

CHAPTER 1 SCIENTIFIC BACKGROUND TO THE RESEARCH

This research examines gender differences in salutogenic functioning in military deployment.

The aim of this chapter is to provide a scientific background to the research. Firstly, the background to and motivation for the research will be presented; this will be followed by the problem statement and a statement of the objectives of the research, where a distinction is drawn between general and specific objectives. The paradigm perspective of the research, research design and research methodology will be discussed, indicating the procedure for execution. In conclusion, an outline of the chapters of this dissertation will be presented, followed by the chapter summary.

1.1 BACKGROUND TO AND MOTIVATION FOR THE RESEARCH

Generally, the workforce has changed drastically over the past few decades. Society has also changed greatly; specifically there have been economic changes, cultural change, and changes in the workplace itself. These changes have necessitated radical changes in how one thinks about work and in how employers approach employees. Organisations are realising the importance of attending to the family and other social needs of their employees (O'Connell, 1999).

The changes in the workplace include the fact that a large number of women are now employed in an environment previously dominated by men. Men are now increasingly taking an active part in family life, way beyond the confines of the traditional role of providing for the family economically (Gini, 1998). According to Moore (1997), men occupied and controlled the workplace while women occupied and largely controlled the family/home.

One of the major changes in the South African National Defence Force (SANDF) is the deployment of a large number of women. Almost 30% of soldiers deployed are females. The participation of females in military deployment has raised questions about the capability of females to function in an environment that was previously dominated

by males. Despite these changes, the SANDF has to ensure that the mental health of employees is not affected by the current situation (Bartone, 1997).

Military members perceive deployment operations as life-threatening, with soldiers repeatedly being exposed to gunshots; they experience inner tension or stress, which manifests in a variety of psychological and physiological symptoms (Fontana, Litz & Rosenheck, 2000).

Everybody suffers from stress at some time or another and people are rarely concerned about how to manage stress until they are confronted with a stressful situation. Whether people manage stress or not, the fact is they are and will continue to be affected by the environment for many years to come (Long & Khan, 1993). No-one can live without experiencing some degree of stress (Ashford, 1988), but according to Cascio (1991) individuals respond differently to stress. Ross and Altmaier (1994) state that stress is indeed a necessary part of life and certainly, every job can be stressful.

Members of the armed forces are subjected to stressors as part of their military assignments and duties. Such stressors may be associated with the physical or mental challenges of their jobs, the demands placed on members because of a shortage of other personnel, or exposure to trauma associated with family and military responsibilities (Sutker, Davis, Uddo & Ditta, 1995).

Since 1994, the SANDF has been deploying members to countries outside the borders of South Africa. The members who are deployed are normally away from their homes for extended periods of time. This has placed a lot of stress on members and has an impact on their personal life and family systems. The members are required to move rapidly from one deployment area to another, with inadequate time at home in between deployments. A military career can expose members to a great range of stressors, including more extreme conditions than are perhaps found in any other occupation (Cascio, 1991).

Evidently, deployment places great stress on members and their families (Manewitz, 1997). Some react with worry, resistance, sadness, anxiety and confusion, while others accept deployment as part of their task and adapt quite easily to the process.

Military deployment threatens the family and can cause complete fragmentation of the sense of work as well as of the family (Robbins, 2003). The effects of stress on employees will differ from one individual to another. Some members seem to cope and deal well with military deployment stressors but others find it very difficult to cope (Barham, Gottlieb & Kelloway, 1998).

The 7 South African Infantry must ensure that they retain mentally healthy employees and the salutogenic functioning of the workforce has to be ensured by improving the conditions under which members have to function when deployed (Britt & Bliese, 2001).

Researchers such as De Wet (1998); Viviers (1999); Kossuth (1998); Marais (1997); Viviers and Cilliers (1999) have explored ways of coping with stressful situations from a salutogenic perspective. The work of these researchers has contributed to the information available on the functioning of employees in a salutogenic and holistic sense. The coping skills of individual members enable them to survive and stay healthy in spite of the anxiety and trauma they may experience during military deployment (Blankenship, 1998).

This study will investigate gender differences in salutogenic functioning in military deployment. In his salutogenic model, Antonovsky (1979) used the term health ease/disease continuum. Antonovsky (1984) stated that other ease/disease continua exist and mentioned social relations, material resource and family relations as examples. This implies that everybody falls somewhere between these theoretical poles of total wellness and total terminal illness. In other words, people fall somewhere between the healthy successful copers and the unhealthy, unsuccessful non-copers.

1.2 PROBLEM STATEMENT

The SANDF expects soldiers to be combat ready and to deploy where their services are needed nationally and internationally. Military deployment is a situation where the members of the armed forces get separated from their families as a result of military operations, missions and exercises. As a result of deployment, some members may become worried, resistant, sad, anxious and confused, while others accept it (Knox &

Price, 1995). Males and females respond differently to stressful situations; some display good salutogenic functioning but others find it very difficult to cope (Manewitz, 1997).

The Seven South African Infantry (7 SAI) members who took part in this research experience the following specific problems with regard to deployment:

- There is a shortage of personnel at 7 SAI, hence members are forced to deploy more often without a break.
- Heavy workload and long hours of work when deployed.
- Lack of support when deployed.
- Poor communication and flow of information between deployed personnel and their homes.
- Deployments impose additional financial and relational hardships on both families and deployed personnel.
- There is a backlog of functional and military promotions.
- Members are constantly deployed at short notice.
- There are no incentives and rewards for the members.

The assumption is that the problems experienced by the 7 SAI members will affect the salutogenic functioning differently. This study on gender differences in salutogenic functioning in military deployment will help the SANDF and 7 SAI in the following ways:

- To be aware of gender differences in salutogenic functioning in military deployment.
- To develop and implement programmes that will help members who have been deployed to achieve more effective salutogenic functioning.
- To maintain healthy, productive and resilient soldiers who display good salutogenic functioning.

Given this background, the research questions are formulated as follows:

- How can salutogenic functioning and the constructs sense of coherence, hardiness and self-efficacy be conceptualised?
- Are there gender differences in salutogenic functioning in military deployment, according to the literature?
- How can gender differences theoretically be integrated into salutogenic functioning?
- Do gender differences in salutogenic functioning manifest in military deployment among the chosen sample?
- What recommendation can be formulated for future development with regard to more effective salutogenic functioning, taking gender differences in military deployment into account?

1.3 OBJECTIVES OF THE RESEARCH

The following general and specific objectives for this study have been formulated from the above research problem and research questions.

1.3.1 General objective

The general objective of this research is to determine whether there are gender differences in salutogenic functioning in military deployment.

1.3.2 Specific objectives

The specific objectives of this research are divided between the theoretical and the empirical objectives.

In terms of the literature review, the specific objectives formulated are:

- To discuss salutogenic functioning and the salutogenic constructs.
- To discuss gender differences in military deployment.
- To offer a theoretical integration of the three constructs with gender differences.

The empirical objectives of this study are:

- To determine whether gender differences in salutogenic functioning in military deployment exist.
- To formulate recommendations in terms of future research with reference to salutogenic functioning and gender differences in military deployment.

1.4 PARADIGMATIC PERSPECTIVE OF THE RESEARCH

According to Mouton and Marais (1990), research is always conducted within the context of a specific paradigm. Paradigms are assumptions or views on which theorists agree. This makes it possible to classify different theorists under the same paradigm. Research plays a critical role in demarcating the boundaries of the particular research project, making it possible to formulate specific points of departure.

Paradigms are collections of metatheoretical, theoretical and methodological beliefs, which have been selected from the intellectual climate and the market of intellectual resources of a particular discipline. Paradigmatic research, therefore refers to research which is conducted within the framework of a given research tradition or paradigm (Mouton & Marais, 1990).

The study is presented from the salutogenic paradigm, where stressors are perceived as omnipresent rather than as the exception. It is argued that despite this obstacle, people not only survive, but they also prosper. Salutogenesis thus traces the origin of health and well being (Strümpfer, 1990).

The term salutogenesis was introduced by Aaron Antonovsky, a professor of Medical Sociology at the Ben Gurion University of the Negev in Israel (Antonovsky, 1991). The concept salutogenesis is a Latin word, which has its origins in the word *salus* (health) and the Greek: *genesis* (origin), and the term emphasises the origins of health or wellness (Strümpfer, 1995).

Salutogenic constructs are different theoretical perspectives, which although developed independently, are still part of the overall salutogenic paradigm, illustrating the potential

of salutogenic thinking (Antonovsky, 1979). According to Antonovsky (1991), salutogenic constructs may also be referred to as salutogenic strengths and both terms are known to be related and linked to stressors, health and salutogenic functioning.

The following are the basic assumptions of the salutogenic paradigm (Strümpfer, 1995):

- The origins of health or wellness need to be studied and understood.
- The primary concern is with the maintenance and enhancement of wellness, and less with the prevention and treatment of illness.
- The assumption that stressors are inherently bad is rejected in favour of the possibility that stressors may have salutary consequences.
- Stressors are omnipresent, rather than the exception, yet most people survive and remain healthy.
- It is necessary to understand how people manage stress and cope well.

From the salutogenic constructs of the Strümpfer model, the researcher studied the following salutogenic constructs, which were considered relevant to the current study (Strümpfer, 1995):

- Sense of coherence: Antonovsky (1979, 1987)
- Hardiness: Kobasa (1979)
- Self-efficacy: Bandura (1982)

This research was conducted within the field of Industrial Psychology and its field of application. Specific emphasis was placed on Organisational Psychology.

Industrial Psychology is the scientific study of human behaviour in the production and consumption of the goods and services of society. It is a brand of applied psychology, a term covering Organisational and Personnel Psychology (Reber, 1988). Industrial Psychology aims to help achieve organisational goals in terms of productivity and job satisfaction by studying, explaining and predicting people's behaviour in the workplace (Gibson, Ivancevich & Donnelly, 1991).

Organisational Psychology can be defined as the study of organisations, and their elements and systems. It is concerned with those factors that influence the effectiveness of the organisation, especially the interaction between the individual and the organisation (Plug, Meyer, Louw & Gouws, 1988). Organisational Psychology as a sub-discipline of Industrial Psychology deals with the individual dimensions of organisational behaviour, group and interpersonal processes, organisational structures and organisational development (Cascio, 1991).

At the metatheoretical level, the concepts of stress, coping, gender and stressors are relevant. They are conceptualised as follows:

- Long and Khan (1993) define stress as a person's experience of negative emotion, unpleasantness or general discomfort. These experiences often result in a cycle of changes to the perceptions and cognitions of the person, and to changes in that person's behavioural and physiological functioning. Similarly, Hendricks (1985) perceives stress as an unpleasant state that individual experiences as a result of demands made by that person's environment that exceed the person's resources or capabilities.
- According to Moore (1997), gender is a state of being male or female. Gender refers to the extent to which an individual endorses behaviours or statements that have been viewed as appropriate for one sex. The extents to which an individual's socialisation patterns are consistent with traditional gender norms, and the extent to which individuals identify with traditional notions of masculinity and femininity, condition the impact of biological sex (Chusmir & Franks, 1988).
- According to Nelson and Quick (1985), a stressor is any stimulus (external or internal), which causes or disrupts the homeostasis of the body.
- The concept of coping has received much attention among researchers, especially as a result of the movement away from the pathogenic to the salutogenic paradigm, an approach which focuses on factors that have the potential to maintain and even enhance psychological wellbeing (Antonovsky, 1998, Strümpfer, 1995). Coping is defined as the cognitive and behavioural

efforts of individuals to manage/master, reduce or tolerate specific internal or external demands such demands are appraised as taxing or exceeding the resources of the person (Ashford, 1988). Coping consists of all of the cognitive and behavioural efforts that a person makes to manage the demand of a stressor (Edwards, 1992).

In the following section the research design will be discussed.

1.5 RESEARCH DESIGN

A research design is the arrangement of conditions for the collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure (Mouton & Marais, 1996). The aim of the research design is to plan and structure the research according to its purpose in order to enhance the validity of the internal and external levels. Irrespective of how structured or unstructured a research project is likely to be, nuisance variables, which may render the results invalid, must be either minimised or eliminated (Mouton & Marais, 1996).

This research aims to determine gender differences in salutogenic functioning in military deployment.

The quality of a good researcher is reflected in the attempts he or she makes to eliminate all those variables that might have an influence on the validity of the results. The research design has a critical role to fulfil in this regard. It helps to enhance the internal and external validity of the research findings (Mouton & Marais, 1990).

The following aspects of the research design will be discussed: the types of research, validity, reliability, unit of research, the central hypothesis and the variables.

1.5.1 Types of research

Descriptive and explanatory researches are two types described below, with reference to their roles in this specific research project.

1.5.1.1 Descriptive research

Descriptive research focuses on the in-depth description of a specific individual, situation, group, organisation, subculture, interaction or social object and the frequency with which a specific characteristic or variable occurs in a sample is emphasised (Mouton, 1996).

This research is descriptive, as the aim is to investigate certain domains and to classify systematically the differences between variables in the research domains. The overriding aim is to describe issues as accurately as possible (Mouton, 1996). The research meets the requirements of descriptive research in that it accurately describes the salutogenic constructs and gender differences in military deployment.

1.5.1.2 Explanatory research

The aim of explanatory research is to indicate causality between variables or events, thus explaining a given phenomenon (such as high intelligence) (Mouton & Marais, 1996). This research is explanatory in that it seeks to explain the occurrence or non-occurrence of gender differences in salutogenic functioning in military deployment.

1.5.2 Validity

According to Mouton and Marais (1996), for research to be internally valid the constructs must be measured in a valid manner. This implies that the data to be measured must be accurate and reliable. The analysis should be relevant to the type of data collected, and the final solutions should be adequately supported by the data. The researcher followed these principles.

For the research to be externally valid, the findings must be applicable to all other similar cases. The findings must be valid for similar studies other than the one under review (Mouton & Marais, 1996).

1.5.2.1 Validity in relation to the literature review

In this research validity is ensured by making use of literature that relates to the nature, problems and aims of the research. The constructs, concepts and dimensions that form part of salutogenesis and gender differences in this research are to be found in the relevant literature. The choice of constructs and concepts has therefore not been subjective. Care has been taken to ensure that the concepts and constructs have been ordered in a logical and systematic manner. Every attempt has been made to search for and make use of the latest literature sources.

1.5.2.2 Validity in relation to the empirical research

The empirical research is deemed valid for a number of reasons. In the discussions of the measuring instruments of sense of coherence, hardiness and self-efficacy, it will be shown that the compilers of the salutogenic questionnaires have validated them. The questionnaires chosen specifically for this research have been found to be valid through factor analysis and construct validity. The sample chosen from the 7SAI is a convenience sample that is proportionally representative of all deploying soldiers in the three platoons. The measurement of sampling adequacy indicated that the sample is valid here.

1.5.3 Reliability

Reliability has been ensured by structuring the research model in such a way that nuisance variables are limited.

1.5.3.1 Reliability in relation to the literature review

The reliability of the literature review is ensured when other interested academics have access to the literature sources and to the theoretical views expressed in the literature.

1.5.3.2 Reliability in relation to the empirical research

The reliability of the empirical research is ensured when a truly representative sample is used. This research makes use of a representative sample of the 7SAI members.

1.5.4 Unit of research

The units of investigation and analysis are the individual male and female soldier. Babbie (1979) makes it clear that where the individual is the unit of analysis then the research focuses on the characteristics of individual behaviour.

This research therefore focuses on gender differences in salutogenic functioning in military deployment.

The purpose of the research design is to determine whether the identified independent variable has an impact on the identified dependent variable (Huysamen, 1983). In the research, the independent variable is gender and the dependent variable is salutogenic functioning.

1.6 RESEARCH METHODOLOGY

The following represents the selected research methodology which, in accordance with the specific literature and empirical objectives of this research, will be applied in two phases. Phase one will be the literature review and phase two, the empirical study for this research project.

1.6.1 Phase one: Literature review

Step 1. Literature review on salutogenic functioning

The background to salutogenesis, the salutogenic constructs and salutogenic functioning in military deployment will be discussed.

Step 2. Literature review on gender differences in military deployment

In this step military deployment will be put in perspective, the emotional cycle of military deployment, gender in military deployment and coping with military deployment will be discussed.

Step 3. Theoretical integration

A theoretical integration of the salutogenic constructs (sense of coherence, hardiness and self-efficacy) and the gender differences in military deployment will be given.

1.6.2 Phase two: Empirical study

Step 1. Description of the population and sample

The data for this study were collected from the population of the 7 South African Infantry who were deployed in Kwa-Zulu Natal. A convenience sample was drawn consisted of 69 male and 43 female soldiers working at the Seven South African Infantry (7SAI) at Phalaborwa.

Step 2. Measuring instruments

Measuring instruments for the three salutogenic constructs were chosen and reasons will be given for their use in this research project. The instruments were: sense of coherence (SOC), personal view survey (PVS) and self-efficacy scale (SES). A biographical questionnaire was also included.

Step 3. Data collection

Sense of coherence, the personal view survey and the self-efficacy scale were used to collect data. A biographical questionnaire was also included.

Step 4. Data analysis

The data obtained from the measuring instruments will be analysed statistically with the aid of the SPSS programme (1983). The statistical techniques used are: descriptive statistics, item analysis, reliability analyses of the questionnaires, *t*-test, analysis of variance. The effect size and power will also be determined.

Step 5. Formulation of the empirical hypothesis

The hypothesis was formulated to cover the objectives of the research. The hypothesis of this research is that there are gender differences in salutogenic functioning in military deployment.

Step 6. Reporting on and interpretation of the results

The empirical results will be reported, interpreted and integrated.

Step 7. Formulation of the conclusions, limitations and recommendations

The conclusions will be presented in such a way that the objectives of the study are addressed. The limitations of the literature review and the empirical study will be discussed. Recommendations will be formulated in terms of the literature and empirical objectives.

1.7 CHAPTER DIVISION

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

Chapter 1: Scientific background to the research

Chapter 2: Salutogenic functioning

Chapter 3: Gender differences in military deployment

Chapter 4: Empirical study

Chapter 5: Results

Chapter 6: Conclusions, limitations and recommendations

1.8 CHAPTER SUMMARY

This chapter describes the background to and motivation for the research, the problem statement and the objectives of the study. It is followed by the paradigmatic perspective, research design, research method and an explanation of the chapter division. Finally, the chapter summary is provided.

In chapter 2, salutogenic functioning will be discussed.

CHAPTER 2 SALUTOGENIC FUNCTIONING

The objective of this chapter is to present a literature review on salutogenic functioning and the salutogenic constructs sense of coherence, hardiness and self-efficacy.

This chapter firstly presents a discussion of the background to salutogenesis. This is followed by a discussion of the three salutogenic constructs: sense of coherence, hardiness and self-efficacy. Thirdly, a short summary of other salutogenic constructs is presented. Lastly, salutogenic functioning in military deployment is discussed and this is followed by the chapter summary.

2.1 BACKGROUND TO SALUTOGENESIS

The term salutogenesis was first used in 1973 by Antonovsky, a professor of Medical Sociology at the Ben Gurion University of Negev in Israel. Salutogenesis as a concept originates from the Latin word “salus”, meaning health and the Greek word “genesis”, meaning origins. The term emphasises the origins of health or wellness (Strümpfer, 1995).

The salutogenic paradigm assumes the following aspects (Strümpfer, 1990):

- The emphasis is placed on ongoing health or well-being.
- The primary concern is with the maintenance and enhancement of well-being.
- The assumptions that stressors are inherently bad is rejected in favour of the possibility that stressors may have salutary consequences.
- The focus is on how a person can manage stress and stay well.

According to Antonovsky (1991), salutogenic constructs also refer to salutogenic strengths and both terms are known to be related and linked to stressors, health and coping.

Salutogenesis makes a fundamentally different philosophical assumption about the world than does pathogenesis. The salutogenic paradigm focuses on the origin of

health, or wellness, but pathogenesis, which focuses on the origins of disease, has largely continued to be the dominant model of health and medicine (Antonovsky, 1993). According to the pathogenic paradigm, people remain healthy unless they catch a specific infection or a combination of infections (Antonovsky, 1998). Pathogenic research and practice are aimed at determining why people become sick and why certain people develop particular diseases. This knowledge can be utilised to find ways of combating and preventing each of the diseases in turn. At the heart of the pathogenic paradigm is the assumption that diseases are caused by physical, biochemical, microbiological and psychosocial agents (Strümpfer, 1990).

Unlike the pathogenic paradigm, the salutogenic paradigm does not focus on the identification of stressors because it is accepted that stress is infectious. The focus is on how the individual stays healthy, despite the omnipotence of stressors. The salutogenic paradigm also accepts that stressors are neutral in their health consequences for the individual. The consequences for the individual depend on his or her response to the stressor (Antonovsky, 1979, 1987; Strümpfer, 1995).

The central salutogenic question is: "Why, do some people remain healthy and others become ill when exposed to the same level of stress?" (Antonovsky, 1979; Strümpfer, 1990).

Antonovsky's (1979) studies concerning the origins of health led him to propose the salutogenic model of health. The model shows how various compounds work together to give rise to a prediction of an individual's position along the ease-disease continuum. Antonovsky (1979) emphasises that our child-rearing patterns, which provide us with sets of meaningful and coherent life experiences, shape an individual's sense of coherence. When one is exposed to life stress, one experiences a state of tension.

A strong sense of coherence mobilises one's available general resistance resources (GRR), which interact with the state of tension to contain the stress and overcome the stressors. Successful management of the tension boosts one's sense of coherence and maintains one's position towards the health end of the ease-disease continuum (Antonovsky, 1987).

Generalised resistance resources are characteristic of an individual, group, subculture or society that facilitates avoiding or combating a wide variety of stressors. When the person regularly experiences the availability of GRRs a sense of coherence develops (Antonovsky, 1987). By definition, GRRs provide a person with life experience that is meaningful and coherent (Antonovsky, 1979).

According to Antonovsky (1979), personality constructs develop when people experience the availability of the GRRs regularly, a condition Antonovsky terms the sense of coherence. One's health status acts on one's life experience in four main directional ways:

- Firstly, the health status influences the kinds of stressors one is exposed to.
- Secondly, good health is in itself a significant generalised resistance resource by the definition of a GRR as a factor that fosters meaningful and sensible life experience.
- Thirdly, being healthy can facilitate the acquisition of other GRRs.
- Fourthly, the sense of coherence will operate decisively depending on the extent to which an individual moves along the health ease-disease continuum.

According to Antonovsky (1979), the salutogenic model reflects the emphasis on health, rather than illness. According to Antonovsky (1979), the model focuses broadly on a variety of general factors that are conducive to a positive movement towards health, irrespective of the specific disease being experienced by an individual.

The salutogenic constructs will be discussed in the following section.

2.2 SALUTOGENIC CONSTRUCTS

The general conception about the salutogenic constructs is that they focus mainly on how individuals handle stressors positively and remain healthy (Antonovsky, 1991).

Salutogenic constructs cover a range of personality characteristics and skills which are believed to be linked to stressors, health and coping. A person who scores high on

salutogenic constructs is able to function salutogenically well in handling complex work and such a person derives meaning from work (Antonovsky, 1991).

Strümpfer (1990) identified the following six salutogenic constructs: sense of coherence (Antonovsky, 1979, 1987), hardiness (Kobasa, 1979), self-efficacy (Bandura, 1982), learned resourcefulness (Rosenbaum, 1988), locus of control (Rotter, 1966) and potency (Ben Sira, 1985) within the salutogenesis paradigm. These constructs have become known, and have been accepted and used by many researchers (De Wet, 1998; Marais, 1997; Viviers, 1999).

Three of these six salutogenic constructs according to Strümpfer's model (1990) were identified as salutogenic functioning mechanisms applicable to this study. These are: sense of coherence (Antonovsky, 1979), hardiness (Kobasa, 1979) and self-efficacy (Bandura, 1982). The three salutogenic constructs were selected because they are classified as personal coping resources.

In the following section the three chosen salutogenic constructs, sense of coherence, hardiness and self-efficacy will be discussed in full, followed by a brief discussion of the salutogenic constructs learned resourcefulness, locus of control and potency.

2.2.1 Sense of coherence (SOC)

Antonovsky's contribution to salutogenesis is sense of coherence (1979,1987). The discussion of SOC will include the following aspects: the theoretical framework and development, definition and dimensions.

2.2.1.1 Theoretical framework and development

Sense of coherence (SOC) is the central contribution of Antonovsky's salutogenic model, which assumes that the movement of individuals along the health continuum is of paramount importance. Sense of coherence (SOC) is not a specific coping style, method or resource. Rather, it is a general approach to life that enables the mobilisation of specific coping resources (Antonovsky, 1979).

A sense of coherence is developed through the process of coming to understand one's life experiences. This process is characterised by consistency and participation in shaping the historical and sociocultural context of the individual's life span. This is formed in childhood and adolescence, but can change throughout life in response to significant cataclysmic life events or through personal development and growth (Antonovsky, 1998).

2.2.1.2 Definition

Antonovsky defines SOC as a global orientation that expresses the extent to which an individual has a pervasive, enduring, though dynamic feeling of confidence. It is a sense that the individual's internal and external environments are predictable and that there is a high probability that things will work out as well as can reasonably be expected (Antonovsky, 1979, 1987, 1991).

2.2.1.3 Dimensions

The SOC is seen as a major determinant of maintaining one's position on the health ease-disease continuum. Comprehensibility, manageability, and meaningfulness are the three core components of the SOC (Antonovsky, 1998). When individuals rate high on these core dimensions, such individuals can be classified as having a strong sense of coherence, while lower rates on the core dimensions indicate that the individuals have a weak sense of coherence (Antonovsky, 1979).

Antonovsky is adamant about the fact that a strong SOC is not a particular coping style. The stresses encountered in life are many and varied, and there are many possible coping procedures. To consistently adopt only one pattern of coping is to fail to respond to the nature of the stressor and therefore to decrease the chances of successful coping. What the person with a strong SOC does, is to select the particular coping strategy that seems most appropriate to deal with the stressor being confronted (Antonovsky, 1987).

- *Comprehensibility*

Comprehensibility is primarily a cognitive dimension, referring to the extent to which the individual thinks about, or makes sense of a set of internal or external stimuli or situations. It implies that life, which is currently comprehensible, is expected to be comprehensible in the future. It also implies that, although one may experience great difficulties, complex situations and life challenges, there is a fundamental conviction that these situations will make sense (Antonovsky, 1985; 1979).

- *Manageability*

Manageability is the extent of the belief that not only has one understood the problem, but that the requisite resources to cope with the problem successfully are at one's disposal (Antonovsky, 1998). The resources at an individual's disposal may refer to resources under his or her own control, but may also refer to resources controlled by legitimate others like history, friends, colleagues and God upon whom one can count (Antonovsky, 1984).

- *Meaningfulness*

Meaningfulness is the emotional face of comprehensibility. Meaningfulness refers to the degree of commitment that an individual has to various life domains. While comprehensibility means that life makes cognitive sense, meaningfulness includes the notion that life is emotionally worthwhile and sensible (or life makes sense emotionally). Meaningfulness accounts for an individual's motivation to engage in a difficult life situation (Antonovsky, 1998). When individuals say that life is meaningful in cognitive terms they mean that they care (Antonovsky, 1984).

In a study by Antonovsky (1998) it was found that people with a strong SOC are willing to accept the challenge, will be determined to seek meaning in situations and will do their best to overcome difficulties with dignity.

Persons who have a high sense of manageability will not feel victimised by the events nor will they feel that life is threatening them unfairly. Such individuals will be able to

cope, whereas an individual with lower manageability will be unable to cope with stressful situations (Antonovsky, 1984).

According to Cederblad and Hansson (1996), a person with a strong SOC confronts stressors, is capable of clarifying and structuring the nature of the stressors, believes that the appropriate resources are available and can be mobilised to deal successfully with life's challenges and is motivated to deal with them. Orientation to life will allow the selection of appropriate coping strategies and provide a solid base for maintenance and strengthening of health and well-being (Cederblad, Dahlin, Hagnell, & Hansson, 1995).

Strümpfer (1990) states that an individual with a weak SOC would perceive internal and external stimuli as noise, not information, as inexplicable disorder and chaos, and as unpredictable in future. Such a person would experience the events of life as unfortunate things that happen to her/him and victimise her/him unfairly; and would feel that nothing in life matters much. Worse still, such happenings are unwelcome demands and wearisome burdens to such people.

2.2.2 Hardiness

Kobasa's contribution to salutogenesis is the concept of hardiness (1979). Hardiness was proposed by Kobasa as a global personality construct, that moderates stress-health relationships. Hardiness will be discussed according to its theoretical framework and development, definition and subcomponents.

2.2.2.1 Theoretical framework and development

Suzanne Ouellette Kobasa (1979) and her co-workers introduced the concepts personality hardiness or the hardy personality, which is the concept mostly used by psychologists as a salutogenic construct (Strümpfer, 1990).

The conceptualisation of hardiness as a source of resistance to the negative effects of stressful life events on health derives from the existential personality view (Kobasa & Maddi, 1977). Hardiness is presented as facilitating the kind of perception, evaluation

and coping that lead to successful resolution of the situation created by stressful events (Kobasa, Maddi & Kahn, 1982).

2.2.2.2 *Definition*

Hardiness is defined as a resistance resource, protecting vulnerable people from illness (Kobasa, 1979). Kobasa, Maddi and Courington (1981) postulate that stressful life events and constitutional predisposition increase illness, whereas personality-based hardiness decreases illness. The personality dispositions of hardiness are commitment, control and challenge.

2.2.2.3 *Subcomponents*

Three subcomponent concepts were chosen as integral to the stress resistance resources of hardiness, namely: commitment, control and challenge, which will be discussed in the following section.

- *Commitment*

Commitment is an individual's belief in the truth, importance and value of what he or she is and is doing. It is related to the tendency to involve the self fully as a social being (Kobasa et al., 1981).

Among persons under stress, those who feel committed to the various areas of their life will remain healthier than those who are alienated (Kobasa, 1979). Kobasa, Maddi, Pucetti and Zola (1985) argue that committed persons have a generalised sense of purpose that allows them to identify with and find meaningful events, things and persons in their environment.

According to Kobasa et al. (1982), commitment is firstly the valuing of one's life, one's self and one's relationships. Secondly, it is the investment of oneself in the valued dimensions of life. Commitment increases the individual sense of purpose that can carry a person through turbulent life events.

- *Control*

Control is a tendency to believe and act as if one can influence the course of events (Kobasa et al., 1982). Individuals who are under stress and who have a greater sense of control over what occurs in their lives will remain healthier than those who feel powerless in the face of external forces (Kobasa, 1979).

Hardy individuals have the tendency to believe and act as if they can influence the course of events. Individuals with control can interpret and incorporate various sorts of events into an ongoing life plan and transform these events into something consistent and less jarring to the organism (Kobasa et al., 1982).

- *Challenge*

According to Kobasa (1979a), an individual under stress who perceives change as a challenge will remain positive and healthier than an individual who perceives challenge as a threat.

Kobasa et al. (1982) postulate that challenges are based on the belief that change, rather than stability, is the normative mode of life. Hardy individuals feel positively about change, they are catalysts in their environment and are well prepared to respond to the unforeseen or unexpected. They are stimulated by, rather than afraid of the unforeseen and the unknown because they are sufficiently aware of their own environment and where to turn for needed resources (Kobasa, 1979).

Kobasa et al. (1981) describe a hardy person as a person who considers curiosity and tends to find his/her experience interesting and meaningful. This is a person who views and sees change to be the norm and regards it as an important stimulus/challenge to development.

In contrast to people with hardiness, Kobasa et al. (1981) describe people with low hardiness as individuals who find themselves and the environment boring, meaningless, and threatening. They feel powerless in the face of overwhelming forces and believe that life is best when it involves no changes. Such individuals

have no real conviction that development is possible or important, and are passive in their interactions with the environment.

2.2.3 Self-efficacy

The contribution of Bandura (1982) to salutogenesis is self-efficacy. Self-efficacy is thought to be an essential coping resource. Successful coping promotes expectations of self-efficacy, which lead to more vigorous and persistent efforts to master new tasks (Bandura, 1982). The discussion includes the theoretical framework and development, definition and information sources.

2.2.3.1 Theoretical framework and development

Self-efficacy is a term that emerged in the field of behaviour modification, and was formulated and developed by Albert Bandura of the Department of Psychology at Stanford University, California (1982). Bandura (1982) stated that people do not behave optimally, even though they know fully well what to do. People who lack self-efficacy tend to perform ineffectively in accordance with their perceived efficacy. This happens because self-referent thought, which also mediates the relationships between knowledge and actions.

Self-efficacy therefore involves the way individuals judge their capabilities and how, through their self-perception of efficacy, they affect their motivation and behaviour (Bandura, 1982). Bandura and Adam (1977) argue that the basic phenomenon that we are dealing with relies on a person's sense of personal efficacy to produce and to regulate events in his or her life.

2.2.3.2 Definition

Bandura (1977) defines self-efficacy as the belief in one's ability to perform a particular task, or more specifically, to execute a specific behaviour successfully.

Perceived self-efficacy also influences the effort made and promotes vigorous and persistent effort to master new activities and to determine how much effort individuals

will expend and how long they will persist in the face of obstacles or aversive experiences. Individuals who have a strong sense of self-efficacy tend to exert greater effort to master new challenges in an active and persistent way. They focus their attention on handling the task and are energised by difficulties (Bandura, 1977).

Bandura (1982) explained that people with less or a lower sense of self-efficacy will doubt their capabilities and make less effort. They are consumed by their inadequacies and have little energy to deal with the task at hand and tend to avoid challenging situations.

2.2.3.3 *Information sources*

According to Bandura (1986), judgments of self-efficacy are based on information derived from four sources, namely performance attainments, vicarious experiences, verbal persuasion and social influence, and physiological state. These four sources are discussed below.

- *Performance attainment*

The most influential source of information is previous success, since success breeds success. Likewise, previous failure decreases perceived self-efficacy and increases the likelihood of failure (Bandura, 1982).

Antonovsky (1991) defines performance attainments or inactive attainments as "doing something completely". There is no possibility of learning from a mastery experience if an individual is simply not allowed to engage in the experience by whoever or whatever is the gatekeeper of such experiences. The mastery experience, as a source of information that can be used 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 or barriers to engage in a given activity.

- *Vicarious experiences*

The increase in one's own self-efficacy is inspired by observing the success in task performance of those people we consider ordinary, people we interact with and people we perceive to have similar competencies to ourselves. Similarly, when we observe others failing in set tasks, it decreases our self-efficacy through vicarious learning (Bandura & Adam, 1977).

- *Verbal persuasion and social influence*

Bandura (1982) postulates that attempts by others to verbally persuade persons to believe in themselves regarding their capability to perform a task have limited effect. When a persuader is an expert in the particular field, his or her credibility is easily accepted. Nevertheless, such persuasion may result in the person trying harder in the next attempt at a task, which would increase his or her chances of success. This success then provides the inactive attainment that enhances self-efficacy, increasing the chances of future success.

- *Physiological status*

According to Bandura (1982), people judge their capability partly on the basis of their physiological state of arousal. Excess or aversive arousal informs the individual that failure is imminent and consequently self-efficacy decreases and the chances of failure increase.

Bandura (1986) revealed that emotions such as tension, fear and anger tend to bring the memory network into play. Perceptions of self-efficacy thus affect emotional reactions as well as behaviour. Everyone has a history of emotions. If this history is one of consistent association between the emotion and the coping success, arousal in the new situation is likely to be predictive of high self-efficacy. Emotions, both distressful and positive, result from real, anticipated, recollected or imagined outcomes of power and status relations.

The salutogenic constructs cover a range of personality characteristics and skills that are believed to be linked to stressors, coping and health or well-being. Although they focus on different aspects of personality functioning, the constructs complement each other (Antonovsky, 1991).

2.2.4 Other salutogenic constructs

Three salutogenic constructs, namely: learned resourcefulness, locus of control and potency, will be discussed briefly. Although these three constructs are not measured in this study, they were included in the literature discussion of salutogenic functioning as they form part of the primary constructs of the theoretical model of salutogenesis of Strümpfer (1990), and their inclusion therefore completes my overview of salutogenic functioning.

These constructs are of fundamental importance for research and practice in health psychology in general and can be used to explore the salutogenic field of study.

2.2.4.1 Learned resourcefulness

Rosenbaum's contribution to salutogenesis is learned resourcefulness (1988). Michael Rosenbaum, a psychologist at Tel-Aviv University whose construct will be described in the following section, gave credit to Meichenbaum (1977) for first using the term learned resourcefulness.

According to Rosenbaum and Palmon (1984), learned resourcefulness is not a personality trait, but rather a cluster of behavioural or cognitive skills. The individual self-regulates internal responses that interfere with desired responses. Self-regulation thus enables a person to continue with the initial goal, goal-directed and self-sustaining activities even in the absence of external reinforcement. Effective self-management or self-control behaviour may assist subjects to sustain goal-directed behaviour even when external reinforcements are not available or are non-contingent and negative.

According to Rosenbaum (1980), individuals are trained in cognitive and behavioural skills to enable them to cope effectively with stressful situations. Learned

resourcefulness refers to a personality repertoire which has been defined as a set of behaviours and mainly cognitive self-control skills by which the individual self-regulates “internal responses that interfere with the smooth execution of an ongoing behaviour” (Rosenbaum & Ben-Ari, 1985).

Rosenbaum and Ben-Ari (1985) show that individuals who succeed in controlling their internal process during difficult situations acquire the skills of self-regulation. When difficult events arise, such individuals are more adept at regulating their internal processes and are thus better able to respond effectively to the situation.

According to Strümpfer (1990), individuals with lower resourcefulness judge themselves as inefficacious in coping with emotional strains and difficult tasks and as a consequence, they tend to dwell more on their deficiencies than on the task. Individuals with strong resourcefulness judge themselves as being more efficacious in dealing with emotional and task-oriented demands and are, as a consequence, more likely to continue with self-regulation.

Learned resourcefulness is a basic behavioural repertoire that is learned from the moment of birth and serves as a basis for coping with stressful situations (Rosenbaum & Palmon, 1984).

2.2.4.2 Locus of control

The concept of locus of control is attributed to Julian B Rotter (1966) and is based on the social learning theory. According to Rotter (1966), the individual learns from the environment through modelling, past experience and reinforcement of certain behaviours.

According to Rotter (1966), behaviour is reinforced to the degree that the individual perceives the consequences of the behaviour to be contingent on a person’s own behaviour rather than under the control of other external forces. The external forces could include “fate, luck, chance, powerful others, or unpredictable”.

According to Rotter (1966), locus of control refers to the extent to which the individual perceives that he/she has control over a given situation. Rotter (1966) postulates that 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 contingencies or independence between their behaviour and subsequent events.

2.2.4.3 Potency

The contribution of Ben-Sira (1985) to salutogenesis is potency. The construct potency was developed by the Israeli social worker, Zeev Ben-Sira (1985), a professor at the Hebrew University in Jerusalem. Ben-Sira views the term potency as a salutogenic construct, a mechanism that prevents the tension which follows occasional inadequate coping from turning into a permanent lasting stress disorder (Strümpfer, 1990).

Ben-Sira (1989) defines potency as a person's confidence in his/her 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.

As noted above, Ben-Sira (1985) views potency as a mechanism that prevents the tension, which follows occasional inadequate coping from turning into a lasting stress disorder. 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 opposite poles 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 (Ben-Sira, 1984).

According to Antonovsky (1991), all salutogenic constructs focus on how individuals characteristically handle stressors and still remain healthy. They focus on factors such as the ability to control and resolve stressful situations successfully. They include a

generalised set of beliefs about oneself and about one's world, which shows one's appraisal of a given stress situation.

In the following section salutogenic functioning in military deployment will be discussed.

2.3 SALUTOGENIC FUNCTIONING IN MILITARY DEPLOYMENT

The three salutogenic constructs of sense of coherence, hardiness and self-efficacy and their role in salutogenic functioning in military deployment will be discussed.

Antonovsky's construct of sense of coherence serves as a central component of the salutogenic profile. Sense of coherence indicates the extent to which an individual sees life as comprehensible, manageable and meaningful (Antonovsky, 1987). The SOC construct entails judgments on how well one executes courses of action required to deal with prospective situations (Antonovsky, 1979). A person with a strong SOC is able to perceive the work environment as comprehensible, manageable and meaningful and will display good salutogenic functioning and remain motivated to deal with work challenges (Cederblad et al., 1995).

A person who displays good salutogenic functioning during military deployment will make cognitive sense of the workplace, perceive work as consisting of experiences that are bearable and will make emotional and motivational sense of work demands, perceiving them as welcome challenges, worthy of engaging in and investing energy in (Bartone, 1997).

Individuals with a high SOC will, when deployed, generate life experiences that reinforce and promote their salutogenic functioning. Such individuals will show signs of understanding the problem. They will see it as a challenge and select what they believe to be the most appropriate tool for the task at hand. The SOC enhances one's sense of comprehensibility, meaningfulness and manageability (Antonovsky, 1987).

Hardiness as the second salutogenic construct which is discussed explains why certain people who are exposed to high stress levels do not become ill as expected (Kobasa, 1979). Hardy individuals remain healthy and function salutogenically when

undergoing an intensely stressful time during military deployments by using available resources to develop their coping abilities. Hardiness is a resistance resource, protecting those who are vulnerable from illness (Kobasa et al., 1982).

Bandura (1982) states that the stronger an individual's perceived self-efficacy is, the higher the goals he/she will set and the firmer his/her commitment will be to successfully achieve them. According to Bandura (1986), human attainments and positive well-being require an optimistic sense of personal efficacy. Individuals who judge themselves as self-efficacious in coping with the emotional strains of deployment function salutogenically well in dealing with difficult tasks and make greater efforts to master the challenges (Bandura, 1982).

Sense of coherence, hardiness and self-efficacy, as salutogenic constructs, are indicators of salutogenic functioning and personal coping resources in military deployment. Their main focus is on how individuals handle stressors positively and still remain healthy.

2.4 CHAPTER SUMMARY

In this chapter a literature review of salutogenic functioning was presented. Firstly, the background to salutogenesis was discussed and this was followed by a detailed discussion of the salutogenic constructs: sense of coherence, hardiness and self-efficacy. These constructs were discussed in terms of the theoretical framework and development, definition, dimensions and subcomponents of each. A brief discussion of the salutogenic constructs learned resourcefulness, locus of control and potency was also given, followed by a discussion of salutogenic functioning in military deployment and the chapter summary.

The first literature objective, namely to discuss salutogenic functioning and the salutogenic constructs, can therefore be said to have been accomplished.

Chapter 3 deals with gender differences in military deployment.

CHAPTER 3 GENDER DIFFERENCES IN MILITARY DEPLOYMENT

The objective of this chapter is to discuss gender differences in military deployment.

Firstly, in this chapter, military deployment will be put in perspective and secondly, the emotional cycle of military deployment will be presented. This will be followed by a discussion of gender in military deployment. Finally, coping with military deployment will be discussed. The chapter will end with a summary.

To understand gender differences in military deployment, it is important to have a background knowledge of the military environment and therefore military deployment will be put in perspective and used as a point of departure.

3.1 MILITARY DEPLOYMENT IN PERSPECTIVE

Knott and Rice (1996) define military deployment as a separation in the family due to military operations, missions and exercises. When soldiers are deployed, they work under extraordinarily unpleasant conditions. On a daily basis, some members will react with worry, resistance, sadness, anxiety and confusion and as a result members experience stress (Bartone, 1997). Understandably, it is not easy to cope with being deployed to serve under turbulent conditions, far from home and family. It is not surprising then that most soldiers who are normally deployed experience stress (Burnam, Meredith, Sherbourne, Valdez & Vernez, 1992).

According to Bartone, Britt and Adler (1996), military deployments have a significant effect on members and the probability of severe depression increases with the length of deployment. Members are subjected to a wide range of stressors as part of their military assignments and duties. Such stressors may be associated with the physical, behavioural or mental challenges of their jobs (Sutker et al., 1995).

Military deployment may lead directly to impaired performance of members and can contribute to a variety of physical and mental health difficulties, which result in a variety of social adjustment problems. These problems manifest as family violence, divorce and substance abuse (Fontana et al., 2000).

Military deployment has a profound influence on the physical and mental health of members whether in war or peace (Phelphs & Farr, 1996). The physical and mental health of the members may influence their performance and achievement of organisational goals. The physical and mental health of deployed soldiers should be regarded as being of the utmost importance as it affects members' morale and motivation (Pierce, 1997).

Male and female soldiers may be serving in endangering environments or be far away from home and family as a result of continued deployment. They could experience stress in their work and family lives (Bartone, 1997).

Knapp and Newman (1993) argue that separation as a result of military deployment has been noted as the leading source of high stress in military organisations. Military deployment is not the only source of stress, but it is quite demanding and places additional stress on families and members themselves. The military environment is seen as a potentially stressful career worldwide (Phelphs & Farr, 1996).

Deployed members and their families have a very similar experience of military deployments. They feel the same way about being separated from each other. Members are deployed quite often at short notice, without having time in between to attend to their families (Edwards, 1992).

Members who are deployed are confronted with work-related stress and as a result members start to abuse alcohol, become violent and depressed, and commit suicide. The stress experienced by these members may reach abnormal proportions and affect their work (McGlohn, King, Butter & Retzlaff, 1997).

There is a need to clarify the emotional cycle of deployment which members are faced with before, during and after deployment and this will be discussed in the following section.

3.2 THE EMOTIONAL CYCLE OF MILITARY MEMBERS IN DEPLOYMENT

According to Solomon (1993), the emotional cycle of military deployment is a cycle which continually repeats itself and one in which members go through various emotional changes. Bartone et al. (1996), highlight three phases of military deployment, namely pre-deployment, mid-deployment and post-deployment, which will be discussed in the following section.

3.2.1 Pre-deployment phase

The pre-deployment phase is the stage before soldiers are deployed to the environment where the operation, mission and exercise take place (Rosen, Wright, Marlowe, Bartone & Gifford, 1999).

According to Adler, Vaitkus and Martin (1996), prior to deployment conflicts in the family are at their peak. Irritability, and being on edge seem to be the most common feelings. Much of the conflict tends to centre on the difference in the ways family members experience the deployment.

A study conducted by Bartone et al. (1996) reported that members experience work-related pressure such as not having sufficient time to complete their personal arrangements and prepare their family to cope with their absence during deployment. During the pre-deployment stage members are preparing themselves to deploy and they put in long hours planning and preparing for deployment (Bartone et al., 1996).

Pre-deployment places members and their families in a tense and conflict-ridden situation. Members are concerned about the place of deployment, and the fact that their families will be isolated and without support. Family members may feel that the deploying member has little consideration for the family (Bartone, 1997).

Bartone et al. (1996) reported that prior to deployment the deploying soldiers and their families experience the following:

- withdrawal symptoms among family members
- separation anxiety
- engagement in distracting activities by family members
- avoidance of the subject of deployment
- an increase in family arguments, mood-swings, tension and depression

Bartone et al. (1996) identified the following major symptoms, which members exhibit when they have to be deployed. The symptoms are divided into behavioural and physical symptoms.

The behavioural symptoms are: emotional outbursts, departure from the normal routine, fear, a quickness to anger, excessive risk-taking, suspicion, poor interpersonal relationships with co-workers, poor work performance, absenteeism, drug, alcohol and tobacco abuse, uncertainty, changed sleeping habits and impulsive behaviour.

The physical symptoms are: headaches, nervousness, restlessness, sweating, sleep disturbance, difficult breathing, high blood pressure, lack of appetite, eating disturbance, fatigue and frequently feeling tired.

These reactions are not fixed but depend on the person's personality, previous experience and the context within which the stress is experienced (Bartone et al., 1996).

A study conducted by Bartone, Baitkus and Adler (1994) found that prior to deployment the majority of members were profoundly worried about the welfare of their family and the time spent away from their homes and families.

3.2.2 Mid-deployment phase

Bartone et al. (1996) define mid-deployment as the phase when soldiers are in the area or environment where duties are taking place.

Federman, Bray and Kroutil (2000) describe the behavioural symptoms, quickness to anger, boredom, alcohol and tobacco abuse which deployed members exhibit in the mid-deployment phase and which may have a negative influence on their morale and health.

According to Federman et al. (2000) the causes of behavioural symptoms include: being away from home and missing being with family members, restriction of movement, boring and repetitive work and lack of time-off. When deployed soldiers experience behavioural symptoms associated with the above causes they become stressed and dissatisfied with the work environment and members become unproductive. The behavioural symptoms such as low morale and shortage of meaningful professional daily work activities have an impact in members salutogenic functioning during military deployment operations.

The physical symptoms are: an increase in blood pressure, rashes, hypertension, somatic problems, migraines, tension headaches and muscular discomfort, fatigue, asthma and urinary frequency (Federman et al.,2000).

Federman et al. (2000) and Raghav and Merydith (2001) identified boredom as the main stressor affecting both men and women deployed in Operation Uphold Democracy in Haiti in 1994. This stressor increased anticipation and frustration. Other problems to which boredom has been attributed as a casual factor include delinquency and substance abuse, such as smoking and taking alcohol.

According to Bartone, Baitkus and Adler (1994) and Raghav and Merydith (2001), boredom may have a direct effect on the salutogenic functioning of the members. The following are associated with boredom: the lack of mental stimulation, environmental and social isolation, poor concentration, lack of interest and job

dissatisfaction. Any or a combination of these symptoms may result in lower productivity levels.

The behavioural and physical symptoms may have negative consequences for deployed members and the military organisation. If the symptoms are not addressed and treated timeously they may result in poor performance, low morale, dissatisfaction and lower organisational commitment. Individuals who experience these behavioural and physical symptoms are likely not to display good salutogenic functioning in military deployment.

3.2.3 Post-deployment phase

Post-deployment is the phases in which members who have been deployed return home and are reunited with their family after their separation as a result of their participation in a military exercise, operation or mission (Bolton, Litz, Glenn, Orsillo & Roemer, 2002).

According to Holden (2002), the stress of the member returning home after military deployment is as great as that experienced by the family at the time of departure. Generally, when members return home after deployment they experience poor communication, emotional distancing and sexual difficulties.

Soeters (2001) mentions the following as a common cause of tension in post-deployment:

- Family rearrangement (reorganisation of family roles, routine and rules).
- Family conflict (conflict plays a role immediately after the reunion, and is perhaps a result of the difficulty experienced in resuming family life).
- The growing sense of having to readjust to a normal family life.

The three phases of military deployment were discussed in the previous section. The following section deals with gender in military deployment and the different stressors affecting men and women will also be discussed.

3.3 GENDER IN MILITARY DEPLOYMENT

During military deployment males and females are affected by different stressors, which have an impact on individual salutogenic functioning (Phelps & Farr, 1996).

Military deployment is seen as a masculine world, the world of men, while the family is seen as the world of women. Males occupy high positions in leadership and control the flow of work while females attend to the administrative duties (Bell, Stevens & Segal, 1996).

A study conducted by Barker (1999) during Operation Desert Storm (Gulf War 1990-1991) indicated that there are gender differences when males and females are deployed. The results indicate that males are significantly more work oriented than females and that they also experience less loneliness than females.

According to Heineken (2000), gender refers to the common ideas and options held about what it is to be a boy or a girl, or a man or woman and what constitutes masculine or feminine behaviour. It is the perception about how people are expected to behave simply because they are male or female.

Sutker, Davis, Uddo and Ditta (1995) express the view that people's perceptions differ from race to race and culture to culture and that these can change over time. The important thing is that individuals have these perceptions because they learned them during their childhood.

According to Knott and Rice (1996), individuals' opinions about gender influence the work those women and men choose or are allowed to choose. Their opinion also has an influence on the work that women and men are likely to get, their qualifications and experience as well as the position and status women and men occupy at work.

The way in which gender is interpreted and the roles that people are expected to play in life are being challenged by human rights laws, which advocate that people should be treated equally and be given the same opportunities in life (Stone & Altmaier, 1990). Alder and Cliff (1989) state that it is unfair to have policies,

procedures or management practices in society or in the workplace that discriminate against women.

A number of researchers, including Bartone (1997), Sutker et al. (1995) and Stone and Altmaier (1990) attribute gender differences in the military context to the fact that males and females are not equally represented in all jobs. When men and women are deployed they are subject to different stressors, which affect their salutogenic functioning.

In the following section the different stressors affecting women and men respectively in military deployment will be described and discussed.

3.3.1 Stressors affecting women in military deployment

Generally, females are making significant progress in professions that were previously dominated by males. In the past decade, the number of women in the military environment has increased and there are many women in military leadership positions and management positions (Gottlieb, 1983). Women experience a much greater number of work-related and health stressors during military deployment than when they are not deployed. The following were identified as stressors affecting women during military deployment (Sutker et al., 1995):

3.3.1.1 Role ambiguity

Role ambiguity has been defined as a job situation in which there are inadequate information, uncertainties or misleading pieces of information about how an individual is supposed to perform on the job, or the scope of an individual's work responsibility. Most females experience role ambiguity when prevented from being productive and achieving the set goals in their jobs (Barker, 1999).

3.3.1.2 Lack of privacy

Burke, Brief and George (1993) in their study conducted in the USA military reported that lack of privacy was the key problem when females were deployed and they need

privacy or time alone. Living and working with the same people in close and crowded conditions often leads to increased irritability over time.

3.3.1.3 Isolation

Females deployed in Operation Desert Storm (Gulf War 1990-1991) indicated that their greatest concern was being away and separated from their homes and family, as well as living in a foreign and often bleak environment (Sutker et al., 1995).

The majority of females in deployment frequently worry about the welfare of their families. Deployment to physically remote locations, where the deployed member encounters obstacles to communication, results in soldiers feeling isolated (Barker, 1999).

3.3.1.4 Workload

According to Bell, Stevens and Segal (1996), workload was singled out as a concern that affects the mental and physical state of most females during military deployment. Individuals are expected to work under pressure to meet deadlines. This normally happens when an individual does not have enough time to complete the assigned job.

3.3.1.5 Mission importance

Litz (1996) explains that an intra-psychic conflict develops around the perceived imbalance between personal sacrifices required by the mission, the importance of the overall mission, and women's role in that mission. During operations, soldiers engaged in combat sacrifice their opportunities for advancement, families, freedom of movement and career development as a result of military missions.

Females who were deployed in Somalia Operation Restore Hope (1993) were doubtful about the importance and significance of the mission and their participation in military operations, more especially when there is relative shortage of meaningful professional daily activities (Aldridge, Sturdivant, Smith and Lago (1997).

3.3.1.6 *Conflicting demands of being a female in a male-dominated environment*

Generally, females feel threatened by a deployment environment, especially when they experience work-related difficulties and feel powerless. Females experience conflicting demands during military deployment of being a female in an environment dominated by males (Bartone et al., 1996). According to Joy (1996), males feel that the changes in gender roles may harm and hurt the quality of military operations.

3.3.1.7 *Discrimination*

According to Bell et al. (1996), women have made great advances in the traditionally male-dominated professions. In the military deployment situations, women continue to face gender discrimination. Generally, females are prevented from advancing beyond the platoon leadership positions (Long & Khan, 1993).

3.3.1.8 *Sex stereotyping*

Van Breda (1995) states that during military deployment females are expected to work in the personnel and logistics sections and on the switchboard rather than in direct war situations. Litz (1996) states that to reduce sex stereotyping in military deployment there should be a shift of organisational power structures. Military structures should involve females in leadership positions and invest more in the development of women's careers at the top level of the hierarchy.

Women have to cope with the problems of combining work and family responsibilities, as well as prejudice and discrimination at work. This makes their task a great deal more difficult than that of men (Nelson, Quick & Hitt, 1989).

3.3.2 Stressors affecting men in military deployment

Generally, the military environment has been dominated by males and has been perceived as a world of men in which males occupy high leadership positions ahead of their female counterparts (Eastman, Archer & Bell, 1990). The following were identified as stressors affecting men during military deployment (Sutker et al., 1995):

3.3.2.1 *Uncertainty*

English (2000) conducted a study during Military Operation Shield and Desert Storm (Persian Gulf War, 1990-1991) and reports that males were uncertain and confused about the mission, where and when the unit might be moving next, as well as the lack of clarity about the command policies. The unplanned unit moves were found to be stressful and disturbing to deploying males.

3.3.2.2 *Monotony*

Monotony was highlighted as one of the problems faced by males during military deployment where daily activities take place on a routine basis (Nelson & Quick, 1985). Phelps and Farr (1996) explain that routine tasks might lead to complaints on the part of members, loss of focus as regards their mission, and depression. The majority of males who were deployed in Operation Desert Storm (Gulf War 1990-1991) felt that the shortage of meaningful professional daily work increased the frustration.

3.3.2.3 *Finance*

The study conducted by Van Breda (1999) indicates that males who were deployed in Lesotho in 1998 were significantly concerned about their finances. According to research by Bell et al. (1996), financial difficulties proved to have a direct and negative impact on deploying males, their readiness and their ability to execute their mission, as well as the well-being of their families.

The study conducted by the US Army Community and Family Support Centre in 1994 reported that 74% of males who were deployed in Operation Desert Storm (Gulf War 1990-1991) were concerned about their financial status and whether their families had enough money to pay bills during deployment or separations (Burke, Brief & George, 1993).

3.3.2.4 *Work schedule*

Shift work, stand-by and alternative work schedules were highlighted as stressors experienced by most males during military deployment. Shift work and alternative work schedules have psychological and physical effects related to disturbances in sleep quality and quantity, psychosomatic complaints and poor adjustment in work roles (Etzion & Westman, 1994).

3.3.2.5 *Unpredictable and erratic deployment*

During military deployments males are frequently moved from one area of deployment to serve on missions where help is needed. Furthermore, most males who serve on these missions encounter stressors and frustrations, such as difficult living conditions (Burnam et al., 1992).

3.3.2.6 *Lack of career development.*

According to Barham, Gottlieb and Kelloway (1998), males are deployed more often than females. 90% of males spend time in the deployment areas and therefore experience limited career opportunities. This lack of career development creates frustration and reduces motivation and impairs the performance of deploying individuals (Cascio 1991).

The stressors affecting men and women respectively in military deployment were explored in the previous section. In the following section coping with military deployment will be discussed.

3.4 COPING WITH MILITARY DEPLOYMENT

Coping is one of the stabilising factors that can help individuals maintain psychological adaptation during stressful periods. It encompasses cognitive and behavioural effects to reduce or eliminate stressful conditions and associated emotional distress. The social, psychological and biological effects of coping with

one stressor may influence a person's ability to cope with concurrent stressors (Monat & Lazarus, 1991).

In the following section women and men coping with military deployment will be discussed.

3.4.1 Women coping with military deployment

Exposure to military deployment stressors may help females to develop some coping resources and mechanisms so that they are less harmed by subsequent stressors (Monat & Lazarus, 1991). Most women make use of social support and religious support as support systems to help them function better during military deployment.

3.4.1.1 Social support

Social support has been defined as information that leads individuals to believe that they are cared for and loved, esteemed and valued, and that they are participating in a network of communication and mutual obligation (Daro & Harding, 1999). Although social support systems serve a multitude of functions, the buffering effects of social support can be condensed into six basic support functions: "listening; technical support; technical challenge; emotional support; emotional challenge; and the sharing of social reality" (Pines & Aronson, 1988).

In the broad sense, social support is believed to have both stress preventive and stress buffering features. On one hand, social support surrounds most females with emotional and instrumental assistance that promotes well-being; on the other hand, it reduces the toll of stressful events by contributing to effective salutogenic functioning (Jaffee, 2001).

According to Van Breda (1997), poor social support does not necessarily increase the risk of illness. Social support appears to be a protective factor, which somehow lessens the impact of a stressor on the individual.

The study conducted by Barker (1999) reveals that females who were deployed in Operation Desert Storm (Gulf War 1990-1991) and who felt unsupported by their management tended to experience more sadness, tension, anxiety and depression during deployment.

Van Breda (1996) points out that female members of the SANDF who were deployed in the KwaZulu Natal area in 1995 and who felt supported by their management were more satisfied with their work, and experienced better health, less depression and higher levels of energy.

3.4.1.2 Religious support

According to McCubbin and McCubbin (1988) and Wood, Scarville and Gravino (1995), religious support has been found to buffer the stress related to military deployments and to increase emotional well-being of deployed females.

McCubbin (1979) states that the use of religion as a support mechanism in salutogenic functioning during military deployment was found to be particularly advantageous to most deployed females.

The study conducted by McCubbin and McCubbin (1988) indicates that 29% of the females who were deployed to Somalia in Operation Restore Hope in 1983 made use of religious support for their emotional well-being.

The use of religious support has become increasingly important to females, allowing them to function salutogenically well during military deployment. The literature indicates that religious support buffers the stressors experienced by females (Alder & Cliff, 1989).

3.4.2 Men coping with military deployment

According to Knott and Rice (1996), Sadacca, McCloy and Di Fazio (1992) and Sadacca, McCloy and Di Fazio (1993), males use friends and community support as a coping mechanism to buffer military-related stressors when they are deployed.

3.4.2.1 *Friends and community support*

Friends and community support helps males to reduce deployment-related stress, as well as general life stressors (Eastman et al., 1990). According to McCubbin (1979) and Riggs (1990), males who did not have children and family seemed to cope well with the support of friends and the community during military deployment.

Supportive friends in organisations help to reduce stress, and in this sense, the lack of friends and community support can be considered to be stressful (Van Breda, 1999). The availability of friends and community support has been considered a valuable aid in coping with life stress; the lack of friends and community support is related to increased employee strain (Etzion & Westman, 1994).

Bell, Stevens and Segal (1993) revealed that 78% of deployed males relied on friends and community support during Somalia Operation Restore Hope in 1993. The support of friends and the community promoted the health and wellbeing of most males during military deployment.

Having discussed the way women and men cope with military deployment, the researcher presents a chapter summary in the following section.

3.5 CHAPTER SUMMARY

In this chapter, gender differences in military deployment were discussed. Firstly, military deployment was put in perspective, secondly, the emotional cycle of military deployment was presented and this was followed by a discussion of gender in military deployment. Lastly, coping with military deployment was presented and this was followed by the chapter summary.

This represents the accomplishment of the second aim of the literature study, namely to discuss gender differences in military deployment.

To conclude the literature study for this research project, an integration of the literature about salutogenic functioning and gender differences in military deployment will be presented.

THEORETICAL INTEGRATION

The objective of this section is to integrate the information obtained from the literature on salutogenic functioning with that obtained from the literature on gender differences in military deployment.

The literature review indicates that gender differences are a factor in military deployment (Sutker et al., 1995). A general underlying assumption regarding salutogenic functioning is that people manage stress and stay well. A specific assumption regarding salutogenic functioning is that there are individual differences in responses to stress (Antonovsky, 1987).

Sense of coherence is seen as a major determinant of whether one will be able to maintain one's position on the health ease/disease continuum. Antonovsky (1987) sees comprehensibility, manageability and meaningfulness as the three core components of the SOC. When individuals rate high on these components, they can be identified as having a strong SOC, and when they rate low on these three components they can be identified as having a weak SOC (Antonovsky, 1998).

The person who scores high on sense of comprehensibility believes that events can be coped with, and challenges will be met. The person with a weak sense of coherence is negative about life (Antonovsky, 1987). Most males believe that they understand deployment problems and feel that they have the resources to cope with the challenges successfully (Bartone et al., 1996). Males are more comprehending and work-oriented than females when faced with military deployment operations (Burnam, Meredith, Sherbourne, Vernez & Vernez, 1992). Most females lack a sense of confidence during military deployment. Females have a weak sense of coherence in military deployment, they experience tension when faced with challenges (Fontana et al., 2000).

A person who has a high sense of manageability will not feel victimised by events or feel that life is treating her or him unfairly. Bad things do happen in life, but when they occur, the individual will be able to cope without endless complaints (Antonovsky, 1991). Males have a sense of coherence when deployed; they do not feel victimised by the events that take place during deployment, and by life-threatening events. They are

able to cope with the challenges posed by the environment. Literature indicates that female feel challenged and threatened by the deployment environment (Knott & Rice, 1997). According to Bartone (1997), females experience lower manageability and tend to feel victimised by stressful situations (Sutker et al., 1995).

The meaningfulness component of the sense of coherence refers to the extent to which one feels that life makes sense emotionally and that some of the problems and demands posed by living are worth investing energy in or are worthy of commitment and engagement (Antonovsky, 1998). According to research findings, males have a strong sense of coherence, they are willing to accept the challenges and seek meaning in stressful situations. They will do their best to overcome a stressful period with dignity (English, 2000). Females feel doubtful about their participation in the mission, especially when there is relatively little meaningful daily professional work (Bolton et al., 2002).

Hardiness is seen as a personality stress resistance resource that might have a certain constitutional predisposition as per individual, but is seen as a legitimate stress buffering resource by its proponents. Commitment, challenge and control are viewed as interlocking parts of an overall orientation or personality style of stress resistance (Kobasa, Maddi & Kahn, 1982).

Research indicates that committed people have a sense of purpose that allows them to identify with and find meaning in their environment. During military deployment most males have a tendency to involve themselves in life-threatening situations and demanding assignments and believe that they have the skills to cope with the environment (Zappert & Weinstein, 1985). According to Alridge, Sturdivant, Smith & Lago (1997), females are more likely to experience negative feeling, lack of confidence and commitment when they are deployed. The committed person knows not only what he/she is involved in but also why the involvement was chosen (Soeters, 2001).

According to Bartone (1997), in military operations males have a greater sense of control over what occurs in their lives and will remain healthier than females, who usually feel that they are powerless when faced with external forces. Research conducted by Etzion and Westman (1994), revealed that males approach military

deployment with a positive attitude and they are able to control the flow of work, unlike females, who experience an absence of control, particularly when they have to work under pressure to meet deadlines.

A sense of control is a critical component in military deployment. Lack of control, which most females experience when deployed, is the biggest contributor to the fact that females do not succeed during military deployment (Burnam et al., 1992).

Challenge involves seeing changes as a necessary and integral part of life (Kobasa, 1982). Males and females are exposed to stressors and they are expected to function salutogenically well. The challenges during military deployment are: being separated from their families and being away from home. Individuals with low hardiness find the environment boring, meaningless and threatening and those with strong hardiness find the environment challenging (Holden, 2002).

Bandura (1982) refers to self-efficacy as individuals' belief in their capacity to mobilise cognition resources and to take action to exercise control over task demands. Individuals have unique capacities such as self-reflection, self-regulation and a capacity for vicarious learning. Males have high deployment resilience as compared to females with low deployment resilience and tend to suffer when confronted with military deployment difficulties (Bolton et al., 2002).

Bandura believes that self-efficacy refers to the skills, competencies and capabilities an individual possesses which enable him/her to achieve a high level of functioning. Self-efficacy is concerned with how individuals judge their capabilities and how, through their self-perception of efficacy, they influence their motivation and behaviour (Bandura, 1982).

In addition, people high on self-efficacy believe in their capacity to mobilise cognition resources and to take action to exercise control over task demands (Bandura, 1982). Literature indicates that women are more likely than men to cope by venting their emotions (physiological states of self-efficacy) during military deployment. Self-efficient women will tend to avoid activities that they believe will exceed their coping abilities, but

they will undertake and perform with confidence those that they judge themselves capable of managing (Bandura, 1977).

The third literature objective of integrating salutogenic functioning and gender differences in military deployment has been accomplished in the above section.

The empirical study will be presented in chapter 4.

CHAPTER 4 EMPIRICAL STUDY

The objective of this chapter is to present the empirical study of this research. To achieve this goal, the population is described and the selection of the sample discussed. Next the measuring instruments are described and the reasons for choosing them explained. The data collection and data processing are then discussed, followed by a formulation of the hypothesis and the chapter summary.

4.1 POPULATION AND SAMPLE

The population for this research are males and females who were employed in Kwa-Zulu Natal working in the South African National Defence Force at the 7 South African Infantry in Phalaborwa. A convenience sample was used by selecting only the members who were available after their six months' military deployment.

McBurney (1994) defines convenience sampling as a nonrandom sampling procedure chosen for practical reasons, such as selecting respondents who are readily available to participate in a study. A sample of 112 was selected, representing all the deploying soldiers in three platoons proportionately. Of these 112, 69 were male and 43 female. Everyone of the final sample ($N=112$) completed the measuring instruments.

4.2 MEASURING INSTRUMENTS

In this study a biological questionnaire and three questionnaires to measure salutogenic functioning were used. These questionnaires will be discussed according to their development and rationale, description, administration, interpretation, reliability, validity and motivation for inclusion in this study.

The following biographical information was measured in the biographical questionnaire: age, qualifications, population group, marital status, years of service and gender. These variables were chosen to allow the researcher to capture more detail about the biographical profile of the deploying members.

The three salutogenic questionnaires used as measuring instruments in this study were: sense of coherence (SOC) (Antonovsky, 1979; 1987), personal views survey (PVS) (Kobasa, 1979), and self-efficacy scale (SES) (Bandura, 1982). They will be discussed in the following section.

4.2.1 Sense of coherence (SOC)

Antonovsky (1987) developed the measurement of the concept sense of coherence. Antonovsky is the chief proponent of salutogenesis. Antonovsky (1993) referred to the sense of coherence as a global orientation, which means a way of looking at the world in general rather than responding to a particular situation. The SOC questionnaire focuses on factors that enable coping and wellbeing, rather than risk factors, which promote disease.

4.2.1.1 Development and rationale

Antonovsky (1987) developed the SOC questionnaire using experimental subjects who had experienced serious irreversible trauma in their lives, such as the death of a loved one. The pivotal aim was to gauge their sense of coherence on three dimensions, namely comprehensibility, manageability and meaningfulness. The higher the total score on the SOC, the stronger the sense of coherence of the respondent.

When Antonovsky (1993) constructed the sense of coherence questionnaire, he considered whether the questionnaire was universally applicable and whether it cut across lines of gender, social class and culture.

The questionnaire is based on a health-oriented rather than a disease-oriented approach to psychological functioning. It measures the extent to which the individual sees the world around him as predictable, manageable and meaningful, that is, "how people manage stress and stay well" (Antonovsky, 1979,1987, Strümpfer, 1990). The rationale of the questionnaire is that it measures an individual's personality disposition and global orientation regarding the handling of stimuli in terms of three components, namely comprehensibility, manageability and meaningfulness.

4.2.1.2 *Description*

The questionnaire consists of 29 items and an answer sheet. The items are rated on a seven-point scale that indicates the extent to which a respondent disagrees or agrees with the meaning of the items. A score of 1 and 7 represents extremes, while the score of 4 is in the middle and suggests that both poles apply equally.

According to Antonovsky (1987), the items are based on the components measuring a sense of coherence, namely, comprehensibility, manageability and meaningfulness. Comprehensibility consists of 11 items (1,3,5,10,12,15,17,19,21,24 and 26). Manageability consists of 10 items (2,6,9,13,18,20,23,25,27 and 29). Meaningfulness consists of 8 items (4,7,8,11,14,16,22 and 28).

4.2.1.3 *Administration*

The SOC is administered individually or in groups. The respondent is provided with a series of 29 items and is required to respond to each of the 29 items on the questionnaire. The 29 self-completion questions are on various aspects of life and for each question there are seven possible answers to select from (Antonovsky, 1993).

The respondent is required to mark the number which best expresses the extent to which the statements are applicable to him/her on the scale of 1 to 7. There is no time limit. Thirteen items are formulated in the negative and have to be reversed. All the items are added to form the total score (Antonovsky, 1993).

The scoring of the questionnaire consists of a numerical count of all 29 items. There are 13 items, which represent negative scoring (they include items 1,4,5,6,7,11,13,14,16,20,23,25 and 27) and these are reversed before being marked. The new scores for each item are counted to determine the sum of the respondent's score.

4.2.1.4 *Interpretation*

A sense of coherence is developed as a single dimension of the individual's personality, consisting of the three dimensions, comprehensibility, manageability and meaningfulness.

- Comprehensibility means the extent to which individuals perceive the stimuli that are congruent to them as making cognitive sense and as information that is ordered, constant, structured, and clear (Antonovsky, 1984).
- Manageability refers to the belief that not only did one understand the problem, but that the requisite resources to cope with the problem successfully were at one's disposal (Antonovsky, 1998).
- Meaningfulness means that life is emotionally worthwhile and sensible (Antonovsky, 1998).

A person with a strong sense of coherence has a significantly high score. A high score on the three dimensions represents a high level of sense of coherence. Those who attained low scores on the three dimensions would reflect a low level of sense of coherence and they are likely to perceive many stressful situations as threatening and anxiety provoking to them (Antonovsky, 1993).

4.2.1.5 *Reliability*

Antonovsky (1987) reports high levels of internal consistency and reliability, which are reflected on the Cronbach's alpha as ranging from 0,83 to 0,93. Antonovsky (1993) testifies to the questionnaire's reliability after having conducted studies in 26 countries using different cultures, populations and languages to achieve these reliability scores.

4.2.1.6 *Validity*

Antonovsky (1993) refers to the face and content validity by presenting each item for scrutiny by his colleagues, who are familiar with the theory. The colleagues evaluated each item as referring to one of the senses of coherence and its dimensions. Construct validity ranges between 0,38 and 0,72.

According to Antonovsky (1987), there is sufficient evidence to warrant the tentative conclusion that the scale is an adequate representation of the sense of coherence construct.

4.2.1.7 *Motivation for inclusion*

Sense of coherence is the central construct from the paradigm of salutogenesis. The questionnaire was chosen because it measures the sense of coherence construct. It is an instrument that focuses on how people manage stress and stay well (Antonovsky, 1979).

The SOC questionnaire is culturally non-specific and can be used for cross-cultural measurement. It is universally accepted as a measurement instrument for sense of coherence constructs. The questionnaire has been empirically tested worldwide and high levels of reliability and validity have been found. The SOC questionnaire is an appropriate measure of individuals on the illness-health continuum. This implies that it could also be used in the study to determine sense of coherence as part of salutogenic functioning (Antonovsky, 1987).

4.2.2 Personal views survey (PVS)

The Personal Views Survey (PVS) is used to measure hardiness (Kobasa, 1979). Kobasa, Maddi and Courington (1981) developed this instrument from an extensive longitudinal study.

Several versions of hardiness scales were developed by various authors such as Kobasa (1979), Kobasa, Maddi, Pucetti & Zola (1985). The initial scale, the

“Cognitive Hardiness Scale” went through a series of adaptations after being criticised specifically for its focus on the negative measurement of hardiness (Funk & Houston, 1987).

The PVS (Kobasa, 1979) used in this study to measure hardiness is called a third generation measurement instrument (Funk & Houston, 1987) and it consists of both negatively and positively scaled items.

4.2.2.1 Development and rationale

Kobasa (1979) developed the Personal Views Survey, which was used to measure hardiness. On the basis of the existential personality theory, personality hardiness is a salutogenic construct which moderates stress/health relationships.

The aim of the instrument is to measure an 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, the ability to resist illness caused by stressful events and to anticipate change as existing challenge (Kobasa, 1979).

The rationale of the questionnaire is that it measures a person's general hardiness in terms of its components, namely commitment, control and challenge. A high score in this survey will indicate the individual's commitment, control and challenge, while a low score will show a lack of these characteristics.

4.2.2.2 Description

The Personal View Survey comprises a 50-item questionnaire and an answer sheet on which responses are indicated on a 4-point scale. Commitment is measured by 15 items (1,8,11,14,17,20,23,26,29,32,38,39,44,47 and 50), control by 17 items (3,4,5,7,10,13,16,19,22,25,28,31,34,35,42,45 and 48) and challenge by 18 items (2,6,9,12,15,18,21,24,27,30,33,36,37,40,41,43,46 and 49).

4.2.2.3 Administration

The PVS is self-administered and can be completed individually or in groups. The respondent indicates on the answer sheet the extent of agreement or disagreement with the statements on a scale of 0 to 3. The figure 0 shows total disagreement and 3, total agreement. The respondents are requested to answer all statements on the basis of the way they feel at that moment.

The scoring of the questionnaire consists of the numerical count of all 50 items. There are 11 items to be reverse scored (including items 1,2,3,4,5,22,23,24,25,26 and 27).

4.2.2.4 Interpretation

Hardiness is an individual predisposition that has been found to moderate the impact of stress. Three existential concepts were chosen as integral to the stress resistance resource of hardiness, namely commitment, control and challenge (Kobasa, 1979).

- Commitment - a positive score is indicative of an individual who believes that he or she is of some worth and is fully involved as a social being. A negative score is indicative of low self-worth and alienation in many situations in life, for example, work, family, friendship and social organisation.
- Control - a positive score indicates that an individual believes he or she can influence events in life, with an emphasis on personal responsibility. A negative score reflects a feeling of powerlessness.
- Challenge - a positive score indicates an expectation that change, rather than stability is the norm of life. A negative score indicates that change is perceived as a threat.

According to Kobasa et al. (1981), individuals with a high score on hardiness represent a strong sense of hardiness. Kobasa (1979) describes hardy persons as those individuals who have considerable curiosity and tend to find their experiences

interesting and meaningful. Such individuals believe they can be influential through what they imagine, say and do. They expect changes to be the norm and regard change as an important stimulus to development.

Kobasa et al. (1981) state that beliefs and tendencies are very useful in coping with stressful events. Optimistic cognitive appraisals are made, changes are perceived as natural enough. They are regarded as meaningful and even interesting despite their stressfulness and in that sense are kept in perspective.

According to Kobasa et al. (1985), individuals with a lower score on hardiness represent a weaker sense of hardiness than those with high scores. Individuals with lower hardiness tend to find themselves and their environment boring, meaningless and threatening.

Individuals with a lower hardiness tend to feel powerless in the face of overwhelming forces, believing that life is best when it involves no changes. Such individuals have no real conviction that development is either possible or impossible, and are passive in their interactions with their environment. When stressful events occur, they have little basis for optimistic cognitive appraisal or decisive action. Because their personalities provide little or no buffer, the stressful events are allowed to have debilitating effects on health (Kobasa et al., 1981).

4.2.2.5 Reliability

Kobasa et al. (1982) report a significant correlation of 0,85 for commitment, 0,68 for control and 0,70 for challenge. This indicates reliability for the questionnaire.

4.2.2.6 Validity

According to Kobasa et al. (1982), the survey shows a significant internal validity of 0,85 for commitment, 0,70 for control and 0,71 for challenge.

4.2.2.7 Motivation for inclusion

According to Kobasa et al. (1985), the PVS instrument is based on a sound theoretical framework and is both valid and reliable. The PVS is accepted in literature as the best measure of the hardiness concept. The instrument is used extensively in organisations to assess coping behaviour, health, morale and effectiveness of the employees (Kobasa & Maddi, 1977).

For the purpose of this research, the PVS questionnaire was chosen because it measures individuals' resistance to illness caused by stressful events and to anticipate change as existing challenge. The instrument also measures individuals' ability to believe that they can control or influence the events of their experience and their ability to stay committed to the activities of their lives (Kobasa, 1979).

4.2.3 Self-efficacy scale (SES)

The self-efficacy scale (SES) was used to measure an individual's expectations on how that individual is likely to perform in a wide variety of situations (Bandura, 1982). Bandura (1977) defines self-efficacy as an inner coping mechanism against stress in the environment and a mechanism for psychological growth. It is the belief in one's ability to perform a task.

4.2.3.1 Development and rationale

Bandura (1982) developed the self-efficacy scale as an instrument for the measurement of perceived self-efficacy, which an individual has about him/herself in the performance of tasks. The stronger the perceived self-efficacy, the more active the coping efforts. The instrument distinguished between those individuals who have the capacity to use cognitive, social and behavioural skills to regulate events in their lives and those who do not.

4.2.3.2 Description

The SES consists of 27 items measuring an individual's attitudes and the feelings he/she might have about different situations or the performance of different tasks. A

person who expects to be successful in a variety of situations will score low on the questionnaire, because, in terms of the scoring in this questionnaire, the lower the score, the higher the level of self-efficacy. High scores indicate low levels of self-efficacy.

4.2.3.3 Administration

The self-efficacy scale consists of 27 items on a respondent's attitude to and feelings about a variety of tasks. Items are presented to the respondents in the form of statements. Respondents are asked to indicate the extent of their agreement/disagreement with each of the 27 statements on a scale of 1 to 7. A score of 1 indicates that they strongly agree and a score of 7 that they strongly disagree. All the items are added to form the total score.

The scoring of the questionnaire consists of a numerical count of the 27 items. There are 9 items to be reverse scored (including items 1,2,9,10,11,12,22,25 and 26).

4.2.3.4 Interpretation

According to Bandura (1986), self-efficacy is concerned with how individuals judge their capabilities and how their self-perception of efficacy affects their motivation and behaviour. When interpreting the test, the total score is used as an indication of self-efficacy. The stronger the self-efficacy, the bolder the behaviour of the individual will be.

An individual with a strong feeling of self-efficacy is more likely to be motivated to do things competently than someone with a weak perception of self-efficacy. Furthermore, he/she can withstand failures by viewing tasks as challenges rather than concentrating on his/her shortcomings, and can devote more attention and effort to the demands of a given situation and be spurred on to greater efforts by obstacles than the other individual (Bandura, 1982).

4.2.3.5 *Reliability*

Kossuth (1998) reported a Cronbach alpha reliability coefficient of 0,71 and 0,86, which is persuasive evidence of the instrument's reliability.

4.2.3.6 *Validity*

According to Bandura (1977), studies have provided evidence that self-efficacy is a valid predictor of performance. Research suggests that self-efficacy beliefs may be reciprocally related to performance. This implies that they may be both a cause and effect of performance.

4.2.3.7 *Motivation for inclusion*

For the purpose of this research, the SES questionnaire was chosen because it measures self-efficacy, which serves as a central component of the salutogenic profile. The instrument entails judgments of how well one can execute courses of action required to deal with prospective situations.

People with a strong sense of self-efficacy focus their attention on handling the task and are energised by difficulties, while people who doubt their efficacy tend to be consumed by their inadequacies and have little energy to deal with the task at hand (Bandura, 1982).

According to Bandura (1982), the stronger the individual's perceived self-efficacy, the higher the goals he/she will set and the firmer the commitment to their successful achievement. Bandura (1986) states that human attainments and positive wellbeing require a strong sense of personal efficacy.

In the following section the gathering of data will be discussed.

4.3 DATA GATHERING

The steps that were followed in the administration of the measuring instruments and the statistical procedures will be discussed as follows:

4.3.1 The administration of the measuring instruments

The data for this study were collected from the members of 7 South African Infantry. Permission was requested from the Commanding Officer of the unit and platoon leaders to conduct the study. A covering letter was drawn up, indicating the aim of the research.

After permission had been granted, all possible participants were briefed about the study, and the aim of the research was explained to them. Those who were interested in participating were asked to fill in the informed consent form.

The respondents who volunteered were informed that their responses would remain confidential. Anonymity was preserved by not mentioning the names of participants in the research findings. The biographical questionnaire was given to 7 SAI members to complete.

The three salutogenic instruments (sense of coherence, personal views survey and self-efficacy scale) were given to the respondents. All participants were handed a questionnaire booklet, and an answer sheet for each of the three instruments, as well as an eraser and HB pencil. No time limit was specified and the respondents were given clear verbal instructions. The researcher encouraged those who were working exceptionally slowly to work a little faster.

The biographical questionnaire and the three salutogenic instruments were administered in one day, as the participants were given half a day off to participate in the study.

Each questionnaire was scored according to the scoring and interpretation guidelines for every instrument. The researcher ensured that all the questions had been answered.

The data were encoded for the biographical questionnaire and the three salutogenic instruments. The encoded data comprised eight items for the biographical information and 114 items for the salutogenic instruments, consisting of 29 items for the sense of coherence, 50 items for the personal views survey and 27 items for the self-efficacy scale.

In the following section the statistical procedure will be discussed.

4.3.2 Statistical procedure

The statistical procedure included the analysis of the biographical information, the application of the following statistical techniques: descriptive statistics, item analysis, reliability analyses of the questionnaires, *t*-test, analysis of variance, and effect size and power. All statistical analyses in this study were computed using the SPSS statistical package for Windows (SPSS User Guide, 1983).

The statistical techniques used are discussed below.

4.3.2.1 Descriptive statistics

Descriptive statistics were compiled for all the variables to facilitate the reporting of the biographical information and the performance of the statistical analysis. The descriptive statistics will be reported according to the mean and standard deviation.

4.3.2.2 Item analysis

Item analysis was performed, involving extracting a single factor on the items of a particular sub-scale, inspecting the factor loading to ascertain whether those items indicated by theory to be reverse-scored, should indeed be reverse-scored,

according to the factor loading (less than 0,1). These items were then omitted from the final sub-scale. In the case of each sub-scale, that scale's Cronbach Alpha was compiled as an index of the internal reliability of that scale which is reported in the study (Lemke & Wiersma, 1976).

Depending on the results of the item analysis, it was decided to calculate each sub-scale score as follows:

- Calculate the scale or sub-scale as the mean of the items which represents that scale, or sub-scale.
- Ensure that all items that make up a particular sub-scale are such that a high score on each of the scales indicates high salutogenic functioning. This meant that some items had to be reverse-scored.

The Cronbach Alpha coefficient was calculated for this study (Lemke & Wiersma, 1976) as a measure of the internal consistency reliability of each of the scales (the sub-dimensions of the sense of coherence, hardiness scale and self-efficacy scales). Before this could be done, however, a decision had to be taken as to the direction in which the items were to be scaled and some items had to be reverse-scored.

4.3.2.3 Reliability analyses of questionnaires

The three measuring instruments for salutogenic functioning, namely: SOC, PVS and SES, were used in this research. Owing to the relatively small sample size ($N = 112$), it was decided to accept the construct validities of these instruments, rather than attempt new factor analytical analyses for the construct validities of the various sub-scales. The Cronbach alpha was used to determine the internal consistency reliability of the questionnaire used.

4.3.2.4 *T-test*

The *t*-test is a powerful statistical test because it simultaneously takes the central value, distribution widths and group sizes into consideration. The *t*-test has no restriction on the number of means (Howell, 1989).

A *t*-test was used to determine the significant differences between two groups. The *t*-test is the most commonly used method to evaluate the differences in means between two groups. Theoretically the *t*-test can be used even if the sample size is very small, as long as the variables are normally distributed within each group and the variation of scores in the two groups is reliably similar (Aron & Aron, 1997). The *t*-test was performed in this research to determine gender difference in salutogenic functioning. The *t*-test in the study was used to determine gender differences with respect to the different salutogenic constructs, sense of coherence, hardiness and self-efficacy.

4.3.2.5 *Analysis of variance*

The analysis of variance (ANOVA) is used when the research hypothesis incorporates two or more population means and it tests differences among the respective sample means (Williams, 1992). The analysis of variance examines the significant difference among the means of the population simultaneously (Kathori, 1985).

The aim of the statistical techniques for this study was to establish the difference between the biographical variables: gender, marital status, age, years of service, population group and qualifications and the salutogenetic scales. The hypothesis concerns the gender differences in salutogenic functioning when deployed.

4.3.2.6 *Level of statistical significance*

Conventionally, the levels 0,05 and 0,01 are used by most researchers as levels of significance for statistical tests performed. For the purposes of this research the significance level of 0,05 was considered to be sufficient.

4.3.2.7 *Effect size and power*

The effect size gives a measure of the magnitude of a result. Effect size is a measure of practical significance and has to be estimated from the samples if the populations as a whole are not observed. Cohen (1988) uses different measures of effect size, which can be derived from η^2 (Partial Eta Squared). Cohen (1988) uses the following levels:

$\eta^2 = 0,01$ (small effect size)

$\eta^2 = 0,059$ (medium effect size)

$\eta^2 = 0,138$ (large effect size).

Power is defined as $1 - \hat{\alpha}$, the probability of rejecting the null hypothesis when it is false. Type I error $= \hat{\alpha}$ is the probability of rejecting the null hypothesis when it is true. Type II error $= \hat{\beta}$ is the probability of failing to reject the null hypothesis when it is false.

The effect size and power were used to determine whether the sample size has an effect on the statistical results. The results may be statistically significant yet of little practical significance or results may be non-significant, but yet of a moderately large effect size (Kirk, 1996).

In the following section the formulation of hypotheses will be discussed.

4.4 FORMULATION OF HYPOTHESIS

In this research it is hypothesised that there are gender differences in salutogenic functioning in military deployment. Although specific hypotheses were not stated with regard to the differences between the other biographical variables, age, gender, qualifications, marital status, years of service, population group and salutogenic functioning, it were also explored.

4.5 CHAPTER SUMMARY

The objective of this chapter was to describe the empirical study carried out for this research. Firstly, the population and the sample were described. Thereafter, the biographical information and the three measuring instruments were discussed and their inclusion justified. This was followed by an account of the data gathering, which included the administration of the measuring instruments and statistical processing of the data. The chapter was concluded with the formulation of the hypothesis and a chapter summary.

In chapter 5, the results of the empirical study will be reported and interpreted.

CHAPTER 5 RESULTS

The objective of this chapter is to report as well as interpret the results of the empirical study and finally to integrate the literature and empirical findings.

Firstly, the biographical profile of the sample will be reported on, followed by the reliability of the salutogenic scales, the descriptive statistics, *t*-tests on differences between the gender groups, analysis of variance and effect size and power. Lastly, the results will be interpreted and integrated and a chapter summary will be given.

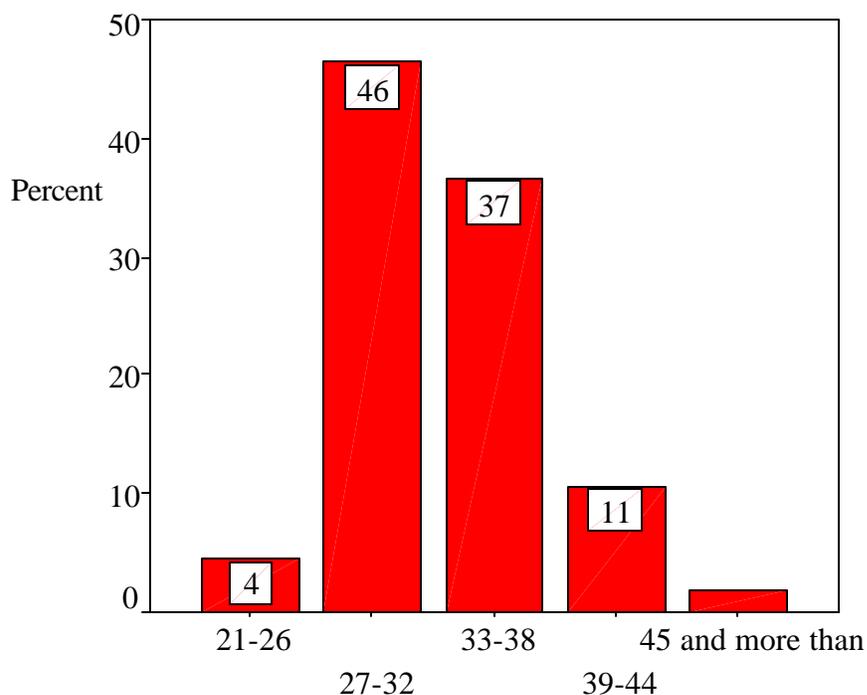
5.1 BIOGRAPHICAL PROFILE OF THE SAMPLE

The biographical information on the sample will be presented. This includes the following: age, qualifications, marital status, population group, years of service and gender.

5.1.1 Distribution of the sample according to age

The distribution of the sample according to the age of the respondents is presented in Figure 5.1.

Figure 5.1 Age of the respondents (N = 112)



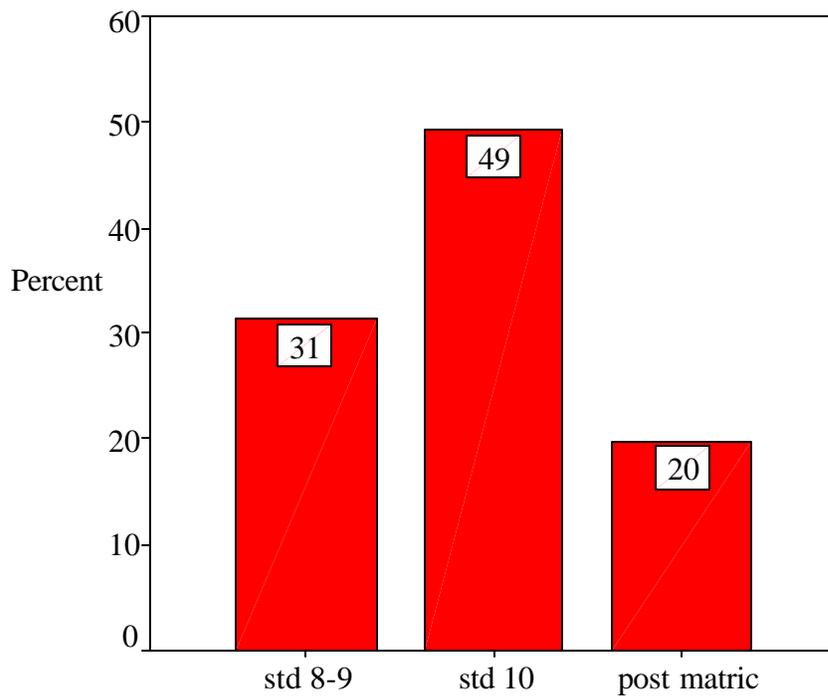
The data from figure 5.1 show that 46% of the respondents are between the ages of 27 and 32 years. 37% are between the ages of 33 and 38 years. 11% are between the ages of 39 and 44 years, 4% are between the ages of 21 and 26 years, and only 2% are 45 years and older.

The distribution of the data in figure 5.1 shows that a total of 83% of the respondents are between the ages of 27 and 38, and only 13% of the respondents are 39 years or older.

5.1.2 Distribution of the sample according to qualifications

The distribution of the sample according to the qualifications of the respondents is represented in Figure 5.2.

Figure 5.2 *Qualifications of the respondents (N = 112)*



The data from figure 5.2 show that 49% of the respondents obtained standard 10, and 31% have passed standards 8 or 9, whereas only 20% have a post-matriculation education.

5.1.3 Distribution of the sample according to population groups

The distribution of the sample according to the population groups of the respondents is represented in Figure 5.3.

Figure 5.3 *The population groups of the respondents (N = 112)*

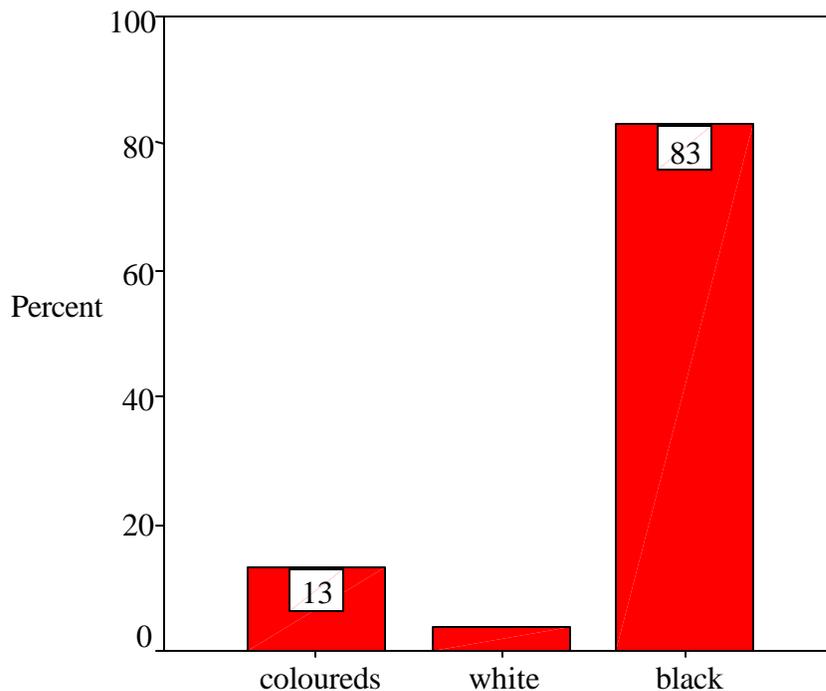


Figure 5.3 illustrates the distribution of the respondents population groups. The majority of the sample (83%) comes from the black population group, while (13%) comes from the coloured population group and only (4%) of the respondents come from the white population group.

5.1.4 Distribution of the sample according to marital status

The distribution of the sample according to marital status of the respondents is represented in Table 5.1.

Table 5.1 *Marital status of respondents (N=112)*

Marital status	Frequency	Percentage
Unmarried	35	31,2
Married	64	57,1
Divorced	12	11,7
Total	112	100

According to the distribution of the data in table 5.1, 31,2% of the respondents are single, while 57,1% of the respondents are married and 11,7% are divorced. Table 5.1 indicates that more than two-thirds of the total sample are married.

5.1.5 Distribution of the sample according to years of service

The distribution of the sample according to years of service of the respondents is represented in Table 5.2.

Table 5.2 *Years of service of the respondents (N = 112)*

Years of service	Frequency	Percentage
2-5	9	8,0
6-10	63	56,3
10 and more	40	35,7
Total	112	100

The distribution of the data from table 5.2 shows that 56,3% of the respondents have worked for the SANDF for six to ten years, 35,7% have served ten or more years and 8,0% have served in the SANDF for between two and five years. A total of 92% of the respondents have worked for six years or longer.

5.1.6 Distribution of the sample according to gender

The distribution of the sample according to the gender of the respondents is represented in Table 5.3.

Table 5.3 *Gender of the respondents (N = 112)*

Gender	Frequency	Percentage
Males	69	61,6
Females	43	38,4
Total	112	100

The distribution of the data in table 5.3 shows the distribution of the respondents according to gender. 61,6% of the respondents are males and 38,4% are females. This indicates that there are 23% less females than males in the sample.

5.2 RELIABILITY OF THE SALUTOGENIC SCALES

The reliability of the salutogenic scales will be reported according to the single factor loadings and Cronbach Alphas of sense of coherence, hardiness and self-efficacy followed by a summary of the Cronbach Alpha values of the scales.

5.2.1 Single factor loadings and Cronbach Alphas for SOC

Table 5.4 presents the single factor loadings and Cronbach Alphas for sense of coherence.

Table 5.4 *Single factor loadings and Cronbach Alphas for SOC*

Comprehensibility		Manageability		Meaningfulness	
Item	Factor loading	Item	Factor loading	Item	Factor loading
1	0,51	2	0,62	4	0,76
3	0,60	6	0,56	7	0,53
5	0,47	9	0,75	8	0,67
10	0,54	13	0,69	11	0,75
12	0,53	18	0,61	14	0,16
15	0,59	20	0,49	16	0,58
17	0,57	23	0,60	22	0,13
19	0,11	25	0,71	28	0,17
21	0,56	27	0,52		
24	0,67	29	0,12		
26	0,12				
Cronbach Alpha = 0,60		Cronbach Alpha = 0,73		Cronbach Alpha = 0,75	

The following factors were rescaled to measure in a positive direction, items 19 and 26 for comprehensibility, item 29 for manageability and items 14, 22, and 28 for meaningfulness.

5.2.2 Single factor loadings and Cronbach Alphas for the PVS

Table 5.5 presents the single factor loadings and Cronbach Alphas for the hardiness.

Table 5.5 *Single factor loadings and Cronbach Alphas for the PVS*

Commitment		Control		Challenge	
Item	Factor loading	Item	Factor loading	Item	Factor loading
1	0,19	3	0,01	2	0,41
8	0,34	4	0,18	6	0,13
11	0,40	5	0,06	9	0,05
14	0,51	7	0,36	12	0,07
17	0,04	10	0,08	15	0,32
20	0,19	13	0,35	18	0,02
23	0,22	16	0,14	21	0,16
26	0,08	19	0,15	24	0,28
29	0,14	22	0,05	27	0,10
32	0,04	25	0,20	30	0,13
38	0,02	28	0,39	33	0,40
39	0,39	31	0,33	36	0,12
44	0,41	34	0,50	37	0,06
47	0,13	35	0,16	40	0,26
50	0,08	42	0,24	41	0,19
		45	0,19	43	0,25
		48	0,21	46	0,06
				49	0,41
Cronbach Alpha = 0,53		Cronbach Alpha = 0,50		Cronbach Alpha = 0,51	

The following factors were rescaled to measure in a positive direction. For commitment, items 1,17,20,26,29,32,38,47 and 50 were rescaled. For control, items 3,4,5,10,16,19,22,25 and 35 were rescaled and for challenge, items 6,9,12,18,27,30,36,37,41 and 46 were rescaled.

5.2.3 Single factor loadings and Cronbach Alphas for the SES

Table 5.6 presents the single factor loadings and Cronbach Alphas for self-efficacy.

Table 5.6 *Single factor loadings and Cronbach Alphas for SES*

Self-efficacy	
Item	Factor loading
1	0,22
2	0,04
3	0,54
4	0,55
5	0,56
6	0,29
7	0,42
8	0,36
9	0,08
10	0,04
11	0,27
12	0,13
13	0,34
14	0,29
15	0,41
16	0,30
17	0,53
18	0,63
19	0,71
20	0,62
21	0,52
22	0,43
23	0,48
24	0,42
25	0,47
26	0,42
27	0,69
Cronbach Alpha = 0,80	

Items 2,9 and 10 were rescaled to measure in a positive direction.

5.2.4 Summary of Cronbach Alpha values

Table 5.7 presents a summary of the Cronbach Alpha values of the salutogenic scales.

Table 5.7 *Reliability of the scales*

SALUTOGENIC CONSTRUCTS	CRONBACH ALPHA	RELIABILITY
SOC: Comprehensibility	0,60	Moderate
SOC: Manageability	0,73	Moderate
SOC: Meaningfulness	0,75	High
PVS: Commitment	0,53	Moderate
PVS: Control	0,50	Moderate
PVS: Challenge	0,51	Moderate
Self-efficacy	0,80	High

When the reliability (Cronbach alpha value) of the questionnaire is 0,75 or above, it is regarded as high. According to the Cronbach alpha value in Table 5.7, the sense of coherence sub-scale “meaningfulness” and the self-efficacy scale show high internal consistency reliability. The sense of coherence sub-scales “comprehensibility”, “manageability” and the hardiness sub-scales “commitment”, “control” and “challenge” indicate moderate internal consistency reliability.

The low to moderate reliability obtained in the sub-scales of salutogenic constructs could be due to various factors such as possible cultural biasness of the items or limited language proficiency of the respondents. The Cronbach alpha values and the possibility of a measurement error due to these in reliabilities could also affect validity results. Therefore, results will be interpreted with caution and generalizations will be limited.

5.3 DESCRIPTIVE STATISTICS

The descriptive statistics will be reported according to the mean scores of gender relating to the salutogenic constructs.

5.3.1 Mean scores of gender relating to the salutogenic constructs

The descriptive statistics for gender relating to the salutogenic constructs will be presented in Table 5.8.

Table 5.8 *Mean scores of gender relating to the salutogenic constructs*

Salutogenic constructs	Gender	N	Mean	Std deviation
SOC	Female	43	66,40	19,37
	Male	69	61,18	19,05
PVS	Female	43	85,30	14,19
	Male	69	91,47	13,83
SES	Female	43	57,76	12,42
	Male	69	52,55	11,61

* Mean on a scale of 0-100

Table 5.8 indicates that the means of the female and male respondents in the sample differ in terms of the salutogenic constructs. It appears from Table 5.8 that the means of females (66,40 and 57,76) in the sense of coherence and self-efficacy constructs are higher than those of males (61,18 and 52,55). The mean of males (91,47) in the hardiness construct is higher than that of females (85,30).

Table 5.8 indicates that on average females did better than males in the sense of coherence and self-efficacy constructs. This higher mean of females in the sense of coherence and self-efficacy constructs may be an indication that the females in the sample believe that they understand the problem and see it as a challenge, which enhances their sense of comprehensibility, meaningfulness and manageability. On the other hand, they judge themselves efficacious in dealing with their emotional task

demands and are, in consequence, more likely to continue with self-regulation than males are.

The lower means of males in sense of coherence and self-efficacy constructs could be an indication that the males in the sample believe that the appropriate resources are not available to deal successfully with the challenges. This may indicate that males do not have appropriate coping strategies and a solid base for the maintenance and improvement of health and well-being.

Table 5.8 indicates that on average males did better than females in the hardiness construct. This higher mean of males in the hardiness construct may be an indication that males have feelings of being adequate to meet the demands posed by military deployment operations and they do not feel victimised by events or feel that they are being treated unfairly as compared to females.

5.4 T-TEST FOR THE DIFFERENCES BETWEEN THE GENDER GROUPS

The *t*-test for the differences between the gender groups and the three salutogenic constructs will be presented in Table 5.9.

Table 5.9 *T-test for equality of means with equal variances assumed*

	<i>F</i>	<i>p</i> -value for Levene's pre-test	<i>t</i>	<i>df</i>	<i>p</i> -value	Mean difference
Comprehensibility Equal variances Assumed	0,343	0,559	0,210	110	0,83	0,27
Meaningfulness Equal variances Assumed	3,207	0,76	2,580	110	0,02*	2,88
Manageability Equal variances Assumed	0,045	0,832	1,640	110	0,10	2,14

Control Equal variance Assumed	3,630	0,059	1,210	110	0,21	1,10
Commitment Equal variances Assumed	2,135	0,147	6,661	110	0,00*	5,91
Challenge Equal variances Assumed	0,280	0,597	-0,346	110	0,02*	-2,17
Self-efficacy Equal variances Assumed	2,361	0,127	0,331	110	0,75	0,39

* p -value < 0,05

Table 5.9 above shows that males and females differ significantly ($p=0,02$) in terms of the sense of coherence sub-scale “meaningfulness”. Statistical significance was also found between males and females in terms of the hardiness sub-scale of “commitment” ($p=0,00$) and “challenge” ($p=0,02$).

Males and females differ with regard to the sense of coherence sub-scale “meaningfulness”. According to SOC, “meaningfulness” means that life is emotionally worthwhile and sensible and based on the result males and females differ with regards meaningfulness. Although the results only indicate difference and not direction the following interpretations, based on the literature findings in chapter 3, might be that during military deployment males feel that the deployment operations are emotionally worthwhile and sensible (English, 2000). The literature integration also indicated that most females lack commitment when deployed and they become doubtful about their participation in military deployment operations. During military deployment males are motivated to engage in difficult life-threatening situations (Bolton et al., 2002).

Males and females differ with regard to the hardiness sub-scale “commitment”. Commitment increases the individual persons sense of purpose that can carry a person through turbulent life events. Based on the literature findings in the theoretical integration in chapter 3, one interpretation of the statistical significant

difference between males and females found in the hardiness sub-scale “commitment” might be that males are committed when faced with the challenges during military deployment operations (Zappert & Weinstein, 1985). Most females experience tension when deployed. Most males are motivated and feel confident when deployed (Burnam et al.,1992).

Males and females differ with regard to the hardiness sub-scale “challenge”. Challenge refers to the believe of individuals that change, rather than stability, is the normative mode of life. Based on the literature findings in the theoretical integration in chapter 3, one interpretation of the statistical significant difference between males and females found in the hardiness sub-scale “challenge” may imply that when a difficult situation is perceived as meaningful, most males choose to invest emotional energy in dealing with military deployment missions; they see the difficult situations as a challenge in which it is worth investing energy and commitment, rather than as a burden (Bartone et al., 1996).

5.5 ANALYSIS OF VARIANCE

The analysis of variance will be presented in Table 5.10, which compares the biographical aspects and the salutogenic constructs.

Table 5.10 ANOVA results. Comparison of the salutogenic constructs based on biographical profile aspects

Source	Dependent variable	Type III Sum of squares	df	Mean square	F	Sig.
AGE	Comprehensive	1,69	1	1,69	0,04	0,85
	Meaningfulness	27,79	1	27,79	0,86	0,36
	Manageability	18,72	1	18,72	0,41	0,53
	Control	5,30	1	5,30	0,25	0,62
	Commitment	4,19	1	4,19	0,20	0,66
	Challenge	6,20	1	6,20	0,06	0,90
	Self-efficacy	73,52	1	73,52	2,05	0,16
QUAL	Comprehensive	23,62	1	23,62	0,54	0,47
	Meaningfulness	15,67	1	15,67	0,06	0,94

	Manageability	31,02	1	31,02	0,67	0,41
	Control	10,51	1	10,51	0,49	0,49
	Commitment	77,34	1	77,34	3,72	0,06
	Challenge	29,04	1	29,04	1,32	0,25
	Self-efficacy	5,65	1	5,65	0,16	0,69
SERVICE	Comprehensive	197,05	1	197,05	4,46	0,04*
	Meaningfulness	88,36	1	88,36	2,73	0,10
	Manageability	42,46	1	42,46	0,92	0,34
	Control	12,42	1	12,42	0,58	0,45
	Commitment	7,88	1	7,88	0,38	0,54
	Challenge	6,28	1	6,28	0,03	0,87
	Self-efficacy	86,44	1	86,44	2,42	0,12
MARITAL	Comprehensive	2,39	1	2,39	0,05	0,87
	Meaningfulness	53,79	1	53,79	1,66	0,20
	Manageability	13,89	1	13,89	0,30	0,59
	Control	16,66	1	16,66	0,78	0,38
	Commitment	1,13	1	1,13	0,05	0,82
	Challenge	57,14	1	57,14	2,60	0,11
	Self-efficacy	9,11	1	9,11	0,03	0,87
POP	Comprehensive	75,27	1	75,27	1,71	0,19
	Meaningfulness	30,54	1	30,54	0,94	0,33
	Manageability	2,51	1	2,51	,000	0,98
	Control	117,10	1	117,10	5,47	0,02*
	Commitment	32,21	1	32,21	1,55	0,22
	Challenge	101,86	1	101,86	4,63	0,03*
	Self-efficacy	69,57	1	69,57	1,94	0,17
GENDER	Comprehensive	5,47	1	5,47	0,12	0,73
	Meaningfulness	269,92	1	269,92	8,34	0,01*
	Manageability	112,86	1	112,86	2,45	0,12
	Control	26,00	1	26,00	1,22	0,27
	Commitment	801,87	1	801,87	38,57	0,00*
	Challenge	112,99	1	112,99	5,14	0,03*
	Self-efficacy	9,10	1	9,10	,003	0,96

* p -value < 0,05

Table 5.10 shows that statistical significance was found between the biographical profile aspect, “years of service” and the sense of coherence sub-scale “comprehensibility” ($p=0,04$). There was statistical significance found between the different “population groups” as biographical profile aspect and the hardiness sub-scales “control” ($p=0,02$) and “challenge” ($p=0,03$). There was also a significant difference between the “gender” and sense of coherence sub-scale

“meaningfulness” ($p=0,01$), and the hardiness sub-scales “commitment” ($p=0,00$) and “challenge” ($p=0,03$).

Groups with different years of service differ with regard to the sense of coherence sub-scale “comprehensive”. According to SOC, “comprehensive” means that the individual finds certain logic in the sequence of events, that there is a degree of consistency from one experience to another, as a general rule, unexplainable events do not occur (Sullivan, 1993). The more employees deploy, the better their comprehensibility and ability to find the work environment to be meaningful (Phelphs and Farr, 1996). It is assumed from the statistically significant difference found in the biographical profile aspect “years of service” and the sense of coherence sub-scale “comprehensive” that the more employees acquire experience in military deployment operations the more they become confident and feel motivated about being involved in the work-related activities.

Population groups differ with regard to the hardiness sub-scale “control”. Different groups differ with regards to their believe that they can influence events in life, with an emphasis on personal responsibility. Control refers to the tendency to believe and act as if one can influence the course of events. People who are in control have a feeling of responsibility for what is happening around them and they see events as a consequence of their own actions (Kobasa, 1979). Based on the literature findings the statistically significant difference found in the biographical profile aspect “population groups” and hardiness sub-scales “control” that the different population groups do differ when faced with challenges posed by military deployment operations. Some of the population groups are able to resist and gain control over the prevailing situation during military deployment operations and some are not able to do it (Bolton et al., 2002).

It was also found that population groups differ with regard to the hardiness sub-scale “challenge”. Challenge refers to the believe that change, rather than stability, is the normative mode of life and the anticipation of changes as interesting incentives to growth rather than threats to security. Challenge mitigates the stressfulness of events on the perceptual side by colouring events as stimulating rather than

threatening, specifically because they are changes requiring readjustment (Kobasa et al., 1982). Different population groups differ with how they perceive challenges and changes as a necessary and integral part of life. The literature findings indicate that some of the population groups may become resilient, self-reliant and committed when faced with challenges when deployed and other may not.

Males and females differ with regard to sense of coherence sub-scale “meaningfulness”. Meaningfulness refers to the degree of commitment one has to various life domains. A high score on meaningfulness includes the feeling that life makes sense emotionally. Meaningfulness is the emotional part to comprehensibility (Antonovsky, 1984). Males have a sense of meaningfulness and are willing to take up the challenge, they are determined to seek meaning in stressful situations and they will do their best to carry out any task with dignity (Sutker et al., 1995). Based on the literature findings in the theoretical integration in chapter 3, one interpretation of the statistical significance found in the biographical profile aspect “gender” may imply that males have a sense of meaningfulness and believe that they have resources at their disposal which are adequate to deal with life demands placed upon them as compared to females when deployed (English, 2000).

Males and females differ with regard to hardiness sub-scales “commitment”. Commitment indicates a sense of purpose that allows the individuals to identify with and find meaning in their environment. Committed people will do their best to overcome the challenges faced with. Based on the literature findings in the theoretical integration in chapter 3, one interpretation of the statistical significant difference found in the biographical profile aspect “gender” might be that during military deployed operations males show a sense of commitment and direction and are active in their work and females lack a sense of commitment and see challenges as a threat during military deployment operations (Zappert & Weinstein, 1985).

Males and females differ with regard to hardiness sub-scale “challenge”. Challenge involves seeing change to be the norm, and regard it as an important challenge to development. Based on the literature findings in the theoretical integration in chapter 3, one interpretation of the statistical significance found in the biographical profile

aspect “gender” may imply that males involve themselves wholeheartedly in every activity they perform, be it work, family or social situations (Holden, 2002).

5.6 EFFECT SIZE AND POWER

The effect size and power will be presented for the three salutogenic constructs, sense of coherence, hardiness and self-efficacy. The effect size will confirm the practical significance of the values which were found to be statistically significant in the statistical analysis.

Table 5.11 presents the effect size and power for sense of coherence sub-scales.

Table 5.11 *Effect size, partial Eta squared and observed power for sense of coherence*

Sense of coherence sub-scales	Partial Eta squared	Observed power
Comprehensibility	0,000*	0,055
Manageability	0,024**	1,000
Meaningfulness	0,057**	0,725

* small effect size ($\eta^2=0,01$)

** medium effect size ($\eta^2=0,059$)

*** large effect size ($\eta^2=0,138$)

Table 5.11 indicates that the sense of coherence sub-scale “comprehensibility” has a small effect size at the value of 0,000. The sense of coherence sub-scale “manageability” shows a medium effect size at the value of 0,024 and “meaningfulness”, a medium effect size at the value of 0,057.

The effect size indicates that the sample size has no effect on the statistical test for “comprehensibility” at the value of 0,000. “Meaningfulness” at the value of 0,057 and “manageability” at the value of 0,024 indicate that the sample size has a medium effect on the results of the statistical test.

The effect of the sense of coherence sub-scale “comprehensibility” tends to be practically non-significant, since the estimated effect size is small. The sense of coherence sub-scales “manageability” and “meaningfulness” tend to be practically significant, since the estimated effect size is medium. This confirms that the statistical significance of “meaningfulness” and “manageability” as sub-scales are also practically significant.

Table 5.12 presents the effect size and power for the hardiness sub-scales.

Table 5.12 *Effect size, partial Eta squared and observed power for hardiness*

Hardiness sub-scales	Partial Eta squared	Observed power
Challenge	0,480***	0,643
Commitment	0,287***	1,000
Control	0,013**	0,224

- * small effect size ($\eta^2=0,01$)
 - ** medium effect size ($\eta^2=0,059$)
 - *** large effect size ($\eta^2=0,138$)
-

Table 5.12 indicates that the hardiness sub-scale “challenge” has a large effect size at the value of 0,480 and the sub-scale “commitment” indicates a large effect size at the value of 0,287. The hardiness sub-scale “control” reflects a medium effect size at the value of 0,013.

The effect size indicates that the sample size has a large effect on the statistical test for “commitment” at the value of 0,287 and “challenge” at the value of 0,480. “Control” at the value of 0,013 indicates that the sample size has a medium effect on the statistical test.

The effect of the hardiness sub-scale “control” tends to be practically significant, since the estimated effect size is medium. The effect of the hardiness sub-scales “challenge” and “commitment” tend to be practically significant and of practical importance, since the estimated effect size is large. This confirms that the statistical

significance of the sub-scales “challenge” and “commitment” are also practically significant.

Table 5.13 presents the effect size and power for the self-efficacy scale.

Table 5.13 *Effect size, partial Eta squared and observed power for self-efficacy*

Self-efficacy scale	Partial Eta squared	Observed power
Self-efficacy	0,001*	0,062

- * small effect size ($\eta^2=0,01$)
- ** medium effect size ($\eta^2=0,059$)
- *** large effect size ($\eta^2=0,138$)

Table 5.13 indicates that self-efficacy has a small effect size at the value of 0,001.

The effect size indicates that the sample size has a small effect on the statistical test at the value of 0,001.

The effect of self-efficacy tends to be practically non-significant, since the estimated effect size is small.

This section presented the effect size, and the practical significance of the salutogenic constructs, sense of coherence, hardiness and self-efficacy.

5.7 INTEGRATION

The sample in the study consisted of males and females from the 7 SAI Phalaborwa who were deployed in Kwa-Zulu Natal. 98% of the sample were younger than 45, and 69% have passed standard 10 or do have a post-matriculation qualification. Most of the respondents (83%) were black, 13% coloured and 4% white. More than the half (57%) of the respondents were married, 31,2% unmarried and 11,7% divorced. 92% of the respondents have worked for the SANDF for more than six years. 61,6% of the respondents were males and 38,4% females.

All the salutogenic sub-scales were found to be moderately and highly reliable.

The descriptive statistics on the mean scores of gender relating to the salutogenic constructs indicate that the mean of females is higher than that of males on the sense of coherence and self-efficacy scales. Males' mean was higher than that of females in the hardiness construct. The higher mean of females in the sense of coherence and self-efficacy scale may be an indication that females are able to meet the challenges and demands posed by military deployment operations. The lower mean of males on the sense of coherence and self-efficacy scale may be an indication that males are threatened and feel challenged by military deployment operations. Literature confirms that women are more likely than men to cope by venting their emotions during military deployment by using the social support (Jaffee, 2001).

The higher mean of males in the hardiness scale may be an indication that males have the power to influence the environment around them during military deployment and the lower mean of females may be an indication that females have a low deployment resilience. According to Bartone (1996) males have a greater sense of control and believe that they have the skills to cope with demanding situations when deployed. Literature confirms that females experience tension when faced with challenges posed by military deployment operations (Burke et al., 1993).

The *t*-test and analysis of variance results indicated that males and females differ significantly with regard to "meaningfulness" sub-scale of sense of coherence and "commitment" and "challenge" sub-scales of hardiness.

Males and females differ statistically significant with regard to sense of coherence sub-scale "meaningfulness". Meaningfulness refers to the importance for the individual of being involved in the process of shaping not only his/her destiny, but also his/her daily experience. Based on the literature findings males believe that they have the skills to cope with challenges posed by military deployment operations. The literature confirm that males have a sense of comprehensibility and believe that events can be coped with and challenges can be met (English, 2000).

Males and females differ with regard to the hardiness sub-scale “commitment”. Commitment refers to the ability to believe in the truth, importance, and interest value of who one is and what one is doing. The commitment quality can be seen as a tendency to involve oneself in whatever one is doing or what the individual is encountering, instead of experiencing alienation from it (Kobasa, 1982). Based on the literature findings the statistically significant difference found between gender groups that males involve themselves in military deployment operations and they become committed, motivated and confident in their own capabilities. The literature findings confirm that males have the resources to cope with challenges successfully and they understand deployment problems (Bartone et al., 1996).

A statistically significant difference was also found between males and females with regard to the hardiness sub-scale “challenge”. Challenge involves seeing change as a necessary and integral part of life. Hardy individuals feel positively about change, are catalysts in their environment and are well practiced in responding to the unexpected. They are stimulated by, rather than afraid of, the unknown for they are sufficiently aware of their own environment and where to turn to for needed resources (Kobasa, 1979). Based on the literature finding males are willing to accept challenges posed by military deployment and do their best to overcome the challenges. The literature findings confirm that males function salutogenically well during military deployment operations as compared to females (Van Breda, 1997).

It was also found in the analysis of variances that employees with different years of service differ with regard to sense of coherence sub-scale “comprehensibility”. Based on the literature finding the more employees deploy the more he/she becomes resilient towards the stressful situations, and the more experience an employee acquires in military deployment operations the more comprehensive he/she becomes in the work.

Population groups differ with regard to the hardiness sub-scale “control”. The control disposition is expressed as a proclivity to make the individual feel and act as if he/she is influential in the face of the varied contingencies of life, rather than being helpless (Kobasa, 1979). Based on the literature population groups with a sense of control have

the power to influence events when faced with difficult situations. It was also assumed that some population groups are not threatened by the military deployment operations and that they perceive military deployment operations as an opportunity for personal growth and development.

The null hypothesis that there are gender differences in salutogenic functioning in military deployment could not be rejected, as statistically significant gender differences were found in the sub-scale “meaningfulness” of the construct sense of coherence and in the sub-scales “challenge” and “commitment” of the construct hardiness.

5.8 CHAPTER SUMMARY

This chapter presented the reporting, interpretation and integration of the results. Firstly, the biographical profile of the sample was presented and this was followed by the presentation and interpretation of the descriptive statistics, item analysis, reliability of the measuring instruments, *t*-test, analysis of variance and effect size and power. Lastly, the results were interpreted and integrated.

In chapter 6, the conclusions, limitations and recommendations will be discussed.

CHAPTER 6 CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

The aim of this chapter is to formulate the conclusions in terms of the objectives of this research as outlined in chapter 1, to discuss the limitations of this research, and finally, to make recommendations with reference to the literature review, the empirical study and to the 7 South African Infantry of the SANDF on the basis of the findings of this research.

In the following section the conclusions will be discussed.

6.1 CONCLUSIONS

Conclusions will be drawn regarding the literature review, the empirical research and integration. The conclusions will be formulated in accordance with the objectives of the research as stipulated in 1.3.

6.1.1 Conclusions in terms of the objectives of the literature review

With reference to the literature objectives of this study, the following conclusions are drawn:

The first literature objective was to discuss salutogenic functioning and the salutogenic constructs. This was accomplished in chapter 2. The three chosen salutogenic constructs (sense of coherence, personal views survey and self-efficacy scale) focus broadly on a variety of general factors that promote movement towards health, irrespective of the specific disease being experienced by an individual (Antonovsky, 1984).

Sense of coherence is a coping mechanism which places the person on the healthy end of the ease/disease continuum (Antonovsky, 1987). According to Antonovsky (1979), the closer a person is to the healthy end of the continuum, the stronger he/she will be on sense of coherence. The stronger the sense of coherence, the healthier and more resilient to stress the individual will be.

Kobasa (1979) postulates that hardy persons see change as the norm, and regard it as an important challenge to development. They have a feeling of responsibility for what is happening around them and they see events as a consequence of their own actions. They tend to find their experiences interesting and meaningful, thus they transform stressful events into less stressful forms.

According to Bandura (1982), self-efficacy is concerned with how individuals judge their capabilities and how, through their self-perception of efficacy, they influence their motivation and behaviour. The basic phenomenon being addressed relies on the individuals' sense of personal efficacy to produce and regulate events in their lives.

Individuals with higher levels of self-efficacy tend to approach challenging situations in an active and persistent style, whereas those with lower levels of self-efficacy are less active and tend to avoid such situations (Bandura, 1982).

The second literature objective was to discuss gender differences in military deployment. This was accomplished in chapter 3. The literature indicates that men and women experience a number of work-related and health stressors during military deployment compared to when they are not deployed (Sutker et al., 1995). During military deployment operations males and females are affected by stressors caused by being away from home and family. Males are motivated and feel committed when they are faced with challenges and a demanding environment. Females feel powerless and threatened by the challenges posed by military deployment operations (Soeters, 2001).

The literature findings indicate that males function salutogenically well during military deployment compared to females, who lack a sense of confidence. Males have a positive attitude toward military operations, they become involved in challenging and demanding assignments (Bolton et al., 2002).

6.1.2 Conclusions in terms of the empirical objectives

With reference to the empirical objectives of this study, the following conclusions are drawn:

The first objective of the empirical study was to determine whether gender differences in salutogenic functioning in military deployment exist.

In general gender differences were found between the mean scores of males and females. The females were better than males in sense of coherence and self-efficacy and males scored better on hardiness than females.

The results of the study indicate that there are gender differences with regard to the salutogenic construct sense of coherence sub-scale “meaningfulness” and on the sub-scales “commitment” and “challenge” of the hardiness construct.

Statistical significance were also found between the biographical profile aspect “years of service” and the salutogenic construct sense of coherence sub-scale “comprehensibility”, as well as between the population groups and the hardiness sub-scales “control” and “challenge”.

6.1.3 Integration

The empirical findings indicate that males and females differ significantly with regard to the salutogenic construct sense of coherence sub-scale “meaningfulness” and the hardiness sub-scales “commitment” and “challenge”. Literature findings confirm differences between males and females. It indicate that males function salutogenically well as compared with females in military deployment with regard to the sub-scale “meaningfulness” of sense of coherence and the sub-scales “commitment” and “challenge” of hardiness. Literature confirms that males are able to deal with the challenges and the demands posed by military deployment operations. Males feel committed when engaged in military deployment operations and females feel threatened by challenges posed during military deployment

operations (Bolton et al., 2002). Most females experience conflicting demands during military deployment because they are females in an environment dominated by males (Burke, Brief & George, 1993).

In the following section the limitations of the research will be discussed.

6.2 LIMITATIONS OF THE RESEARCH

The limitations that were experienced in this study will be discussed in terms of the literature review and empirical study.

6.2.1 Limitations in terms of the literature review

Regarding the limitations of the literature review, the availability of recent published literature on gender differences in military deployment in South Africa is limited. This resulted in the use of older sources available on this topic.

6.2.2 Limitations in terms of the empirical study

The use of the three instruments measuring salutogenic functioning and the biographical questionnaire evoked a general reaction from the respondents that the completion of the instruments was time-consuming, which could have resulted in respondents completing some questions inattentively.

This study focused on males and females who were deployed in South Africa. The possibility is there that males and females that were deployed in the Democratic Republic of Congo and Burundi and who are from a different socioeconomic environment would adjust differently when deployed from those targeted in the current study.

A representative sample of the population in terms of gender, and population groups of soldiers who deploy would have been better in the overall empirical study. The number of participants from the coloured and white population groups was quite low

in this study and the inclusion of more females (especially white) could have added value to the study.

Limitations with regard to the statistical analysis are that the descriptive statistics (means) for the sub-scales of sense of coherence, hardiness and self-efficacy were not included, which could have added value to the interpretations. The *t*-tests only tested for the differences (between gender groups) and not for the direction of differences (males and females), which could also have added value to the interpretations.

Reliability of the scales indicates low reliability because of cross-cultural testing and language differences that can be addressed in follow up research.

The last objective was to formulate recommendations in terms of future research with reference to salutogenic functioning and gender differences in military deployment. This will be done in the following section.

6.3 RECOMMENDATIONS

The recommendations are discussed with reference to the literature review, empirical study and the organisation (7 SAI).

6.3.1 Recommendations pertaining to the literature review

The following recommendations pertaining to the literature review have been formulated.

- It is suggested that the same study be conducted with the focus on gender differences, marital status, age and race, and how these affect the military member's family when deployed.

- The inclusion of other salutogenic constructs (potency, locus of control and learned resourcefulness) and other positive psychology constructs would have added value to the study.

6.3.2 Recommendations pertaining to the empirical objectives

The following recommendations on the empirical objectives have been formulated:

- It is recommended that for future research, a more representative sample of the population with regard to all members deploying be used so that the results could be generalised to the overall South African National Defence Force members who deploy.
- Future research is needed to investigate the impact of deployment on the family. Such samples should include parents and children and in-depth interviews would be useful in getting more information from deploying members and their families.

6.3.3 Recommendations pertaining to the organisation (7 SAI)

The following recommendations are made on the basis of the findings:

- The 7 South African Infantry unit should provide communication facilities for all deployed soldiers. Communication facilities are the most important way of enhancing the resilience of soldiers in deployment.
- Adequate time should be provided to prepare deploying soldiers and their families prior to deployment. According to Joy (1996), soldiers who received debriefing prior to the deployment experience military deployments as less stressful.
- The 7 SAI should be aware of and take care of deployed soldiers and the differences between males and females to promote the psychological wellbeing of soldiers during deployment.

- Salutogenic functioning courses should be offered to soldiers who deploy. Implementing an effective salutogenic functioning programme requires conscious and sustained effort and commitment from the top structure of the 7 SAI. The management of 7 SAI needs to buy into the process, evaluate the levels of stress in the organisation, inspire the workforce and mobilise resources to maintain a health-enhancing working environment that encourages and stimulates productivity. This can be achieved by offering programmes to deal with stress and coping with stressful situations and teach soldiers how to function salutogenically well when deployed.

The second empirical objective, which is to formulate recommendations in terms of further research, has been achieved.

6.4 CHAPTER SUMMARY

This chapter presented the conclusions and limitations of the literature review and the empirical study. The recommendations were presented with reference to the literature review, the empirical study and the organisational aspects.

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The assumption is that males in the study perceive difficult situation as a challenge to invest energy.

The findings from the empirical study are that there are gender differences in salutogenic functioning in military deployment. The findings in the current study indicate that females are functioning salutogenically well in military deployment as compared with their males counterparts in terms of the salutogenic constructs of self-efficacy and sense of coherence. Females scored significantly higher on the salutogenic constructs of sense of coherence and self-efficacy.

The objective of the current study was to determine whether there are gender differences in salutogenic functioning in military deployment. The study conducted by Bartone et al. (1996) in Operation Restore Hope Somalia in 1993 on gender

differences in military deployment found that there are gender differences in salutogenic functioning. Similarly, Long, Kahn and Schutz (1992) reported finding that there are gender differences between deployed male and female military members in terms of their salutogenic functioning.

Burnam, Meredith, Sherbourne, Valdez and Vernez (1992), in their study on stress in military operation in Operation Uphold Democracy Haiti in 1994, reported that men and women who are deployed under the same conditions differ in their salutogenic functioning during military deployment.

In contrast to the empirical findings Burke, Brief and George (1993), in their study on gender differences in military personnel, reported that most women had problems with salutogenic functioning during military deployment. Similarly, Sutker et al. (1995), in their study on gender differences in the military environment, found that most women are faced with a greater number of both work and health stresses than their males counterparts during military deployment.

Zappert and Weinstein (1985), in their study on women in military deployment, reported that crises or persistent stress lead to breakdowns in more women, whereas men are more likely to deal with the situation. Knott and Rice (1996), in their study on gender in military deployment, found that males function salutogenically well compared with their female counterparts.

A study on military deployment conducted by Alridge, Sturdivant, Smith and Lago (1997), at the USA Department of Defence (1993) found that the more experience a soldier has of military deployment, the more his or her coping ability increases and deployment stress decreases. This implies that the more years of service an employee has in the organisation, the more experienced he/she becomes. Experienced employees are more in control, more committed and hardier than those who have fewer years of services in an organisation.

