COPING RESOURCES AND SENSE OF COHERENCE OF MALE POLICE OFFICERS IN THE SOUTH AFRICAN POLICE SERVICES

BY

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Submitted in partial fulfilment of the degree of

MAGISTER ARTIUM IN CLINICAL PSYCHOLOGY

In the

Faculty of Health Sciences at the University of Port Elizabeth

January 2004

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ACKNOWLEDGEMENTS

I would like to express my sincere appreciation and thanks to each of the following:

Paddy Cloete, my supervisor, for her guidance and encouragement throughout the process of this research. Her assistance went beyond the call of duty as she supervised this project with more time and care than I could have expected.

Dr Di Elkonin, my co-supervisor, for agreeing to supervise me and for lending her experience and expertise to this research.

Tracy Geyer for her assistance in the data analysis procedures.

The South African Police Services (SAPS) in the Port Elizabeth area for allowing me to conduct this research study, and for giving me access to helpful information.

The Kind Hearts Organization for financial assistance, trusting that I will utilize my skills in the future to enhance quality of life for those in my community. In particular, I would like to thank Mr. Esmaali, the president of the Kind Hearts, as well as my friend Ayman Abu Rahma, for liaising between myself and the Kind Hearts.

My friends and colleagues, especially Jacqui Makowem, for being my family away from home.

My best friend in Israel, Tamer Kayal for his love and support to me along the way.

Lastly, all my loving sisters and brothers for being what they are. Particularly I am grateful to both, Abeer and Areej whose patience and generosity made it possible for me to study.
I would like to dedicate this thesis to my loving family. My time away from home was longer than they expected, but their steadfastness and encouragement were more than I ever expected. For this I will always be grateful.

For my father

And for you mother…
TABLE OF CONTENTS

Acknowledgments
Table of Contents
Appendices
List of Tables
List of Diagrams
Summary

Chapter 1: Introduction and Problem Statement

1.1. Chapter Preview 1
1.2. General Orientation to the Study 1
1.3. Conceptualisation of the Constructs 2
   1.3.1. Stress 2
   1.3.2. The Salutogenic Approach 3
   1.3.3. Coping 3
   1.3.4. Coping Resources 5
   1.3.5. Sense of Coherence 6
1.4. Problem Statement and Rationale 7
1.5. Primary Aim and Objectives of the Study 9
1.6. Chapter Orientation 9
Chapter 2: Stress, Coping and Sense of Coherence

2.1. Chapter Preview

2.2. The Concept of Stress

   2.2.1. Introduction

   2.2.2. Approaches to Stress
      
         2.2.2.1. The Stimulus Based Approach
         2.2.2.2. The Response Based Approach
         2.2.2.3. The Psychological Approach

2.3. The Salutogenic Paradigm

   2.3.1. Introduction

   2.3.2. The Pathogenic Paradigm

   2.3.3. The Salutogenic Paradigm

2.4. Sense of Coherence

   2.4.1. Introduction

   2.4.2. Description of the Sense of Coherence Construct and its Components

   2.4.3. Development of the Sense of Coherence (SOC)
      
         2.4.3.1. Infancy and Childhood
         2.4.3.2. Adolescence
         2.4.3.3. Adulthood

   2.4.4. Dynamics of the SOC

   2.4.5. The SOC and Coping
2.4.6. Research on the SOC

2.5. The Concept of Coping and Coping Resources

2.5.1. Introduction

2.5.2. Coping and Models of Coping

2.5.2.1. Lazarus and Folkman’s Model of Coping

2.5.2.2. Antonovsky’s Model of Coping

2.5.3. Coping Resources and Models of Coping Resources

2.5.3.1. Introduction

2.5.3.2. Hammer and Marting’s (1988) Model of Coping Resources

2.5.3.3. Lazarus and Folkman’s (1984) Model of Coping Resources

2.5.3.4. Antonovsky’s (1979) Model of Coping Resources

2.5.4. Research on Coping Resources

2.6. Research on the Relationship between the SOC and Coping Resources

2.7. Conclusion

Chapter 3: General Well-being, Stress and Coping of Police Officers in the SAPS

3.1. Chapter Preview

3.2. Policing as an Occupation

3.2.1. Introduction
3.2.2. Nature of Police Work 53
3.2.3. Sources of Stress in Police Work 55
3.2.4. Stress Reactions, Symptoms and Coping Strategies among Police Officers 58

3.3. Stress and Coping in the South African Police Services (SAPS) 62
   3.3.1. Introduction 63
   3.3.2. Historical Background of the Police Institution in South Africa 66
   3.3.3. Occupational Stress among Police Officers in the SAPS 70
   3.3.4. Effects of Stress on Police Officers of the SAPS 70
      3.3.4.1. Post Traumatic Stress Disorder (PTSD) 73
      3.3.4.2. Medical Boarding 74
      3.3.4.3. Suicide Rates 75
      3.3.4.4. Burnout 76

3.4. Research on General Well-being, Stress and Coping of Police Officers in the SAPS 76

3.5. Conclusion 81

Chapter 4: Research Design and Methodology

4.1. Chapter Preview 82
4.2. Primary Aim and Objectives of the Research 82
4.3. Research Design 83
4.4. Participants and Sampling Procedure 84
4.5. Measures                                                    87
   4.5.1. The Biographical Questionnaire                          87
   4.5.2. The Coping Resources Inventory (CRI)                   88
      4.5.2.1. Reliability and Validity of the CRI               91
   4.5.3. The Sense of Coherence Questionnaire (SOC-29)         91
      4.5.3.1. Reliability and Validity of the SOC-29            93
4.6. Procedure                                                  94
4.7. Data Analysis                                              95
   4.7.1. Descriptive Statistics                                 96
   4.7.2. Correlational Study                                    97
4.8. Ethical Considerations                                     98
   4.8.1. Informed Consent and Voluntary Participation          99
   4.8.2. Privacy and Confidentiality                           99
4.9. Conclusion                                                 100

Chapter 5: Results and Discussion

5.1. Chapter Preview                                            102
5.2. Demographic Description of the Sample                     103
   5.2.1. Introduction                                           103
   5.2.2. Age                                                    103
   5.2.3. Ethnic Group                                           104
   5.2.4. Marital Status                                         104

5.2.5. Level of Education 105
5.2.6. Rank in the SAPS 106
5.2.7. Income 106
5.2.8. History of Psychiatric Illness 107
5.2.9. Treatment 107

5.3. Results of the Measures 108
5.3.1. Results of Objective 1: Coping Resources of Male Police Officers in the SAPS 109
5.3.2. Results of Objective 2: Sense of Coherence of Male Police Officers in the SAPS 112
5.3.3. Results of Objective 3: Relationship between the Sense of Coherence and Coping Resources of Male Police Officers in the SAPS 121
  5.3.3.1. The Relationship between the SOC Total Score and the CRI Total Score 123
  5.3.3.2. The Relationship between the SOC Total Score and the CRI Subscales 126

5.4. Conclusion 129

Chapter 6: Conclusion, Limitations and Recommendations

6.1. Introduction 130
6.2. Objectives of the Study 130
  6.2.1. Description of the Coping Resources of the Sample 131
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.2.2. Description of the Sense of Coherence of the Sample</td>
<td>131</td>
</tr>
<tr>
<td>6.2.3. Description of the Relationship between the Sense of Coherence and the Coping Resources of the Sample</td>
<td>133</td>
</tr>
<tr>
<td>6.3. The Value of the Research</td>
<td>134</td>
</tr>
<tr>
<td>6.4. Limitations of the Research</td>
<td>135</td>
</tr>
<tr>
<td>6.4.1. Limitations of the Design</td>
<td>135</td>
</tr>
<tr>
<td>6.4.2. Limitations of the Participants and the Sampling Method</td>
<td>136</td>
</tr>
<tr>
<td>6.4.2. Limitations of the Measures</td>
<td>137</td>
</tr>
<tr>
<td>6.5. Recommendations</td>
<td>138</td>
</tr>
<tr>
<td>6.5.1. Recommendations for the SAPS</td>
<td>138</td>
</tr>
<tr>
<td>6.5.2. Recommendations for Future Research</td>
<td>139</td>
</tr>
<tr>
<td>6.6. Conclusion</td>
<td>140</td>
</tr>
<tr>
<td>Reference List</td>
<td>142</td>
</tr>
<tr>
<td>Appendices</td>
<td>168</td>
</tr>
</tbody>
</table>
APPENDICES

Appendix A: Biographical Questionnaire 169
Appendix B: Confirmation Letter from the SAPS to Conduct the Study 173
Appendix C: Covering Letter 177
Appendix D: Consent Form 181
### LIST OF TABLES

Table 1: Conceptualisations of Coping Styles and Stress-Resistant Personality Patterns  
Table 2: Summary of Research Published by Wissing, et al. (1992)  
Table 3: Stressors in the Police Work  
Table 4: Murder of Members of the SAPS  
Table 6: Medical Boarding of Police Officers from 1991-1997  
Table 7: Total Number of Suicides in the SAPS from 1991 to 1997  
Table 8: Means and Standard deviations of the Coping Resources Inventory (CRI)  
Table 9: Means and Standard Deviations of the Sample for the SOC-29  
Table 10: Normative Data from International Studies using the SOC-29  
Table 11: Normative Data from South African Published Studies using the SOC-29  
Table 12: Correlation between the SOC and the CRI/CRI Scales  
Table 13: Comparison of the Correlation between the SOC-29 and CRI as found by South African Studies and the Current Study
**LIST OF DIAGRAMS**

<table>
<thead>
<tr>
<th>Diagram 1: Age Distribution</th>
<th>103</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagram 2: Ethnic Group Distribution</td>
<td>104</td>
</tr>
<tr>
<td>Diagram 3: Marital Status Distribution</td>
<td>105</td>
</tr>
<tr>
<td>Diagram 4: Educational Level Distribution</td>
<td>105</td>
</tr>
<tr>
<td>Diagram 5: Rank Distribution</td>
<td>106</td>
</tr>
<tr>
<td>Diagram 6: Income Distribution</td>
<td>106</td>
</tr>
<tr>
<td>Diagram 7: Psychiatric Illness</td>
<td>107</td>
</tr>
</tbody>
</table>
SUMMARY

In South Africa the extraordinary high levels of violence and crime, escalating execution and killings of police officers, large number of murders, hijacking, robberies and shootings have created an unusually dangerous and stressful working environment for the members of the South African Police Services (SAPS). An overview of the literature on the nature of work in the SAPS indicates that these working conditions might have a detrimental effect on the coping resources and sense of coherence of police officers.

This study aimed to explore and describe the coping resources and sense of coherence of male police officers in the SAPS. It employed a quantitative exploratory descriptive research design, making use of non-probability convenience sampling. The sample consisted of 70 male police officers who have been in the service of the SAPS for at least two years. All police officers that were included in the sample were also shift workers defined by the SAPS as police officers who work unsociable hours and who are likely to be exposed to violence, risks, danger, and traumatic situations. A further inclusion criterion was that the police officers must not be subjected to possible relocation or transfer as stipulated in Resolution 7/2002.

The Coping Resources Inventory (CRI) was employed to identify the coping resources used by the participants and the Sense of Coherence Questionnaire (SOC-29) was utilised as a measure of the participants’ sense of coherence. A biographical questionnaire collated important demographic and background information. The data was analysed by computing descriptive statistics. To examine the relationship between the sense of coherence and coping resources of the participants, a multiple correlation
between the total score of the SOC-29 and the subscales of the CRI was conducted. Following this, a Pearson product-moment correlation coefficient was utilised to intercorrelate the total score of the SOC-29 and the individual subscales of the CRI.

The results of the present study indicated the followings: The SOC-29 revealed relatively low scores for the current sample. Results on the CRI revealed low average scores for both the total and all five scales. The correlational analysis revealed a significant positive relationship between the two measures for the current sample.

Key words: South African Police Services (SAPS), male police officers, stress, coping, coping resources, sense of coherence
CHAPTER 1
INTRODUCTION AND PROBLEM STATEMENT

1.1. CHAPTER PREVIEW

In this chapter, a general orientation to the study and the main constructs employed in the study are briefly outlined. These constructs include stress, the salutogenic approach, coping, coping resources and sense of coherence. The problem statement and the rationale for the study are also provided. The chapter concludes with the primary aim and objectives and an outline of the study, namely the chapter delineation.

1.2. GENERAL ORIENTATION TO THE STUDY

The field of health psychology has moved increasingly away from the pathogenic approach of the Western medical model to the salutogenic approach developed by Antonovsky in 1979. This relatively new perspective focuses more on those factors that promote health and well-being as opposed to the factors that cause disease, as in the pathogenic approach. The salutogenic approach therefore supports research that attempts to understand the relationship between stress, coping and illness within the ultimate aim of increasing people’s resilience. This study follows in the tradition of health psychology but focusing on the salutary concepts of sense of coherence and coping
resources of male police officers in the SAPS, rather than the factors that increase the stress experienced by these police officers.

1.3. CONCEPTUALISATION OF THE CONSTRUCTS

This section aims to explain and define the main constructs employed by the study, namely stress, the salutogenic paradigm, coping, coping resources, and sense of coherence. These constructs will be further explored in the following chapters.

1.3.1. Stress

Many theories have been developed to explain or define stress, how it works and how it relates to health. According to Rice (1992), stress is an illusive concept: “everyone knows what it means, but no two people would define it in the same way” (p. 3). Cooper and Payne (1991) attempted to provide some clarity. They identified three fundamentally different approaches to stress namely the stimulus-based or engineering approach, the response-based or medico-physiological approach, and the psychological approach. For the purposes of this study, the psychological approach will be used. This approach has come to be known as the interactional model and views stress as a multifaceted dynamic process which involves “a complex, reciprocal interaction among a number of different variables related to both the environment and the person” (D’Zurillo, 1990, p. 328).
1.3.2. The Salutogenic Approach

The pathogenic paradigm contends that diseases are caused by physical, biochemical, microbiological, and psychosocial agents (Strümpfer, 1993). This paradigm thus seeks to explain why people get sick and why they enter a given disease category. On the other hand, the salutogenic paradigm focuses on the origins of health and poses a radically different question, namely what enables people to stay well and even thrive in spite of life’s ever present stress load (Antonovsky, 1987). According to Antonovsky (1996), “the salutogenic approach focuses on coping rather than stressors, salutary factors rather than risk factors, survivors rather than defeated, and the invulnerable rather than the damaged” (p. 34). Instead of classifying people as either healthy or diseased, individuals are therefore placed on a multidimensional health-ease/dis-ease continuum. This suggests that an individual’s position on the continuum between the poles of total sickness and perfect health should be studied (Antonovsky, 1987). This study will be conceptualised within the salutogenic paradigm.

1.3.3. Coping

A central aspect of contemporary models of stress involves the conceptualisation of coping processes (Holahan & Moos, 1987). As is the case with stress, there is no single definition that is agreed upon when considering the concept of coping. However, a number of models have been posited around what it means to cope successfully. For
the purposes of this study, two such models of coping, namely that of Lazarus and Folkman (1984) and Antonovsky (1979; 1987) will be described.

- **Lazarus and Folkman’s model (1984)** views coping as a stabilising adaptation during stressful periods. They defined coping as “constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person” (p. 141). Lazarus and Folkman (1984) described a two phase process when individuals experience a stressor. The first, namely, appraisal can be subdivided into primary and secondary appraisal. Primary appraisal is an initial evaluation of whether an event is irrelevant to the individual, relevant but not threatening, or stressful. When s/he views an event as stressful, s/he is likely to make a secondary appraisal, which implies an evaluation of his/her coping resources and options for dealing with the stressful situation (Lazarus & Monat, 1991). The second phase is termed the coping appraisal. Coping appraisal is conceptualised not as what the person should, would or could do, but rather what the person in fact does as s/he reacts to a particular stressful condition (Lazarus & Folkman, 1984).

- **Antonovsky’s model (1987)** expanded upon Lazarus and Folkman’s model (1984). He defined coping as “the extent to which one is capable of cognitively and emotionally ordering one’s perception of the stressor and accepting a willingness to confront it” (p. 137). Antonovsky distinguished between primary appraisal, secondary appraisal, and tertiary appraisal. Primary appraisal is divided into three sub-appraisals. Primary appraisal I refers to the definition of an event as either a stressor or a non-stressor. Primary appraisal II refers to the judgment of the nature of the
stimulus as threatening or positive and primary appraisal III describes the emotional component, and is the extent to which one is cognitively and emotionally capable of dealing with the stressor. Secondary appraisal pertains to the selection of the most appropriate strategy to deal with the stressor being confronted. Tertiary appraisal refers to the further assessment of the availability of the resources if the first option is unavailable or fails.

1.3.4. Coping Resources

Coping resources refer to the repertoire of techniques available to the individual for use in the coping process. It involves an evaluation of stressors and the initiation of activities, with the aim of decreasing the stressor’s impact (Margalit, Raviv & Ankonia, 1992). Hammer and Marting (1988) defined coping resources as “those resources inherent in individuals that enable them to handle stressors more effectively, to experience fewer or less intense symptoms upon exposure to a stressor, or to recover faster from exposure” (p. 2). They divided coping resources into five domains namely, cognitive, social, emotional, spiritual/philosophical and physical. These will be discussed in more detail later in this document. For the purpose of the present study, Hammer and Marting’s (1988) definition of coping resources is accepted. The Coping Resources Inventory, the measure that assesses an individual’s coping resources according to the domains identified by Hammer and Marting, will therefore be used to measure the coping resources of the male police officers who constitute the sample.
1.3.5. Sense of Coherence (SOC)

Sense of coherence (SOC) is a construct coined by Antonovsky (1987) to describe a personality orientation which is associated with interpersonal differences in vulnerability to stress (Antonovsky, 1979). Antonovsky (in Frenz, Carey & Jorgensen, 1993) defined sense of coherence as:

“...a global orientation that expresses the extent to which one has a pervasive, enduring though dynamic feeling of confidence that a) the stimuli deriving from one’s internal and external environments in the course of living are structured, predictable and explicable; b) the resources are available to one to meet the demands posed by these stimuli; and c) these demands are challenging, worthy of investment and engagement” (p. 145).

The construct SOC can be further subdivided into three components namely, comprehensibility, manageability and meaningfulness (Antonovsky, 1987). Comprehensibility describes the extent to which an individual perceives a stimulus as making cognitive sense, as information that is ordered, consistent, structured and clear (Carstens, 1995). Manageability describes the extent to which an individual perceives resources to be available to him/her and to be adequate to meet his or her different demands. Meaningfulness is defined as “the extent to which one feels that life makes sense emotionally, that at least some of the problems and demands posed by living are worth investing energy in, are worthy of commitment and engagement, are challenges
that are welcome rather than burdens that one would much rather do without” (Carstens, 1995, p. 18). This component is the most crucial since it provides motivation. These components will be described in more detail in the following chapters.

1.4. PROBLEM STATEMENT AND RATIONALE

Police work has been identified as the most psychologically stressful profession in the world. According to Nel and Burgers (1998), police officers are present in most situations which can be described as critical incident stressors. These stressors may include the serious injury or death of a child or a colleague; a mother who leaves small children behind; suicide of a colleague and incidents in which odours, sounds and sights trigger uneasy feelings (i.e., decomposing bodies, shooting incidents and bomb blast scenes; environmental dangers; and national disasters) (Mitchell in Dietrich & Hatting, 1993). In South Africa, police work is further complicated by the socio-economic and political turmoil of the past 30 years, changes resulting from the dissolution of apartheid, and escalating crime and violence (Marks, 1995; Nel & Burgers, 1995).

The work environment of police officers thus put them at risk of developing stress related symptoms or disorders. The nature, frequency, and intensity of the incidents to which they are exposed to have an influence on the extent to which police officers experience these incidents as traumatic, and influence the cumulative impact on the individual. The internal and external stress factors which police officers are exposed to on a daily basis in the carrying out of their duties, also play an important role in the extent to which police officers are capable of coping with their work. Many police officers
suffer from psychological reactions such as time distortion, sleep difficulties, and emotional reactions such as anger and crying. Alcohol abuse, lack of patience, tension, aggression, depression, loss of motivation, and loss of interest in the outside world are commonplace. Furthermore, their ability to function in the family, social and professional worlds is adversely affected (Carsons, 1982; Nel, 1994).

The increasing distress of the members of the SAPS is furthermore evident in (a) the alarming rise in suicide statistics in the past four years; (b) the dramatic increase of medical boarding, particularly for psychological reasons (Nel & Burgers, 1995); (c) divorce statistics; and (d) the incidence of both alcohol and drug abuse (Marks, 1995). This was confirmed by Van Rooyen (2000) who found that police officers in the SAPS experienced difficulty with coping and adjusting to the demands of their work.

To date, research on police officers has covered topics such as the police officer’s experience of trauma in a trauma intervention program (Boshoff, 2000), the stress experiences of community police personnel (Govender, 1999) and the incidents of post traumatic stress disorder (Stromnes, 1999). Van Rooyen’s study (2000) on the psychosocial adjustment and stress levels of shift workers in the SAPS flying squad is one of the few studies that focused on coping and adjustment of police officers.

Despite the limited research on coping and adjustment of police officers, research on coping and adjustment is not new in South Africa as several studies have been conducted. These studies include Brown (2002) who investigated the coping resources of medical professional women, Cairns (2001) who investigated the coping resources of cancer patients, and Madhoo (1999), who studied the coping resources of patients in cardiac rehabilitation programs. The coping and adjustment focus within the
police service is relatively new. The aim of the proposed study is therefore to explore and describe the coping resources and sense of coherence of male police officers in the SAPS.

1.5. PRIMARY AIM AND OBJECTIVES OF THE STUDY

The primary aim of this study was to explore and describe the sense of coherence and coping resources of male police officers in the South African Police Services (SAPS).

In order to accomplish this aim, the following objectives have been identified:

1. To explore and describe the coping resources of male police officers in the SAPS.
2. To explore and describe the sense of coherence of male police officers in the SAPS.
3. To explore and describe the relationship between the sense of coherence and coping resources of male police officers in the SAPS.

1.6. CHAPTER DELINEATION

This study is composed of the following chapters:

- Chapter 1 introduced the study and provided the necessary contextual background against which the research was conducted.
- Chapter 2 presents the theoretical framework of this research study. This includes Antonovsky’s salutogenic theory as well as different conceptualisations of stress, coping, coping resources and sense of coherence as relevant concepts for the
present study. Finally, research in these areas of investigation is reviewed.

- Chapter 3 aims to focus on policing as an occupation as well as to highlight the nature and inherent dangers of police work and the impact of this type of work on police officers’ general well-being. Lastly, research findings concerning stress and coping among police officers in the South African Police Services (SAPS) is briefly described.

- Chapter 4 describes the research methodology and design, sampling methods and procedure, participants, instruments, data collection and data analysis techniques and finally the ethical considerations pertaining to the study.

- Chapter 5 presents the results, described and discussed with specific reference to the aim and objectives of the study.

- Chapter 6 highlights the conclusions based on the results as well as the limitations and recommendations.
2.1. CHAPTER PREVIEW

In this chapter, an overview of the theoretical framework of this research study presented. The construct, sense of coherence, that hails from Antonovsky’s salutogenic theory is discussed. Furthermore, different conceptualisations of stress, coping, and coping resources are provided. In addition, the relationship between coping resources and sense of coherence is highlighted. Attention is also given to research on sense of coherence and coping resources respectively, as well as to research on the relationship between sense of coherence and coping resources.

2.2. THE CONCEPT OF STRESS

2.2.1. Introduction

The stress phenomenon differs from individuals to groups to societies. Many theories have been developed to explain what stress is, how it works and how it relates to health. There is, however, still no universally accepted definition or conceptualisation of stress (D’Zurillo, 1990). While the scientific study of stress from a psychological perspective is a relatively recent development, the concept itself has a long history. The word stress has its origins in the Latin word strictu, meaning tight or narrow. The root
word reflects the internal feelings of tightness and constriction of the muscles and breathing reported by many individuals under stress. In early usage the term was used more frequently to refer to difficult environmental situations (Cox, 1978). In the 1930s, Hans Selye began his studies of stress and he defined stress as “the non-specific result of any demands upon the body, be the effect mental or somatic (1982, p. 7)”.

Spielberger (1983), on the other hand, suggested that stress should refer to the objective characteristics of a situation, and that threat should denote the perception of danger by the individual. Still others emphasised that stress is neither an external situation nor an internal state, but rather proceeds entirely from a complex interaction between environmental demands, perceptions of these demands, and the perceived ability to meet or alter them (Bishop, 1994; Hafen, 1996; Lazarus & Folkman, 1984). Lazarus, (1966) one of the most well-known, respected investigators of stress, argued that stress cannot be adequately understood without reference to external conditions, internal evaluative processes, personal resources, and the psychological and physical outcomes.

Theorists and researchers thus differ in their conceptualisation of the concept stress. Likewise, people subjectively experience stress in different ways. However, there are common factors that lead to the experience of stress (Dore, 1990). According to Weiten, Lloyd and Lashley (1991), the most common provoking circumstances include frustration, conflict, change and pressure. Stress, in general, is then referred to as any circumstance in which external or internal demands or both strain or surpass the adaptive resources of the individual (Monat & Lazarus, 1977). These demands are known as “stressors” (Rice, 1998). The term stress, however, has become confused
with the term distress and many use the term interchangeably (Rice, 1992).

If stress is to be left as a general term, then other terms must be used for the elements and phases of which it is composed. An agreement among researchers is that the stimuli, or environmental situations, that set the whole process in motion are typically referred to as *stressors*. The consequences of these stressors within the individual are collectively called the *stress response*.

### 2.2.2. Approaches to Stress

Obtaining agreement among researchers as to the precise meaning of psychological stress has thus, not surprisingly, been rather difficult. Much has been written on psychological stress more specifically on the ambiguity inherent in the concept, the multitude of meanings assigned to the concept’s ambiguous stimulus status and multiple response parameters, including its coactive nature as both stimulus and response in triggering adaptive coping or maladaptive behaviour (Garmezy & Masten, 1986). The multitude of models and theories, which exists, adds to the confusion, as they offer different conceptualisations of the stress concept.

Cooper and Payne (1991) attempted to provide some clarity. They identified three fundamentally different approaches to stress, namely, the stimulus-based or engineering approach, the response-based or medico-physiological approach, and the psychological approach. Each of these approaches will be described in the following sections.
2.2.2.1. The Stimulus Based Approach

The stimulus based approach, also referred to as the engineering approach, defines stress as a stimulus characteristic of the person’s environment (Cooper & Payne, 1991). It is thus suggested that a linear relationship exists between stress and an event or environmental stimulus causing the individual to feel tense or aroused. Seen within this approach, stress is thus treated in terms of the load or level of demand placed on the person (Hobfoll, 1989; Holmes, 1979; Sarafino; 1990). Stress is described as external and is represented by stressors; the environmental events that precede the recognition of stress (Bernard & Krupat, 1994).

Researchers who follow this approach often study the impact of a wide variety of stimuli which include catastrophic events, and major negative conditions. Walter Cannon was one of the first proponents of the stimulus based approach. He was also among the first to take an interest in and use the term stress (Louw & Edwards, 1993). Cannon regarded stress to be a “disturbing force, and something which upsets the person’s equilibrium, disrupting the usual balance” (Carroll, 1992, p. 3). Cannon applied the term homeostasis when referring to this equilibrium or balance, describing the tendency of an organism to maintain a stable internal environment (Louw & Edwards, 1993).
2.2.2.2. The Response Based Approach

The response based approach, also known as the medico-physiological approach, considers stress to be a generalised and non-specific response to aversive environmental stimuli (Sarafino, 1990). One of the proponents of this approach was Hans Selye who is a pioneer in stress research. Selye (1976) described stress as a response or physiological arousal to some demanding event. Similar to Cannon (in Carroll, 1992), Selye was also concerned with disruptions of homeostasis. However, he focused on the internal disruptions, namely, the physiological and psychological components of stress. Selye used the term strain to describe the psychological and physiological reactions of the person to chronic stress (Bernard & Krupat, 1994). The physiological component refers to heightened bodily arousal, change of heart rate, respiration rate, and an increase in the release of certain hormones (Bishop, 1994) while the psychological component involves behaviours, thoughts, cognitions and emotions (Sarafino, 1990).

2.2.2.3. The Psychological Approach

The psychological approach, also known as the interactional model, attempts to overcome the limitations of both the stimulus-based approach and the response-based approach. It aims to account for the individual’s differential stress responses. This approach views stress as a multifaceted dynamic process which involves “a complex, reciprocal interaction among a number of different variables related to both the
environment and the person” (D’Zurillo, 1990, p. 328). The psychological approach suggests that the nature of the stressful experience may vary considerably between persons and across situations (D’Zurillo, 1990). This approach furthermore focuses on the concept of “cognitive appraisal”, which would appear to account mostly for the individual differences in stress and coping (Cooper & Payne, 1991). Stress is treated as a psychological state “which is the internal representation of a particular and problematic transaction between the person and his/her environment” (Cooper & Payne, 1991, p. 8). Appraisal is described as an evaluative process that gives these transactions meaning (Holroyed & Lazarus in Cooper & Payne, 1991). Proponents of this approach thus consider the external stressor and the internal cognitive process factors as the main characteristics of the interactional model. They called this interaction a transaction, taking into account the ongoing relationship between the individual and his/her environment (Bernard & Krupat, 1994).

This psychological approach emphasises the meaning an event has for a person, rather than focusing on the stressor or strain itself. This conceptualisation of stress is supportive of Lazarus’s theory (1966) that noted that a thorough understanding of stress requires knowledge of three factors, namely, the environment, the individual’s view of the environment, and his/her reaction to it (Neufeld, 1989). Lazarus thus argued that external stimuli are not inherently stressful, but rather that they become so through the process of appraisal (Cooper & Payne, 1991). This approach to stress will be used as the theoretical basis of this study.
2.3. THE SALUTOGENIC APPROACH

2.3.1. Introduction

Prior to a discussion of the theoretical constructs of sense of coherence and coping resources, a brief description will be given of the pathogenic paradigm. This traditional paradigm will then be contrasted with the salutogenic paradigm in which the constructs sense of coherence and coping resources are grounded.

2.3.2. The Pathogenic Paradigm

Strümpfer (1993) defined the pathogenic orientation or the biomedical approach as directed “toward finding out why people fall ill and, in the specific way, at why they develop particular disease entities” (p. 160). The concept of homeostasis is central to the pathogenic approach. It implies that the normal state of the human organism is a relatively constant condition, which may vary somewhat but is maintained by various complexly interacting regulatory mechanisms. However, homeostasis may be disrupted by pathogens and stressors and if the regulatory mechanisms do not function properly, disease sets in (Cairns, 2001).

The pathogenic paradigm thus contends that diseases are caused by physical, biochemical, microbiological, and psychosocial agents (Strümpfer, 1993). Health professions are therefore encouraged to focus on the structure and chemistry of illness, rather than the subjective interpretation of the individual who is ill, and to enter into
combat with, and prevent each of these diseases in turn. In psychology, specifically, the
pathogenic orientation encourages a focus on pathology and abnormality and places
the emphasis on determining the causes, risks and vulnerabilities associated with the
development of mental illness (Wissing & Van Eeden, 1997).

2.3.3. The Salutogenic Paradigm

The theory of salutogenesis, which focuses on the origins of health, was formally
published in Antonovsky’s (1979) book entitled Health, Stress, and Coping. This theory
encouraged an emphasis and focus on health creation, rather than disease etiology.

Salutogenesis is a neologism developed by Antonovsky (1979). Salus comes
from the Latin word meaning health and genesis is a Greek word meaning origins.
Therefore salutogenesis refers to the origins of health. The theory of salutogenesis
moved the focus to those factors that promote well-being and health in stark contrast to
psychology’s traditional focus on pathogenesis which focus on physical and emotional
illness (Antonovsky 1979; 1984). As mentioned in the previous section, a pathogenic
orientation seeks to explain why people get sick and why they enter a given disease
category. On the other hand, a salutogenic orientation focuses on the origins of health
and poses a radically different question namely, what enables people to stay well and to
thrive in spite of life’s ever present stress load (Antonovsky, 1993).

According to Antonovsky (1987), the five hallmarks of the salutogenic paradigm
are as follows:

- It favours the classification of people on a multidimensional health ease/dis-ease
continuum rather than the classification of people as healthy or diseased as the pathogenic paradigm does (Antonovsky, 1987). The salutogenic paradigm suggests that an individual’s position on the continuum between the poles of total sickness and perfect health should be studied. According to Antonovsky (1987), it is important to look at the factors that move one to the health pole of the continuum. These factors are believed to be associated with psychological well-being.

- It encourages researchers to search for the total story of a human being rather than focusing on the etiology of a given disease condition.

- It encourages people not to look at stress as necessarily pathological, but as salutary. In the salutogenic paradigm, researchers investigate cases of positive outcomes. Antonovsky (1990) noted that the salutogenic question that should be asked is “how can we learn to live, and live well, with stressors and possibly even to turn their existence to our advantage” (p. 74). To some people a healthy person is someone who functions without stress. Antonovsky (1987) could not accept this notion and stated that the nature of a person’s reaction towards the stressor or any stressful situation will determine whether it would have negative, neutral or salutary consequences.

- It compels researchers to search for all sources of negative entropy that may facilitate active adaptation of the organism to his/her environment. Antonovsky (1979), began his recap of the “new view of illness” (p. 1) by stressing the fundamental assumption of heterostasis (entropy) versus the assumption of homeostasis which he felt underlines the pathogenic paradigm. He seemed to emphasise the complexity and dynamics of human existence which necessitate a
heterostatic view of the world.

- It allows researchers to look beyond the data obtained from pathogenic inquiry by studying the deviant cases found in such inquiry. The salutogenic paradigm investigates the origins of health rather than the knowledge of illness. Antonovsky (1979) believed that the pathogenic orientation cannot provide answers as to why pathogenic risk factors associated with morbidity stay with certain people and are absent in other people. In contrast to the pathogenic orientation that questions why people get sick, the salutogenic orientation questions why some people remain healthy in the presence of stressors (Antonovsky, 1979).

It should be taken into account that Antonovsky (1979) did not advocate rejecting the pathogenic paradigm. He suggested that the two paradigms are complementary, but that there could be more balanced representation of this newer field. The direction in which current research on stress and coping is developing suggests that this balance between the two paradigms is being addressed (Folkman & Moskowitz, 2000; Lazarus, 2000).

2.4. SENSE OF COHERENCE (SOC)

2.4.1. Introduction

In an attempt to answer the questions mentioned in the previous section, namely, “how can we learn to live, and live well, with stressors and possibly even to turn their
existence to our advantage" (Antonovsky, 1990, p. 74), Antonovsky (1990) proposed the sense of coherence (SOC) construct. Sense of coherence is a central concept in the salutogenic paradigm, which represent an orientation to life that people use to deal with stressful situations and to move towards health (Antonovsky, 1984). In the following section, a description of SOC will be given together with its development, components, related concepts and finally a brief outline of the relationship between sense of coherence and coping.

2.4.2. Description of the Sense of Coherence Construct and its Components

Antonovsky (1987) was interested in the different ways in which people cope with demands under stressful circumstances, as he believed that most, if not all, people will experience stress at some time in their lives. He observed that in stressful situations some individuals maintain a relatively stable level of psychosocial and physical well-being, whereas others become depressed, anxious and hostile, sometimes even emotionally and physically ill.

Antonovsky (1979) attempted to examine psychological and social factors that could explain why individuals react differently to life’s stressors. His research led him to coin the sense of coherence (SOC) construct that describes a personality orientation which is associated with interpersonal differences in vulnerability to stress (Antonovsky, 1979). Antonovsky (in Frenz, Carey, & Jorgensen, 1993) defined sense of coherence as:

“...a global orientation that expresses the extent to which one has a pervasive,
enduring through dynamic feeling of confidence that a) the stimuli deriving from
one’s internal and external environments in the course of living are structured,
predictable and explicable; b) the resources are available to one to meet the
demands posed by these stimuli; and c) these demands are challenging, worthy
of investment and engagement” (p. 145).

It is important to clarify that Antonovsky (1993) preferred not to refer to sense of
coherence as a personality trait or personality type, but to call it a “dispositional
orientation” (p. 143). He made this distinction, as he was against the traditional
definition of personality which implies a fixed behavioural tendency or constellation of
tendencies. For him, the sense of coherence construct refers to a pattern of
experiences that may change considerably.

The construct SOC can be further subdivided into three components, namely,
comprehensibility, manageability and meaningfulness (Antonovsky, 1987).
Comprehensibility describes the extent to which an individual perceives a stimulus as
making cognitive sense, as information that is ordered, consistent, structured and clear
(Carstens, 1995). Antonovsky (1987) stated that perceiving events as comprehensible
does not mean that they are necessarily benign, or that they are completely predictable.
It means that one can make logic and sense out of stressors. Events such as death and
war can therefore occur, but a person can make sense out of these (Antonovsky, 1987).
Likewise, Ryland and Greenfield (1991) are of the opinion that if an individual sees the
situation as comprehensible, then s/he will always have the feeling of understanding
what is going on.
Manageability describes the extent to which an individual perceives resources to be available to him/her and to be adequate to meet the different demands posed by the stimuli that bombard him/her (Antonovsky, 1987). The resources may include one’s own resources or those resources controlled by legitimate others, such as friends, colleagues or God. Someone who is high on manageability will not feel victimised by events and will approach stressful situations with the belief that the resources to cope with it are available to him/her.

Meaningfulness is viewed as the most important component of sense of coherence as it provides motivation to invest energy and to willingly take up the challenges that confront a person in his/her life (Antonovsky, 1987). Carstens (1995) defined meaningfulness as:

“the extent to which one feels that life makes sense emotionally, that at least some of the problems and demands posed by living are worth investing energy in, are worthy of commitment and engagement, are challenges that are welcome rather than burdens that one would much rather do without” (p. 18).

Antonovsky (1987) described the relations among the three components as inextricably intertwined. Research has shown that the inter-correlation among the components of the SOC was very high, but not perfect (Antonovsky, 1987). It is important to note that the SOC is not a specific coping style. A person with a strong sense of coherence will select the particular coping strategy that seems most appropriate. Furthermore, Antonovsky (1979) claimed that the position of a person on
the SOC continuum will probably be determined by the meaningfulness component, which acts as a motivational factor and a measure of energy or action potential. That is, someone with high comprehensibility and high meaningfulness will probably find that his low manageability will tend to become higher, while someone with a high comprehensibility and low meaningfulness will have difficulty to develop a stronger sense of manageability to find resources to cope with stressors. To summarise, these three components of the SOC represent different dimensions of coping with stressors, stimuli, or challenges. Whilst the comprehensibility component represents the cognitive dimension of the SOC, the meaningfulness component represents the emotional dimension. The instrumental or resource dimension, in turn, is represented by the manageability component of the SOC (Antonovsky, 1987; 1996). Now that the sense of coherence construct and its components have been defined, the attention moves to the development of this orientation.

2.4.3. Development of the Sense of Coherence (SOC)

According to Antonovsky (1979), the development of the SOC involves more than intrafamilial personality-shaping experiences, it is also a product of socio-cultural and socio-historical influences. He traced the development of the SOC through three major life stages, namely infancy and childhood, adolescence, and adulthood. These stages are discussed next.
2.4.3.1. Infancy and Childhood

Antonovsky referred in infancy and childhood to the work of Bowlby (1969) and Boyce (1985). He noted that the comprehensibility component of the SOC seems to be the product of stable life experiences provided by the major attachment figures during infancy and childhood. Such attachment figures provide the human child in his or her interaction with the environment, with stable and consistent responses. Antonovsky (1979) claimed that the structure of the infant’s reality is already there and that s/he does not have control over it, and that his/her ability to structure it, is limited. Therefore, the infant will naturally comprehend and appreciate it as it is. This implies that if there is no structure in the infant’s reality, comprehensibility will be very low.

Meaningfulness in this context, refers to the quality of the response which the child elicits from this structured environment, and even more importantly, whether this response is, as Antonovsky (1987) put it, “embedded in positive affect” (p. 97). Accordingly, manageability for the child refers to the balance of demands placed on the child by the environment and conversely, the environment’s demands from the child. In the case of the demands posed by the environment, there are two types of demands, namely:

- An overload demand where the demand placed on the child exceeds his or her developmental maturity.
- An underload demand where the demand placed on the child underestimates his or her developmental maturity (Antonovsky, 1979; 1987).

Antonovsky (1979) also described two types of demands posed by the child, namely:
• Demands which are socially and developmentally acceptable. This is the case where the child is usually encouraged, rewarded and reinforced.

• Demands which are socially and developmentally unacceptable. This is the case where the child is prohibited, ignored or punished by the significant figures.

2.4.3.2. Adolescence

Antonovsky (1987) typified four different environments in which the adolescent can grow up which may foster the life experiences that shape the SOC, namely:

• The complex open society. Such a society provides the adolescent with a wide variety of legitimate, realistic options which are presented by sophisticated parents, peers, teachers and media. The possibility of experiencing new things and experimenting with new challenges is existent. Furthermore, the information and choices offered by the environment are always realistic and clear. In such an environment, a strong SOC can be formed (Antonovsky, 1987).

• The homogenous and isolated culture or subculture. A strong SOC is found in those homogenous, historically rooted, and culturally isolated groups who live in modern societies. These cultures or subcultures take part in the life of the bigger society on one level, but do not participate on a more profound level (Antonovsky, 1987). Adolescents in these historically rooted cultures, experience life as a rich tapestry of myths, rituals and models. A further characteristic of these cultures is the sense of cultural and religious rootedness which provides the adolescent with life experiences that are meaningful, resourceful and consistent (Antonovsky, 1987).
• *The socio-economic devastated and confusing culture and subculture.* This culture or subculture refers to communities characterised by relative socio-economic deprivation. A large number of adolescents find themselves in alien, hostile and incomprehensible environments because of these conditions of deprivation which make them experience life as unpredictable and stressful (Antonovsky, 1993).

• *The fundamentalist culture or subculture.* In such a community “a leader arises who offers the solution to all problems, a clear, consistent message, a legitimate channel for the expression of aggression, a promise of redemption, and membership in the community of the elect” (Antonovsky, p. 105). Antonovsky (1987) noted that a strong, yet a very rigid SOC might arise out of such a community.

2.4.3.3. Adulthood

Antonovsky (1987) argued that adolescents have a tentative SOC which may be useful for short-range prediction about coping with stressors and the resulting health status. However one’s location on the SOC continuum becomes more or less fixed during early adulthood. Adulthood demands commitments of a more long-range nature from the individual, such as commitment to persons (e.g., spouses and children), social roles, and work. It is especially the experience gained from work, as a life role, that reinforces or reverses the strength of the SOC that developed during adolescence (Antonovsky, 1987). The term “work”, as it is used here, does not only refer to an organisational occupation or career, but also incorporates the household which includes activities such as raising children, cleaning and caring for other family
members (Antonovsky, 1987). Accordingly, Antonovsky (1987) identified certain crucial variables in the work situation that provide life experience central to the formation of the SOC. These variables are summarised in the following paragraphs under the headings of the components of the SOC.

- **Meaningfulness**: Participation in the decision-making processes at work which affect one’s working conditions and one’s joy at work. Discretionary freedom and decision latitude seem crucial to this environment, as well as the legitimacy of power allocation in the work setting (Carstens, 1995).

- **Manageability**: Load balance refers to the availability of resources to the individual to perform the job well and the degree to which the job situation allows the worker to develop his full potential, which is then utilised in what Antonovsky (1987) called “work of substantive complexity” (p. 12). This refers to a reasonable match between the ability of the worker and the challenges of degree of difficulty of his or her task (Carstens, 1995; Fouché, 1999).

- **Comprehensibility**: Consistency refers to the degree of clarify of seeing the whole picture and one’s place in it. It also involves job security, open communication and feedback regarding social relations in the work environment (Antonovsky, 1987).

The focus of the discussion now moves from the development of the SOC construct to the dynamics of the SOC.

### 2.4.4. Dynamics of the SOC

Antonovsky (1987) suggested that at the end of the first decade of adulthood,
one normally attains a given location on the SOC continuum. According to Carstens (1995), Antonovsky accepted that from then on, the SOC would not change in a radical way, despite the minor changes that may occur. This, however, seems only to apply to an individual with a strong SOC at the beginning of adulthood. When an individual with a strong SOC is confronted with challenges, one can expect his/her SOC to return or even surpass premorbid levels once the crisis is over (Carstens, 1995; Otto, 2002). An individual with a weak SOC, on the other hand, tends to exacerbate his/her situation. S/he takes on the challenge as a burden, which results in a downward spiralling circle (Antonovsky, 1987). When an individual with a weak SOC is in crisis, one can expect his/her SOC to weaken even further. Moreover, when the crisis is resolved, it is highly likely that his/her SOC will not fully return to the premorbid level (Otto, 2002).

Carstens (1995) pointed out that if the aforementioned is accepted, then Antonovsky (1987) seemed to contradict himself. He claimed that the SOC is stable, but noted that if the SOC is low to start with, it is bound to weaken. He explained this apparent contradiction by hypothesising that there seems to be a critical level of the SOC above which there is a strong tendency to stabilise, and below which there seems to be a deterioration of the SOC strength. Antonovsky (1987) offered a further explanation for the apparent contradiction. He claimed that, although the SOC tends to stabilise near the end of the first decade of adulthood, people are equipped to seek out “SOC-enhancing experiences” (p. 126) to cope with their stressors. People could either seek out these experiences by themselves or enlist the assistance of health professionals who are trained to modify the SOC with planned interventions.

Antonovsky (1987) suggested one need not necessarily feel that all of life is
highly comprehensible, manageable, and meaningful in order to have a strong SOC. In fact, someone can attach subjective importance to a certain sphere of life with the exclusion of other spheres and still have a high SOC (Carstens, 1995).

Antonovsky (1987) attempted to account for the latter by introducing the notion of boundaries. He argued that one may have a high SOC, if one also possesses boundaries with the following two qualifications:

- These boundaries should include the following spheres, namely, one’s inner feelings, immediate interpersonal relations, major activity, and existential issues such as death, inevitable failure, shortcoming in life, and isolation.
- Narrowing these boundaries to the point of exclusion of a relation to the larger social order does not mean that the real world will not influence one’s life and therefore one’s SOC.

The sense of coherence construct is closely related to the availability of coping resources. This relationship between the SOC and coping resources is the focus of next section.

### 2.4.5. The SOC and Coping

According to Fouché (1999), different theorists and researchers in the field of health and coping have developed similar concepts to the SOC to conceptualise coping styles and stress-resistant personality patterns (Schaefer, 1996). Table 1 represents a brief description of some of these conceptualisations.
Table 1
Conceptualisations of Coping Styles and Stress-Resistant Personality Patterns

<table>
<thead>
<tr>
<th>Concept</th>
<th>Description</th>
<th>Proponents</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Hardiness</td>
<td>A personality style according to which individuals show a liking of challenge, a strong sense of commitment and strong sense of control.</td>
<td>Kobasa (1979); Maddi &amp; Kobasa (1984)</td>
</tr>
<tr>
<td>2. Survivor personality</td>
<td>A personality pattern of individuals who have survived a major crisis or challenge, surmounted the crisis through personal effort, and emerged from the experience with previously unknown strengths and abilities.</td>
<td>Siebert (1983; 1993); Walter &amp; Siebert, (1990)</td>
</tr>
<tr>
<td>3. Learned optimism</td>
<td>A coping style and personality pattern that entails a pattern of thinking in which good events are explained by factors that are internal, permanent, and pervasive. Bad events are explained by factors that are external, temporary, and limited in scope.</td>
<td>Seligman (1970)</td>
</tr>
<tr>
<td>4. Self-efficacy</td>
<td>A coping style that refers to the conviction that, when one is confronted by a behavioural setting that induces tension, one can successfully execute behaviour required to produce the desired outcome.</td>
<td>Bandura (1977; 1982)</td>
</tr>
<tr>
<td>5. Type C pattern</td>
<td>A personality pattern that draws some of the best attributes from type A and type B patterns and adds new elements to form a cluster of ingredients for meeting challenges head-on with success and vitality. Type C thus entails peak performance under pressure.</td>
<td>Kriegel &amp; Kriegel (1984)</td>
</tr>
<tr>
<td>6. Sense of performance</td>
<td>A coping style involving the belief or perception that certain central, valued elements of life experience are stable and enduring.</td>
<td>Boyce, Shaefer &amp; Uitti (1985)</td>
</tr>
<tr>
<td>7. Invincibility</td>
<td>A resilient coping style characterised by an internal locus of control, a positive self-concept, and a responsible and achievement-oriented attitude towards life.</td>
<td>Dahlin, Cederblad, Antonovsky &amp; Hagnell (1990); Werner (1989)</td>
</tr>
<tr>
<td>8. Potency</td>
<td>A coping mechanism that refers to a person’s enduring confidence in his/her own capacities as well as commitment to and confidence in his/her social environment. This is perceived as being characterised by a basically meaningful and predictable order and by a reliable and just distribution of rewards.</td>
<td>Ben-Sira (1985)</td>
</tr>
<tr>
<td>9. Stamina</td>
<td>The physical and moral strength and endurance to resist or withstand disease, fatigue or hardship.</td>
<td>Thomas (1981)</td>
</tr>
<tr>
<td>10. Fortogenesis</td>
<td>A construct that refers to the origins of strength. It is a more embracing constructs than salutogenesis because it refers to the sources of strength in general.</td>
<td>Strümpfer (1995)</td>
</tr>
</tbody>
</table>
These conceptualisations of coping tend to explain and describe the coping process as the result of either a personality pattern, or a cognitive appraisal, or an emotive and behavioural style. However, the SOC conceptualisation of coping process is unique in that it combines the cognitive, emotive, behavioural, and motivational aspects of coping (Antonovsky, 1996). According to Fouché (1999), in the context of the SOC construct, the successful individual in coping is the one who approaches the world with the generalised expectation that stressors are meaningful and comprehensible. This in turn lays the foundation for managing the stressor and preventing it from becoming a negative force (Geyer, 1997). Antonovsky (1987) consequently described coping as “…the extent to which one is capable of cognitively and emotionally ordering one’s perception of the stressor and accepting a willingness to confront it” (p. 137).

Fouché (1999) noted that there is a positive relationship between a strong SOC and successful coping, whereas an individual with a moderate to weak SOC would tend to become overwhelmed by the stressor, or at least cope less successfully. Antonovsky (1987 in Fouché, 1999) identified the following characteristics of individuals with a strong SOC:

- A person with a strong SOC is likely to define a stimulus as less stressful than a person with a weaker SOC.
• S/he has greater ability to prevent tension from being transformed to stress, to be able to describe feelings and to be less threatened by them.

• S/he is likely to focus on the instrumental rather than the emotional parameters of the problem and to appropriate blame to where it belongs.

• S/he is more likely to have considerable available resources for his/her crisis and to effectively and flexibly choose the most appropriate strategy from a variety of potential resources available.

• S/he is more likely to feel a sense of engagement, or commitment, or willingness to cope with the stressor.

• S/he is more likely to be capable of introducing order and meaning into the situation and to engage in adaptive health behaviours and habits when coping with stressors.

These characteristics led Cairns (2001) to conclude that the SOC may also be understood as a readiness to co-ordinate and take advantage of resources. This readiness can be regarded as being independent of the level and type of resources at the individual’s disposal (Suominen, Blomberg, Helenius & Koskenvuo, 1999).

Many studies have explored health development over the lifespan, more specifically the relationship between the SOC strength and healthy lifestyle behaviours. A review of the research that have direct relevance for the present study will be presented in the following section.

2.4.6. Research on the SOC

Previous reported cross-sectional data has supported the hypothesis that the
SOC is negatively correlated with life stress and psychological symptomology (Antonovsky, 1987; Berstein & Carmel, in Flannery & Flannery, 1990). Flannery and Flannery (1990) investigated the association of the SOC with life stress and symptomology. They found that the SOC correlated negatively with life stress and symptomology and appeared to mitigate the impact of stress. These researchers proposed further study in the SOC since it might prove to be helpful in assessing the disrupted assumptive world of victims of psychological trauma and individuals with learned helplessness (Carstens, 1995). The SOC was also found to be negatively correlated with hostility and anxiety in a study that examined SOC, self-motivation and personality of Swedish adolescents (Langius, Bjorvell & Antonovsky, 1992).

Furthermore, Nyamathi (1991) investigated the relationship of self-esteem, sense of coherence, and support availability to emotional distress, somatic complaints and high-risk behaviour in a sample of 581 homeless or drug abusing minority women. She found that women who were high in self-esteem and stronger in sense of coherence reported significantly less emotional distress, and significantly fewer high risk behaviours. Bowman (1996) confirmed this in his cross-validating study of Antonovsky’s SOC construct by noting that a significant negative correlation between SOC scores and measures of anxiety, depression and physical symptoms were found. In another study that was conducted in New Zealand, suicidal ideation on admission of psychiatric patients was found to be best predicted by a low SOC (Petrie & Brook, 1992).

McSherry and Holm (1996) also reported support for the validity and utility of the SOC as a stress resistant personality/cognitive variable. These researchers not only found that participants who were low on SOC reported more psychological distress but
they were also less likely to use coping strategies during the stressful encounter in the experiment.

Likewise, Dudek and Koniarek (2000) found that lower levels of SOC were related to higher levels of Post Traumatic Stress Disorder (PTSD) symptoms. Furthermore, a significant negative association was found between participants who met the American Psychiatric Association’s Diagnostic and Statistical Manual of Mental Disorders’ (DSM-IV-TR) (2000) diagnostic criteria for PTSD and their SOC scores. Kassen (2002) conducted a similar study in South Africa with reference to a population engaged in a critical occupation, facing multiple and prolonged exposure to traumatic stressors namely the South African Police Services (SAPS). This study yielded results that pointed to the fact that the SOC is associated with lower levels of subjective distress and that SOC impacts on the relationship between defence styles and levels of traumatic stress.

Several other recent South African studies have focused on the SOC. For example, Wissing, De Waal and De Beer (1992) published four studies in one article which investigated different aspects of the relationship between SOC and stress symptomology. The findings of these studies are briefly outlined in Table 2:
Table 2
Summary of Research published by Wissing, et al. (1992)

<table>
<thead>
<tr>
<th>Research topic</th>
<th>Findings</th>
<th>Implications</th>
</tr>
</thead>
<tbody>
<tr>
<td>The experience of work climate, stress symptomology and SOC by a group of university staff</td>
<td>Significant negative correlations between the SOC subscales and the stress symptomology.</td>
<td>The pattern of factors obtained suggests that SOC and stress symptomology are two poles of the same dimension of behaviour, rather than presenting separate dimensions of human functioning.</td>
</tr>
<tr>
<td>SOC, stress symptomology and social desirability in a group of undergraduate students</td>
<td>A high negative correlation between total SOC scores and the stress symptomology. Furthermore, very low, but significant positive correlations between social desirability and the subscales of the SOC.</td>
<td>This supports the idea of a health ease/disease continuum (Antonovsky, 1987).</td>
</tr>
<tr>
<td>SOC and self concept in a group of young adults</td>
<td>Significant positive correlations between scores on the SOC scale and scores on a scale measuring the quality of the self-concept.</td>
<td>Confirms the finding above.</td>
</tr>
<tr>
<td>SOC, stress symptomology and the stability of SOC in adulthood in the wake of enduring, severe stress</td>
<td>The strength of the SOC and the intensity of psychological burnout or traumatic stress symptomology are directly inversely related in adulthood.</td>
<td>The SOC is not necessarily stable during adulthood.</td>
</tr>
</tbody>
</table>

Other South African research on the SOC construct included samples of individuals who were not confronted with a particular stressor, as well as individuals diagnosed with chronic illness or general medical conditions. Cairns (2001) investigated the sense of coherence and coping resources of cancer patients and found a fairly high SOC. This finding might indicate that the patients’ sense of coherence may have increased due to their exposure to the changes brought about by their diagnosis (Cairns, 2001), which confirms literature that noted that stressful life events may provoke positive psychological changes and therefore strengthen the SOC (Motzer &
Stewart, 1996). In a related study, Madhoo (1999) investigated a sample of 35 patients in a cardiac rehabilitation program and similar to Cairns (2001), found a high SOC among the patients. Otto (2002), on the other hand, investigated the coping orientation and resources of adult patients with depressed mood and found fairly low SOC among these patients. Otto’s (2002) findings compare with Carsten (1995) who investigated the relationship between SOC and depression and found that individuals with major depressive disorder tend to have low SOC, even lower than terminally ill patients.

Wissing and Van Eeden (1997) studied a non-patient sample. They investigated a mixed sample group of psychology students and found relatively low SOC scores. This finding suggests that these students did not cope successfully with the stressful demands of their studies.

The aforementioned research suggests that the SOC strength differs from individuals to groups, to societies. According to Antonovsky (1987, cited in Otto, 2002), “individuals with a low SOC tend to exacerbate their situation by taking challenges on as burdens, and being unable to make sense of, find meaning in, life experiences” (p. 141). Therefore, individuals with low SOC may be at a greater risk for experiencing coping difficulties in their own lives and consequently manifesting stress symptomology. The SOC and stress symptomology may thus be seen as two poles of the same dimension of behaviour, rather than separate dimensions of human functioning (Wissing, et al., 1992).
2.5. THE CONCEPTS OF COPING AND COPING RESOURCES

2.5.1. Introduction

A central aspect of contemporary models of stress involves the conceptualisation of coping processes (Holahan & Moos, 1987). While Antonovsky’s SOC is one of the constructs under investigation in this study, the second area of investigation is that of coping resources, which will be discussed in this section. The discussion will firstly focus on coping and models of coping, after which the attention will move to coping resources and models of coping resources. This section will culminate in a discussion on research that have been conducted on coping resources as well as research that have explored the relationship between coping resources and SOC.

2.5.2. Coping and Models of Coping

As is the case with stress, there is no one definition that is agreed upon when considering the concept of coping. However, a number of models have been posited around what it means to cope successfully. For the purposes of this study, the researcher shall describe two such models of coping, namely that of Antonovsky (1979; 1987) and Lazarus and Folkman (1984). These two models were chosen because these models highlight the importance of appraisal processes which are considered central to successful coping (Antonovsky, 1979; Lazarus & Folkman, 1984).
2.5.2.1. Lazarus and Folkman's Model of Coping

According to Lazarus and Folkman (1984), coping is generally viewed as a stabilising adaptation during stressful periods. They defined coping as “constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person” (p. 141). These cognitive and behavioural efforts change constantly, because of the continuous appraisal and reappraisal of the person-environment relationship, which is also in a state of continuous change. There are three key aspects of this definition, namely:

1. It focuses on the person’s thoughts and actions within a specific encounter and how it changes as the situation progresses, thus coping is a process that takes place over time.
2. Coping is contextual, and is influenced by the person’s appraisal of the actual demands and his or her available resources.
3. Coping is a person’s efforts. This definition does not assume that the outcome of a coping response will always be positive (Folkman & Lazarus, 1986).

Cooper and Payne (1991) concurred with the aforementioned definition, as they noted that coping implies that the individual is involved in making conscious choices in response to stress. Accordingly, they defined coping as “an ongoing, dynamic, interactional process, rather than outcome. The effort the individual makes to overcome, master, tolerate, reduce, minimise and adapt would therefore appear to influence the process” (Cooper & Payne, 1991, p. 122).
Lazarus and Folkman (1984) described a two phase coping process that comes into play when individuals are confronted with a stressor. The first phase of this process is termed appraisal. The appraisal phase can be subdivided into primary and secondary appraisal. Primary appraisal refers to the initial evaluation of whether an event is irrelevant to the individual, relevant but not threatening, or stressful. If an event is viewed as stressful, secondary appraisal comes into play. Secondary appraisal refers to the evaluation of coping resources and options for dealing with the stressful situation (Lazarus & Monat, 1991). The second phase, described as the coping appraisal, comes into being when the individual engages in actual coping behaviour. Coping appraisal is therefore conceptualised not as what the person should, would or could do, but rather what the person in fact does as s/he reacts to a particular stressful condition (Lazarus & Folkman, 1984).

2.5.3.4. **Antonovsky’s Model of Coping**

Antonovsky (1987) expanded upon Lazarus and Folkman’s model (1984) by distinguishing between primary appraisal, secondary appraisal, and tertiary appraisal. He divided primary appraisal into three sub-appraisals, namely:

- Primary appraisal I refers to the definition of an event as either a stressor or a non-stressor. In terms of this depiction, Antonovsky (1987) argued that the individual with a strong SOC will be more likely to define stimuli as non-stressors, than one with a weak SOC.
- Primary appraisal II refers to the judgment of the nature of the stimulus as
threatening or positive. The strong-SOC individual will at this stage, having considerable experience of stressors which soon turn out to be non-problematic, be more likely to define a stressor as benign or irrelevant and feel confident that the tension will quickly subside (Antonovsky, 1987).

- Primary appraisal III describes the emotional component, and is the extent to which one is cognitively and emotionally capable of dealing with the stressor (Antonovsky, 1987).

Secondary appraisal pertains to the selection of the most appropriate strategy to deal with the stressor being confronted. This means that the strong-SOC individual chooses from the repertoire of generalised and specific resistance resources at his or her disposal, what seems to be the most appropriate combination. Finally, tertiary appraisal refers to the further assessment of the availability of the resources if the first option is unavailable or fails. It may involve role modification, mobilisation of hitherto unknown resources, shifting of perception and so forth (Antonovsky, 1987).

Some theorists (Lazarus and Folkman, 1984) have proposed that specific coping strategies in the coping process can be categorised as efforts to either approach or avoid the stressor. This depends on the appraisal of the resources available to the individual as well as on the constraints that might inhibit the use of these resources. In order to explore these resources available to an individual, some models of coping resources are highlighted in the following section.
2.5.3. Coping Resources and Models of Coping Resources

2.5.3.1. Introduction

The second construct under investigation in this study is coping resources. Coping resources refer to the repertoire of techniques available to the individual for use in the coping process. It involves an evaluation of stressors and the initiating of activities, with the aim of decreasing the stressor’s impact (Margalit, Raviv & Ankonina, 1992). There are a number of coping resources available to an individual in the coping process. Different researchers have explored and defined these coping resources in various ways (Schaefer, 1996). For the purposes of this study, the researcher shall briefly describe three such models of coping resources, namely that of Antonovsky (1979), Hammer and Marting (1988) and Lazarus and Folkman (1984).

2.5.3.2. Hammer and Marting’s (1988) Model of Coping Resources

Hammer and Marting (1988) defined coping resources as “those resources inherent in individuals that enable them to handle stressors more effectively, to experience fewer or less intense symptoms upon exposure to a stressor, or to recover faster from exposure” (p. 2). They divided coping resources into five different domains namely, cognitive, social, emotional, spiritual/philosophical and physical.

The following is a description of these five domains as described by Hammer and Marting (1988, p. 3):
• Cognitive (COG): This domain measures the extent to which individuals maintain a positive sense of self-worth, a positive outlook towards others, and optimism about life in general.
• Social (SOC): This domain measures the degree to which individuals are imbedded in the social networks that are able to provide support in times of stress.
• Emotional (EMO): This domain measures the degree to which individuals are able to accept and express a range of affect, based on the promise that a range of emotional response aids in ameliorating long-term negative consequences of stress.
• Spiritual/Philosophical (S/P): This domain measures the degree to which actions of individuals are guided by stable and consistent values derived from religious, familial, or cultural tradition or from personal philosophy. Such values might serve to define the meaning of potentially stressful events and prescribe strategies for responding effectively.
• Physical (PHY): This domain measures the degree to which individuals enact health-promoting behaviours believed to contribute to increased physical well-being. Physical well-being is thought to decrease the level of negative response to stress and to enable faster recovery from stress.

On closer inspection of these domains, it becomes clear that they fall under the larger framework of the biopsychosocial model. The physical domain constitutes the biological component; the cognitive and emotional domains fall under the psychological component; and the social and philosophical/spiritual domains fall under the social component of the biopsychosocial model (Brown, 2002; Otto, 2002).

For the purpose of the present study, Hammer and Marting’s (1988) definition of
coping resources is accepted. The Coping Resources Inventory (CRI), the measure that assesses an individual's coping resources according to the domains identified by Hammer and Marting (1988), will therefore be used as measuring instrument in this study.

2.5.3.3. Lazarus and Folkman’s (1984) Model of Coping Resources

According to Lazarus and Folkman's (1984) model, the way people cope in stressful situations depends on their appraisal of the resources available to them as well as on the constraints that might inhibit the use of these resources. Resources are defined as constituting cognitive, emotional, social and physical characteristics in order to deal with the environment's demands. Lazarus and Folkman (1984 in Otto, 2002, p. 39) identified six major categories of coping resources, namely:

- **Health and Energy**: Lazarus and Folkman (1984) contended that these resources are the most pervasive and relevant resources to all people and refer to physical well-being. The rationale being that a healthy, robust person has more energy to spend on coping than one who is ill, tired or in any way debilitated.

- **Positive Beliefs**: A positive view of oneself can also be regarded as a very important psychological resource. This category includes specific beliefs that serve as a basis for hope, and sustaining coping efforts.

- **Problem Solving Skills**: These skills involve the ability to search for information, analyse situations and generate solutions. The problem solving skills are drawn from other resources such as general experience, knowledge, cognitive ability and the
capacity for self control.

- **Social Skills:** These skills involve the capacity to communicate with others in a socially appropriate manner. The assumption being that interaction with other people increases the likelihood of their support and cooperation and in general it gives the individual a greater control over social interaction.

- **Social Support:** This refers to receiving emotional, informational or tangible support from others.

- **Material Resources:** This refers to monetary resources that provide easier and sometimes more effective access to legal, medical, financial and other professional assistance.

### 2.5.3.4. Antonovsky’s (1979) Model of Coping Resources

This model will only be briefly revised, as it has already been discussed in this chapter, in the section on the sense of coherence construct. Antonovsky’s (1979) concept of salutogenesis led him to view individuals’ coping resources as hinges on which movement towards the positive end of “health ease/dis-ease” continuum rests. He called these resources the generalised resistance resources (GRRs). Antonovsky (1987) developed this concept to provide a theoretical answer to the question of what explains movement towards the health pole of the health ease/ dis-ease continuum. He defined a generalised resistance resource as:

“a physical, biochemical, artifactual-material, cognitive, emotional, evaluative-
attitudinal, and interpersonal-relational or macrosociocultural characteristic of an individual, primary group, subculture or society that is effective in avoiding or combating a wide variety of stressors. It is a characteristic, phenomenon or relationship of an individual that provides extended and continued experience in making sense of the countless stimuli with which one is constantly bombarded and facilitates the perception that the stimuli that one transmits are being received by the intended recipients without distortion” (Carstens, 1995, p. 11).

According to this definition, the commonality among all GRRs is that they all fostered repeated life experiences which enable the person to see the world as “making sense” in a cognitive, instrumental and emotional manner (Antonovsky, 1987, p. 23). This led to the emergence of the sense of coherence construct as a generalised orientation towards the world which perceives the world on a continuum as comprehensible, manageable, and meaningful (Antonovsky, 1996). Antonovsky (1987) therefore argued that sense of coherence is most likely to develop to the extent that the GRRs are present. Antonovsky (1979) divided the GRRs into different categories. Strümpfer (1993) reported them as follow:

- Physical and biochemical GRRs which include immunosuppresors and potentiators.
- Artefactual-material GRRs, particularly wealth that can buy, for example, food and clothing, but also, power, status and services.
- Cognitive GRRs, particularly knowledge-intelligence, contingent on education, which includes skills and general knowledge.
- The emotional GRR of ego identity.
• Coping strategies, as overall plans of action for overcoming stressors.
• Interpersonal-relational GRRs, like social-support and commitment.
• The macrosociocultural GRRs of meanings provided by one’s culture and its social structure which include religion.

GRRs can therefore range from material (money), to cognitive (intelligence), to interpersonal (social interaction and support) and even macro social resources such as religion (Levert, Lucas & Ortlepp, 2000). In these resources lie the promotion of the development of a strong SOC. Antonovsky (1987) also pointed out that GRRs can also be applied to stressors (i.e., the extent to which they weaken or strengthen one’s level of SOC) and labelled these as generalised resistance deficits (GRDs). From this it becomes clear that Antonovsky (1987) considers stressors as primary determinants of the individual’s overall SOC.

To summarise, Antonovsky’s (1979) model of GRRs correspond with the domains as described by Lazarus and Folkman (1984) and Hammer and Marting (1984) in terms of viewing resources as constituting cognitive, emotional, social and physical characteristics. In the following section, research on the coping resources will be outlined.

2.5.4. Research on Coping Resources

A multitude of research studies have been conducted on coping resources. Anson, Carmel, Levenson, Bonneh and Maoz (1993) explored the moderating effect that personal and collective resources have on the health consequences of recent life
events. Antonovsky’s SOC was defined as a personal resource, while belonging to a religious community was defined as a collective resource. Findings suggested that although collective resources foster the development of personal resources to some degree, personal resources are more valuable in coping with recent life events. Moreover, in some situations, personal resources facilitate the recruitment of collective resources, as personal resources enable those who possess them to recruit the available collective resources in the coping process. Both types of resources were found to have a salutogenic effect, but personal resources (i.e., SOC) were found to be better resources for avoiding the negative effects of recent life events.

The findings of the aforementioned study were confirmed in a study by Suominen et al. (1999). They concluded that the relationship between SOC and good subjective health was not affected when the levels of three resistance resources, namely social integration, socio-economic status, and activities during leisure time were adjusted. Therefore, it was concluded that a strong SOC could be interpreted as representing an autonomous personal resource capable of contributing directly to subjective wellbeing (Cairns, 2001).

South African research pertaining to coping resources, include studies by Cairns (2001) and Otto (2002). Cairns (2001) concluded that cancer patients perceived themselves as having high levels of coping resources. She furthermore reported that the social resources scale was one of the higher mean scores among the participants, whereas the spirituality/philosophical resources scale was the highest. These findings were consistent with research by Lu and Chen (1996) who noted that received social support is related to increased use of all kinds of coping behaviour. Similarly, Penninx et
al. (1998) reported that social support and personal coping resources may contribute to variability in the impact of stressors on psychological health. Cairns’s findings (2001) also support other research that indicated that many cancer patients rely on religion and spirituality as a coping resource (Ferraro & Kelley-Moore, 2000). Otto (2002) reported similar findings with a sample of adult patients with depressed mood. These patients had the spirituality/philosophical resource scale as the first resource of coping with their illness, while the least utilised resource for them was the physical resource domain.

It would seem that different populations utilise different coping resources in order to survive their crisis and to deal with the environment’s demands and stressful encounters. This depends on the resources available to these populations. These resources comprise different domains such as cognitive, emotional, social, spiritual/philosophical and physical. Furthermore, successful coping and utilising resources to contend with stressors are related to the SOC strength of the individual. In the following section, research on the relationship between sense of coherence and coping resources will be outlined.

2.6. RESEARCH ON THE RELATIONSHIP BETWEEN THE SOC AND COPING RESOURCES

According to Cairns (2001), a positive relationship between the coping resources and sense of coherence was found among cancer patients. Individuals high on SOC were likely to report high levels of coping resources. These findings confirm findings of other research studies. McSherry and Holms (1996) found that individuals with low SOC
scores were significantly less likely than high SOC participants to believe that they possessed the personal resources necessary to cope with a stressful situation. Further evidence for this relationship between SOC and coping resources was provided by Madhoo (1999) who investigated the SOC and coping resources of 35 patients in cardiac rehabilitation. Similar to previous research, this researcher also reported a significant positive correlation between the SOC and the coping resources.

Some implications should be drawn in this regard, firstly that these results support the similarity between Antonovsky’s concept of GRRs and the concept of coping resources. In exploring coping, Matheny, Aycock, Pugh, Curlette, and Canella (1986) suggested that “increasing one’s coping resources should positively affect the equation between perceived demands and resources at the appraisal stage” (p. 533). In other words, individuals with high levels of certain types of coping resources should be less likely to make the initial appraisal that a demand is in fact threatening enough to represent a stressor. This hypothesis highlights the similarities between the concept of coping resources and Antonovsky’s generalised resistance resources (GRRs). Therefore, an individual with strong SOC is expected to utilise the GRRs which are available to him/her.

Another implication of these findings is that SOC plays a significant role in cognitive appraisal processes, which were outlined by Lazarus and Folkman (1984), specifically, individuals with a high SOC are more likely to define stimuli as non-stressors during primary appraisal or to feel that they have the resources needed to cope with the stressful encounters during secondary appraisal (Cairns, 2001).

In contrast to these findings, Otto (2002) reported that results obtained in her
research on the coping orientation and resources of adult patients with depressed mood showed that no significant positive correlation was found between the SOC and coping resources of the patients. These results might raise questions regarding the proposed similarity between Antonovsky’s (1987) concept of GRRs and Hammer and Marting’s (1988) definition of coping resources. However, it was noted by Otto (2002) that the discrepancy of results between her study on depressed patients and other studies could be attributed to the nature of the sample. It was speculated that the sample’s responses to the items may have been shaped their subjective perceptions of reality which was likely to be distorted due to their mental illness.

2.7. CONCLUSION

In this chapter a summary of the development of the salutogenic paradigm and the implication of this paradigm on recent research in the field of stress, coping and health were introduced. The “new view of health” as termed by Antonovsky (1979) was presented as an alternative orientation to the pathogenic orientation. For the purposes of the present study, two constructs from this paradigm have been singled out, namely, the sense of coherence construct and the concept of coping resources.

In the following chapters these concepts will be applied to male police officers who work in the field during unsociable hours and who are likely to be exposed to violence, risks, danger, and traumatic situations. In addition, the general well-being in the South African Police Services (SAPS) will be outlined.
CHAPTER 3
GENERAL WELL-BEING, STRESS AND COPING OF POLICE OFFICERS IN THE SAPS

3.1. CHAPTER PRERVIEW

This chapter aims to focus on policing as an occupation as well as to highlight the nature and inherent dangers of police work and the impact of this type of work on police officers’ general well-being. Patterns of violence and a range of different stressors encountered by police officers in the world in general and in South Africa in particular are explored. Reactions, symptoms and coping strategies of police officers will be described. Furthermore, a description of the nature of policing in South Africa and its impact on police officers (e.g., PTSD, medical boarding, suicide rates and burnout) will be provided. Lastly, research findings concerning stress and coping among police officers in the SAPS will be briefly described.

3.2. POLICING AS AN OCCUPATION

3.2.1. Introduction

Police work has been identified as the most psychologically stressful and critical profession in the world (Bonifacio, 1991; Heiman, 1975; Manolias & Hyatt-Williams, 1986). Paton and Smith (1996) labelled individuals in high-risk professions, particularly
“those who fulfil a helping role during or after traumatic events” (p. 15), as being involved in critical occupations. Selye (1980) noted that due to the inherent nature of police work, this profession is likely to be one of the most stressful occupations in the world. Lewis (1973) focused his attention on the stress associated with the nature of police work. He referred to the hazards associated with the occupation as “danger stress” due to the characteristics and the nature of policing.

The danger and trauma associated with policing therefore seem to differentiate police work from other occupations. The nature of police work will be discussed in the next section followed by a focus on the typical stressors associated with police work, along with the common stress reactions and symptoms as well as coping strategies used by police officers.

3.2.2. Nature of Police Work

Police work encompasses a wide range of activities from mundane administrative tasks to dangerous, life threatening situations. Meadows (1981) described the function of the police as incredibly broad and complex. Police officers are expected to respond to a wide variety of situations both criminal and non-criminal. Reiser (1974) viewed police officers as performing an executive function, with minimal supervision and little opportunity for research or reflection. A police officer’s role requires him/her to make critical decisions to intervene and resolve a variegated spectrum of human crises. Often, the immediacy of time in which they must make life affecting decisions creates situations of great emotional intensity (Silbert, 1982).
Most researchers agree with Oliver (1993) who stated that violence in a suggestive or concrete form seems to have been ever present in the history of public order policing. In fact, it may be said that at some time or another every police officer is exposed to violence, becomes a victim of violence or uses violence against offenders (Nel, 1994). The most common traumas that police officers experience involve serious threats to themselves, their lives and the lives of fellow police officers. Police officers witness criminal activity, riots and corruption, injury or death of citizens, bombing, shooting and often even the killing of people (McCafferty, Godofredo, Domingo, & McCafferty, 1990). Beside exposure to death, police officers are often involved in high speed chases, witness violence, and are also expected to cope with several critical incidents, such as responding to deeply depressing social situations (e.g., scenes involving abuse, hostage situations, violent confrontations and raid situations) (Williams, 1987). Turco (1986) pointed out that the most dramatic part of every police officer’s job is that in carrying out their duties they may have to kill people. He added that exposure to such events often impact on the police officer’s personality and general well-being, personal life and the lives of those close to him/her. According to Meadows (1981), this horrific act leaves the police officer who committed such an act with a psychological crisis and impacts negatively on his/her psychological health (Meadows, 1981). Given the nature of police work, it is not surprising that there is sufficient evidence that stress levels experienced by police officers are elevated and exact a high emotional toll on them (Bonifacio, 1991).

The environment in which police officers operate is also an important factor to consider to fully understand the nature of their job, as the environment holds further
stressors. One of the environmental stressors may be the police organisation. In most
countries, including South Africa, this organisation has a quasi-military structure and is
often characterised by rigid authority, impersonality and an authoritarian command
system that subjects the officers to strict discipline (Gross, 1980).

Police work thus seems to be highly stressful taking into account the different
sources of this stress that are routinely part of the job. These different sources of stress
are explored in more depth in the following section.

3.2.3. Sources of Stress in Police Work

All the job stressors mentioned by police officers across the world can be
grouped into two major categories, namely organisational and inherent police stressors
stressors refer to factors related to police administration (e.g., shift work, paper work,
management and organisational change) (Aron, 1992; Kassen, 2002; Reese, 1986;
Territo & Vetter, 1981). In turn, inherent stressors refer to events and critical incidents
generally occurring as part of the police work which have the potential to be
psychologically or physically harmful to officers (e.g., danger, violence and crime)
(Violanti & Aron, 1993).

As noted before, in most parts of the world police work is seen as a highly
stressful occupation, a view strongly supported by literature and research. Kroes (1976,
1983) was among the first researchers to implicate contemporary policing as a
potentially stressful career. Others agreed that although policing offers many socially
redeeming rewards, it is one of the most stress filled jobs in the occupational picture today (Bonifacio, 1991; Heiman, 1975). Similarly, Reiser (1974) stated that police work is not only a high stress occupation, but it also affects, shapes and at times scares the individuals involved and their families. Manolias and Hyatt-Williams (1986) supported this sentiment by stating that police work has been identified as the most psychologically dangerous job in the world. The quoted literature points to the fact that a certain amount of consensus on the stressful nature of police work was established in the 1970s. This sentiment is echoed in more contemporary literature by Edwards (1992) and Goodman (1990).

Stress has thus become synonymous with police work. Police stress has become a term that encompasses the stress of being a member of a subculture within society composed of people who deal with life and death and who must be willing to put themselves in harm’s way to do their job (Stromnes, 1999). The stress associated with police work is closely related to the range of experiences that may be part of an average day at work. Researchers have classified police stressors along similar lines but under different categories. They concluded that no definite categories of stressors exist to describe police stress (Bonifacio, 1991; Kroes, Margolies & Hurrel 1974). However, Stratton, Parker, and Snibbe (1984) listed the most common incidents of traumatic exposure for police officers. These stressors are presented in Table 3.
Table 3

Stressors in the Police Work

<table>
<thead>
<tr>
<th>Stressor</th>
<th>Definition</th>
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<tbody>
<tr>
<td>External stressors</td>
<td>These include the public’s hostility, adverse government decisions, ineffective referral agencies, and ineffective communication among criminal justice agencies.</td>
</tr>
<tr>
<td>Internal stressors</td>
<td>These include poor training, poor supervision, poor career development opportunities, an inadequate departmental system of reward and reinforcement, excessive paperwork, and poor equipment.</td>
</tr>
<tr>
<td>The work itself</td>
<td>These include role conflict, shift work, constantly seeing people in pain and as a result taking the responsibility to assure their safety, exposure to trauma, and sometimes having to take undesirable steps to deal with the situation, such as shooting.</td>
</tr>
<tr>
<td>Personal stressors</td>
<td>These include incompetence, being part of minority, fears, and other personal problems.</td>
</tr>
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</table>

Table 3 highlights four categories of stressors. Of these two categories, Stratton et al. (1984) found that police officers reported administrative issues (external stressors) to be more stressful than life-threatening situations (work itself). These findings were confirmed by Reiser (1974) who identified the nature of the police organisation as the key contributor to stress among police officers.

Violanti (1993, cited in Paton & Violanti, 1996) generated a ranking of police stressors from a sample of 103 police officers. The following list emerged ranking the ten most highly rated stressors in police work from the most to the least stressful:

- Killing someone in the line of duty
- Fellow officer killed
- Physical attack
- Battered child
• High speed chases
• Shift work
• Use of force
• Inadequate departmental support
• Incompatible patrol partner
• Accident in patrol vehicle

The top-ranking stressors incorporate both inherent police stressors (i.e., killing someone in the line of duty) as well as organisational stressors (i.e., shift work). These stressors may generate various stress reactions and symptoms as well as attempts at coping among police officers, which will be outlined in the following section.

3.2.4. Stress Reactions, Symptoms and Coping Strategies among Police Officers

Researchers delineated a variety of symptoms and reactions as a result of the stressful aspects of policing (Alexander, Walker, Innes & Irving, 1993; Atkinson, Smith & Bem, 1990; Burke, 1994; Girdano & Stotelmeyer, 1980; Marais, 1992; Maslach, 1976; Roos & Moller, 1988). These symptoms and reactions can be categorised as follow:

• Emotional and psychological symptoms and reactions: which manifest in the form of frustration, anxiety, depression, burnout, emotional fatigue, excessive worrying, guilt, anger, feelings of resentment, irritation, inability to relax, feelings of hostility, rage, hate, and moodiness.
• Physiological and psychosomatic symptoms and reactions: these are characterised by high blood pressure, headaches, indigestion, constipation, diarrhoea, and ulcers.
- \textit{Behavioural reactions}: these include increasing the work level, exercising strong control, changing eating and sleeping patterns, alcohol consumption, using drugs, playing sport in a frenetic manner and poor patience.
- \textit{Cognitive symptoms}: these manifest through forgetfulness, concentrations problems, decision-making difficulties, deficiency in self confidence, and hypersensitivity towards criticism.
- \textit{Organisational reactions}: these are characterised by increased absenteeism for reasons such as poor mental health, low work productivity, boarding and poor interaction with colleagues and the community.

The focus of this study is not on these stress reactions and symptoms, but rather on the coping employed by the police officers. The attention therefore now turns to coping among police officers.

Kleinke (1991) defined coping as “the efforts we make to manage situations we have appraised as potentially harmful or stressful” (p. 3). These efforts may involve perceptual, cognitive or behavioural responses that are used to manage, avoid or control situations that could be regarded as difficult (Folkman & Lazarus, 1984).

For the purpose of this study, an important distinction must be made between coping resources and coping strategies. Coping resources act as “precursors of behaviour” (Wheaton, 1983, p. 222) and as “background factors” (Wheaton, 1983, p. 211). According to Hammer and Marting (1988), “coping resources are those resources inherent in individuals that enable them to handle stressors more effectively, to experience fewer or less intense symptoms upon exposure to a stressor, or to recover faster from exposure” (p. 2). Coping strategies, on the other hand, refer to behaviours
occurring after the appearance of a stressor or in response to chronic stressors (Pearlin & Schooler, 1978). Amirkhan (1994), Callan (1993) and Folkman and Lazarus (1980) distinguished between problem-focused (adaptive coping), emotion-focused and maladaptive coping strategies. Problem-focused coping strategies are directed at managing and improving an unpleasant experience or reducing the effects thereof (e.g., taking active steps to remove stressors, planning to solve the problem and seeking social support for advice or information). Emotion-focused coping strategies are directed as reducing the effects of stressful feelings caused by unpleasant experiences (e.g., seeking moral support and empathy, positive reinterpretation, denial, acceptance and turning to religion). Lastly, maladaptive coping strategies include the following: denying, focusing upon and venting of emotions (e.g., anger and aggressive outbursts), excessive alcohol and drug use, and mentally disengaging from the experience (e.g., daydreaming, sleep or self-destruction behaviour).

In much of the research on police coping with stress and trauma, the focus is more on the coping strategies rather than the coping resources, therefore, the researcher will describe these strategies used by police officers in the following paragraphs.

It has been found that police officers are likely to use a variety of coping mechanisms following stressful incidents. These include, cynicism, deviance, secrecy, depersonalisation, suspiciousness and alcohol and drug use or abuse (Graf, 1986). Gersons (1989) described the police organisation as a place with no room for fear. Part of the police officer’s job is to be tough and to suppress his/her emotions. One way in which police officers cope with anxiety and frustration emanating from stressful
conditions is by telling grotesque jokes or acting out their fears in brief spurts of aggressive physical and verbal behaviour, acting out the very opposite of what their true feeling are (Davis, 1984). Another common strategy recognised among police officers is cynicism. Niederhoffer (1967, cited in Violanti, 1981) defined cynicism as a loss of faith in people, or enthusiasm for the higher ideals of police work. As coping, cynicism allows police officers to lessen the effect of the job demands by simply disbelieving them. In this way, cynicism psychologically modifies the meaning of stressful job demands (Violanti, Marshall & Howe, 1985).

Alcohol is another coping strategy employed by police officers. The high incidence of alcoholism seems to point to the vulnerability of this occupational group and the mental stress involved in carrying out such work (Carson, 1982; Dagenaro, 1980). When other coping mechanisms fail, alcohol use seems to serve as convenient back up device to manage existing stress. A study conducted by Violanti et al. (1985) examined the impact of occupational factors on coping responses and found that stress has great effect on alcohol use. The results indicated that the attempts to cope by being cynical did not lessen the stress, and this coping failure increased the use of alcohol. Alcohol use can generate feelings of distraction and relief, it also reduces the ability to concentrate, to enjoy life and be productive, to sleep restfully and to cope with trauma memories and stress. In addition, it increases emotional numbing, social isolation, anger, irritability and depression (Stress Line, 02/10/2003).

The high incidence of divorce, psychological disorders and suicide among police officers, are more prevalent than in many other occupational groups and offer further confirmation of the relative absence of healthy coping mechanisms among police
officers (Jenkins, 1996). McCafferty et al. (1990) recognised that the stress experienced by police officers are similar to that experienced by individuals in military combat. They may therefore also suffer inflictions often associated with combat, namely Post Traumatic Stress Disorder (PTSD). McCafferty et al. (1990) stated that PTSD is a serious illness and is defined and diagnosed by certain symptoms a person exhibits following exposure to a specific traumatic event. It affects a person physically, mentally and emotionally to the degree where it is life altering. It has been estimated that at any given time 15-32% of all emergency personnel (i.e., law enforcement officers, firefighters, emergency medical personnel, traffic officers, and other crisis workers) will be suffering from PTSD, and there is a 30-64% chance that they will suffer from PTSD at some time during their lifetime (Stress Line, 02/10/2003). The literature reports an incidence of PTSD among police officers, which leads one to believe that it may be considered an occupational hazard for people carrying out policing duties (Kassen, 2002).

This section primarily referred to international research. As this is a South African study, the following section will focus on stress and coping of police officers in the South African Police Services (SAPS).

3.3. STRESS AND COPING IN THE SOUTH AFRICAN POLICE SERVICES (SAPS)

3.3.1. Introduction

In the following sections a historical background of the police institution in South
Africa will be outlined. Emphasis will be given to occupational stress, stress symptomology and its effects on police officers in the SAPS. These effects include PTSD, medical boarding, suicide, and burnout, all of which will be described in the following paragraphs.

3.3.2. Historical Background of the Police Institution in South Africa

The changes resulting from the dissolution of apartheid in South Africa are directly related to the new demands placed on the police. These demands include a growing expectation that the demographic profile of the police must reflect the community they serve. The public’s expectations regarding accountable service delivery has also increased. Police work is further complicated by the socio-economic and political turmoil of the past 30 years and escalating crime and violence in South Africa (Marks, 1995; Nel & Burgers, 1995). It seems necessary to consider the historical background of South Africa as well as that of the police system to contextualise the discussion regarding stress and coping of South African police officers.

From a historical perspective, the SAPS has been under the control of the Afrikaner dominated Nationalist Party since 1948. As such, policing reflected and adopted the apartheid policies of racial segregation and inequality (Brewer, Guelke, Hume, Moxon-Brown, & Wilford, 1988 cited in Stromnes, 1999). The SAPS of the apartheid government had a strong paramilitary structure with its root firmly entrenched in its origins as a colonial force and more generally, in the cultural tradition of the Afrikaans community which emphasised the importance of civil and military activities.
The paramilitary character was enhanced by the need of the South African state to control many threats to public order which apartheid by its very nature generated (Brewer et al., 1988 cited in Stromnes, 1999). According to Brewer et al. (1988, cited in Stromnes, 1999), states which govern divided societies, such as South Africa, Israel, and Northern Ireland, increasingly face public order problems arising from divisions within the dominant group which intensifies the difficulties of order maintenance. Accordingly, states like the old apartheid South Africa give the police an autonomy which allowed them in practice to have a wider definition of public disorder than the law allowed. For example, the Police Act of 1958 defined the functions of the SAPS to be the promotion of internal stability in South Africa and its dependent territories, the maintenance of law and order and the prevention of crime. Brewer et al. (1988, cited in Stromnes, 1999), therefore concluded that throughout the apartheid regime, most black South Africans were alienated from the police. There were a variety of issues which gave rise to this experience, such as the SAPS’s excessive brutality, their lack of impartiality and the protective attitude of the state towards police misconduct. This has contributed to the division between the police and the people (Brewer et al., 1988 cited in Stromnes, 1999).

According to Stromnes (1999), the recent political changes in South Africa have had a significant impact on the SAPS and created uncertainty and turmoil among police officers. In other words, the new political ideology required new ways of operating. The tactics used in the past in public order policing (e.g., excessive use of brutality) have now become punishable on both organisational and legal level, causing considerable role ambiguity and division within the organisation. However, the most significant
problems faced by the police are apartheid-induced repercussions with regard to community relations. The strong sense of cohesion and propensity to oppose influences disturbing the sense of “family togetherness, so typical of the SAPS since its inception has also contributed to the us/them mentality and the gap that exists between the police and the community” (Nel, 1994, p. 16). Brogden and Sheary (1993) therefore argued that the anger and frustration experienced by the black South African community resulted in mutual distrust, antagonism, and hostility. Consequently, police officers became targets of violent attacks. Rodney (1996) reported that, in comparison to most Western European and North American law enforcement agencies, a greater number of South African police officers are more regularly involved in shooting incidents. According to Gun Control Statistics (20/09/2003), South Africa has one of the highest rates of police officers killed in the world. During the years 1994 to 1998, an average of more than 240 police officers were murdered every year in South Africa. These statistics are presented Table 4.

<table>
<thead>
<tr>
<th>Year</th>
<th>On Duty</th>
<th>Of Duty</th>
<th>Total</th>
<th>Gun Shot</th>
<th>Gunshot murders as of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994</td>
<td>83</td>
<td>180</td>
<td>263</td>
<td>234</td>
<td>89%</td>
</tr>
<tr>
<td>1995</td>
<td>83</td>
<td>156</td>
<td>239</td>
<td>215</td>
<td>90%</td>
</tr>
<tr>
<td>1996</td>
<td>76</td>
<td>145</td>
<td>221</td>
<td>177</td>
<td>80%</td>
</tr>
<tr>
<td>1997</td>
<td>90</td>
<td>154</td>
<td>244</td>
<td>200</td>
<td>82%</td>
</tr>
<tr>
<td>1998</td>
<td>91</td>
<td>145</td>
<td>236</td>
<td>175</td>
<td>74%</td>
</tr>
<tr>
<td>Total</td>
<td>423</td>
<td>780</td>
<td>1203</td>
<td>1001</td>
<td>83%</td>
</tr>
</tbody>
</table>

The Table shows that firearms are the most commonly used weapon to kill police officers. In most cases police officers were shot while off duty. This seems to indicate that attackers target police officers when they are at their most vulnerable state, where they are not wearing bullet-proof vests or whilst relaxing from the stresses of their policing work.

3.3.3. Occupational Stress among Police Officers in the SAPS

The policing situation in South Africa is considered to be more dangerous and stressful than in any other western European or North American countries. The working environment for South African police officers is marked by increasing violence, extraordinary high crime rates and execution of police officers on and off duty. Murdering of police officers in South Africa has become endemic during the nineties (Conradie, 2002). Since 1993, more than 200 killing occurred in the SAPS. This is in sharp contrast with the average of 67 murders of police officers in the United States of America over a period of 50 years since 1945 to 1994 (Conradie, 2002).

Police officers in the SAPS are often victims, not only of violence but also of other kinds of disasters. According to Nel and Burgers (1998), police officers are present in most situations which can be described as critical incident stressors. These stressors include the serious injury or death of a child or a colleague; a mother who leaves small children behind; suicide of a colleague and incidents in which odours, sounds and sights trigger uneasy feelings (i.e., decomposing bodies; shooting incidents and bomb blast scenes; environmental dangers; and national disasters) (Mitchell in Dietrich & Hatting, 1993).
Gulle, Tredoux and Foster (1998) conducted a study among 91 officers of the SAPS in the Cape Peninsula as well as 102 police officers in the USA. The aim of the study was to compare stress levels of these two samples of police officers. Results showed that the South African sample evidenced a greater degree of stress when compared to the USA sample. However, both samples rated “fellow officer killed in the line of duty” and “killing someone in the line of duty” as the two most stressful events, inherent in police work.

It is evident from these findings that shooting incidents are a major source of stress and trauma for police officers. This was confirmed in the South African context by Nel (1994). According to Nel and Burgers (1998), police officers themselves emphasise that shooting someone, being shot, or seeing someone shot, are particularly traumatic. They postulated that such incidents must be seen in the context of crime statistics in South Africa for the past few years (1997 - 2003). These statistics reflect not only the state of policing, but also of South African society. These statistics are presented in Table 5.
In 2001 the Traumatic Stress Institute of South Africa (TSISA) conducted a study of 966 members of the SAPS working in the Gauteng province of South Africa, the area surrounding the major cities of Johannesburg and Pretoria. The aim of the study was to explore the level of traumatic stress symptomology and factors related to psychological resilience (SOC) of SAPS members. The sample was drawn from a range of units within the SAPS, and reflected diverse backgrounds and experience. The majority of the sample was males, with 61% of them being black and 34% white. The ten most highly

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Murder</td>
<td>24486</td>
<td>25127</td>
<td>22604</td>
<td>21758</td>
<td>21505</td>
<td>21553</td>
</tr>
<tr>
<td>Attempted murder</td>
<td>28145</td>
<td>29545</td>
<td>28179</td>
<td>8128</td>
<td>31293</td>
<td>35861</td>
</tr>
<tr>
<td>Robbery (aggravated)</td>
<td>73053</td>
<td>92630</td>
<td>98813</td>
<td>113716</td>
<td>116736</td>
<td>126905</td>
</tr>
<tr>
<td>Car hijacking</td>
<td>13052</td>
<td>15773</td>
<td>15172</td>
<td>14930</td>
<td>15846</td>
<td>14691</td>
</tr>
<tr>
<td>Bank robbery</td>
<td>463</td>
<td>493</td>
<td>450</td>
<td>469</td>
<td>256</td>
<td>127</td>
</tr>
<tr>
<td>Cash-in-transit</td>
<td>236</td>
<td>223</td>
<td>226</td>
<td>196</td>
<td>238</td>
<td>374</td>
</tr>
<tr>
<td>Rape (including attempt)</td>
<td>51959</td>
<td>49676</td>
<td>52891</td>
<td>25872</td>
<td>54293</td>
<td>52425</td>
</tr>
<tr>
<td>Assaults (serious)</td>
<td>234819</td>
<td>237818</td>
<td>261804</td>
<td>275289</td>
<td>264012</td>
<td>265321</td>
</tr>
<tr>
<td>Assaults (common)</td>
<td>201317</td>
<td>203678</td>
<td>232024</td>
<td>248862</td>
<td>261886</td>
<td>282526</td>
</tr>
<tr>
<td>Burglary (residential)</td>
<td>251579</td>
<td>274081</td>
<td>289921</td>
<td>303162</td>
<td>302657</td>
<td>319984</td>
</tr>
<tr>
<td>Burglary (business)</td>
<td>90294</td>
<td>94273</td>
<td>93077</td>
<td>91445</td>
<td>87114</td>
<td>73975</td>
</tr>
<tr>
<td>Vehicle theft</td>
<td>102571</td>
<td>107448</td>
<td>103041</td>
<td>100030</td>
<td>96859</td>
<td>93133</td>
</tr>
<tr>
<td>Theft out of vehicle</td>
<td>179191</td>
<td>190027</td>
<td>195411</td>
<td>200532</td>
<td>199282</td>
<td>195896</td>
</tr>
<tr>
<td>Shoplifting</td>
<td>63522</td>
<td>64597</td>
<td>66046</td>
<td>67685</td>
<td>68404</td>
<td>69005</td>
</tr>
</tbody>
</table>

rated duty-related stressors for police officers in the SAPS were as follow:

- Mistake causing serious injury or death to fellow colleague.
- Present when colleague was killed intentionally.
- Mistake causing serious injury or death to a bystander.
- Present when colleague was killed accidentally.
- Taken hostage.
- Serious threats against loved ones as a result of police work.
- Present when colleague was intentionally seriously injured.
- Sexually assaulted child.
- Exposed to HIV/AIDS or other disease.
- Seriously assaulted child (TSISA, 2001).

According to this list, the nature of the traumatic stressors SAPS officers encounter, is linked to current trends of violence in South Africa. The profile of traumatic stressors for members of the SAPS can thus be expected to be different from that quoted by Paton and Violanti (1996) (in section 3.2.3.). For example, police officers in the SAPS appear particularly sensitive to stressors that involve perceived negligence (e.g., mistake causing serious injury or death of a colleague) and stressors involving children (e.g., seriously assaulted or sexually assaulted children) (Kassen, 2002). These differences in what diverse groups of police officers regard as a stressor also extend to response patterns to traumatic exposure, which is influenced inter alia by cultural aspects (e.g., cultural identity of the individual, cultural explanation of the individual’s illness, and cultural factors related to the psychosocial environment and levels of functioning) (Stamm & Friedman, 2000). To conclude, Paton and Smith (1999) noted
that “high level of job demands and chronic exposure to traumatic events will elevate baseline levels of stress and traumatic stress symptomology in duty-related populations (e.g., police officers) to a level exceeding those prevailing within the general population…” (p. 17).

3.3.4. Effects of Stress on Police Officers of the SAPS

Given the nature and amount of stressors police officers experience, the effects are many and varied. According to Griggs (1985) and Violanti et al. (1985), it has been well documented that police officers appear prone to a variety of job-related infliction such as alcoholism, divorce, suicide, medical boarding, burnout, and psychiatric illnesses (e.g., depression, anxiety and Post Traumatic Stress Disorder).

The increasing distress of the members of the SAPS is evident in (a) the alarming rise in suicide statistics in the past few years; (b) the dramatic increase of medical boarding, particularly for psychological reasons (Nel & Burgers, 1995); (c) divorce statistics; and (d) the incidence of both alcohol and drug abuse (Marks, 1995). In the following paragraphs, a description of these effects will be outlined.

3.3.4.1. Post Traumatic Stress Disorder (PTSD)

According to Nel and Burgers (1998), continuous and excessive exposure to critical incidents without counselling can eventually lead to Post Traumatic Stress Disorder (PTSD). However, even when help is available some incidents are so acute that exposure to them will result in PTSD. PTSD is a diagnostic category used to
describe symptoms arising from emotionally traumatic experiences (Hamber & Lewis, 1997). According to the DSM-IV-TR (2000), the disorder presumes that the person has experienced a traumatic event involving actual or threatened death or injury to him/her or others, and where s/he felt fear, helplessness or horror. There are three main symptom clusters in PTSD namely:

- The intrusive symptom cluster: Intrusions can take the form of repeated, unwanted and uncontrollable thoughts of the trauma, and can include nightmares and/or flashbacks.
- The avoidant symptom cluster: These symptoms consist of the individual's attempt to reduce exposure to people or places that may elicit memories of the event (or intrusive symptoms). This also involves symptoms such as social withdrawal, emotional numbing and a sense of loss of pleasure.
- The hyperarousal symptom cluster: This cluster refers to physiological signs of increased arousal, such as hypervigilance, or increased startle response.

Although these reactions are disturbing, particularly for the victim, they are considered to be normal responses to abnormal events. Trauma symptoms are to some extent adaptive. Baldwin (1996) argued that the symptoms originally evolve to assist the individual to recognise and avoid other dangerous situations. In some cases these symptoms resolve within a few days or weeks of a traumatic experience. It is only when many symptoms (e.g., repeated thoughts, nightmares, flashback, attempts to avoid exposure to places or people that may elicit memories of the traumatic event, and physiological signs of increased arousal) (DSM-IV-TR, 2000) persist for more than six
weeks, and when they are extreme and debilitating, that the diagnosis of PTSD can be made. Risk for PTSD increases with exposure to trauma, and multiple or chronic trauma experiences are likely to be more difficult to overcome than most single instances (Baldwin, 1996). Hamber and Lewis (1997) suggested that the incidence and lifetime prevalence rates of PTSD in the general population are around 1% - 9%. In particularly violent areas, the incidence may be even higher. In studies to determine the extent of PTSD in the SAPS, it was indicated that 36% of riot police officers and 41% of black police officers suffered from PTSD at any given time (Wissing & Breed in Burgers, 1994).

Significantly, these statistics indicate that levels of PTSD were already high more than ten years ago and that the possibility of overexposure to violence and trauma is great in South Africa. The work environment of police officers thus put them at risk of developing stress related symptoms or disorders. The nature, frequency, and intensity of the incidents to which they are exposed have an influence on the extent to which police officers experience these incidents as traumatic, and this influences the cumulative impact on the individual. The internal and external stress factors which police officers are exposed to on a daily basis in the carrying out of their duties, also play an important role in the extent to which police officers are capable of coping with their work. Many police officers suffer from psychological reactions such as time distortion, sleep difficulties, and emotional reactions such as anger and crying. Alcohol abuse, lack of patience, tension, aggression, depression, loss of motivation, and loss of interest in the outside world are commonplace. Furthermore, their ability to function in the family, social and professional worlds is adversely affected (Carsons, 1982; Nel,
In other words, many police officers may experience symptoms associated with PTSD, although they may not meet the diagnostic criteria of PTSD.

3.3.4.2. Medical Boarding

A study conducted by the SAPS’s Institute for Behavioural Sciences has declared that stress-related trauma which results in police members being retired on medical grounds has increased (Rodney, 1996). “Boarding” is the term used when a medical board declares police officers unfit for service due to physical or psychological factors (Nel, 1994). According to Nel and Burgers (1998), because of stress-related disabilities, medical boarding constitutes a high percentage of medical retirements. Medical boarding for psychological reasons, including PTSD, have increased dramatically since 1991, suggesting that many police officers experience their circumstances as traumatic and feel unsupported and unable to cope. The statistics of medical boarding of police officers are presented in Table 6.
3.3.4.3. Suicide Rates

According to Rothmann and Van Rensburg (2002), suicidal behaviour may be considered a domain of psychological disturbance and is associated with potentially severe mental and/or physical health outcomes. Suicide among police officers of the SAPS is a serious problem. Factors linked to post traumatic stress disorder such as depression, hopelessness, substance abuse, moodiness and aggression are often cited as causes of police suicide. All these problems can be linked to stress emanating from police work (e.g., easy access to firearms, crime and corruption among police officers, and the police culture which often denies the problem and views it as disgraceful to the victim and the profession) (Peltzer, 2001). Nel and Burgers (1998) reported that, suicide statistics are alarming, as reflected in Table 7.

### Table 6

Medical Boarding of Police Officers from 1991 to 1997

<table>
<thead>
<tr>
<th>Year</th>
<th>Total boarded</th>
<th>Psychological reasons</th>
<th>% of total boarded</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991</td>
<td>571</td>
<td>37</td>
<td>7%</td>
</tr>
<tr>
<td>1992</td>
<td>788</td>
<td>236</td>
<td>30%</td>
</tr>
<tr>
<td>1993</td>
<td>1166</td>
<td>379</td>
<td>33%</td>
</tr>
<tr>
<td>1994</td>
<td>1375</td>
<td>540</td>
<td>39%</td>
</tr>
<tr>
<td>1995</td>
<td>1500</td>
<td>616</td>
<td>41%</td>
</tr>
<tr>
<td>1996</td>
<td>860</td>
<td>357</td>
<td>42%</td>
</tr>
<tr>
<td>1997</td>
<td>958</td>
<td>404</td>
<td>42%</td>
</tr>
<tr>
<td>Total</td>
<td>7218</td>
<td>2569</td>
<td>36%</td>
</tr>
</tbody>
</table>

Adopted from: Nel and Burgers (1998)
Table 7

Total Number of Suicides in the SAPS from 1991 to 1997

<table>
<thead>
<tr>
<th>Year</th>
<th>Total number of suicides</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991</td>
<td>65</td>
</tr>
<tr>
<td>1992</td>
<td>106</td>
</tr>
<tr>
<td>1993</td>
<td>134</td>
</tr>
<tr>
<td>1994</td>
<td>179</td>
</tr>
<tr>
<td>1995</td>
<td>154</td>
</tr>
<tr>
<td>1996</td>
<td>169</td>
</tr>
<tr>
<td>1997</td>
<td>154</td>
</tr>
</tbody>
</table>

Adopted from: Nel and Burgers (1998)

According to Piertese (1993 cited in Nel & Burgers, 1998), the highest number of suicides during 1994 was committed by police officers between the ages of 26 and 29, with an average age of 28. When comparing the incidence of suicide among police officers in 1991 (60 of every 100000) with that of the general population in South Africa (5 of every 100000), the extent of the problem is evident (Nel & Burgers, 1998; Rossouw, 1998).

3.3.4.4. Burnout

Burnout is defined as a chronic, protracted reaction or symptoms of excessive stress (Lazarus & Monat, 1985) with emotional fatigue, depersonalisation, and poor personal fulfilment (Maslach & Jackson, 1986). Based on this definition, burnout is an occupational hazard in police work (Biggam, Power, MacDonald, Carcary & Moodie, 1997). In their research, Lanagan-Fox, Deery and Van Vliet (1997) have found that the
relationship among police officers, long working hours, poor salaries, problems with the public, bureaucratic meddling and poor opportunities for promotion were the most relevant causes of burnout. Alexander et al’s. (1993) study of burnout in the police forces concluded the following:

• Burnout can be active in terms of externalised behaviour, like hostility.
• Burnout can be passive in terms of interpersonal and psychological processes such as withdrawal.
• Burnout usually manifests itself in individuals who are sensitive, dedicated, enthusiastic, compassionate, idealistic, energetic, and productive.
• Burnout comprises the basic components of emotional, physical, and cognitive fatigue, depersonalisation, a decrease in personal effectiveness and a divergence from normal behaviour patterns.

The harmful psychological and physical effects of danger, violence and crime as stressors inherent to police work are evident from the discussion thus far. In focusing on the inherent stressors, as they apply to the SAPS, the discussion now turns to South African research, as well as informal research that have been conducted in the SAPS on general well-being, stress and coping of police officers.

3.4. RESEARCH ON GENERAL WELL-BEING, STRESS AND COPING OF POLICE OFFICERS IN THE SAPS

Peltzer (2001) conducted a study in the Northern Province of South Africa which aimed to examine the extent to which current and continuous exposure to traumatic
experiences contributed to traumatic stress responses. It was found that threat, anxiety, helplessness and total emotional intensity were all significantly interrelated. However, PTSD symptoms were not associated with the outcome measures of anxiety and helplessness, and negatively related with threat. Further results indicated that the length of police service and age were positively associated with threat but not with the other outcome measures namely, anxiety, helplessness and post traumatic symptoms. In the light of these findings, it seems that there are no strong indications that there is a relationship between specific traumatic experiences and particular patterns of traumatic stress symptomology (Kopel & Friedman, 1997).

Rothmann and Van Rensburg (2002) investigated psychological strengths and resilience (SOC), coping and suicide ideation in the SAPS in the North West Province. These researchers found that the sense of coherence of police officers included in their study was relatively weaker than that of other samples studied by Rothmann (2000). The research design does not allow one to determine whether the sense of coherence of police officers becomes weaker after their having been involved in the police work for a given period of time. However, they concluded that it might be possible that the nature of the work environment and the low social status associated with the SAPS could have impacted negatively on police officers’ sense of coherence. Further results regarding coping strategies among police officers indicated that the most frequently used coping strategies were both emotion-focused and problem-focused coping strategies namely: a) turning to religion (to facilitate emotional support); and b) planning (think about various strategies which could be used to solve a problem) (Carver, Scheier & Wientraub, 1989). In addition, it was found that the coping strategies utilised less
frequently by the police officers were those judged to be maladaptive in nature, namely: a) denial (experiencing stress as unreal); b) focus on and venting of emotions (focusing on stressful situation and expressing feelings about it); and c) behavioural disengagement (ignoring and avoiding stressors and becoming more helpless and powerless). Although probably not as effective as a coping strategy, it is of concern that police officers scored low on the venting of emotions. This tendency may be the result of emotional detachment due to the nature of their work and their lack of trust in the organisation (Evens & Coman, 1992). It could be expected that police officers will refuse to share their emotional reactions to job stressors with others, which may isolate them from social support at work as well as at home (Evens & Coman, 1992).

Boshoff (2000) investigated the police officer’s experience of trauma in a trauma intervention programme in the Port Elizabeth area. His sample of police officers adopted different coping styles to deal with their stress. These coping styles vary with specific reference to social support for emotional reasons (e.g., reaching out to others for moral support, sympathy and understanding), avoidance/denial and problem-focused coping mechanisms. It seems from these findings that police officers use both emotion-focused and problem-focused coping strategies to deal with the trauma they experience. Van Rooyen (2000) who investigated the psychosocial adjustment and stress levels of shift workers in the SAPS found that the participants tend to use problem-focused, emotion-focused and maladaptive strategies to cope with the stressful demands of their work. He reported that they appeared to use those strategies without indicating any preference for any of them.

Consistent with Rothmann and Van Rensburg study’s findings (2002), Rothmann
and Strijdom (2002) who investigated suicide ideation and the sense of coherence (SOC) among SAPS members, found that SOC strength was related positively to suicidal ideation of police officers in the SAPS. In other words, the lower the SOC is, the higher the likelihood of police officers to have suicidal ideations. It could be concluded from these research studies (Rothmann & Rensburg, 2002; Rothmann & Strijdom, 2002) that individuals with greater resources are less vulnerable to resources loss and more capable of resource gain. Conversely, those with fewer resources are more vulnerable to resource loss and less capable of resource gain. While SOC is regarded as a broad-band resource, suicide ideation could be the result of a lack of resources (Hobfoll, 1989).

Kassen (2002) investigated post traumatic response, ego mechanisms and the SOC of a sample of police officers in the SAPS. His study aimed to explore the relationship between different factors and the SOC as he found it in the study sample. The findings of his study were as follow:

- **Sense of coherence (SOC) and levels of PTSD symptoms**: Overall findings in relation to the three components of the SOC (i.e., comprehensibility, manageability and meaningfulness) pointed to a significant inverse relationship with levels of PTSD. This finding was confirmed by Dudek and Koniarek (2000) who investigated the relationship between PTSD symptoms and SOC. These researchers found that lower levels of SOC were related to higher levels of PTSD symptoms.

- **Sense of coherence (SOC) and stress symptoms**: Results from this study suggested that SOC is associated with lower levels of subjective distress and as a global, perceptual disposition underlying coping resources, SOC appears to play a central
role as a protective factor against subjective distress. A weak SOC in this study suggested an inability to mobilise cognitive/affective resources, both internally and externally, in the context of continued exposure to routine work stressors and particularly traumatic stressors. This finding confirms Antonovsky’s (1987) conclusion that successful coping is dependent on SOC as a global orientation of coping.

Kopel (1996) investigated the relationship between coping styles, levels of psychological distress and the possible development of PTSD among a sample of police officers following exposure to traumatic experiences. Results from his research suggested that coping strategies used in general by police officers are predominantly emotion-focused and that participants who were diagnosed with PTSD reported more frequent usage of such coping strategies than others who were not diagnosed with PTSD. In addition, emotion-focused strategies also tend to be significantly related to greater levels of psychological distress and PTSD development.

Further research in the area of coping among police officers, was conducted by Van Rooyen (2000) who investigated the psychosocial adjustment and stress levels of shift workers in the South African Police Services. He concluded that shift workers in the SAPS find it difficult to cope and adjust to shift work. One of the implications of Van Rooyen’s (2000) study is that stress is a problem amongst shift workers in the SAPS. He noted that further research is necessary to gain insight into police stress and to implement initiatives in order to reduce stress and to facilitate coping and adjustment of shift workers in the SAPS and of police officers in general.

To summarise, over the past decade the research focus was directed mainly at
the symptoms, causes of stress and coping strategies among police officers (Ainsworth & Pease, 1987). Police officers seem to employ a range of strategies to cope with the stress and trauma inherent in their work. These coping strategies could be classified into problem-focused, emotion-focused, and maladaptive strategies. No research studies were reported to investigate the coping resources of SAPS members, which is one of the objectives of the present study.

3.5. CONCLUSION

In most parts of the world, police work is identified as a highly stressful occupation, a view strongly supported by literature. Although, stressors to which police officers are exposed to can be classified into two categories namely organisational and inherent stressors, the focus in this chapter was on the latter.

The increasing distress of police officers in the SAPS is evident in the high incidence of PTSD, as well as the alarming rise in suicide and burnout statistics. Research on coping as well as relevant statistics showed high levels of stress among police officers that impact negatively on their general well-being.

It is of importance to note that research on coping and coping resources of police officers is limited in South Africa, and that most of the research studies were conducted to explore the causes and symptomology of stress among police officers.
CHAPTER 4
RESEARCH DESIGN AND METHODOLOGY

4.1.CHAPTER PREVIEW

This chapter presents a description of the research design and methodology employed in the study. The primary aim and objectives of the study are outlined, followed by descriptions of the research design, the participants, the sampling procedure and the measures used to gather the data. Lastly, the research procedure, the methods for analysing the data and the ethical considerations are discussed.

4.2. PRIMARY AIM AND OBJECTIVES OF THE RESEARCH

The primary aim of this study was to explore and describe the sense of coherence and coping resources of male police officers in the South African Police Services (SAPS).

In order to accomplish this aim, the following objectives were identified:

1. To explore and describe the coping resources of male police officers in the SAPS.
2. To explore and describe the sense of coherence of male police officers in the SAPS.
3. To explore and describe the relationship between the sense of coherence and coping resources of male police officers in the SAPS.
These objectives guided the methodological aspects of the study. No hypotheses were generated, given the exploratory-descriptive nature of the study.

4.3. RESEARCH DESIGN

A quantitative exploratory descriptive research design was employed in the present study. The exploratory design was selected as the study aimed to gain familiarity with a phenomenon or topic (Van Lill & Grieve, 1994), namely the coping resources and sense of coherence of male police officers in the SAPS. Tentative incomplete conclusions were therefore generated that could direct further research on the topic (Babbie, 1990; De Vos, 2000). The study was also descriptive in nature, as it attempted to accurately describe the characteristics of a particular individual, group, situation or event (De Vos, 2000; Leary, 1991).

Rosnow and Rosenthal (1996) indicated that descriptive research is considered a necessary first step when attempting to gain familiarity with a phenomenon, since it establishes the foundation of future research. This type of research aims to document the frequency and prevalence of particular psychological problems (Barker, Pistrang & Elliot, 1994). A disadvantage of this design is that faking can occur in the self-report techniques (Kerlinger, 1986). Information obtained may therefore not reflect in-depth perceptions. Biased sampling, unanswered questions, lack of spontaneous responses and lack of control over the environment might be added to these disadvantages. The advantages of this design are that it saves time and money and interviewer bias is reduced as participants complete identically worded self-report measures (Bailey,
The exploratory-descriptive design was considered to be best suited to the current study as the primary aim and objectives were exploratory and descriptive in nature. In keeping with this design, the tentative conclusions generated could then direct further research on the topic.

According to Cozby (1993), researchers can employ various descriptive methods. For the purpose of this research the correlational research method was employed. Correlational research considers more than one variable and attempts to look at the relationships between two or more variables. In correlational research, each person is measured or assessed or observed on two or more dimensions, and through statistical procedure, some inferences are drawn about the relationship between those dimensions. The essence of correlational research is that the researcher does not manipulate or change the individuals or their position on any variable but merely observes and measures. Because of this lack of control, it is rarely legitimate to draw inferences about the effect of one variable on another, based on the correlational design (Harris, 1998). The correlational design was utilised to meet the third objective of this study, namely to explore and describe the relationship between the coping resources and sense of coherence of male police officers in the SAPS.

4.4. PARTICIPANTS AND SAMPLING PROCEDURE

A non-probability convenience sampling technique was employed, since the aim and objectives of the study were exploratory and descriptive in nature. Non-probability
sampling means that the researcher has no way of knowing the probability that a particular case will be selected for the sample (Fink & Kosekoff, 1998; Leary, 1991).

Convenience sampling was employed as the researcher selected a sample primarily because it was accessible and reasonably representative of the population of interest (Harris, 1998). The advantages of non-probability convenience sampling are that it saves time and money and is less complicated than probability sampling methods, since the population of participants is accessible to the researcher (Harris, 1998). The major disadvantages of non-probability sampling are that it is less precise and therefore limits the possibility of generalising the results of the study beyond the specific sample (Bailey, 1987). This was not perceived to be a major disadvantage as the exploratory-descriptive research design that was employed in this study does not lend itself to generalisation.

The sample under investigation consisted of male police officers in the South African Police Services who are categorised as “shift workers”. According to the SAPS, “shift workers are those police officers who work in the field during unsociable hours and who are likely to be exposed to violence, risks, danger, and traumatic situations” (SAPS, 2003, p. 3). The sample was restricted to male participants because of the limited number of females police officers who are categorised as shift workers. All participants were required to have at least a grade 12 qualification which is in keeping with a prerequisite for individuals wanting to join the SAPS. In addition, participants were required to be proficient in English in order to complete the questionnaires. English proficiency was therefore set as a requirement to ensure that the participants understood the researcher’s explanation of the purpose of the study and were thus able
to give informed consent and complete the questionnaires, thereby maintaining the validity of the results. All participants furthermore had to have been employed as shift workers in the SAPS for a minimum of two years, irrespective of their rank, so as to provide some uniformity in terms of time spent in the SAPS as shift workers. A further requirement was that the participants should not be affected by possible relocation or transfer as stipulated in Resolution 7/2002 (SAPU, 2003). It was hypothesised that this Resolution may impact on the sense of coherence and coping resources of those police officers who are affected. Police officers affected by this Resolution were therefore excluded from the sample to maintain the validity and reliability of the results.

It was decided to make use of four police stations, as these stations met all the relevant and necessary requirements to conduct this study. In addition, the four stations served communities that were reasonably similar in terms of the nature of the work conducted by police officers working as shift workers. All these stations granted permission for the study to be conducted. However, the required sample size for meaningful data analysis, was drawn from only three of these stations.

The researcher invited all the male police officers from the identified stations who met all the sampling requirements to participate in the study. Not all these police officers volunteered their participation. Factors such as busy work schedules, prior commitments, personal circumstances (e.g., illness, lack of motivation, and suspicion regarding the intended purpose of the study) prevented some of the police officers from volunteering their participation.

Grinnell and Williams (1990) suggested that a minimum of 30 participants are sufficient to facilitate the performance of basic statistical procedures in an exploratory
descriptive study, while at least 50 participants are required for a correlational study. Since the aim and objectives of the present study had a correlational component, the data was collected until the requirements for conducting a correlational study were met. Notwithstanding the aforementioned, the minimum size of the sample was set at 60, to ensure meaningful analysis of the data, even if some of the questionnaires proved to be incomplete and therefore not valid for inclusion. Seventy-eight police officers participated in the study. After incomplete questionnaires had been discarded, the final sample size came to 70.

4.5. MEASURES

The measures that were used in this study included a biographical questionnaire, and two standardised questionnaires namely, the Coping Resources Inventory (CRI) and the Sense of Coherence Questionnaire (SOC-29). Each of these measures will be briefly described in the following paragraphs.

4.5.1. The Biographical Questionnaire

A brief biographical questionnaire (see Appendix A) was constructed by the researcher to obtain information regarding the personal demographics of the participants. The information was needed for the meaningful interpretation and description of the research findings. The questionnaire gathered information on the participants’ age, ethnic group, marital status, rank in the SAPS, history of psychiatric
illness or psychological treatment and income. Participants requiring feedback were also requested to provide their names and contact details.

4.5.2. The Coping Resources Inventory (CRI)

The Coping Resources Inventory (CRI) was constructed by Hammer and Marting (1988) to identify coping resources currently available to individuals for dealing with stress. In contrast to a large body of clinical theory and practice, the CRI was developed to emphasise resources rather than deficits. The emphasis on resources is important because, according to Hammer and Marting (1988), “identifying and acknowledging clients’ resources and competencies as well as their deficits and impairments may prove useful in designing interventions and improving self-concept” (p. 1). Furthermore, increased knowledge of the role of resources in the coping process could facilitate the planning of prevention programs and allow researchers to specify more comprehensive models of coping that take both resources and deficits into account (Hammer & Marting, 1988).

The CRI has been used in a variety of applications in clinical and educational settings. Although more research is needed for many of these applications, the following list is representative of the CRI’s potential uses (Hammer & Marting, 1988, p. 2):

- In treatment planning for stress-related problems of individuals in counselling.
- In treatment planning for specific rehabilitation programs.
- As a tool for designing stress workshops tailored for specific groups.
- As a tool for program evaluation.
• As a tool for identifying individuals who might be at-risk, in need of counselling, or in need of medical intervention.

• As an educational planning and assessment device in high school health classes.

• As a research instrument to investigate coping resources in various populations and to provide a standardised measure in coping research.

Hammer and Marting (1988) divided the resources that are assessed by the CRI into five broad domains. These domains resulted from their experience in conducting stress programs, working with individual clients and reviewing stress literature. It is of importance to note that many resources were not included in the CRI, such as education and income, because the measure incorporates only those resources that fall in the counselling realm. The result was a 60-item instrument that measures resources in five domains namely; cognitive, social, emotional, spiritual/philosophical and physical.

Hammer and Marting (1988) described these domains as follow:

• Cognitive (COG): This domain measures the extent to which individuals maintain a positive sense of self-worth, a positive outlook towards others, and optimism about life in general. Examples of questions from this domain include: “I feel as worthwhile as anyone else” and “I see myself as lovable”.

• Social (SOC): This domain measures the degree to which individuals are imbedded in social networks that are able to provide support in times of stress. Examples of questions from this domain include: “I am part of a group, other than my family that cares about me” and “I enjoy being with people”.

• Emotional (EMO): This domain measures the degree to which individuals are able to accept and express a range of affect, based on the premise that a range of
emotional responses aids in ameliorating long-term negative consequences of
stress. Examples of questions from this domain include: “I can show it when I am
sad” and “I express my feelings clearly and directly”.

- **Spiritual/Philosophical (S/P):** This domain measures the degree to which actions of
  individuals are guided by stable and consistent values derived from religious,
familial, or cultural tradition or from personal philosophy. Such values might serve to
define the meaning of potentially stressful events and prescribe strategies for
responding effectively. Examples of questions from this domain include: “I know
what is important in life” and “My values and beliefs help me meet daily challenges”.

- **Physical (PHY):** This domain measures the degree to which individuals enact health-
  promoting behaviours believed to contribute to increased physical wellbeing.
Physical wellbeing is thought to decrease the level of negative response to stress
and to enable faster recovery from stress. Examples of questions from this domain
include: “I exercise vigorously 3-4 times a week” and “I am in good physical shape”.

According to Hammer and Marting (1988), the CRI may be administered to
individuals or to a group and is appropriate for a wide range of ages. The inventory can
normally be completed in about 10 minutes. For each of the 60 items of the CRI,
respondents use a four-point rating scale to indicate how often they have engaged in
the item over the past 6 months. Six items with negative wording are reversed scored,
before adding their scores to the total score for that particular scale. The sums of the
item responses for each scale constitute the scale scores. The total resource score is
computed by adding the five individual scale scores. The higher the scores, the higher
the coping resources of that person (Hammer & Marting, 1988).
4.5.2.1. Reliability and Validity of the CRI

The reliability and validity of the CRI were tested on a variety of subjects. The item to scale reliability correlations were shown to possess fairly good homogeneity in terms of item content per scale. Similarly, the internal consistency, which was measured using Cronbach’s alpha, possessed a range and pattern that suggests that the constructs in the CRI are fairly homogenous and reliably tapped (Aiken, 1997). As regards validity, the CRI was found to possess evidence of predictive, convergent, divergent, discriminant and concurrent validity (Hammer & Marting, 1988).

It is important to mention that the CRI was developed and standardised in the United States of America, and that the norms generated are not necessarily applicable to the South African population. However, the CRI has been used in previous studies conducted in South Africa by amongst others, researchers from the University of Port Elizabeth. These studies include Brown (2002) who investigated the coping resources of medical professional women, Cairns (2001), who investigated the coping resources of cancer patients, and Madhoo (1999), who studied the coping resources of patients in cardiac rehabilitation programs. Brown (2002) found that a reliability coefficient of 0.93 was obtained for the study’s sample which indicates a moderate to high reliability (Murphy & Davidshofer, 1994).

4.5.3. The Sense of Coherence Questionnaire (SOC-29)

The Sense of Coherence Questionnaire (SOC-29) of Antonovsky (1987) is
regarded as the operationalisation of his construct “sense of coherence”. According to
Antonovsky (1993), the questionnaire measures sense of coherence, which he
described as the extent to which a person has a pervasive, enduring and dynamic
feeling of certainty that:

1. The stimuli that bombard people and which come out of the internal and external
   environment in the course of living is structured and predictable (Comprehensibility -
   11 items).

2. There are resources available to the individual that will help or enable him/her to
   manage these stimuli (Manageability - 10 items).

3. These demands are perceived as challenges in which energy is worthy of being
   invested (Meaningfulness - 8 items).

   The SOC-29 consists of 29 five-facet items, where each scale item includes four
facets describing stimulus, and the fifth represents one of the three components that
comprises the sense of coherence (i.e., comprehensibility, manageability, and
meaningfulness). Respondents are required to select a response on a seven-point
semantic differential scale, with two typical anchoring phrases (i.e., “never have this
feeling” as opposed to “always have this feeling”). A short form of 13 of the 29 items is
available and is called the SOC-13. For the purposes of the current study, the English
SOC-29 was utilised.

   When scoring the questionnaire, reversed scoring is used for 13 items that have
been formulated negatively (Antonovsky, 1987). The values of each item on the seven-
point scale are then summated to obtain a total score. The subtotal of the three
components of the SOC-29 can be determined by identifying the items for every
subscale and then adding the scores to obtain a total score for each subscale. The scores on the SOC-29 range widely from 29 to 203. The higher the score, the more positive the respondent’s sense of coherence and the lower the score, the more negative the respondent’s sense of coherence.

Studies have confirmed that the SOC-29 questionnaire is a uni-dimensional instrument with a single global factor that measures SOC (Frenz et al., 1993; Holm, Ehde, Lamberty, Dix & Thompson, 1988). Even though the SOC-29 consists of three components, measured by the three subscales, the scale is first and foremost a one-dimensional measuring instrument. The scale was developed to measure the SOC construct as a global orientation, rather than consisting of explicit components (Antonovsky, 1979; 1993). The current study therefore only made use of the total SOC scores.

4.5.3.1. Reliability and Validity of the SOC-29

The SOC-29 has been used in various countries and has been found reliable and valid across a variety of populations in 26 studies. The SOC-29 is available in 14 different languages namely, Afrikaans, Czech, Dutch, English, Finnish, German, Hebrew, Norwegian, Rumanian, Russian, Serbian, Spanish, Swedish and Tswana. The Cronbach alpha measure of internal consistency has been found to range from 0.82 to 0.95 with further indications of good construct and criterion validity (Frenze et al., 1993). Substantial evidence exists that confirms content validity and face validity (Antonovsky, 1993). In a later article, Antonovsky (1996) reiterated these findings by stating that the
SOC-29 had been found to be consistently feasible, reliable and valid across cultures, social classes, age, ethnic groups and gender. Furthermore, it has been found to bear a strong correlation to a variety of measures of well-being and health, as well as distress and adaptation (Smith & Meyers, 1997).

The validity of a cross-cultural applicability of this measure was investigated in the South African context by Wissing and Van Eeden (1997). The SOC-29 was found to have adequate validity. The South African research also confirmed the universal applicability and validity of the measure across culture, gender, and age (Cairns, 2001; Carsten, 1995; Madhoo, 1999; Otto, 2002). Considering the fact that the SAPS is an organisation, Le Roux (2000) who conducted research within a transforming banking organisation, confirmed the reliability and validity of the SOC-29 as a measuring instrument within an organisational context.

4.6. PROCEDURE

The first step in the current study was to establish formal contact with the South African Police Services in Port Elizabeth. This contact ensured that verbal consent was received from the director of the SAPS for the Port Elizabeth region. Following verbal consent by the director, various police stations in Port Elizabeth were contacted to obtain a database of possible participants. Before field work commenced, written permission was requested from the SAPS. The researcher also ensured that the present study met the ethical standards of the Human Ethics Committee of the University of Port Elizabeth. Once written permission was obtained from the SAPS
(Appendix B), dates for administration were scheduled and potential participants received a letter (Appendix C) informing them of the nature and purpose of the study as well as a consent form (Appendix D) to be signed by those who agreed to participate in the study.

Following this, the tests were administered in a group setting across different shifts. The shift commanders requested the testing to be conducted during different night shifts as the police officers were judged to be less busy at night. A total of 12 testing sessions were conducted over a period of three weeks.

After each administration session, all the completed forms and questionnaires were collected by the researcher. The researcher was responsible for the scoring of the questionnaires. Once the questionnaires had been double-checked by an independent psychometrist, the data was ready for analysis. Group feedback was given to the participants who requested feedback.

4.7. DATA ANALYSIS

The data was analysed in terms of the three objectives of this study. In order to realise these objectives, data analysis consisted of both descriptive and correlational analysis. In the following sections a theoretical overview of the techniques employed for this purpose as well as the motivation for using them will be outlined.
4.7.1. Descriptive Statistics

To realise the first two objectives, descriptive statistics were used to describe the sample’s performance on the SOC and on each of the subscales for the CRI. This included measures of central tendency (e.g., mean) and of dispersion (e.g., standard deviation). The mean is a measure of central tendency, meaning that it provides numerical values referring to the centre of the distribution (Howell, 1995). The mean was used to describe the average score of the sample on the SOC and each of the subscales for the CRI. The advantages of using the mean is that it can be algebraically manipulated and is also a better estimate of the population mean than other measures of central tendency, such as the median or the mode (Howell, 1995). However, the disadvantage of using the mean is that it is influenced by extreme scores (Harris, 1998; Howell, 1995).

The standard deviation is a measure of variability (or spread in a distribution of scores) and determines distance (or the average deviations) of scores from the mean (Cozby, 1993; Harris, 1998). Since norms for the sample under investigation had not been established, describing the data in terms of its means and standard deviations is a crucial step towards understanding the nature of the SOC and coping resources of male police officers in the SAPS. The data obtained from the biographical questionnaire, which was essential for placing the results within a contextual framework, were also analysed using descriptive statistics.
4.7.2. Correlational Study

To meet the third objective of the study, which was to explore and describe the relationship between the coping resources and the sense of coherence of male police officers in the SAPS, the following steps were taken. Firstly, multiple correlations were employed between the total score of the SOC and the subscales of the CRI. Multiple correlations symbolized by R, depict a correlation between a group or combination of variables and another variable (Harris, 1998). Secondly, the Pearson product-moment correlation coefficient was used. It is difficult to assess the strength of a relationship between two variables on the basis of a scatter diagram (Young, 1962). The Pearson product-moment correlation thus provides an objective measure of the direction and strength of the relationship between variables as reflected in their bivariate frequency distributions (Huysamen, 1987). Aiken (1997), however, cautioned that, although a correlation implies prediction, it does not imply causation. This means that although two variables may be related to one another, one cannot say either necessarily causes the other. According to Harris (1998), the Pearson r, or indeed any correlation coefficient, can take on values between -1 to +1. A value of 0 indicates that there is no relationship between variables. A value of -1 indicates that there is a perfect negative relationship between the variables; implying that as the scores of the one variable increase, so the scores of the other variable decrease (Harris, 1998; Rosnow & Rosenthal, 1996). A value of +1 indicates that there is a perfect positive relationship; suggesting that as the scores of the one variable increase, so the scores of the second variable increase (Harris, 1998; Rosnow & Rosenthal, 1996).
Once a correlation between variables has been established, it is important to assess the significance of the relationship. A p-value of 0.05 was utilised, as this is the standard for most psychological research reports (Harris, 1998). With regard to the interpretation of the significant correlations, the following well-established set of guidelines suggested by Guilford (1946) was used for the interpretation of the magnitude of the relationship:

- \( > 0.20 \) slight; almost negligible relationship
- \( 0.20 - 0.40 \) low correlations, definite, but small relationship
- \( 0.40 - 0.70 \) moderate correlation
- \( 0.70 - 0.90 \) high correlation
- \( 0.90 - 1.00 \) very high correlation

### 4.8. ETHICAL CONSIDERATIONS

Since the objects of study in the social sciences are human being, researchers do not have free reign in terms of research procedure (Huysamen, 1994). The participants are entitled to be treated with respect, dignity and courtesy. For this reason, the researcher found it necessary to briefly explore some of the ethical considerations that are relevant to the current research study. These considerations include informed consent, voluntary participation, privacy and confidentiality.
4.8.1. Informed Consent and Voluntary Participation

Informed consent implies consent to participate in a scientific study, given by a potential participant who has received an explanation of the procedure to be followed and a description of any possible adverse results from participating (Christensen, 1997). The information given to a participant is important so that s/he makes an informed choice as to whether to participate or to decline (Christensen, 1997; Strydom, 1998). It is therefore important that the researcher uses language that is reasonably understandable to research participants (APA, 2000). Huysamen (1994) indicated that the participants should be informed of the purpose of the research, and the risk of any possible discomfort. They should also know that they have the right to withdraw at any time, and that their participation in the study is voluntary. This means that there is no pressure or coercion on the part of the researcher. In the present study, all the potential participants were informed of the nature and purpose of the study in the form of a letter (Appendix C) and a consent form (Appendix D) that emphasised the confidential and voluntary nature of the research. Prior to commencing the testing, the researcher also verbally explained the nature and purpose of the study to the participants and informed them of their rights. Participants were invited to ask questions before signing the consent form.

4.8.2. Privacy and Confidentiality

According to Huysamen (1994), the invasion of privacy is the most ethical
consideration in research to be taken into account. An invasion of privacy includes any questions about intimate or personal matters that are not usually discussed in public, and which may cause feelings of anxiety, guilt or shame (Strydom, 1998). In the current study, no questions were asked regarding intimate details of the participants. Since no sensitive or personal information was required in the questionnaires, potential harm to the participants was also minimised (Barker et al., 1994).

There are two standards that are applied in order to help in protecting research participants’ privacy, namely confidentiality and anonymity. Confidentiality refers to the handling of information in a confidential manner (Strydom, 1998). It is the researcher’s responsibility to assure that identifying information will not be made available to anyone who is not directly involved in the research. Anonymity implies a stricter standard, in that it refers to the principle that the participants will remain anonymous throughout the study, even to the researcher (APA, 2000). Although the current study guaranteed confidentiality to all participants, anonymity could not be guaranteed for those participants who chose to provide their personal details so as to receive feedback. The confidentiality and anonymity issues where brought to the participants’ attention in the covering letter (Appendix C) as well as during the researcher’s verbal explanation prior to commencing the testing.

4.9. CONCLUSION

This study aimed to explore and describe the coping resources and sense of coherence of male police officers in the SAPS. It employed a quantitative exploratory
descriptive research design, making use of non-probability convenience sampling. The sample consisted of male police officers who have been in the service of the SAPS for at least two years. The sample was restricted to male participants because of the limited number of female police officers who are categorised as shift workers. All participants were required to have at least a grade 12 qualification which is in keeping with a prerequisite for individuals wanting to join the SAPS. A further inclusion criterion was that the police officers must not be subjected to possible relocation or transfer as stipulated in Resolution 7/2002.

The Coping Resources Inventory (CRI) was employed to identify the coping resources used by the participants and the Sense of Coherence Questionnaire (SOC-29) was utilised as a measure of the participants’ sense of coherence. Both questionnaires display high measures of validity and reliability in South Africa. In addition, a biographical questionnaire collated important demographic information. The data was analysed by computing descriptive statistics. In addition, in order to examine the relationship between the sense of coherence and coping resources of the participants, a multiple correlation between the total score of the SOC-29 and the subscales of the CRI was conducted. Following this, a Pearson product-moment correlation coefficient was utilised to inter-correlate the total score of the SOC-29 and the individual subscales of the CRI. The results obtained from this analysis will be outlined and discussed in the following chapter.
CHAPTER 5
RESULTS AND DISCUSSION

5.1. CHAPTER OVERVIEW

As noted in Chapter 1, there were three main objectives in this study. The first objective was to explore and describe the coping resources of a group of male police officers in the SAPS. The second objective was to explore and describe the sense of coherence of these police officers. Finally, the third objective was to explore and describe the relationship between the coping resources and sense of coherence in this sample.

The results obtained from the data analysis in accordance with these objectives are presented in this chapter. The total sample population was N=70. In order to gain an understanding of the sample, the distribution of the demographic details obtained from the biographical questionnaire (i.e., age, ethnic group, marital status, level of education, rank in the SAPS, psychiatric history, treatment and income) will be explored first. Following this, the results of the two measures, namely the CRI and SOC-29, are presented and explored individually in response to the first and second objectives respectively. Finally, the relationship between these two measures as found in the sample will be examined and discussed. The discussion of these findings will be based on theoretical background presented in Chapters 2, 3 and 4.
5.2. DEMOGRAPHIC DESCRIPTION OF THE SAMPLE

5.2.1. Introduction

In this section, the demographic details obtained from the biographical questionnaire are described in order to gain better understanding of the sample. It is important to report on this information, since it provides a context for the findings as related to the measures. The variables are displayed in diagrams 1 to 7. The relationship of these variables to previous research, existing literature and the findings of the present study are discussed later in the chapter.

5.2.2. Age

The ages of the participants in the current sample ranged from 18 to 50 years. As presented in Diagram 1.

Diagram 1: Age Distribution (N=70)

- 18-30 (17.14%)
- 31-40 (57.14%)
- 41-50 (25.71%)
- 51-60 (0%)
5.2.3. Ethnic Group

The ethnic groups represented in the sample are displayed in Diagram 2. The sample comprised of 52.86% Africans, 28.57% Whites, 15.71% Coloureds and 1.42% Indians, while the remaining 1.42% of participants do not belong to any of the previous categories.

![Diagram 2: Ethnic Group Distribution (N=70)](image)

5.2.4. Marital Status

The majority of the participants in this sample (70%) are married, while 20% have never been married and the remaining 10% are either engaged, divorced or widowed. Diagram 3 represents these statistics.
5.2.5. Level of Education

A prerequisite for individuals wanting to join the SAPS is a matriculation certificate. All participants therefore are in possession of such a certificate. While this is their highest educational qualification for 70% of the participants, 30% have completed some form of tertiary education, as displayed in Diagram 4.
5.2.6. Rank in the SAPS

This distribution of the ranks held by the participants is displayed in Diagram 5. The majority of participants (41.42%) hold the rank of inspector, while 31% are sergeants, 10% are captains and 17.14% are constables.

5.2.7. Income

Diagram 6 presents the distribution of the income among the participants in the sample.
5.2.8. History of Psychiatric illness

Diagram 7 presents the distribution of the psychiatric illnesses among the participants in the current sample. The majority of the participants (62.95%) did not report any psychiatric illnesses, while 37.05% reported a history of psychiatric illness (i.e., depression (14.2%), PTSD (18.57%) and anxiety disorders (4.28%)).

![Diagram 7: Psychiatric Illness (N=70)](image)

5.2.9. Treatment

It is evident from Diagram 7 that among the police officers who comprised the sample, 26 participants (37.05%) reported a history of psychiatric illness. Reportedly, 14.2% have been (n=10) diagnosed with depression, 18.57% (n=13) have been diagnosed with PTSD and 4.28% (n=3) have been diagnosed with an anxiety disorder.
The data obtained in the biographical questionnaire revealed that only 9 of these 26 participants received professional treatment for their psychiatric illnesses.

As noted in previous chapters, the incidence of psychiatric disorders (i.e., depression, PTSD and anxiety disorders) and suicide is more prevalent among police officers than among members of many other occupational groups.

The incidence of PTSD among police officers, reported in relevant literature, is particularly high, which indicates that this disorder may be considered as an occupational hazard for people carrying out policing duties (Kassen, 2002). It has been estimated that at any given time 15-32% of all emergency personnel (i.e., law enforcement officers, fire-fighters, emergency medical personnel, traffic officers, and other crisis workers) are suffering from PTSD. In addition, there is a 30-64% chance that the same group will suffer from PTSD at some time during their lifetime (Stress Line, 02/10/2003).

Studies conducted to determine the extent of PTSD in the SAPS have indicated that 36% of riot police officers and 41% of African police officers suffered from PTSD at any given time (Wissing & Breed in Burgers, 1994). Similar results were obtained in the current sample in which the prevalence of PTSD, depression or/and anxiety disorders seems to be relatively high (37.05%).

5.3. RESULTS OF THE MEASURES

This section focuses on the results obtained from the data analysis in relation to the objectives of the current study.
5.3.1. Results of Objective 1: Coping Resources of Male Police Officers in the SAPS

The first objective of this study was to explore and describe the coping resources of male police officers in the SAPS. In order to conceptualise the scores of the sample on the Coping Resources Inventory (CRI), it is necessary to briefly review the definition of coping resources as described in Chapter 2. Hammer and Marting (1988) defined coping resources as “those resources inherent in individuals that enable them to handle stressors more effectively, to experience fewer or less intense symptoms upon exposure to a stressor, or to recover faster from exposure” (p. 2). Thus coping resources act as a buffer or protective factor against the effects of stress, and are as such a vital component of the coping process (Otto, 2002). The Coping Resources Inventory (CRI), the measure that assesses an individual’s coping resources according to the domains (i.e., cognitive, social, emotional, spiritual/philosophical and physical) identified by Hammer and Marting (1988), was used to measure the coping resources of the participants in the current sample. The mean and standard deviations obtained on the CRI for both the scaled total score and the scaled scores of the subscales are presented in Table 8.
Table 8
Means and Standard Deviations of the Coping Resources Inventory (CRI)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Range</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive Resource Subscale</td>
<td>49.45</td>
<td>26.00</td>
<td>69.00</td>
<td>43.00</td>
<td>11.45</td>
</tr>
<tr>
<td>Social Resource Subscale</td>
<td>48.90</td>
<td>29.00</td>
<td>74.00</td>
<td>45.00</td>
<td>10.53</td>
</tr>
<tr>
<td>Emotional Resource Subscale</td>
<td>47.14</td>
<td>29.00</td>
<td>60.00</td>
<td>31.00</td>
<td>9.36</td>
</tr>
<tr>
<td>Spiritual/Philosophical Resource Subscale</td>
<td>48.14</td>
<td>28.00</td>
<td>68.00</td>
<td>40.00</td>
<td>9.64</td>
</tr>
<tr>
<td>Physical Resource Subscale</td>
<td>48.27</td>
<td>32.00</td>
<td>66.00</td>
<td>34.00</td>
<td>7.00</td>
</tr>
<tr>
<td>CRI Scaled Total Score</td>
<td>47.94</td>
<td>24.00</td>
<td>76.00</td>
<td>52.00</td>
<td>11.13</td>
</tr>
</tbody>
</table>

Note: All scores indicated are standard scores of the CRI

The five subscales of the CRI have different numbers of items. Direct comparisons between subscales, based on raw scores, is thus not possible. For the current sample, the raw scores of the five subscales and the total resource score were therefore converted to standard scores. The range of the scores was also computed. Standard scores are indicated in Table 8 in order to facilitate comparisons of the various subscales. In Hammer and Marting’s study (1988), the mean raw score obtained by the sample was converted to a standard score having a mean of 50 and a standard deviation of 10 points. According to these researchers, approximately 95% of individuals will have standard scores that fall between 30 and 70. Therefore, scores below 30 are considered to be below average, while scores above 70 are considered to be above average.

As presented in Table 8, the mean of the total score on the CRI for the current sample was 47.9 (SD=11.13) which is slightly lower than the CRI mean score (Mean=50) as reported by Hammer and Marting (1988). Further findings regarding the
five subscales show that they are all clustered between 47.9 and 49.4 and may be considered as falling in the low average range. These results indicate that police officers in the current sample perceived themselves as having fairly average levels of coping resources with no preference for a specific domain of coping resources.

South African research pertaining to coping resources include studies by Cairns (2001) and Otto (2002). Cairns (2001) concluded that cancer patients perceived themselves as having high levels of coping resources (CRI-scaled total score of 55.94). She further reported that the social resources scale was one of the higher mean scores among the participants, whereas the spirituality/philosophical resources scale was the highest. These findings by Cairns (2001) support research which indicates that many cancer patients rely on religion and spirituality as a coping resource (Ferraro & Kelley-Moore, 2000). Otto (2002) reported similar findings for a sample of adult patients with depressed mood. These patients had the spirituality/philosophical resource domain as the domain of choice for coping with their illness, while the least utilised resource for them was the physical resource domain.

Unfortunately current South African research on the coping resources utilised by various populations is limited. The available research does however suggest that different populations utilise different coping resources in order to survive in times of crisis and to deal with the environment’s demands and stressful encounters. This depends on the resources available to these populations. For the current sample of male police officers no preference to utilise specific coping resources emerged. To date, no comparative research regarding the coping resources of police officers is available. It is thus not possible to conclude whether this finding is typical or atypical of the overall
population.

5.3.2. Results of Objective 2: Sense of Coherence of Male Police Officers in the SAPS

The second objective of this study was to explore and describe the sense of coherence of male police officers in the SAPS. Table 9 displays a quantitative presentation of the mean and standard deviation of the sample for the SOC-29.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Minimum Score</th>
<th>Maximum Score</th>
<th>Standard Deviation</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOC-total</td>
<td>130.11</td>
<td>93.00</td>
<td>177.00</td>
<td>19.04</td>
<td>84.00</td>
</tr>
</tbody>
</table>

The SOC-29 measures the sense of coherence construct (SOC) coined by Antonovsky (1987). Sense of coherence is defined as a global, dispositional orientation that develops over the life-span and crystallizes in early adulthood. It is an orientation to life that people use to deal with stressful situations and to move towards health (Antonovsky, 1984). Sense of coherence may be described as a cognitive and affective process of perceiving a stimulus as making cognitive sense, making logic out of it, finding emotional meaning in it and reacting to it appropriately (Antonovsky, 1993). It was noted by Antonovsky (1987) that an individual with a strong sense of coherence will choose the most effective resources and coping
strategies and will confront the stressor, whereas another individual with a weak sense of coherence will focus on the overwhelming emotional response (Antonovsky, 1996).

Table 9 reflects the mean of the SOC score for the current sample of male police officers, and thus provides information about the coping abilities of this group. It is important to note that Antonovsky (1987) did not provide standard scores or normative samples for the SOC-29. However, a number of internationally published studies exist which provide normative data using the SOC-29 for a variety of samples (Antonovsky, 1993). In order to place the findings of the current study in perspective, this normative data is reported in Table 10.
Table 10

Normative Data from International Published Studies using the SOC-29 (Antonovsky, 1993)

<table>
<thead>
<tr>
<th>Sample</th>
<th>N</th>
<th>Mean-SOC</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swedish high-risk childhood</td>
<td>148</td>
<td>152.6</td>
<td>22.0</td>
</tr>
<tr>
<td>Kibbutz fathers</td>
<td>67</td>
<td>152.5</td>
<td>14.5</td>
</tr>
<tr>
<td>Israeli retired men/age 65 years</td>
<td>428</td>
<td>152.2</td>
<td>22.8</td>
</tr>
<tr>
<td>Kibbutz men/65 years</td>
<td>130</td>
<td>152.2</td>
<td>22.8</td>
</tr>
<tr>
<td>Kibbutz mothers</td>
<td>67</td>
<td>151.0</td>
<td>15.3</td>
</tr>
<tr>
<td>Israeli medical students at entry</td>
<td>93</td>
<td>150.2</td>
<td>16.5</td>
</tr>
<tr>
<td>Finnish adult sample/men</td>
<td>340</td>
<td>150.2</td>
<td>21.9</td>
</tr>
<tr>
<td>Kibbutz fathers, disabled children</td>
<td>67</td>
<td>146.3</td>
<td>19.4</td>
</tr>
<tr>
<td>Finnish adult sample/women</td>
<td>329</td>
<td>146.1</td>
<td>22.7</td>
</tr>
<tr>
<td>Kibbutz women/age 60</td>
<td>130</td>
<td>145.7</td>
<td>20.2</td>
</tr>
<tr>
<td>Israeli retired women/age 60</td>
<td>368</td>
<td>145.0</td>
<td>23.4</td>
</tr>
<tr>
<td>Czech controls in cancer study</td>
<td>153</td>
<td>145.0</td>
<td>_</td>
</tr>
<tr>
<td>Kibbutz mothers/ disabled children</td>
<td>67</td>
<td>140.1</td>
<td>22.6</td>
</tr>
<tr>
<td>USA male patients at VA clinics/age +55</td>
<td>240</td>
<td>139.6</td>
<td>36.4</td>
</tr>
<tr>
<td>Finnish university students/52% women</td>
<td>117</td>
<td>138.6</td>
<td>23.1</td>
</tr>
<tr>
<td>New Zealand, chronic pain/78%, women</td>
<td>107</td>
<td>138.6</td>
<td>14.9</td>
</tr>
<tr>
<td>Israeli Jewish national sample</td>
<td>297</td>
<td>136.5</td>
<td>19.8</td>
</tr>
<tr>
<td>USA production workers/76%, women</td>
<td>111</td>
<td>133.0</td>
<td>26.5</td>
</tr>
<tr>
<td>Israeli cerebral palsy/ ages 18-33</td>
<td>34</td>
<td>131.1</td>
<td>0.8</td>
</tr>
<tr>
<td>USA undergraduates/68%, women</td>
<td>307</td>
<td>129.5</td>
<td>24.5</td>
</tr>
<tr>
<td>Czech cancer patients</td>
<td>17</td>
<td>117.0</td>
<td>_</td>
</tr>
</tbody>
</table>

Adapted from: Antonovsky (1993)

Looking at Table 10, it is evident that the lowest mean SOC score of 117 was reported in a study of Czech cancer patients, whereas the highest mean SOC score of 152.6 was obtained in a study on Swedish high-risk childhood. If one compares the mean SOC score of the current sample (mean=130.1) with that obtained from the
aforementioned studies, the mean of the current sample could be described as relatively low. The mean SOC found in the current sample therefore correlates with the means found for USA undergraduates students and Israeli cerebral palsy patients as depicted in Table 10.

Several recent South African studies have focused on the SOC of individuals not confronted with a particular stressor, as well as individuals diagnosed with chronic illness or general medical conditions (Cairns, 2001; Carstens, 1995; Madhoo, 1999; Otto, 2002; Wissing et al., 1992; Wissing & Van Eeden, 1997). The mean SOC scores in these studies are summarized in Table 11.

Table 11
Normative Data from South African Published Studies Using the SOC-29

<table>
<thead>
<tr>
<th>Sample</th>
<th>N</th>
<th>Mean-SOC</th>
<th>Researchers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients in cardiac rehabilitation</td>
<td>35</td>
<td>159.00</td>
<td>Madhoo (1999)</td>
</tr>
<tr>
<td>Cancer patients</td>
<td>34</td>
<td>151.71</td>
<td>Cairns (2001)</td>
</tr>
<tr>
<td>Group of rural university students</td>
<td>249</td>
<td>140.21</td>
<td>Wissing et al. (1992)</td>
</tr>
<tr>
<td>Mixed group sample of Psychology students</td>
<td>550</td>
<td>136.52</td>
<td>Wissing and Van Eeden (1997)</td>
</tr>
<tr>
<td>Patients with Major Depressive Disorder</td>
<td>50</td>
<td>100.56</td>
<td>Carstens (1995)</td>
</tr>
</tbody>
</table>

It is of evidence from Table 11 that the highest mean score on the SOC (mean=159) was obtained by patients in cardiac rehabilitation, while the lowest was found among adult patients with depressed mood (mean=99.1).
If one compares the findings of the current study with international studies as presented in Table 10 as well as with South African studies as presented in Table 11, there is evidence that the sense of coherence of male police officers in the SAPS is relatively low.

With regard to studies conducted in the South African Police Services, no specific norms for the SOC of police officers exist at present. However, the findings of the current study can be tentatively compared to those obtained from related research studies conducted with members of the SAPS, as discussed in Chapter 3. For instance, Rothmann and Van Rensburg (2002) investigated psychological strengths and resilience (SOC), coping and suicide ideation in the SAPS in the North West Province. These researchers found that the mean SOC score of the sample they investigated was 133 with a standard deviation of 24.51, which is relatively weaker than other samples studied by Rothmann (2000). When comparing this finding with the current sample, a slightly weaker mean SOC score of 130.11 and a standard deviation of 19.04 were obtained in the current sample. Further results obtained in other SAPS samples showed even lower mean SOC scores than the mean obtained in the current sample. The mean scores of the SOC for White and African police officers in a study conducted by Rothmann and Strijdom (2002) were 122.61 (standard deviation of 18.56) and 127.75 (standard deviation of 17.14) respectively.

Although there is evidence that the SOC in the current sample is relatively low when comparing with international and South African studies, the mean scores of the current sample are very similar to those of other samples of the SAPS. The present research thus supports previous research on police officers in suggesting that police
officers have a weak SOC. A weak SOC is indicative of relative inability to mobilize
cognitive and affective resources, both internally and externally, in the context of
continued exposure to routine work stressors and particularly traumatic stressors.

As noted in Chapter 2, SOC is influenced by life experiences that are the result of
generalized resistance resources (GRRs) which enable the person to see the world as
“making sense” in a cognitive, instrumental and emotional manner (Antonovsky, 1987,
p. 23). Related to this, Antonovsky (1987) pointed out that GRRs can also be applied to
external stressors (i.e., the extent to which they weaken or strengthen one’s level of
SOC). One could speculate that difficult work conditions for the participants (i.e.,
unsociable hours, exposure to violence, risks, danger and traumatic situations)
contributed as generalised resistance deficits (GRDs), in weakening police officers’
SOC, thus undermining overall adjustment for those police officers.

As it was reported in Chapter 2 that the SOC can be subdivided into three
components namely, comprehensibility (i.e., the extent to which an individual perceives
a stimulus as making cognitive sense), manageability (i.e., the extent to which an
individual perceives resources to be available to him/her and to be adequate to meet his
or her different demands) and meaningfulness (i.e., the extent to which one feels that
life makes sense emotionally). According to Antonovsky (1979), the position of a person
on the SOC continuum will probably be determined by the meaningfulness component,
which acts as a motivational factor and a measure of energy or action potential. That is,
someone with high comprehensibility and high meaningfulness will probably find that his
low manageability will tend to become higher, while a person with a high
comprehensibility and low meaningfulness will have difficulty in developing a stronger
sense of manageability to find resources to cope with stressors. Although the SOC was presented in the current study as a global orientation of coping, one could speculate from the aforementioned, that the police officers in the current sample may experience weak meaningfulness. They may thus tend to perceive resources (i.e., friends, colleagues or family members) to be unavailable to them and to be inadequate in meeting the different demands posed by their work conditions. One could speculate that the low meaningfulness may be the result of emotional detachment due to the nature of their work and their lack of trust in the organisation, as was found in a study by Rothmann et al. (1998). Furthermore, it expected that police officers may refuse to share their emotional reactions to job stressors with others, which may isolate them from social support at work as well as at home (Evans & Coman, 1992).

As noted in previous chapters, the development of a strong SOC depends to a large extent on positive life experiences characterised by different levels of consistency, load balance and participation in socially valued decision-making. One could argue that police officers in the current sample seem to have deficits in these areas. Furthermore, Antonovsky (1987) introduced the notion of boundaries with specific qualifications if a person is to maintain strong SOC. These qualifications include one’s inner feelings, immediate interpersonal relations, major activity, and existential issues such as death, inevitable failure, shortcomings in life and isolation. The life conditions of police officers can be argued to significantly touch on all these qualifications, and thus could critically affect their life experiences.

Based on the mean scores of the SOC (mean=130.1) in the current sample and other samples of police officers which are around 130, one could pose the question of
whether the SOC of these police officers was already weak when they entered the SAPS or whether it weakened because of the work conditions confronting them. This matter was addressed by Antonovsky (1987) who suggested that at the end of the first decade of adulthood, one normally attains a given location on the SOC continuum. According to Carstens (1995), Antonovsky accepted that from then on, the SOC would not change in a radical way, despite the minor changes that may occur. This, however, seems only to apply to an individual with a strong SOC at the beginning of adulthood. When an individual with a strong SOC is confronted with challenges, one can expect his/her SOC to return or even surpass premorbid levels once the crisis is over (Carstens, 1995; Otto, 2002). An individual with a weak SOC, on the other hand, tends to exacerbate his/her situation. S/he takes on the challenge as a burden, which results in a downward spiralling circle (Antonovsky, 1987). When an individual with a weak SOC is in crisis, one can expect his/her SOC to weaken even further. Moreover, when the crisis is resolved, it is highly likely that his/her SOC will not fully return to the premorbid level (Otto, 2002).

Carstens (1995) pointed out that if the aforementioned is accepted, then Antonovsky (1987) seemed to contradict himself. He claimed that the SOC is stable, but noted that if the SOC is low to start with, it is bound to weaken. He explained this apparent contradiction by hypothesising that there seems to be a critical level of SOC above which there is a strong tendency to stabilise, and below which there seems to be a deterioration of the SOC strength. Accordingly, it seems that based on Antonovsky’s argument, he allowed for change in the SOC in response to changes in patterns of life experiences, but described these as only temporary fluctuations around a mean. Thus
the weaker the SOC, the more tension experienced and the more negative the changes in the strength of the SOC. It can be concluded that one can look at the SOC as being either an independent (i.e., deep rooted and stable) or dependant variable (i.e., vulnerable to some extent to life stressors). This seems to be based on the position of the individual on the ease/dis-ease health continuum. It could be speculated from the aforementioned, that police officers who have a strong SOC respond favourably to stressors, while those with a weak SOC, are more likely to respond negatively to life events, resulting in a downward spiral of their SOC. Alternatively, although it could be initially proposed that the SOC of police officers in the current sample might be crystallized by the early adulthood, this does not prohibit the possibility of its being either temporarily or permanently changed by changes in patterns of their work experiences.

The relatively low SOC of the current sample may also offer an explanation for the prevalence of psychiatric illnesses among police officers. Bowman (1996) in a cross validating study of the SOC noted a significant negative correlation between SOC and measures of anxiety, depression and physical symptoms. The low SOC and the prevalence of psychiatric illnesses found in the current sample are thus consistent with previous research findings.

To conclude, the present sample obtained a relatively low mean SOC score when compared to other South African and international research. However, this finding is similar to other findings in various research studies conducted in the SAPS. This indicates that the sense of coherence of police officers in the SAPS is low when compared to other South African samples. This finding suggests that, when confronted
with a stressor, the participants are more likely to focus on the overwhelming response to the stressor than to choose effective resources and coping strategies to confront the stressor.

5.3.3. Results of Objective 3: Relationship between the Sense of Coherence and Coping Resources of Male Police Officers in the SAPS

The third objective of this study was to explore and describe the relationship between the coping resources and sense of coherences of male police officers in the SAPS. The relationship between the CRI and SOC-29, measuring coping resources and sense of coherence respectively, was examined using multiple correlations followed by the Pearson product-moment correlation coefficient (Pearson r). For the purposes of the current study, the CRI total score and the five subscales were correlated with the SOC total raw score. The means of the different variables, results of the correlations between the SOC, CRI and the CRI scales and the p-value for each correlation (significance level) are displayed in Table 12.
Table 12

Correlation between the SOC and the CRI/CRI Scales

<table>
<thead>
<tr>
<th>Variable (SOC/CRI/CRI Subscales)</th>
<th>Mean</th>
<th>Std</th>
<th>r (SOC/CRI)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive Resource Scale</td>
<td>49.45</td>
<td>11.45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOC Total Raw Score</td>
<td>130.11</td>
<td>19.04</td>
<td><strong>0.46</strong></td>
<td><strong>0.0000</strong></td>
</tr>
<tr>
<td>Social Resource Scale</td>
<td>48.90</td>
<td>10.53</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOC Total Raw Score</td>
<td>130.11</td>
<td>19.04</td>
<td><strong>0.46</strong></td>
<td><strong>0.0000</strong></td>
</tr>
<tr>
<td>Emotional Resource Scale</td>
<td>47.14</td>
<td>9.36</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOC Total Raw Score</td>
<td>130.11</td>
<td>19.04</td>
<td><strong>0.37</strong></td>
<td><strong>0.0013</strong></td>
</tr>
<tr>
<td>Spiritual/Philosophical Resource Scale</td>
<td>48.14</td>
<td>9.64</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOC Total Raw Score</td>
<td>130.11</td>
<td>19.04</td>
<td><strong>0.35</strong></td>
<td><strong>0.0027</strong></td>
</tr>
<tr>
<td>Physical Resource Scale</td>
<td>48.27</td>
<td>7.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOC Total Raw Score</td>
<td>130.11</td>
<td>19.04</td>
<td><strong>0.42</strong></td>
<td><strong>0.0002</strong></td>
</tr>
<tr>
<td>CRI Total Scaled Score</td>
<td>47.94</td>
<td>11.13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOC Total Raw Score</td>
<td>130.11</td>
<td>19.04</td>
<td><strong>0.57</strong></td>
<td><strong>0.0001</strong></td>
</tr>
</tbody>
</table>

Note: p-value < 0.05.

The relationship between the SOC total raw score and the CRI total score as well as between the SOC total raw score and the CRI subscales, as depicted in Table 12, are discussed in the next sections. In addition, comparisons of the current findings with other research studies conducted in South Africa are outlined.
5.3.3.1. The Relationship between the SOC Total Raw Score and CRI Total Scaled Score

It is evident from Table 10 that, for a critical p-value of 0.05, a significant positive correlation \((r=0.57)\) was found between the CRI and the SOC-29. In terms of the magnitude of the relationship, according to the guidelines suggested by Guilford (1946), this significant correlation can be described as a moderate correlation which indicates a fairly substantial relationship between the two measures. This finding was confirmed by various research studies conducted in South Africa. According to Cairns (2001), a positive relationship between the coping resources and sense of coherence was found among cancer patients. Individuals high on SOC were likely to report high levels of coping resources. Likewise, McSherry and Holm (1996) found that individuals with low SOC scores were significantly less likely than high SOC individuals to believe that they possessed the personal resources necessary to cope with a stressful situation. Further evidence for this relationship between SOC and coping resources was provided by Madhoo (1999) who investigated the SOC and coping resources of 35 patients in cardiac rehabilitation. Similar to previous research, this researcher also reported a significant positive correlation between the SOC and coping resources \((r=0.57)\).

Some implications from the findings of these studies as well as the current study should be drawn in this regard. Firstly, it can be concluded that these results support the similarity between the concept of coping resources and Antonovsky’s concept of GRRs. Antonovsky (1987) noted that the communality among all the GRRs is that they all fostered repeated life experiences which enable the individual to see the world as
“making sense” in a cognitive, instrumental and emotional manner (p. 23). Antonovsky (1987) argued that SOC is most likely to develop to the extent that GRRs are present. In exploring coping, Matheny et al. (1986) suggested that “increasing one’s coping resources should positively affect the equation between perceived demands and resources at the appraisal stage” (p. 533). In other words, individuals with high levels of certain types of coping resources should be less likely to make the initial appraisal that a demand is in fact threatening enough to represent a stressor. This hypothesis highlights the similarities between the concept of coping resources and Antonovsky’s generalised resistance resources (GRRs). Therefore, it could be concluded that the individuals in the current study who have a strong SOC are expected to utilise the GRRs which are available to them.

Another implication of these findings is that SOC plays a significant role in cognitive appraisal processes, which were outlined by Lazarus and Folkman (1984), specifically, secondary appraisal. According to literature presented in Chapter 2, individuals with a high SOC are more likely to mobilise and take advantage of the resources available to them when confronted with a stressor (Antonovsky, 1987). As a result, they are more likely to define stimuli as non-stressors during primary appraisal or to feel that they have the resources needed to cope with the stressful encounters during secondary appraisal (Cairns, 2001). Related to this, Antonovsky (1987) explained that coping resources (GRRs) interplay with the coping process to build a strong SOC in individuals who experience success in their coping efforts (Otto, 2002). Based on the aforementioned as well as the results obtained in the current study, it could be speculated that the participants are more likely to perceive a situation as stressful (i.e.,
primary appraisal), while still relatively able to evaluate the resources needed to cope with it (i.e., secondary appraisal).

To summarise, Antonovsky’s (1979) model of GRRs correspond with the domains as described by Lazarus and Folkman (1984) and Hammer and Marting (1984) in terms of viewing resources as constituting cognitive, emotional, social and physical characteristics. Furthermore, the correlation found between the two measures, namely SOC-29 and CRI, in the aforementioned studies indicates a moderate similarity between the scores obtained on these two measures. This means that an individual with relatively low SOC, as was found in the current sample, will likely have low coping resources.

In contrast to these findings, Otto (2002) reported that results obtained in her research on the coping orientation and resources of adult patients with depressed mood showed no significant positive correlation between the SOC and coping resources of the patients. These results might raise questions regarding the proposed similarity between Antonovsky’s (1987) concept of GRRs and Hammer and Marting’s (1988) definition of coping resources. However, it was noted by Otto (2002) that the discrepancy of results between her study on depressed patients and other studies could be attributed to the nature of the sample. It was speculated that the sample’s responses to the items may have been shaped by their subjective perceptions of reality which were likely to be distorted due to their mental illness.

While it is not possible to establish a causal or explanatory link in terms of this research, it is evident that a significant positive relationship exists between the two variables and, in the light of the various theories surrounding GRRs and coping
resources, it is logical that the two constructs should significantly correlated.

5.3.3.2. The Relationship between the SOC Total Raw Score and the CRI Subscales

While a strong positive relationship was evident between the SOC-29 and the total score of the Coping Resources Scale, not all the subscales of the CRI were found to be strongly significant related to the SOC-29. As presented in Table 12, there is evidence of a significant positive relationship between the SOC total raw score and the cognitive, social and physical scales scores of the CRI which ranged between 0.42 to 0.46. As noted by Guilford (1946), the magnitude of this relationship can be described as a moderate correlation indicating a fairly substantial relationship. However, further results in the current study indicated that low correlations existed between the SOC and the other two scales of the CRI, namely the emotional and spiritual/philosophical scales. These findings are found to be similar to results obtained by Cairns (2001). However, Otto (2002) found that there is a negative relationship between the SOC and all the CRI scales. The findings of these studies compared to the current study are presented in Table 13.
Table 13
Comparison of Correlation between the SOC-29 and CRI as found by South African Studies and the Current Study

<table>
<thead>
<tr>
<th>Variable (CRI/CRI Scales)</th>
<th>r(CRI/SOC)</th>
<th>r(CRI/SOC)</th>
<th>r(CRI/SOC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive Scale</td>
<td>0.46</td>
<td>0.44</td>
<td>0.22</td>
</tr>
<tr>
<td>Social Scale</td>
<td>0.46</td>
<td>0.47</td>
<td>0.16</td>
</tr>
<tr>
<td>Emotional Scale</td>
<td>0.37</td>
<td>0.24</td>
<td>0.21</td>
</tr>
<tr>
<td>Spiritual/Philosophical Scale</td>
<td>0.35</td>
<td>0.36</td>
<td>0.24</td>
</tr>
<tr>
<td>Physical Scale</td>
<td>0.42</td>
<td>0.67</td>
<td>0.21</td>
</tr>
<tr>
<td>CRI Scaled Score</td>
<td>0.57</td>
<td>0.59</td>
<td>0.24</td>
</tr>
</tbody>
</table>

As was outlined in Chapter 4, the emotional scale of the CRI measures the degree to which individuals are able to accept and express a range of affect, based on the premise that a range of emotional responses aids in ameliorating long-term negative consequences of stress. Accordingly, all the items in the emotional subscale of the CRI show the tendency of participants in the sample to express their feelings behaviourally. However, the SOC-29 is designed to measure three components namely, comprehensibility, manageability and meaningfulness, which do not draw directly on the individual’s ability to accept and express his or her emotions behaviourally. This confirms the finding of the current study that there is a small relationship between the SOC and the emotional subscale of the CRI. This could cause some confusion when referring to the meaningfulness component of the SOC as it represents the emotional dimension of the construct. However, it is viewed as the extent to which one feels that life makes sense emotionally, that at least some of the problems and demands posed by living are worth the investment of energy in them (Antonovsky, 1987). Based on this
idea, the emotional subscale of the CRI represents the behavioural aspect of emotions when one confronts stressors, while the meaningfulness of the SOC is the emotional sense to deal with these stressors. It seems that the participants in the current sample tend not to accept and express their emotions behaviourally; however, they may still make sense of the stress on an emotional level.

Another significant finding is that there is a weak relationship between the spiritual/philosophical scale of the CRI and the SOC in the current sample. The spiritual/philosophical scale measures the degree to which actions of individuals are guided by stable and consistent values derived from religious, familial, or cultural tradition or from personal philosophy. Such values might serve to define the meaning of potentially stressful events and prescribe strategies for responding effectively. The weak relationship between this scale and the SOC might be due to the fact that spirituality is not clearly acknowledged in the items of the SOC-29. However, this does not mean that spirituality is excluded from the SOC concept. According to Strang and Strang (2001, cited in Cairns, 2001), spirituality is related to the meaningfulness component of the SOC as well as the components of comprehensibility and manageability, as religion and faith provide explanations of existential questions and thus results in increased manageability as the individual accepts his or her situation. It can be argued, therefore, that although the participants in the current study tend to utilise the spirituality/philosophical resources scale of the CRI, no significant relationship was found with the SOC. This could be explained by the fact that, spirituality comprises merely one aspect of the SOC components.
5.4. CONCLUSION

The results obtained from data analysis in accordance with the objectives of the current study have been presented in this chapter. In order to gain an understanding of the sample, the distribution of the demographic details obtained from the biographical questionnaire were explored. Results regarding the first objective to explore and describe the coping resources of male police officers showed that a low average CRI was found among the participants. This finding indicates that police officers in the current sample perceived themselves as having fairly average levels of coping resources. Furthermore, results from the SOC-29 suggested that a relatively low SOC was evident in the current sample, indicating that police officers may focus on the overwhelming emotional responses when they are confronted with a stressor. With regards to the third objective, a significant positive relationship between the SOC-29 and the CRI was established. While this relationship was found, not all subscales of the CRI were found to be strongly significant related to the SOC-29. There is evidence of significant positive relationship between the SOC-29 and the cognitive, social and physical scales of the CRI. A low correlation also existed between the SOC-29 and the emotional and spiritual/philosophical scales of the CRI.

The conclusions and limitations based on the results of the study as well as recommendations regarding future research are considered in the next chapter.
CHAPTER 6
CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

6.1. INTRODUCTION

It is necessary to draw certain conclusions regarding stress and coping of police officers based on the results obtained in this study. This chapter provides a summary of the main findings of the three objectives of the study. Discussion of the value of the study as well as its limitations is outlined. In addition, recommendations for the SAPS and for future research are also included in this chapter.

6.2. OBJECTIVES OF THE STUDY

As outlined previously, the primary aim of this study was to explore and describe the sense of coherence and coping resources of male police officers in the South African Police Services (SAPS).

In order to accomplish this aim, the following objectives were identified:

1. To explore and describe the coping resources of male police officers in the SAPS.
2. To explore and describe the sense of coherence of male police officers in the SAPS.
3. To explore and describe the relationship between the sense of coherence and coping resources of male police officers in the SAPS.

The summary of the results and conclusions pertaining to these objectives are
discussed in the following paragraphs.

6.2.1 Description of the Coping Resources of the Sample

This objective aimed to explore and describe the coping resources, as measured by the CRI, of a group of male police officers in the SAPS in the Port Elizabeth area. Results pertaining to this objective indicated that the mean score on the CRI for the current sample was 47.9 which is slightly lower than the CRI mean score (Mean=50) as reported by Hammer and Marting (1988). This means that police officers in the current sample perceived themselves as having fairly average levels of coping resources. Further findings regarding the five subscales (i.e., cognitive, social, emotional, physical and spiritual/philosophical) show that scores on these subscales are all clustered between 47.9 and 49.4 and may be considered as falling in the low average range. This indicates that police officers in the current sample have no preference for a specific domain of coping resources. To date, no comparative research regarding the coping resources of police officers is available. It is thus not possible to conclude whether this finding is typical or atypical of the overall population.

6.2.2 Description of the Sense of Coherence of the Sample

This objective aimed to explore and describe the sense of coherence, as measured by the SOC-29, of a group of police officers in the SAPS. Results pertaining to this objective showed that these police officers have relatively low SOC when
compared to related international and South African studies. With regard to studies conducted in the SAPS, no specific norms for the SOC of police officers exist at present. However, the findings of the current study can be tentatively compared to those obtained from related research studies conducted with members of the SAPS (Rothmann & Strijdom, 2002; Rothmann & Van Rensburg, 2002). These findings show that although there is evidence that the SOC in the current sample is relatively low when comparing with international and South African studies, the mean scores of the current sample are very similar to those of other samples of the SAPS. Therefore, this supports the hypothesis that police officers have a weak SOC which is indicative of relative inability to mobilize cognitive and affective resources, both internally and externally, in the context of continued exposure to routine work stressors and particularly traumatic stressors. Furthermore, it could be concluded that the difficult work conditions for the police officers contributes as generalised resistance deficits (GRDs), in weakening their SOC, thus undermining their overall adjustment.

It seems from the results of the SOC, that police officers in the current sample may tend to perceive resources to be unavailable to them and to be inadequate in meeting the different demands posed by their work conditions. This might be attributed to their emotional detachment due to the nature of their work and their lack of trust in the organisation, as was found in a study by Rothmann et al. (1998).

In conclusion, the finding of the relatively low SOC suggests that, when confronted with a stressor, police officers in the current sample seem to be more likely to focus on the overwhelming emotional response to the stressor than to choose effective resources and coping strategies to confront the stressor.
6.2.3 Description of the Relationship Between the Sense of Coherence and Coping Resources of the Sample

The third objective of the study was to explore and describe the relationship between the coping resources and sense of coherence of male police officers in the SAPS. Results obtained pertaining to this objective, indicated a significant positive correlation between the CRI and the SOC-29 which can be described as a moderate correlation. This finding confirms the findings of previous research studies conducted in South Africa (Cairns, 2001; Madhoo, 1999). Some implications from these findings should be drawn.

Firstly, the similarity between the concept of coping resources and Antonovsky’s concept of GRRs is reinforced. Therefore, it could be concluded that police officers who have a strong SOC are expected to utilise the GRRs which are available to them. Another implication is related to two facts, namely that SOC plays a significant role in cognitive appraisal processes, which were outlined by Lazarus and Folkman (1984), and that coping resources come into play during both primary and secondary appraisal. During the primary appraisal a person with high levels of coping resources would be less likely to make an initial appraisal that a demand is in fact threatening. However, should a demand be perceived as a stressor, secondary appraisal comes into play. Relating these two facts to each other, Antonovsky (1987) explained that coping resources (GRRs) interplay with the coping process to build a strong SOC in individuals who experience success in their coping efforts. It thus follows that police officers in the current sample are more likely to perceive a situation as stressful (i.e., primary
appraisal), while still being relatively able to evaluate the resources needed to cope with the situation (i.e., secondary appraisal).

A further finding is related to the relationship between the SOC-29 and the coping resources subscales. While a strong positive relationship was evident between the SOC-29 and the total score of the CRI, not all the subscale of the CRI were found to be strongly significant related to the SOC-29. There is evidence of a significant positive relationship between the SOC total raw score and the cognitive, social and physical subscales scores of the CRI which can be described as moderate. However, low correlations existed between the SOC and the other two subscales of the CRI, namely the emotional and spiritual/philosophical subscales. It was speculated that the weak relationship between the SOC and emotional subscale was due to the fact that overt behavioural expression of emotions was not directly addressed by the three components of the SOC-29 (i.e., comprehensibility, manageability and meaningfulness). The weak relationship between the SOC and the spiritual/philosophical subscale of the CRI may be explained by the fact that spirituality is not directly acknowledged in the SOC-29 as it is in the CRI. This does not imply that spirituality is excluded from the SOC concept but that it comprises merely one aspect of its components.

6.3. THE VALUE OF THE RESEARCH

This study contributes to the field of health psychology that emphasises the promotion and study of health, rather than illness. Health psychology also attempts to understand the relationship between stress, coping and illness. According to Folkman
and Moskowitz (2000), psychologists and helping professions in general need to understand more clearly the “adaptational significance of positive affect in the midst of stress and as well to learn about how people generate and sustain positive affect under stressful situations” (p. 652). The study therefore focused on salutary concepts such as the SOC and coping resources of male police officers in the SAPS, rather than the factors that increase the stress experienced by these police officers.

Another value of the study relates to its contribution in understanding coping of police officers who are exposed to traumatic experiences in their average working day. The findings suggest that stress is a problem for these police officers and that they experience difficulty with their coping as manifested in their relatively low SOC. The need for initiatives to reduce stress and assure better coping and psychological well-being among police officers in the SAPS is thus further emphasised.

6.4. LIMITATIONS OF THE RESEARCH

A number of limitations, which may have influenced the findings in this study, can be identified and need to be taken into account when considering the findings and conclusions of this study. These limitations relate to the design, the participants and sampling method and the measures as described in the following paragraphs.

6.4.1. Limitations of the Design

The design of the study posed particular limitations. Lazarus (2000) reported that
longitudinal research methods that repeat measurements on the same people across
time and circumstances are essential in the study of stress, emotion and coping
(Lazarus, 2000). For example, if the SOC fluctuates around the mean in response to
stressful events as noted by Antonovsky (1987), then a longitudinal study will facilitate
an answer to the question presented previously, namely, whether the SOC of the police
officers in the sample was already weak when they entered the SAPS or whether it
weakened because of the work conditions confronting them. The current study
measured the participants’ coping resources and sense of coherence at one point in
time and was therefore not able to answer questions such as the aforementioned.

Another limitation of the design is the absence of qualitative data which provides
access to the participant’s subjective view of a changing reality and seeks to understand
his/her reality (Kvale, 1996). This data is not reachable in quantitative data as generated
in this study. Therefore, the ideal would have been to utilise a combination of both
qualitative and quantitative designs.

Due to the fact that this study is exploratory and descriptive in nature, no causal
relationship can be deduced from the results obtained in this study. Although the
findings may revealed a positive relationship between the coping resources and sense
of coherence, no causal explanation for this can be established.

6.4.2. Limitations of the Participants and Sampling Method

An important limitation is related to the sampling and sample size. A non-
probability convenience sampling technique was used. Therefore, due to non-
randomised sampling, the findings of the study cannot be generalised to a broader population. In addition, the sample size was relatively small (N=70), which also limited the possibility of generalising the research findings beyond the scope of this study. These limitations were expected as the purpose of this study was not to generalise the results, but rather explore and describe the coping resources and sense of coherence of a specific group of male police officers in the SAPS. However, the study does promote better understanding of coping of police officers in the SAPS in the area of Port Elizabeth where the sample was selected from.

Another limitation was the police officers’ resistance to participate in the study as manifested by behaviour such as hesitations and aggressiveness towards the examiner. It seemed as though the participants had concerns regarding the reasons for the study and were afraid that information may be related back to their superiors. Thus, these factors influenced the objectivity of the participants to complete the questionnaires. Although, confidentiality was assured in the study, the impact of social desirability which influences the participants’ responses was unavoidable. Paton and Smith (1999) noted that police officers cannot be assumed to respond collectively in terms of their coping with stress, however, they are a cohesive culture. This culture may discourage police officers to report their psychological symptoms in an attempt to present police work and roles in a favourable manner.

6.4.3. Limitations of the Measures

The Coping Resources Inventory (CRI) was developed and standardised in the
United States of America. The norms that were used for the interpretations of the participants’ results are therefore not necessarily applicable to the current sample. Furthermore, no previous South African studies, explored the coping resources of police officers using the CRI. Hence, there is no previous study on police officers with which to compare the findings of the current sample.

Another limitation relates to the language of the measures. Although proficiency in English was a prerequisite for inclusion in the study, for 52.86% of the participants, English was their second language. Therefore, the possibility exists that some participants may have misunderstood the questionnaires.

6.5. RECOMMENDATIONS

Based on the findings of this study, a number of recommendations can be drawn in two domains, namely, recommendations for the SAPS, and recommendations regarding future research studies. These recommendations are outlined in the following sections.

6.5.1. Recommendations for the SAPS

It is recommended that the psychological services in the SAPS in the Port Elizabeth area should receive feedback of the findings of the study, and information on how they can incorporate these findings into their psychological management plans. Furthermore, increasing the insight of police officers into the necessity of research in the
area of stress and coping among members in the SAPS and its contribution to their psychological well-being may motivate them to participate in future research studies.

In addition, the SAPS should attend to the problem of coping among police officers. The sense of coherence of individuals should be assessed when they enter the SAPS in order to identify individuals who may be more at risk for poorer coping due to traumatic exposure. The SAPS, therefore, can select individuals who have appropriate sense of coherence, depending on the job. This step will decrease psychological and emotional distress among police officers which will therefore strengthen the culture of police officers in their coping in daily lives. However more research is needed, especially because of the current study’s findings being based on a small sample.

Furthermore, the researcher notes indirectly from the findings that by equipping police officers with the necessary knowledge, skills and other resources and by ensuring a balance in the load of tasks to be handled, they will increasingly feel that work expectations are manageable. Although the findings from the current sample are not representative of the overall population, one could speculate that participation in decision-making of police officers in the SAPS will enhance their SOC as noted by Rothmann and Strijdom, (2001).

Lastly it is recommended that workshops are developed in order to increase coping amongst police officers and to facilitate their general well-being.

6.5.2. Recommendations for Future Research

The following recommendations regarding future research studies can be made:
• It is recommended that this study be replicated with larger and more representative samples of the SAPS, so that results can be generalised. Longitudinal research designs should ideally be employed to investigate the consistency or changeability of the SOC and coping resources of police officers over time.

• The sample comprised an exclusively male sample. A similar study with a female sample will be of interest.

• This research study was conducted in the urban areas of Port Elizabeth, therefore, a comparison of this sample with another in the rural areas of Port Elizabeth will be of interest.

• One of the findings of the study is that a positive relationship exists between the SOC-29 and the CRI. It is recommended that this study be replicated to examine whether this positive relationship exists across different populations and samples.

6.6. CONCLUSION

This study attempted to explore and describe the coping resources and sense of coherence of male police officers in the SAPS. The relatively low SOC, the low average of coping resources, and the significant positive relationship found between the variables, provide important information regarding the sample under investigation. The value of this study entails in that it contributes to the field of positive psychology and health promotion. In addition, it provides insight into understanding coping of police
officers who are exposed to traumatic experiences in their average working day. The research design, participants, sampling method and the measures were of limitation in the study. Finally, based on the findings of the study, recommendations were made to increase general well-being of police officers in the SAPS as well as for future research studies within the SAPS.
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APPENDICES
APPENDIX A

BIOGRAPHICAL QUESTIONNAIRE
BIOGRAPHICAL QUESTIONNAIRE

Respondent Nr.  

Please indicate your responses with a X in the appropriate block and complete the empty spaces where necessary.

Biographical Data:

1. Name and Surname and contact details (this question is optional and is only relevant if you require feedback).

______________________________________________________________________
______________________________________________________________________

2. Age

<table>
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<th></th>
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</thead>
<tbody>
<tr>
<td>18 – 30</td>
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<tr>
<td>31 – 40</td>
<td>2</td>
</tr>
<tr>
<td>41 – 50</td>
<td>3</td>
</tr>
<tr>
<td>51 – 60</td>
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3. Ethnic Group

<table>
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<tr>
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<tr>
<td>African</td>
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</tr>
<tr>
<td>White</td>
<td>2</td>
</tr>
<tr>
<td>Colored</td>
<td>3</td>
</tr>
<tr>
<td>Indian</td>
<td>4</td>
</tr>
<tr>
<td>Other (please specify)</td>
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4. Marital Status

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</tr>
<tr>
<td>Married</td>
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</tr>
<tr>
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</tr>
<tr>
<td>Divorced</td>
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</tr>
<tr>
<td>Widowed</td>
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</tr>
<tr>
<td>Separated</td>
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5. Level of Education

<table>
<thead>
<tr>
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<td>Matriculation</td>
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<tr>
<td>Tertiary Qualification</td>
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6. Rank in the SAPS

<table>
<thead>
<tr>
<th>Rank</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Captain</td>
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</tr>
<tr>
<td>Inspector</td>
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</tr>
<tr>
<td>Sergeant</td>
<td>3</td>
</tr>
<tr>
<td>Constable</td>
<td>4</td>
</tr>
</tbody>
</table>

7. Have you previously been diagnosed with any of the following psychiatric illnesses? (Tick one or more)

<table>
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<th>Illness</th>
<th>Count</th>
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</thead>
<tbody>
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<td>Post Traumatic Stress Disorder (PTSD)</td>
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</tr>
<tr>
<td>Anxiety</td>
<td>3</td>
</tr>
<tr>
<td>Other: (please specify)</td>
<td>4</td>
</tr>
<tr>
<td>None</td>
<td>5</td>
</tr>
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</table>
8. Are you currently being treated for any of the psychiatric illnesses listed in question 7?

<table>
<thead>
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<th>Yes (please specify)</th>
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9. Your Income:

<table>
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</tr>
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<td>R6000 – R7000</td>
<td>2</td>
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<td>R8000 – R9000</td>
<td>3</td>
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<tr>
<td>R10000 - R11000</td>
<td>4</td>
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</table>

THANK YOU FOR YOUR PARTICIPATION
APPENDIX B

CONFIRMATION LETTER FROM THE SAPS TO CONDUCT THE STUDY
The Coping Resources and Sense of Coherence of Male Police Officers in the South African Police Services

My name is Mohammed Kayal and I am completing a Masters degree in Clinical Psychology at the University of Port Elizabeth. I would like to conduct a study on the sense of coherence and the coping resources of male police officers in the police services. The specific aim of this study is to explore and describe the sense of coherence and coping resources of male police officers in the SAPS. Furthermore, the relationship between these two variables will be explored and described.

I am requesting permission to administer two questionnaires as well as a biographical questionnaire to male police officers who have been in the police services for a minimum of two year and who are not affected by resolution 7/2002. All information

Identifiable details removed to ensure confidentiality
obtained will be treated in the strictest confidence. The participants’ names will not be used and they will not be identified in any written reports on the study. A report of the findings will be made available to the SAPS. The results will also be made available at the University of Port Elizabeth library in the form of a treatise.

It is important to note that feedback will be provided if requested by the participants. The voluntary nature of this study must be emphasized. Any participant is free to decline to participate and may withdraw from the study at any time without prejudice.

I would greatly appreciate your involvement in this research study. If written permission is granted by the SAPS, all correct procedures will be followed to ensure that this study is conducted according to the ethical principles set by the ethical committee of the University of Port Elizabeth. To grant consent for your station to be included in this research study, please complete the attached form.

If you have any further enquiries please feel free to contact me at Tel: 041 5821595.

Kind Regards

Mr. Mohammed Kayal

____________________
Intern Clinical Psychologist

____________________  _______________________
Supervisor: Paddy Cloete  Co-Supervisor: Dr. D. Elkonin
Clinical Psychologist  Clinical Psychologist
APPENDIX C
COVERING LETTER
REQUEST FOR YOUR PARTICIPATION IN RESEARCH PROJECT

Research Project: Coping resources and sense of coherence of male police officers in the South African Police Services

Dear Research Participant

I am currently undertaking a research project as part of the requirement for my M.A. Clinical Psychology Degree at the University of Port Elizabeth. The aim of this research is to gain insight into the coping of police officers in the SAPS who work in the field during unsociable hours and who are likely to be exposed to violence, risks, danger, and traumatic situations.

You will be asked to give your written informed consent to participate by signing and dating a form and putting your initials against each section to indicate that you understand and agree to the conditions. The informed consent statement has been prepared in compliance with current South African Medical Research Council guidelines. If you are willing to participate, please sign the letter of informed consent and complete the three attached questionnaires namely:

1. A biographical questionnaire
2. The Coping Resources Inventory (CRI)
3. The Sense of Coherence Questionnaire (SOC-29)
It should take you no longer than 1 hour to complete all the above.

As you will see the questionnaires do not require you to put your name on them. All information obtained will be regarded as strictly confidential and you can remain anonymous if you wish. However, please include your contact details on the biographical questionnaire if you wish to receive feedback on your individual results. Note that the results of this study may not be used for psycholegal purposes.

You have the right to ask questions concerning the study at any time. You should also immediately report to the researcher any new problems during the study. The telephone numbers of the researcher are provided. Call these numbers if you have any questions or worries about the study.

Also, this study has been approved by the Human Ethics Committee. This is a group of independent experts whose responsibility it is to help ensure that the rights and welfare of participants in research are protected and that the study is carried out in an ethical manner.

Participation in the research is completely voluntary. You are not obliged to take part in the research. If you choose not to participate, your present and/or future medical care will not be affected in any way and you will incur no penalty and/or loss of benefits to which you may otherwise be entitled. Your identity will remain confidential. The results of this research study may be presented at scientific conferences or in specialist publications, but your identity will not be revealed.

Your cooperation is greatly appreciated and I thank you in anticipation for your collaboration. Should you require any further information, you are welcome to contact me at the Psychology Department at the University of Port Elizabeth at 041- 504 2330 (office hours) or 041- 582 4652 (after hours).

Yours sincerely
Mr. Mohammed Kayal

____________________________________
Intern Clinical Psychologist

____________________________________
Supervisor: Ms. P.J. Cloete
Clinical psychologist

____________________________________
Co-supervisor: Dr. D.S. Elkonin
Clinical psychologist

____________________________________
Prof M.B. Watson
Acting head: Department of Psychology: UPE
Counselling and Research Psychologist
APPENDIX D
CONSENT FORM
CONSENT FORM

COPING RESOURCES AND SENSE OF COHERENCE OF MALE POLICE OFFICERS IN THE SOUTH AFRICAN POLICE SERVICES IN

RESEARCHER: Mr. Mohammed Kayal
P.O. Box 1600
Psychology Department
University of Port Elizabeth
PORT ELIZABETH
6000
Tel: 041-5042330 (Office Hours)
041-5824652 (After Hours)

DECLARATION BY PARTICIPANT:

I, THE UNDERSIGNED,…………………………………………………………..(name)

[I.D. No]:………………………………..……………………………………...……
Address:
…………………………………………………………………………………………
…………………………………………………………………………………………
…………………………………………………………………………………………
A. HEREBY CONFIRM AS FOLLOWS:

Please initial against each paragraph
1. I/participant was invited to participate in the abovementioned research project which is being undertaken by Mr. Mohammed Kayal of the Department of Psychology in the Faculty of Health Sciences, University of Port Elizabeth.

2. The following aspects have been explained to me: The research project aims at gaining insight into the coping of police officers who work in the field during unsociable hours and who are likely to be exposed to violence, risks, dangers, and traumatic situations. The information will be used as part of the requirements for a M.A. Clinical Psychology Degree. The results of this study may be presented at scientific conferences or in specialist publications.

3. I understand that I need to complete three questionnaires as well as this consent form.

4. My identity will not be revealed in any discussion, description or scientific publication by the researcher.

5. My participation is voluntary. My decision whether or not to participate will in no way affect my present or future medical care/employment lifestyle.

6. I understand that I may not use my individual results for psycholegal purposes.

7. No pressure was exerted on me to consent to participation and I understand that I may withdraw at any stage without penalization.

8. Participation in this study will not result in any additional cost to
myself.

<table>
<thead>
<tr>
<th>B. I HEREBY CONSENT VOLUNTARILY TO PARTICIPATE IN THE ABOVEMENTIONED PROJECT.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signed at .................. on .................................. 2003</td>
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<td>(place) (date)</td>
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<tr>
<td>..................................................</td>
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<tr>
<td>Signature of participant</td>
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