions was presented in table 5.8 below.

Table 5.8 Reliability for hardiness

Dimension	Cronbach Alpha
Commitment	0,742
Control	0,701
Challenge	0,489

Commitment and control have acceptably high Cronbach' Alpha values of above 0.7. These are consistent with most research findings (Cilliers 2003). However the scale challenge had a relatively low reliability of 0.489. With the possible exception of item 21, it would not help to exclude any items from the scale to improve this mediocre reliability.

Below in table 5.9 is a presentation of an item analysis for hardiness and its dimensions.

Table 5.9 Item analysis for hardiness

Commitment		Control		Challenge	
Item	Cronbach's Alpha if Item	Item	Cronbach's Alpha if Item	Item	Cronbach's Alpha if Item
1	0.744	3	0.697	2	0.454
8	0.737	4	0.703	6	0.452
11	0.732	5	0.696	9	0.447
14	0.734	7	0.687	12	0.532
17	0.715	10	0.694	15	0.479
20	0.750	13	0.670	18	0.446
23	0.727	16	0.695	21	0.529
26	0.734	19	0.685	24	0.547
29	0.730	22	0.701	27	0.481
32	0.708	25	0.680	30	0.429
38	0.719	28	0.694	33	0.523
39	0.719	31	0.674	36	0.445
44	0.734	34	0.698	37	0.482
47	0.732	35	0.714	40	0.384
50	0.712	42	0.689	41	0.465
		45	0.669	43	0.459
		48	0.650	46	0.459
				49	0.491

5.2.2.3 Reliability and item analysis for Self-Efficacy

Bandura's Self-Efficacy scale consists of only a single dimension. On the test, an internal reliability of **0.718** was found. The results were consistent with that of Stanley and Murphy (1997). The table 5.10 below provides the item analysis for the test.

Table 5.10 Item analysis for Self-Efficacy

Item	Cronbach's Alpha if Item Deleted
1	0.712
2	0.697
3	0.701
4	0.691
5	0.709
6	0.703
7	0.724
8	0.704
9	0.705
10	0.720
11	0.707
12	0.717
13	0.717
14	0.702
15	0.690
16	0.724
17	0.719
18	0.711
19	0.697
20	0.702
21	0.701
22	0.715
23	0.724
24	0.713
25	0.722
26	0.725
27	0.717

All the items contribute well to the scale and the biggest improvement in reliability that could be achieved by leaving an item off the test was from 0.718 to 0.725, which was not large enough to justify exclusion of any items.

5.2.2.4 Reliability and item analysis for potency

The first part of Ben Sira's test, the 19 items that measure self-confidence, commitment to society and meaningfulness has a reliability of **0.762**. The item analysis is given in Table 5.11.

Table 5.11 Item analysis for potency

Item	Cronbach's Alpha if Item Deleted
1	0.740
2	0.751
3	0.773
4	0.745
5	0.780
6	0.760
7	0.752
8	0.738
9	0.765
10	0.768
11	0.745
12	0.744
13	0.742
14	0.753
15	0.754
16	0.754
17	0.743
18	0.726
19	0.735

All the items contribute well to the overall Cronbach Alpha of 0.762 which was a fair indication of reliability. The reliability results were consistent with Michielsens, Willemsen, Croon, de Vries, & van Heck, 2004.

5.2.2.5 Reliability and item analysis for learned resourcefulness

The self control scale did not consist of any sub-scales and the overall reliability on the entire test was **0.805**. The results concur with that of (Akgun, 2004). The item analysis for the resourcefulness-self control scale is given below in table 5.12. All items contributed well to the overall reliability.

Table 5.12 Item analysis for learned resourcefulness

Item	Cronbach Alpha
1	0.806
2	0.809
3	0.802
4	0.811
5	0.800
6	0.805
7	0.801
8	0.802
9	0.808
10	0.800
11	0.797
12	0.797
13	0.799
14	0.790
15	0.795
16	0.798
17	0.802
18	0.801
19	0.806
20	0.797

Item	Cronbach Alpha
21	0.794
22	0.789
23	0.797
24	0.805
25	0.798
26	0.801
27	0.795
28	0.799
30	0.794
31	0.792
32	0.796
33	0.810
34	0.800
35	0.809
36	0.804

5.2.2.6 *Reliability and item analysis for locus of control*

The locus of control questionnaire consists of three dimensions; autonomy, internal control and external control, which are reported in table 5.13 below.

Table 5.13 Reliability for locus of control

Item	Cronbach Alpha
Autonomy	0.841
External control	0.746
Internal control	0.808

The item analysis for locus of control is given in table 5.14 below.

Table 5.14 Item analysis for locus of control

Autonomy		External control		Internal control	
Item	Cronbach's Alpha if Item Deleted	Item	Cronbach's Alpha if Item Deleted	Item	Cronbach's Alpha if Item Deleted
3	0.839	4	0.748	6	0.802
5	0.824	9	0.757	7	0.808
13	0.832	12	0.742	8	0.802
14	0.836	20	0.741	10	0.805
16	0.852	34	0.744	18	0.814
17	0.838	35	0.732	19	0.800
22	0.835	36	0.740	26	0.813
23	0.832	38	0.741	27	0.811
24	0.834	41	0.746	31	0.807
25	0.848	43	0.739	32	0.804
28	0.836	45	0.727	33	0.801
29	0.837	47	0.740	37	0.793
30	0.834	50	0.729	40	0.800
44	0.832	51	0.735	42	0.796
46	0.837	52	0.737	48	0.807
62	0.833	53	0.719	49	0.799
64	0.839	56	0.727	54	0.801
66	0.832	57	0.724	55	0.809
67	0.834	58	0.729	59	0.795
68	0.833	65	0.745	60	0.802
70	0.836	72	0.745	61	0.802
74	0.825	77	0.753	63	0.799
78	0.834	79	0.746	69	0.798
81	0.827	80	0.735	75	0.806
82	0.837	84	0.727	76	0.806
83	0.845	88	0.747	85	0.793
				86	0.801
				87	0.791

The reliability of locus of control yielded at 0,798, all the item as presented in table 5.14 contributed well to the overall reliability. Schepers (2001) found almost similar high reliability when the LOC dimensions yielded 0,88 for autonomy, 0,87 for external control and 0,82 for internal control.

5.3. CORRELATIONS BETWEEN SALUTOGENIC CONSTRUCTS

The correlation between the salutogenic constructs are given in table 5.15 below.

This section deals with correlations between the different constructs. The results will be reported and then interpreted.

Table 5.15. Correlation between salutogenic constructs (n = 200)

		Comprehen- sion	Manage- ability	Meaningful- ness	Commit- ment	Control	Challenge	Self- efficacy	Potency	Self- control	Autono- my	Exter- nal	Internal
Comprehension	Correlation	1	0.35**	0.21	-0.08*	0*	-0.12*	0.05	0.05	0.17	-0.16*	0.15	-0.13*
	p-value		0.000	0.003	0.267	0.974	0.079	0.470	0.491	0.014	0.027	0.03	0.058
Manageability	Correlation	-	1	0.49**	0.04*	-0.02*	0.01*	0.02*	0.01*	0.05	0.06	-0.08	0.09
	p-value	-		0.000	0.576	0.831	0.875	0.762	0.837	0.486	0.412	0.249	0.22
Meaningfulness	Correlation	-	-	1	-0.06*	-0.04*	-0.09*	0.15	0*	0.04*	0.04*	0.04	0.05*
	p-value	-	-		0.422	0.553	0.194	0.038	0.962	0.562	0.574	0.579	0.467
Commitment	Correlation	-	-	-	1	0.61***	0.49**	-0.01*	-0.05*	-0.06*	0.1	0	0.16
	p-value	-	-	-		0.000	0.000	0.901***	0.460	0.398	0.147	0.998	0.026
Control	Correlation	-	-	-	-	1	0.32**	-0.1*	-0.09*	-0.08*	0.18	0.11	0.2
	p-value	-	-	-	-		0.000	0.16	0.211	0.254	0.01	0.13	0.004
Challenge	Correlation	-	-	-	-	-	1	0.06	0.18	0.08	0.04*	-0.07*	0.15
	p-value	-	-	-	-	-		0.366	0.011*	0.287	0.542	0.345	0.033
Self- efficacy	Correlation	-	-	-	-	-	-	1	0.14	0.19	-0.16*	0.01*	-0.07*
	p-value	-	-	-	-	-	-		0.052	0.007*	0.026	0.845	0.304
Potency	Correlation	-	-	-	-	-	-	-	1	0.19	-0.02*	-0.06*	-0.02*
	p-value	-	-	-	-	-	-	-		0.008	0.817	0.378	0.83
Self-control	Correlation	-	-	-	-	-	-	-	-	1	0.3**	-0.1*	0.24
	p-value	-	-	-	-	-	-	-	-		0.000	0.177	0.001
Autonomy	Correlation	-	-	-	-	-	-	-	-	-	1	-0.36*	0.72***
	p-value	-	-	-	-	-	-	-	-	-		0.000	0.000
External	Correlation	-	-	-	-	-	-	-	-	-	-	1	-0.27*
	p-value	-	-	-	-	-	-	-	-	-	-		0.000
Internal	Correlation	-	-	-	-	-	-	-	-	-	-	-	1
	p-value	-	-	-	-	-	-	-	-	-	-	-	

Notes: * p<0,05 Total variance - small effect, **

r>0,30 total variance - medium effect, ***

r>0,50 total variance - large effect

In terms of effect size most of the correlations between the salutogenic constructs were statistically significant ($p < 0,05$) some were of medium and large in effect in their total variance.

- Sense of coherence dimensions

Comprehension correlates negatively with self autonomy (statistical significance – small effect) meaning individuals experiencing stressful events will motivationally find it difficult to use resources at their disposal for challenging demands.

Comprehension correlates negatively with internal (statistical significance – small effect) meaning individuals experiencing stressful events will cognitively or motivationally find it difficult to accept responsibility and accountability for life events.

Comprehension correlates positively with manageability (statistical significance – medium effect) meaning individuals experiencing stressful events, will cognitively or emotionally be in a position to manage negative events posed by stress.

Comprehension correlates positively with control (statistical significance – small effect) meaning that individuals experiencing stressful events, will act emotionally against stressful event as they believe they influence the course of events.

Comprehension correlates negatively with commitment (statistical significance – small effect) meaning that individuals experiencing harsh realities of life will either cognitively or emotionally not make an effort to engage with the stressful events.

Comprehension correlates negatively with challenge (statistical significance – small effect) meaning that individuals experiencing stressful events, will also cognitively perceive the external stimuli as not making cognitive sense.

Manageability correlates positively with self efficacy (statistical significance – small effect) meaning individuals experiencing stressful events, will cognitively use resources at their disposal to minimize stress that threatens their motivation.

Manageability correlates positively with potency (statistical significance – small effect) meaning individuals experiencing adverse events of life, will cognitively through their emotional coping abilities use resources at their disposal to learn how to master adverse events.

Manageability correlates positively with meaningfulness (statistical significance – medium effect) meaning individuals experiencing stressful events, will cognitively or motivationally view these events as manageable and life as meaningful.

Manageability correlates positively with hardiness – commitment, control and challenge (statistical significance – small effect) meaning that individuals experiencing stressful events will cognitively, motivationally or emotionally use resources at their disposal to resist the negative effects of stress.

Manageability correlates negatively with control (statistical significance – small effect) meaning that individuals experiencing stressful events, will motivationally find it overwhelming to use resources at their disposal for challenging demands.

Manageability correlates negatively with external control (statistical significance – large effect) meaning that individuals experiencing negative stress, will also motivationally not make an effort to attempt to avoid the sources of negative stress.

Meaningfulness correlates positively with self efficacy (statistical significance – small effect) meaning that individuals experiencing stressful events, will emotionally or affectively view stress as meaningful and cognitively master task demands.

Meaningfulness correlates positively with potency (statistical significance – small effect) meaning that individuals experiencing stressful events, will cognitively or emotionally view these events as meaningful and overcomable.

Meaningfulness correlates positively with self control (statistical significance – small effect) meaning that individuals experiencing problems and demands posed by living, will emotionally or cognitively express a view of life as being meaningful and controllable and thus minimize the extent of negative effects of stress.

Meaningfulness correlates negatively with challenge (statistical significance) meaning that individuals experiencing individuals experiencing problems and demands posed by living will also cognitively or emotionally not welcome change as a challenge.

Meaningfulness correlates positively with locus of control – autonomy, external and internal (statistical significance – all dimensions, medium to large effect) meaning that individuals experiencing problems and demands posed by life will emotionally or motivationally regard life as meaningful and the stimuli posed by living as a challenge.

- Hardiness dimensions

Commitment correlates positively with challenge (statistical significance – medium effect) meaning that individuals experiencing life as meaningful, will also cognitively view change as a challenge and as an interesting experience.

Commitment correlates positively with control (statistical significance – large effect) meaning that individuals experiencing life as meaningful, will also motivationally have the ability to interpret, judge and incorporate external stimuli.

Controls correlates positively with challenge (statistical significance – medium effect) meaning that individuals experiencing life in a positive light, will also cognitively or motivationally view it as a challenge.

Challenge correlates positively with locus of control – autonomy, (statistical significance – small effect) meaning that individuals experiencing life as challenging, will also cognitively or motivationally view life events as within their ability to accept responsibility and accountability.

- Self efficacy

Self efficacy correlates positively with external (statistical significance – small effect) meaning that individuals who attempt to master their environment, will also emotionally or cognitively be in a position to regulate their responses through cognitive control.

Self efficacy correlates negatively with locus of control – autonomy, and internal (statistical significance – small effect) meaning that individuals who attempt to master their environment, will also emotionally or motivationally be inclined to regard this stimuli as a challenge and thus not accept responsibility and accountability.

- Potency

Potency correlates negatively with locus of control – autonomy, external and internal (statistical significance – small effect) meaning that individuals viewing life as orderly will also not be in a position to motivationally or emotionally accept their individual responsibility and control for life events.

- Learned resourcefulness

Self control correlates positively with autonomy (statistical significance – medium effect) meaning that individuals experiencing stressful events will cognitively or motivationally accept responsibility for life events within their ability.

Self control correlates negatively with external control (statistical significance – small effect) meaning that individuals experiencing stressful events will cognitively or motivationally make fewer or no attempt to avoid the source of negative stress.

- Locus of control dimensions

Autonomy correlates positively with internal (statistical significance – large effect) meaning that individuals experiencing the ability to interpret, judge, and incorporate in such a manner that the external stimuli fits to

their life plan, will motivationally act independently with self confidence and decide to overcome stressful events.

Autonomy correlates negatively with external (statistical significance – small effect) meaning that individuals do not only believe less in their abilities but also views external stimuli as unstructured, disordered and inconsistent. In this case the individuals' perception does not make cognitive sense.

External locus of control correlates negatively with internal (statistical significance – small effect) meaning that individuals experiencing greater value on those aspects of the environment that provides useful information for future behaviour, will also not be in a position to cognitively or motivationally internalise the inability to find structure in events.

5.4 CORRELATIONS BETWEEN SALUTOGENIC CONSTRUCTS AND THE SELECTED BIOGRAPHICAL DATA

This section reports the correlation of salutogenic constructs with age and tenure to determine the significance of the selected biological data.

5.4.1 Age

As age is a continuous variable, and not categories, the approach selected to investigate possible differences and effects is a correlation analysis, gender and ethnic orientation were excluded for this purpose because they were not continuous variables.

The correlation between age and the salutogenic constructs are given in table 5.16.

Table 5.16 Correlation between salutogenic constructs and age

	AGE	
	Correlation	p-value
Comprehensibility	0.01*	0.921
Manageability	0.08	0.262
Meaningfulness	0.13	0.069
Self-Efficacy Scale	0.03*	0.694
Potency Scale	0.00*	0.949
Commitment	0.06	0.371
Control	0.05*	0.469
Challenge	(0.07)*	0.335
Self control	(0.07)*	0.343
Autonomy	0.09	0.186
External	(0.11)*	0.137
Internal	0.05*	0.5

Notes: * $p < 0,05$ total variance – small effect, ** $r > 0,30$ total variance - medium effect, *** $r > 0,50$ total variance - large effect

There was no relationship between age and the scores on the salutogenic constructs, p-value below 0.05. Though, one could argue that an individual needs to become of age to be able to cognitively or motivationally or emotionally be in a position to deal with internal or external stimuli. It shows that it is regardless of age that individuals can embrace the salutogenic constructs to respond to demanding situations.

5.4.2 Tenure

The correlation between the Salutogenic scores and tenure, the length of time working at the university, is given in Table 5.17.

Table 5.17 Correlation between salutogenic constructs and tenure

	Tenure	
	Correlation	p-value
Comprehensibility	(0.01)	0.929
Manageability	0.03	0.702
Meaningfulness	0.08	0.255
Self-Efficacy Scale	0.03	0.710
Potency Scale	(0.02)	0.747
Commitment	(0.08)	0.285
Control	(0.04)	0.539
Challenge	(0.19)*	0.007
Self control	(0.15)*	0.036
Autonomy	(0.02)	0.819
External	0.15*	0.039
Internal	(0.01)	0.856

Notes: * $p < 0,05$ total variance – small effect, ** $r > 0,30$ total variance - medium effect,
 *** $r > 0,50$ total variance - large effect

Three positive significant correlations were found between tenure and the constructs. These were with challenge ($p= 0,007$), self control ($p= 0,036$) and external locus of control ($p= 0,039$). This indicates that the longer a person has been working at the university the higher their scores on challenge, self-control and external locus of control.

Challenge as a dimension of hardiness, means that the individuals have the ability to cognitively view stressful events as a challenge, as important

and in the process develop a number of coping skills (Kobasa, 1979, 1982). These findings were consistent with the research of Moos, Brennan, Schutte and Moos (2006) study who indicated that individuals who appraised events as challenging and relied more on approach coping were more likely to report some benefit from those events.

On the aspect of learned resourcefulness, it means that there was a strong tendency by individuals to cognitively apply self management methods to solutions of distressing situations. Whilst on external locus of control this means that there is motivational behaviour to rely to what is fate; luck, circumstances or influential people. Siu, Spector, Cooper, Lu and Yu (2002) confirmed the expectation that external locus of control has direct effect of lowering job satisfaction and well-being. In light of Vinassa's (2003) argument that employee wellness initiatives are not only for big companies, there is room for awareness creation and training for individuals to embrace the internal locus of control behaviour.

5.5 DIFFERENCES BETWEEN GROUPS

The scores on the salutogenic constructs were compared for the different demographic groups. These demographic variables included gender, ethnic orientation and payscale levels.

5.5.1 Gender

While most of the sample was female, (83%), the scores of the males and females were still compared, using the independent t-test. Table 5.18 illustrates the results of the test.

Table 5.18 Comparison of males and females on salutogenic constructs; independent t-test

	Means Females	Means Males	t	p-value
Comprehensibility	4.01	4.09	(0.477)**	0.634
Manageability	4.94	5.01	(0.508)***	0.612
Meaningfulness	5.04	4.98	0.420	0.675
Self-Efficacy Scale	3.05	3.13	(1.043)	0.298
Potency Scale	3.67	3.84	(1.421)	0.157
Commitment	0.86	0.78	1.043	0.298
Control	0.83	0.72	1.570	0.118
Challenge	1.28	1.19	1.620	0.107
Self control	1.06	0.77	2.405*	0.017
Autonomy	5.30	5.08	1.887	0.061
External	3.37	3.58	(2.161)*	0.035
Internal	5.59	5.47	1.167	0.245

Notes: * $p < 0,05$ total variance – small effect, ** $r > 0,30$ total variance - medium effect,

*** $r > 0,50$

total variance - large effect

Males and females differed significantly only with regards to two salutogenic constructs; self control and external locus of control. Females had a much higher score with regards to self-control and males had a higher score on external locus of control. This means that females have a strong tendency to cognitively apply self management methods to solutions of distressing situations as opposed to their emotions. This however is contrary to the traditional view that men are more cognitively inclined as opposed to women who are believed to be more emotive. This could further be inferred to the recent changes in our legislative system, as more women are becoming aware and are claiming their role in society,

for instance Broad Based Black Economic Empowerment (BBBEE), employment equity and the like. The traditional thinking will continuously be that challenges and such prejudice be eradicated. Akgun (2004) found similar results when studying the effects of situation and learned resourcefulness on coping responses.

Whilst for males, they are motivated to attribute their performance to forces outside their control such as fate, luck or influential people. These results have been consistent with Troup and Dewe (2002) in their exploring of the nature of control and its role in the appraisal of workplace stress research. They concluded the importance of having a sense of self – control, particularly when it comes to the use of different coping strategies.

5.5.2 Ethnic orientation

The sample sizes of all ethnic groups were not sufficient to allow for comparisons, i.e. there was only 6,5% Indians in the sample.

Therefore only the three larger groups were compared. These were the Africans (23,5%), Whites (23,5%) and Coloureds (45%). As there were three groups to compare, the analysis of variance (ANOVA) statistics was used to calculate any significant differences between the scores of the ethnic groups.

Table 5.18 presents the findings of the ANOVA on ethnic groups.

Table 5.19 Comparison of ethnic groups on salutogenic constructs

	Africans	Coloureds	Whites	F-Value	P-value
Comprehensibility	4.10	4.01	4.04	0.170	0.844***
Manageability	4.99	4.99	4.87	0.488	0.615***
Meaningfulness	4.92	5.12	5.00	0.943	0.391**
Self-Efficacy Scale	3.07	3.09	3.03	0.222	0.801***
Potency Scale	3.58	3.70	3.75	0.871	0.420**
Commitment	0.81	0.85	0.86	0.217	0.805***
Control	0.79	0.79	0.86	0.782	0.459**
Challenge	1.22	1.26	1.29	0.527	0.591***
Self control	0.96	0.99	1.04	0.190	0.827***
Autonomy	5.27	5.26	5.28	0.017	0.983***
External	3.25	3.54	3.33	4.587	0.011*
Internal	5.58	5.56	5.58	0.030	0.970***

Notes: * $p < 0,05$ total variance – small effect, ** $r > 0,30$ total variance - medium effect, *** $r > 0,50$ total variance - large effect

Ethnic groups only differed significantly at the 0.05 level with regards to external locus of control. Coloured respondents were much higher on this scale than the other groups. Africans had the lowest score on external locus of control. This means that the Africans behavior is motivated by what is fate; luck; circumstances or influential people. For the managers it should indicate the need for more awareness around those aspects of the environment that provide useful information for future behaviour. These findings are consisted with Bekker and Crous (1998) when reviewing the concept of empowerment in South Africa, found that locus of control was key contributor to the construct of empowerment. Whilst Allmann (1993) in Baloyi (2000) confirmed that not only are causes of

stress different for managers from different population groups, but also that black managers experience these stresses more frequently and more severe than their white counterparts.

5.5.3 Pay-scales

Respondents from three different payscales were included in the sample. The three groups were compared by means of ANOVA, table 5.20 presents such results.

Table 5.20 Comparison of salutogenic construct scores amongst employees in different pay scales

	PC06	PC07	PC08	F-value	p-value
Comprehensibility	4.01	4.03	4.04	0.01*	0.988
Manageability	5.02	4.96	4.90	0.37**	0.694
Meaningfulness	5.11	4.99	5.02	0.31**	0.730
Self-Efficacy Scale	3.05	3.06	3.07	0.01*	0.991
Potency Scale	3.70	3.70	3.68	0.02*	0.978
Commitment	0.82	0.86	0.84	0.14	0.873
Control	0.78	0.82	0.82	0.27	0.763
Challenge	1.26	1.27	1.27	0.06	0.943
Self control	1.02	1.01	0.99	0.02*	0.978
Autonomy	5.36	5.19	5.29	1.43	0.242
External	3.35	3.41	3.46	0.41*	0.665
Internal	5.71	5.49	5.57	3.07**	0.049

Notes: * p < 0,05 total variance – small effect, ** r > 0,30 total variance - medium effect, *** r > 0,50 total variance - large effect

Administrators from different payscales only differed on Internal Locus of control. The higher the payscale, the lower their internal locus of control is. This suggests that the more the supervisory and the managerial role the more the individual rely on fate. The individual loses their sense of confidence as they are overwhelmed by the career demands; this however can be overcome by training. Peltzer, Mashego and Mabeba (2003) in their occupational stress and burnout among South African medical practitioners study, also concurred that inadequate salary among other factors does contribute to the individuals loss of control, such as personal abilities, behavior or personal characteristics.

5.6 INTEGRATION OF RESULTS

The focus of the salutogenic constructs is on successful coping (Antonovsky, 1991) and they all deal with how people manage stress and stay well (Strümpfer, 1990; Cilliers & Coetzee, 2003). The correlations from the salutogenic constructs supports this assertion, in that:

- Sense of coherence, two of the components of this construct, i.e. comprehensibility, manageability provided a clear indication of the extent to which individuals cognitively comprehended anxiety-provoking situations such as stressful events and viewed them as manageable (Antonovsky, 1986). Manageability also indicated the extent to which individuals selected appropriate coping resources in order to actively in a motivational manner manage the stressful situations.

- Hardiness, according Kobasa (1979), two of the components of this constructs, control and challenge, served as an indicator of whether individuals will cope cognitively view stressors as controllable or uncontrollable and also as a challenge or threat. This has been

evident when this construct and its dimensions correlated positively with other constructs. This construct also indicated the extent to which individuals acted motivationally and emotionally as though they can influence events (Kobasa, 1985).

- Self efficacy indicated the extent to which individual judge cognitively their own capabilities in stressful situations, reappraising them positively or negatively. This construct also indicated the extent the individual experiences emotions negatively such as tension, fear, and anger. Further the construct indicated the extend to which individuals cope emotionally and motivationally, as includes components such as bold behavior, competence, focused action and being spurred on to greater efforts by obstacles (Bandura, 1989).
- Potency served as an indicator to individuals' experience of disturbance of emotional homeostasis when under stress. Uncontrolled emotional discharge and emotional instability served as an indicator to which the individual is affected by resource deficiency. Whilst the mobilization of primary social support served as the indication of the motivationally coping ability of the individual (Ben-Sira, 1985).
- Learned resourcefulness indicated the extent at which the individual copes cognitively (Rosenbaum, 1980). Self controlled behaviour as one of the components indicated the extent to which the individual control anxiety; this also shows how the individual copes emotionally (Rosenbaum, 1980). This construct conclusively shows the extent to which an individual accept responsibility and apply problem-solving strategies to cope motivationally with stressful situations (Rosenbaum, 1989).

- Locus of control, internal and external components of this construct served among others as an indication of the extent to which individuals have strong belief cognitively that they can control stressful situations or the extent to which they view themselves as powerless (Rotter, 1966). It also indicated the individuals' motivational response, the alertness to the environment and the willingness to accept responsibility and steps taken to improve the circumstance in its positive correlation with other construct. Recommendations to this study also deal with the negative correlations that LOC displayed to other construct dimensions.

- There was no relationship between age and the scores on the salutogenic constructs, p-value below 0, 05. Though, one could argue that an individual needs to become of age to be able to cognitively or motivationally or emotionally be in a position to deal with internal or external stimuli. It shows that it is regardless of age that individuals can embrace the salutogenic constructs to respond to demanding situations.

- Three positive significant correlations were found between tenure and the constructs dimensions. These were with challenge ($p = 0, 007$), self control ($p = 0, 036$) and external locus of control ($p = 0, 039$). It is evident that the longer a person has been working at the university the higher their scores and the better they are cognitively and motivationally to deal with stressful events.

- Males and females differed significantly only with regards to self control and external locus of control when comparing their salutogenic construct scores. Females had a much higher score with regards to self-control and males had a higher score on external locus of control. It is evident that females had a strong

tendency to cognitively apply self management methods to solutions of distressing situations as opposed to their emotions, as it is generally known that females are more in touch with their emotions than males.

- Ethnic groups only differ significantly at the 0, 05 level with regards to external locus of control. Coloured respondents are much higher on this scale than that of the other groups. It is evident that the other groups tend to be motivated by what is fate; luck; circumstances or influential people.

- Employees from different pay scales only differ on Internal Locus of control. The higher the pay scale, the lower their internal locus of control was. This suggests that the more the supervisory and the managerial role the more the individual rely on fate. The individual loses their sense of confidence as they are overwhelmed by the career demands. Suggestions on how to improve on this were formulated in the next chapter under recommendations to this study.

As concluded by Strümpfer (2003), it is evident that the salutogenic person has the ability to use the temporary condition of anguish as an opportunity for growth. This statement has been true since the personality profile was similar to most of the literature. For resolving pre-existing and present problems to University Administrative Staff, it means that they will have to reorganise their life and work circumstances, and for going forward with newly discovered skills and perspective on self and life.

5.7 CHAPTER SUMMARY

The chapter reported and interpreted the findings of the empirical study. The biographical data of the respondents were discussed in the first section followed by the presentation of the reliability of the measuring instruments. Then the correlations between the salutogenic constructs. Further, correlation between salutogenic constructs and the selected biographical data to differences between groups were also reported and interpreted. The chapter concluded with the integration of results.

This concludes steps 5 of the research methodology. In the following chapter, conclusions, limitations and recommendations were formulated.

CHAPTER 6

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

Firstly, the chapter presents formulated conclusions with relation to the orientation of stress management as discussed in the second chapter, the six selected salutogenesis constructs follow and conclude with conclusive results analysis with specific reference to the empirical objectives. Secondly, the limitations are formulated in terms of aspects that influenced the effectiveness and efficiency of the research. Lastly, the recommendations are formulated with relation to the set hypothesis and with regard to future research.

6.1. CONCLUSIONS OF THE RESEARCH

Conclusions to the research were formulated with regards to the literature review, aims of the empirical study and the research hypothesis.

6.1.1 Conclusions in terms of the literature review

In an attempt to investigate whether University Administrative staff do employ coping methods within the sphere of salutogenic perspective to minimise the impact of work related stress, the 2nd chapters' objective was to define and explain the concept of stress and coping mechanism(s) as to how stress manifest itself and ways of coping from literature review were also described.

The aim of the 3rd chapter was to present and integrate the existing literature review on salutogenic constructs, with which six of them were selected and motivated for amongst all the salutogenic constructs. This was with specific focus on the role of salutogenic functioning within the

sphere of stress and coping mechanisms. Each selected construct complied with the most essential criterion, that of focusing to successful coping (Marais, 1997).

6.1.2 Conclusions in terms of the empirical study

The empirical objective was to ascertain whether there is a relationship between the strength of administrators' salutogenic constructs scores and their ability to cope with stress. From the results reported and interpreted, the following conclusions can be drawn:

- Sense of coherence dimensions, comprehensibility correlates positively with self efficacy, potency, self control, control and challenge. Manageability correlates positively with self efficacy, potency, control, self control, hardiness, autonomy and correlates negatively with external locus of control. Meaningfulness correlates positively with self efficacy, potency, self control, challenge and locus of control.
- Hardiness dimensions, commitment correlates positively with challenge and control. Control correlates positively with challenge. Challenge correlates positively with locus of control.
- Self efficacy correlates positively with self control, hardiness and locus of control.
- Potency correlates positively with self control, locus of control and negatively with hardiness.

- Self control correlates positively with commitment, control, autonomy, internal locus of control and negatively with external locus of control.
- Locus of control dimensions, autonomy correlates positively with self control, control and negatively with self efficacy and comprehensibility. External locus of control correlates positively with comprehensibility. Internal locus of control correlates positively with self control and hardiness.
- There was no correlation between salutogenic constructs and age.
- There were 3 significant correlations between salutogenic constructs scores and tenure, namely: challenge, self control and external locus of control.
- Males and females differed significantly only with regards to self control and external locus of control when comparing their salutogenic construct scores.
- Ethnic groups differed significantly only with regards to external locus of control.
- Comparisons of salutogenic construct scores amongst employees pay scales, only differed significantly on internal locus of control.

6.1.3 Conclusions in terms of integration

The literature revealed that the focus of the salutogenic constructs is on successful coping (Antonovsky, 1991) and that all the constructs deal with how people manage stress and stay well (Strümpfer, 1990; Cilliers &

Coetzee, 2003). From the results it was evident that the higher the individual's scores, the higher their ability to cope, the better for the individual to minimise and manage stressful events as inferred to the salutogenic profile and the lesser the individual to succumb to harmful stress.

6.2. LIMITATIONS OF THE RESEARCH

Based on the conclusions obtained the following limitations were experienced

6.2.1 Limitations of the literature review

- Cilliers (2003) recorded the development of positive psychology and how it links to salutogenesis. In this research it was not reviewed to a greater extent, its inclusion to the literature review would have ensured more comprehensive and recent overview.
- The study was not about the cause of stress of the administrative staff, but from the literature review it is still not clear that all situations labeled occupational stress include the same physiological, psychological or behavioural responses or that there is a single response common to all occupational stress situations. The different categories may differ according to organisations, per type of occupation or per individual.

6.2.2 Limitations of the empirical study

- Substantial and very benefiting work in the subject of salutogenic paradigm has been written in Afrikaans, i.e. a dynamic coherence

model for the salutogenic approach to stress. [‘n Dinamiese koherensiemodel vir die salutogeniese benadering tot stress] by Nel (1998), Coping in the South African Secret Service: a salutogenesis healing approach. [Coping in die Suid-Afrikaanse geheime diens: ‘n Salutogenesebenadering] by Raubenheimer (1999), Coping: a salutogenic approach. [Coping: ‘n salutogenese benadering] by Erasmus (1997), Determining personality characteristics in the salutogenic paradigm. [Bepalend persoonlikheidstreke in die salutogenetiese paradigma] by Breed (1997) - for non Afrikaans speaking researchers it is very difficult to access and to critically evaluate this work, if one does not have the financial support to hire interpreters, it may lead to duplicating research as opposed to expanding and bringing new knowledge to the body of the subject matter.

Whilst also the issue of translated work from one language to the other can not be taken lightly. It is noted that in Marais (1997), an instance of translated instruments from one language (Hebrew) to others (i.e. English) to Afrikaans could possibly mislead the respondents in terms of the original meaning of the question. Without referring to any specific instruments, some respondents commented on the Afrikaans translation, indicating that they had to revert to the English version. The same argument could also have substantial ground in translated dissertations. Such dichotomy will be left for educational authorities, policy makers and further research in this regard.

- The absence of qualification of respondents could have indicated whether qualifications of administrators do have a bearing on their salutogenic functioning also concluded by (Baloyi, 2000; Ganyane, 2005; Van Jarsveld, 2005).

- The use administrators in the different South African universities and technikons could have provided more information in terms of more analysis and correlation of demographical profile.

6.3. RECOMMENDATIONS

Based on the conclusions obtained, the following recommendations were made for consideration:

6.3.1 Recommendations with regard to the literature review

- It is recommended that future studies doing similar research should consider including the other salutogenic constructs as identified in chapter 1, such as personal causation, self directedness, sense of humor and social interest.
- It is also recommended that the development of positive psychology and how it links to salutogenesis can be studied further as identified in chapter 1, it includes new constructs such as emotional intelligence, resilience, happiness, wisdom, giftedness, hope, faith, optimism, courage.
- Future researchers could also look at why in the presence of these entire available material, why do we still fail within the ambit of stress? The International Labor Organisation in a survey released recently predicts that workplace stress will be bigger threat to global productivity than HIV/AIDS by 2020. This survey is also supported by the recently published Sunday Times article “sicknesses the new epidemic: worker absenteeism cost SA firms R7bn a year and its getting worse” (Naidoo, 2006). Are individuals and/or organisations

failing to thrive above stress? Do we enjoy to be stressed? Do we choose to be stressed?

- Due to limited resources, the present study could not include all measures of stress. It is hoped that future research can pay attention to both behavioral and physiological stress and their effects on illness, administrators' turnover, their absenteeism, performance, quality of life and achievement.

6.3.2 Recommendations with regards to the empirical study

- For future studies, it is recommended that qualification of respondents be included to indicate whether qualifications of administrators do have a bearing on their salutogenic functioning.
- It is recommended that a larger sample of administrators in the different South African universities be used to provide more information in terms of more analysis and correlation of demographical profile. The study could also be replicated with an element of, the extent to which equity theory affects the salutogenic constructs.
- Other job stress factors as role based stress, job complexity, organizational climate in universities, administrators' participation in decision making, their expectations, managers leadership style and career development factors should be taken into account in future stress-coping research.
- Since social support plays an important role in alleviating stress, future research should aim at constructing a model of support that does not only predict the effects of support, but to understand how

it works. Such a model must include the concepts of information processing, psychological defenses, coping and adoption on the one hand and structural/environmental characteristics, such as role relations and networks of support on the other.

- It is recommended that future research should include direct observations and interviews rather than to only depend on self-reported responses, with reference to the limitations above.
- Further research on Black African (non- white) vs. White African ways of coping with stress is there such a thing? Especially when ethnic groups differ significantly with regards to locus of control.

6.3.3 Recommendations for the University Administrative Staff

- The University should equip their employees with necessary knowledge and skills resources on how to handle stress to ensure a balance in their work, the employees will increasingly feel that their work is manageable and that it is within their power.
- The employee should have the freedom of expression within the parameters of their job autonomy and be encouraged to participate in decision making; this will enhance the component of meaningfulness and thus allow them to act automatically.
- They should provide counseling to stressed individuals and introduce wellness programs within the Human Resources Department, as part of enhancing the salutogenic personality.
- Material on stress that could be made available could include among others encouraged the concern administrator to undertake

self-appraisal, knowing one's strengths and weaknesses. Ascertain what pushes their stress levels take steps to eliminate weak spots and further cultivate areas of strength. Human Resources could run workshops and courses on time management, communication skills, assertiveness, information overload to know the environment and interpersonal relationships.

- If more research is done to verify these factors in a selection context, the university could in future select individuals who possess a strong sense of coherence, a strong internal locus of control, a high level of autonomy, a hardy, strong in learned resourcefulness (Jackson & Rothman, 2001), though in this study it has been challenge, external locus of control and self control.
- The study should be replicated in other universities, technikons and other private organizations with a larger sample and results should be compared with that of the present study.

6.4 CHAPTER SUMMARY

Firstly, the chapter presented formulated conclusions with relation to the orientation of stress management as discussed in the second chapter, the six selected salutogenesis constructs followed and concluded with conclusive results analysis with specific reference to the empirical objectives. Secondly, the limitations were formulated in terms of aspects that influenced the effectiveness and efficiency of the research. Lastly, the recommendations were formulated with relation to the set hypothesis and with regard to future research.

This concludes step 6-7, phase 2 of chapter 1 - of the research methodology.

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