

`` A Survivors Psalm

I have been victimised.
I was in a fight that was not a fair fight.
I did not ask for a fair fight.
I did not ask for the fight. I lost.
There is no shame in losing such
fights, only in winning.
I have reached the stage of survivor and
am no longer a slave of victim status.
I may never forget,
but I need not constantly remember.
I *was* a victim.
I *am* a survivor.”
(Ochberg, 1988: p.vii)

To say that we live in an era of trauma
and human suffering in the global
community is a truism and a tragedy.
(Wilson and Keane, 1997)

**STRESS, POST-TRAUMATIC STRESS DISORDER AND COPING MECHANISMS
AMONGST CORRECTIONAL OFFICERS: AN EXPLORATORY STUDY**

by

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Declaration:

Unless specifically indicated to the contrary, this dissertation is the result of my own work.



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Abstract

Correctional services are viewed as a high-risk profession, given the exposure to violence and other stressors that characterises the work. These factors contribute to occupational stress and the possible development of Post-traumatic Stress Disorder (PTSD) among correctional officers. There is an abundance of international literature on the development of PTSD in various populations, but almost no literature that examines the prevalence of PTSD amongst correctional officers in other countries as well as in South Africa. This study is aimed at exploring occupational stress, PTSD and coping strategies in South African correctional officers, using demographic data, the Impact of Events Scale-Revised, the Occupational Stress Indicator and the Coping Resources Inventory. Results, as measured by the Impact of Event Scale-Revised (IES-R), revealed that correctional officers who worked directly with prisoners, and were therefore exposed to violence, experienced PTSD symptoms. Coping style findings (Coping Resources Inventory) showed that unmarried officers tended to use avoidance coping strategies to deal with occupational stress, whereas married officers tended to use approach coping strategies. It seems that marriage is a protective factor or buffer against stress. Surprisingly, results of the Occupational Stress Inventory did not reveal high levels of stress overall amongst correctional officers. Higher occupational stress was found amongst officers who had been in the correctional services for more than six years. The implications of the above findings indicate that correctional officers, who suffer from PTSD and occupational stress, must be identified and treated. The study further hopes that the findings and associated recommendations made can inform prevention and intervention programmes in the correctional services. Prevention and intervention programmes should impact at the level of the individual and the organisation through programmes such as stress management, stress inoculation and critical incident stress debriefing as well as, structural administrative and environmental change programmes within the correctional services.

Chapter 1 **Introduction**

1.1 Statement of the Problem

Stress-related illnesses and disorders are costing the economies of most countries millions of dollars. Many working hours are lost to stress-related illnesses. Not only do people become ill with physical problems but also they manifest a range of psychological and emotional problems. Due to stressful situations, workers become less motivated and more dissatisfied. This leads to lowered productivity and effectiveness, absenteeism and high staff turnovers (Edwards & Rothbard, 1999; Hofmeyer, 1997; Patel, 1989).

Occupations such as emergency, police, and correctional services are regarded as high-risk occupations. Research into high stress risk occupations has been conducted with ambulance personnel, fire brigade personnel (De Villiers, 1988; Odendal & Van Wyk, 1988; Sparrius, 1992) and other emergency services personnel (Dietrich & Hattingh, 1993), and reveals high levels of stress in these occupations. Research conducted with personnel of the South African Police Services to determine their levels of stress, found stress levels among SAPS officers to be very high (Gulle, Tredoux, & Foster, 1998).

Emergency services and law enforcement work has been ranked among the top five most stressful occupations in the world. Therefore, these officers manifest stress-related complaints, ultimately leading to emotional disorders which are often associated with substance abuse, suicide and divorce. The literature suggests there is a predominance of evidence which shows that these officers use avoidance coping strategies to cope with their harsh circumstances (Anshel, Robertson, & Caputi, 1997; Brown & Grover, 1998; Biggam, Power, MacDonald, Carcary, & Moodie, 1997).

Given the similar nature of the work (although in the absence of research) it can be argued that correctional services work is just as difficult and dangerous as the other services mentioned, and may also be ranked high among the most stressful jobs in the world (Patterson, 1992; Patrick, 1998; Shine, 1997). Another study found that there were higher incidences of coronary disease, substance abuse, gastrointestinal malfunctions, headaches and

migraines among correctional officers than their comparative counterparts in the law enforcement and emergency services (Dignam, Barrerra, & West, 1986). One of the drawbacks in the work of the correctional officer is its routine nature and boredom. Other challenges that face correctional officers are role conflict and ambiguity and lack of social support (Finn, 1998; Gerstein, Topp, & Correll, 1987; Patterson, 1992; Shine, 1997). At times, the correctional officer is faced with more stressful situations than either law enforcement or emergency services personnel. The job is very demanding, involving a high degree of responsibility, threats to the body and personal safety, rotating shifts and unpleasant working conditions (Bergh, 1997). Because of the nature of the job, the correctional officer is prone to many stress-related illnesses and disorders. These illnesses and/or disorders range from coronary heart disease, cancer and intestinal disease to anxiety and mood disorders (Finn, 1998; Holden, Jarvis, Lagace, Svenson, Campbell, & Backs, 1995; Svenson, Jarvis, Campbell, Holden, Lagace, & Backs, 1995).

Various international studies indicate that law enforcement and emergency services personnel who have been exposed to death and violence are prone to Post-traumatic Stress Disorder (PTSD) reactions (Carlier, Lamberts, & Gersons, 1994; Carlier, Lamberts, & Gersons, 1997; Robinson, Sigman, & Wilson, 1997; Harvey-Lintz & Tidwell, 1997; Linton, 1995). The percentage of officers who develop partial or full-blown PTSD is estimated at between 17% and 35%. Some of these officers also suffer from depression and burnout because of the nature of their work (Robinson et al., 1997).

Literature on PTSD in correctional services is scarce, and much of what does exist comments on the violent nature of the working environment. Morris and Morris (in Kratochski, 1988) comment on correctional officers= fear of experiencing violence and/ or assaults by inmates. These fears are not simply in the minds of correctional officers: they are a stark reality. Shine (1997) claims that a major stressor for the correctional officer is contact with inmates, especially in a hostile context. As the correctional officer is exposed to violent situations and threats to the body and person, PTSD may develop therefore.

The aim of this research is to document the profile of correctional services staff in respect of occupational stress and traumatic stress with special reference to PTSD. The dynamics of stress are further explored with regard to several selected independent variables that may influence the degree of stress and traumatic stress experiences. These independent variables

include marital status, exposure to violence and length of service.

There is evidence in the literature regarding occupational stress, that length of service plays a significant role. The literature suggests a definite correlation between length of service and higher levels of stress. However, this correlation, together with other variables (exposure to violence, and so on), may be influenced by coping style. An approach coping style may be a better way of coping with stressful situations. A research question that developed out of this study was whether correctional officers who had more years of service experienced considerably more occupational stress.

Research on correctional services and stress generally focuses on the type of coping mechanisms used by correctional officers. Results so far have mainly concluded that correctional officers apply avoidance coping strategies (Burke, 1993; Evans & Coman, 1993; Graf, 1986). However, there is some evidence that, at times, correctional officers use approach coping strategies (Patrick, 1992).

Social support has been documented and confirmed as a buffer against stress (Bhagat, Allie, & Ford, 1995). The question of marital status as a form of social support arises. Married correctional officers may use approach coping strategies as they have intimate partners with whom to share their problems. Graf (1986) views marital status as an independent support variable, indicating that marital status alone, may mediate stress.

Literature (Durham, McCammon, & Allison, 1985; Harvey-Lintz & Tidwell, 1995; Shine, 1997) stresses the multi-factorial nature (personality of the individual, role of the family, role of the environment, and so on) of the variable psychological health in the context of stress and law enforcement work. This study, however, only considers direct and indirect exposure to life-threatening situations as variables of stressors.

As with PTSD, there is little research that has been conducted in the South African context regarding occupational stress in the correctional services. Most research on correctional services has been conducted on the state of prisons (Africa Watch Prison Project, 1994), gang-related activity (Houston & Prinsloo, 1998), corporal punishment, the death penalty (Devenish, 1992; Hamalengwa, 1991), violence in prison, political detainees (Foster, Sandler, & Davis, 1987) and the detention of children (Puritz, 1987). The literature indicates

that most areas of the correctional services have been researched, with the exception of correctional officers (Bergh, 1997).

The general aim of the research then, is to document the profile of correctional services staff in respect of occupational stress and traumatic stress, with special reference to PTSD. The dynamics of stress are further explored in terms of several selected independent variables that may influence the degree of stress and traumatic stress experiences. These independent variables are found in the form of marital status, exposure to violence, length of service and coping style. The rationale for the study and the theoretical framework is developed to:

- describe PTSD as a construct, and to examine its prevalence
- to describe stress and occupational stress as a construct, and to examine its manifestation in correctional officers
- describe coping strategies as a construct, and to examine how these strategies are applied by correctional officers
- provide a theoretical integration of occupational stress and PTSD, and to link this to coping strategies.

1.2 Situational Analysis

The situational analysis presented here describes the conditions inherent in the Department of Correctional Services (DCS) in order to contextualise the study. The literature on South African prisons suggests that working conditions here are comparable with conditions in other prisons internationally.

The Department of Correctional Services (DCS) is a paramilitary organisation (Inwald, 1994) which is structured hierarchically. At the bottom end of the hierarchy one finds the correctional officers. At this level, there are three rank structures. The lowest rank level officers are mainly responsible for the safekeeping of inmates (DCS, 1994). The second level consists of middle management and the third level constitutes top management.

Correctional officers are either employed in the administrative offices where they perform mainly clerical duties, or they are employed within the prison and are responsible for the safe custody, security and rehabilitation of prisoners or inmates.

The main task of administrative officers is that of clerical duties, administration of leave, salaries, and so on. These officers may experience occupational stress differently and have distinctive stress profiles wherein stress manifests uniquely, as compared to those officers who work within the prison (Gerstein et al., 1987). It is difficult to predict how these officers would experience violent situations when exposed to them.

Chaka (1998) conducted research for her Masters thesis regarding perceived sources of stress in a sample of correctional services officers. She found that boredom, shift work, role ambiguity, violence, and unpleasant working conditions were perceived as sources of stress.

The correctional officers who work within the prison are not only responsible for guarding and escorting prisoners, but also for the rehabilitation of prisoners and the general security of the prison and prisoners. The tasks of security and rehabilitation immediately bring up the issue of role conflict (Anderson, Cooper, & Willmot, 1996; Arnold, Cooper, & Robertson, 1995; Biggam et al., 1997; Furnham, 1997). Correctional officers find themselves in a variety of roles in which they are required to perform opposing and different roles. They may play the role of the rehabilitator, but must also act as protector and aggressor when there is violence in the prison facility. It is argued that this makes the officers vulnerable to not only PTSD but also to occupational stress.

Yet, research (Furnham, 1997; Kicly & Hodgson, 1990; Finn, 1998) indicates that some officers may feel that the contact they have with the inmates and their roles in the rehabilitation of the inmates, make the job worthwhile. It seems that various factors such as job satisfaction, coping style and so on may mediate the effects of exposure.

Officers who are employed within the prison are also responsible for doing shift work (shift work refers to situations where officers are on night duty with no activities to be done other than security), which at best is viewed by the officer as boring and unstimulating, resulting in occupational stress (Anderson et al., 1996; Arnold et al., 1995).

Career development in the DCS is very important (Saylor & Wright, 1992). Officers are encouraged to obtain tertiary educational qualifications as this enhances their knowledge and skills as well as promotional opportunities. There are diploma courses and postgraduate

courses specifically tailor-made for the Department. Departmental courses play an important role in the development of the correctional officer. A variety of courses are presented each year for the officers. Because the lowest tier of the hierarchy is enormous, the correctional officer's chances of promotion are very slim. The officer remains in the same rank structure for a long time, causing boredom, negativity and lack of growth.

An extensive health network, consisting of psychologists, nurses, social workers and chaplains, exists in the DCS. However, these services are for the benefit of the inmates. Officers who suffer from physical and/or mental ailments are encouraged to seek external help for their health problems. Stress management, conflict and time management, and debriefing programmes are available, but these are underutilised due to a lack of trained staff to present the programmes. Through this study, the researcher hopes to create awareness with top management about the stressful nature of the job and the need to offer these programmes.

Transformation within the organisation, which has come in the form of affirmative action, has made officers more vulnerable to occupational stress (Begley, 1998). Two groups of workers are largely affected by affirmative action. The first group constitutes those individuals who have been working in the department for a number of years (DCS, 1994). These individuals must now make way for a new generation of workers. The second group is the new generation of affirmative action appointees. These people experience role demands, conflict and ambiguity because of their unfamiliarity with the job (Begley, 1998). Terry and Callan (1997) found high levels of appraised stress, low appraised certainty and the use of avoidant rather than approach coping strategies, whereas poor social functioning was associated with low self-esteem and high levels of disruption.

Most officers in the Department who have been appointed in managerial positions, come from the lower ranks of the organisation. These officers have not moved through the ranks and acquired the necessary managerial skills needed for the offices they now hold, resulting in stress (Begley, 1998; Bergh, 1997).

Overcrowding in prisons has become a huge challenge in the DCS. UN regulations concerning overcrowding in prisons, stipulate that prisons should only be 150% overcrowded, yet within South African prisons the total stands at 184% (S.A.P.A., 2000). Ellis (1984) and Gayes and McGuire (1985) mention facility crowding. Both these studies

hold the view that overcrowding causes a situation of 'survival of the fittest'. There seems to be competition for the very limited resources in a correctional facility. Not only is there competition for limited resources, but there is also an increase in escapes and gang-related activities (Atlas, 1983; Houston & Prinsloo, 1998). Gang-related activities range from assault to drug dealing and money laundering. Assault is not only in the form of inmate on inmate but inmate on staff (Patrick, 1998).

Overcrowding makes it difficult for correctional officers to control inmates. Officers have to take responsibility for increasing numbers of inmates that enter the system. An unhealthy situation develops. Because there is little or no control of inmates, violent activities increase.

Of the little literature existing about PTSD in correctional services, much of it comments on the violent nature of the working environment. Morris and Morris (in Kratcoeski, 1988) comment on correctional officers' fear of experiencing violence and/or assaults by inmates. Shine (1997) claims that a major stressor for the correctional officer is contact with inmates, especially in a hostile context.

Studies and research have looked into various areas of violence (Africa Watch Prison Project, 1994; Gibbons, 1998; Houston & Prinsloo, 1998). These studies focused chiefly on the causes of violence, but as previously stated, violence is a given part of the correctional officer's job and therefore the officers may be prone to PTSD.

Overcrowding, low staff morale and a shortage of staff are major causes of violence. These three causes go hand-in-hand as officers cannot handle violent situations due to a shortage of personnel. This means that staff morale is low. The number of inmates in overcrowded facilities means that the ratios between officers and inmates are so huge that officers feel overwhelmed (Bergh, 1997).

As indicated above, research from abroad has concluded that correctional officers experience significant amounts of stress. Stress mainly develops in reaction to the specific environment. In this case there are two scenarios in which the correctional officer may develop stress-related illnesses, namely, the violent nature of the prison and the high level of occupational stress experienced in correctional services.

In this section, an overview of the functioning of the correctional services has been presented as contextual information for the reader. Vulnerability to occupational stress and PTSD has been viewed contextually, focussing on the three categories of personnel who are largely responsible for the functioning of the correctional facility.

1.3 Summary of Chapter

The chapter outlines the nature of stress within the context of the South African Correctional Services. Although there is a lack of research in this area, the South African situation could compare to the international situation in prisons.

A situational analysis contextualises the current South African scenario, viewing matters such as overcrowding, career development, violence, boredom, shift work and so on.

As previously indicated, the aim of the research is to document the profile of correctional services staff in respect of occupational stress and traumatic stress, with special reference to PTSD. The dynamics of stress are further explored in terms of several selected independent variables that may mediate the stress and traumatic stress experiences. These independent variables are: support in the form of marital status, exposure to violence, length of service and coping style.

Chapter Two: Literature Review

2. Stress, Occupational Stress and Coping

2.1 Stress and Occupational Stress

2.1.1 An Overview of Stress and Occupational Stress

Since the conceptualisation of the construct stress in 1926 by Hans Selye (Selye, 1956; 1976), the concept of stress has been surrounded with controversy. Researchers and theorists who use the concept in a broad sense have caused this. Stress has been perceived either as stimulus or response or as interaction between stimulus and response. Defining the concept has become very difficult as stress is generated on various levels. These levels may be occupational, academic and interpersonal in nature, and may include natural and man-made disasters. Stress may be measured in human, physical and emotional disorders, as well as financial cost. In 1996, stress cost United States employers an estimated loss of \$75 - 80 billion (Edwards & Rothbard, 1999) annually. It seems that absenteeism, turnover of staff, loss in production, and health and disability claims have precipitated these losses.

Although stress-related disorders are psychological and constitute the behavioural manifestations of people who are mostly employed in the so-called high-risk occupations, stress-related disorders may be found in occupations that are not known to be or classified as high-risk occupations. This study, however, focuses on correctional services, which is regarded as a high-risk occupation. Other high-risk occupations include emergency services and law enforcement (Mitchell & Bray, 1990). Stress-related disorders are usually the result of occupational hazards or forms of occupational stress. Within the context of correctional services, the main threat to the individual lies not only in the contact with violent situations (Morrison, Dunne, Fitzgerald, & Cloghan, 1992), but also in general work conditions such as shift work, lack of support from management and a 'macho' attitude among others (Arnold et al., 1995; Biggam et al., 1997; Dignam et al., 1986).

Current and past literature states that the concept of stress, has been used on a broad level to include several areas which could have an effect on the individual or group of individuals

(Monat & Lazarus, 1977). The term stress is further applied very loosely to occupational stress. The literature does not always distinguish between stress and occupational stress. The concept of stress has always included the larger environment and its effect on the individual. As previously stated, this environment could range from the natural, the interpersonal to the occupational environment. The concept is constructed around the influence that the environment has on the person and *vice versa*.

Historically, theorists have focussed either on the stimulus, response or interaction of both. Current conceptual approaches (Edwards & Rothbard, 1999; Furnham, 1997) recognise that stress is a process concept which includes both internal and external stimuli. It also describes stress as environmental and personal responses, focussing on the transaction or the interactional nature thereof. Occupational stress is a sub-area, researched in depth but it subscribes to some general areas of interactional theory. This will be discussed in more detail further on.

2.1.2 Conceptualisation of the term Occupational Stress

As pressure increases on the average employee to be more efficient and productive, factors intrinsic to the job cause the employee a certain amount of stress. Absenteeism and staff turnover (Brogmus, 1996; Spielberg & Reheiser, 1995) are usually the result of stress in the workplace and they affect efficiency and productivity. The stress created is work-related, hence the concept of occupational stress.

According to Spielberg and Reheiser (1995, p.53), occupational stress can be defined as “the job characteristics that pose a threat to the individual because of a poor match between the abilities of the employee and the demands of the job”.

According to Bhagat et al. (1995, p. 94), occupational stress is “a problematic level of environmental demand that interacts with the individual to change his or her psychological or physiological condition as such that the person is forced to deviate from normal functioning”.

Ross and Altmaier (1994, p. 12) define occupational stress ‘as the interaction of work conditions with characteristics of the worker such that the demands of work exceed the ability of the worker to cope with them’. Their definition views stress as a mediational process.

2.1.3 Multidimensional Models

An overview of multidimensional theories of stress is discussed and applied to the correctional services environment. Multidimensional theories have developed from earlier unidimensional theories. Stress was either viewed as an independent or dependent variable. Theorists began observing the influence of the environment, cognitive processes, outcomes and results of stress and the personality of the person, among others. The stress models that were developed took a more dynamic approach to the development of stress. Some of these models are explained below.

2.1.3.1 Transactional Model

Cox (1978) defines stress as part of a complex and dynamic system of transaction between the person and the environment in which he finds himself. The model also defines stress as an imbalance between demands and resources, with the emphasis on the imbalance. The model further argues that people or individuals influence the environment and *vice versa*. Any person-environment encounter, therefore has implications for the person and environment (Ross & Altmaier, 1994).

In his theory, Cox (1978) preserved the stimulus-based element as he included the actual demand of the environment. He argues that individuals respond to their perception of environmental demand, the perceived demand. Internal demands and non-environmental demands are also perceived. Cox argues that individuals have certain capabilities to meet the demands. The individual then responds in terms of perceived capabilities. The event is defined as stressful when the perceived demands exceed the perceived capabilities; thus, an imbalance is created. The transactional nature of the theory resides in the perception of the capabilities or demands which are not static because responses may modify the appraisal and/or the situation.

Although Cox's (1978) theory views stress as a process, it underplays the importance of the cognitive elements involved. Cox does mention that appraisal is involved but does not clarify appraisal and the role thereof. Cox does mention coping but underplays the importance of it to the individual.

2.1.3.2 Dynamic Interplay Model

Cox and MacKay (Furnham, 1997) view stress in terms of the dynamic interplay between certain variables. They contend that there are four elements involved in the dynamic relationship between the individual and the environment. The environment not only places certain demands and constraints on the individual, but also offers a measure of support. The individual, in order to meet these demands and constraints, has a certain value system and needs, as well as coping resources. These demands and resources are continually appraised. The imbalance between the demands and the resources leads to the subjective experiencing of stress. Coping attempts manifest in physiological, psychological or behavioural activity, in order to create and maintain a balance between the demands and resources. When the demands become considerable and the coping style may be that of avoidance coping, then illnesses or maladaptive behaviour may result (Brown & Grover, 1998; Holden et al., 1995; Patterson, 1992).

Most of the elements of Cox's (1978) transactional theory are maintained and the process is defined as a dynamic interplay between demands and capabilities. The emphasis of this model is still on the imbalance created due to appraisal of the event. The theory does not imply that individuals do have some resources at hand which enable them to cope with the situation.

2.1.3.3 Interactional Model

Lazarus (1966) distinguishes psychological stress from other types of stress through the intervening variable of threat. Threat implies a state in which the individual anticipates a confrontation with harmful conditions. Stimuli resulting in threat or non-threat reactions are cues that signify to the individual some future condition that is either harmful, benign or beneficial. These and other cues are evaluated by the cognitive process of appraisal. These cues are a depiction of stress as perception, that is, the individual's interpretation of one or more events (Eden, 1990). Buunk, De Jonge, Ybema, & De Wolf (1998) propose that a potentially stressful event may lead to different emotional responses in different individuals depending on their appraisal of the situation and their resources.

Lazarus and Folkman (1984) view stress as 'a relationship between the person and the

environment that is appraised by the person as taxing or exceeding his or her resources and endangering the person's well-being' (p.21). Important to the theory is the concept of appraisal, as defined by Lazarus (1966) above.

Lazarus and Folkman (1984) state that the appraisal process begins when a person perceives and evaluates a particular transaction or series of transactions between himself/herself and the environment as stressful. This is called perceived stress. This evaluation gives the encounter meaning or significance. Studies on violence in correctional facilities have indicated that the violent confrontation is usually, although not always, perceived by correctional officers as stressful (Anshel et al., 1997; Atlas, 1983; Biggam et al., 1997). At times it may be the lack of management support or frustration with the boredom and routine of the job that is perceived as harmful. The situation, whatever it may be, is then appraised as harmful. Because it is evaluated in this sense, the event becomes meaningful to the officer. The officer, because he is expecting certain outcomes, reacts in ways intended to attain these outcomes, according to his own resources and coping responses. The event thus becomes meaningful in terms of the desired outcome and not only in terms of the stressfulness of the event. Desired outcomes may be in the form of praise for repressing a potentially violent situation, or finding creative ways to deal with boredom on the job.

Lazarus and Folkman (1984) distinguish between three types of appraisal: primary, secondary and reappraisal. Primary appraisal refers to the judgement of whether a situation is irrelevant, benign, or stressful, and whether a stressful situation is perceived as threatening (potential loss), as harmful (actual loss), or as challenging (potential gain). Secondary appraisal refers to the perception of opportunities for action and coping with a stressful situation. Reappraisal refers to changes in appraisal based on new information from the environment, or based on cognitive coping processes, in which a threatening experience is re-appraised as a challenge.

The coping process is viewed as the process which follows when an event has been appraised as stressful, in which individuals then have to do something to master the situation and/ or control their emotional reaction to the situation. The extent to which the situation is experienced as stressful, as well as the individual's success in mastering it will depend on the individual's coping processes (Lazarus and Folkman, 1984).

Emotion plays an integral part. Appraisal of the situation also depends on the individual's

emotional condition of the situation. In a severely depressed person, coping resources are very low. If a situation is perceived and appraised as stressful by the person, he or she might adopt to behaviours that are consistent with present mood and emotions.

The model helps us understand stress as the combination of personal issues and concerns. These issues change over time. It also helps us to understand that individuals have resources to call upon in times of stress, but these resources also change over time. The model further implies a dynamic process in the sense that stimuli is constantly appraised and re-appraised. It also includes the importance of emotions and coping resources available to an individual.

The Interactional model (Lazarus, 1966, Lazarus and Folkman, 1984), the Dynamic Interplay model of Cox and MacKay (in Furnham, 1997) and the Transaction model of Cox (1978), could successfully be applied to the correctional services environment as indicated above. Each model gives a certain perspective as to why a correctional officer who experiences stress would adopt or apply certain coping strategies. Stress is perceived subjectively when the demands of the situation are larger than the coping resources of the individual. In an overcrowded prison a riot will be perceived as very dangerous, as there is a lack of personnel. In a normally populated prison where personnel are adequate, riots are not perceived as very dangerous, and are able to be controlled by the existing personnel.

The models further indicate an integrative approach as to the multi-dimensional nature thereof. Both the stimulus and response approaches are included and viewed as part of the dynamic process of stress. Coping, emotions and appraisal are further added to the models giving it a three-dimensional perspective.

These models also account for the person-environment issue, and the manner in which both are influenced by each other, as well as which resources are called upon. The models also inform us that stress is not an uni-directional issue, but rather a dynamic process. It is within these theories and models (Interactional, Dynamic Interplay and Transaction Model) that occupational stress is located.

2.1.4 Work-related causes of occupational stress in the correctional services

The literature reveals that there are numerous work-related causes of occupational stress. The researcher has therefore deemed it necessary to provide an overview of dimensions of occupational stress with special reference to correctional services and other emergency services. The detail is necessary in order to develop the rationale for the research design and the selection of variables. Research findings from reviewed studies will be integrated within this section.

Several studies have indicated that correctional officers suffer more from stress-related illness than any other comparative occupation (Finn, 1998; Holden et al., 1995; Svenson et al., 1995). Although the poorer sickness profile of correctional officers could be due to predisposing lifestyle and demographic factors, it may also be due to environmental factors (Morrison et al., 1992) such as long working hours and poor working conditions.

A higher incidence of occupational stress in correctional officers seems to be more prevalent and occurs at higher levels than in blue- and white-collar workers. Coronary disease and hypertension also seem to be higher than in comparative police personnel. Studies to this effect have argued that the major difference between police personnel and correctional officers are that police personnel are able to withdraw from the scene after a situation has occurred, whereas the correctional officer cannot (Williams & Sommers, 1994). An inability to withdraw from an incident results in continued exposure that may give rise to maladaptive coping such as repressed anger, alcohol and drug abuse, and/or maladaptive response syndromes, manifesting in stress-related illnesses. There is thus no immediate relief from the situation (Digman et al., 1986; Grossi & Berg, 1991).

The literature identifies specific areas that meet the criteria for work-related stressors. These are general features of occupational stress with reference to the correctional services, and are listed below:

Occupational demands intrinsic to the job: Certain jobs are more stressful than others due to the nature and features related to the job. These may include, for example, making decisions, constant monitoring of machines, repeated exchanges of information, unpleasant physical conditions and the unstructured nature of some jobs (Biggam et al., 1997; Furnham, 1997;

Kiely & Hodgson, 1990; Rout & Rout, 1997). Shift work is another of these intrinsic factors (Finn, 1998). According to Arnold et al. (1995), shift work and long hours are factors intrinsic to the job. Workers are unable to get into a fixed living routine as it is constantly disrupted (Anderson et al., 1996).

Role conflict: Conflicting demands of the various roles are a cause of stress. Expectations and demands of the role are either difficult to meet or are mutually incompatible. Role conflict is seen when the officer has a custodial function and a rehabilitative function to fulfil. Both functions are mutually incompatible. (Arnold et al., 1995; Anderson et al., 1996; Biggam et al., 1997; Furnham, 1997; Kiely & Hodgson, 1990; Osipow & Spokane, 1986; Um & Harrison, 1998).

Role ambiguity: Due to the demands of the role, ambiguity is experienced. The ambiguity experienced is usually due to a lack of a clear job description, a lack of goals and a lack of responsibilities (Arnold et al., 1995; Anderson et al., 1996; Biggam et al., 1997; Furnham, 1997; Kiely & Hodgson, 1990; Um & Harrison, 1998). Managers often expect officers to adhere to the rules and regulations and to go 'by the book', yet they expect the officers to be flexible and use their judgement in the day-to-day treatment of inmates (Finn, 1998).

Responsibility for others: Stress may result from the burden of being responsible for those who are employed as subordinates. Managers are usually in positions that require them to take responsibility for their subordinates (Arnold et al., 1995; Anderson et al., 1996; Biggam et al., 1997; Kiely & Hodgson, 1990; Um & Harrison, 1998). Posen (1990, in Shine, 1997) reports that an overcritical management style was seen as a major stressor by correctional officers, as officers could not depend on managers for support.

The nature of the correctional officer's work is often regarded as dangerous and the environment is regarded as intrinsically dangerous (Grossi & Berg, 1991). Brodsky (1989, in Kiely & Hodgson, 1990) found that the relationship between officer and inmate has always been troublesome. Gerstein et al. (1987) and Kiely and Hodgson (1990) conclude that when staff - inmate relationships are sound, they cause less stress. Staff who felt that they were contributing to the well-being of inmates found their jobs stimulating and rewarding (Morrison et al., 1992). Smith (1988, in Shine 1997), however, refers to the 'John Wayne syndrome' that he describes as officers being able to cope with potentially violent situations

and inmates through denial and trivialisation. Smith had given stress a low weighting because of this attitude towards inmate contact.

One of the aims of the study is to determine what effects exposure to violence has on correctional officers. It is hypothesised that officers who are exposed to violence would develop PTSD symptomatology and/ or PTSD, but given the role of mediating variables, this may vary as discussed earlier.

Lack of social support: There is a great deal of literature on this subject, all of which emphasises the importance of social support, be it in the sense of the family, colleagues or professionals. Evidence shows that social support reduces stress among workers (Arnold et al., 1995; Anderson et al., 1996; Biggam et al., 1997; Boey, 1998; Peeters, Schaufeli, & Buunk, 1995a; Um & Harrison, 1998). According to Burke and Greenglass (1996), social support plays a direct and an indirect role in reducing job stress. It is directly responsible for emotional and physical well-being, and has an indirect effect on the job stressor-strain relationship.

According to Peeters, Buunk and Schaufeli (1995b), rewarding companionship seems to be of great importance to correctional officers. It is seen as a type of social interaction which, although not help-oriented, still has a supportive function. Rewarding companionship has a prominent and positive effect on the correctional officer. It also reduces or has a buffering effect on stressful life events. Brown and Grover (1998) found that spousal support is a factor that positively affects psychological well-being when officers have to cope with stressful situations.

Another aim of the study is to determine what role marital status plays in the alleviation of stress. Given the above it is reasonable to hypothesise that marital status seemed to be an alleviator of stress. It is therefore hypothesised that marital status allows officers to apply an approach coping style, indicating that officers find relief from stress by being married. It is assumed that marriage provides positive support as indicated in other research cited.

Working conditions: Stress results from working in poor conditions, such as extreme temperatures, loud noises, crowding, poor lighting, etc. The most stress is caused when the above conditions are uncontrollable, unexpected, unpredictable and excessive (Furnham,

1997; Kiely & Hodgson, 1990; Osipow & Spokane, 1986).

Another stressor seems to be that of shortage of staff and this can be directly related to overcrowding in prisons (Berg, 1997; Ellis, 1984). When there is a shortage of staff, there is an increase in security risk as evidenced in the increases in escapes, violence, and other gang-related activities. Any increase in security risks means that rehabilitation suffers as an immediate consequence (S.A.P.A.,2000).

Years experience: According to Patterson (1992), correctional officers who have the least (0 - 5 years) and the most (14 - 20 years) job experience encounter less stress than those in the medium experience category (6 -14 years). Patterson (1992, p. 262) identifies these as occupational developmental stages as follows: "the alarm stage (0 - 5), the disenchantment stage (6 - 14), and the personalisation stage (14 - 20)". In the alarm stage the rookie is in for a 'reality shock' (Patterson, p.262). The disenchantment stage is characterised by the realisation that the officers have little effect on crime and the work ideals are unrealistic. Cynicism becomes a way of coping at this stage. The personalisation stage is characterised by a renewed interest in the work setting and the officer then strives for personal, rather than work goals. Officers become less worried about the demands of the job, and as these values change over time, they seem to have a decreasing effect on stress. Patterson argues that although many studies show curvilinear relationships between job experience and job stress, there are other studies that show inconsistencies (Gerstein et al., 1987). Gerstein et al. found that officers who were newly drafted into the organisation were excited about the prospects of work and the challenges that lay ahead of them. Some of these officers also felt that they could make a difference. Officers falling in the medium range of experience felt more in control of their job situations and were more adjusted and accustomed to the demands of the work environment. Violanti (1983) also found a curvilinear relationship between job experience and perceived stress. Officers who had the least and most experience within the organisation perceived less stress than those with intermediate levels of experience.

One of the aims of this study is to determine the relationship between experience and perceived stress. It is hypothesised that there will be a curvilinear relationship between experience and perceived stress, with the novice officer (0 - 5 years) experiencing the least stress and officers in the disenchantment phase, the most.

Difference in occupational functions in the correctional system: As indicated in the situational analysis in chapter one, a distinction was made between officers who do administrative work and those who work within the prison. Although there is little comparative data available, Robinson, Frank and Simourd (1996) found that different attitudes and work adjustments existed across various occupational groups in the correctional services. The following differences were found:

- Correctional officers were less satisfied with rehabilitation than were case management officers.
- Officers who had less contact with prisoners were more committed to the goals of the organisation than their colleagues who had more contact.
- Officers who were responsible for rehabilitation programmes were more satisfied with their jobs and had less job strain than those who were responsible only for custodial duties.

From the study it seems that the correctional officer who is responsible for custodial and guard duties (and who is usually at the bottom end of the organisational hierarchy, and who is more likely to work within the prison), is the least committed to the organisation, sceptical about organisational change, least positive about rehabilitation, has poor work habits, and derives the least satisfaction from his job (Kiely & Hodgson, 1990; Morrison et al., 1992; Robinson et al., 1996). Because of their poor attitudes and negative outlooks, it could be concluded that these officers are the most likely to be at risk for occupational stress.

Although various categories of occupational groups (Discipline, Psychology, Social Work, Religious Care, and so on) are found in the South African correctional system, this study aims only at determining the level of occupational stress among correctional officers (administrative versus prison workers) and will therefore not study the individual groups independently.

A number of mediating variables have been identified which in correctional officers may mediate possible relief of occupational stress. Only certain variables such as length of service, marital support, occupational section, and working conditions (exposure to violence) have been selected for study in this research.

It seems that there are various areas in which correctional officers may experience stress. The

literature indicates that officers who are stressed are less motivated and more unproductive in doing their jobs. Yet not all officers who experience these occupational stressors experience them as stress. As indicated, mediating processes within the environment, predisposing factors and demographic variables all play significant roles in determining the stress experience in perceiving subjective stress. Although these factors do play an important role, it seems that certain strategies are employed to cope with the perceived stress. These strategies will be studied in the following section as they are similarly important as mediators in the stress-adaption process.

2.2. Coping Processes

The literature has indicated that there are many areas in the working environment that the correctional officer experiences as stressful. Despite the predisposing factors of personality, previous experience and exposure, not all officers experience the same stressor as stressful. This study aims to explore the mediating role of coping style in stress and traumatic stress. The utilisation of specific strategies may indicate the extent to which the correctional officer is coping adaptively with a particular stressor. The study aims to determine what type of coping style is utilised by officers and whether there is a relationship between a particular coping style and levels of stress and PTSD.

2.2.1 Conceptualisation of Coping Processes

Although coping is described in this study under a separate heading, it is nevertheless inseparable from stress. Once a person experiences stress, that person behaves in a certain way to manage the stress. This may be in a positive way by seeking guidance, or it may be negative in which cases for example, the person turns to alcohol and drugs to relieve the stress.

According to Holahan, Moos, and Schaefer (1996), coping seems to be a stabilising factor that may help individuals maintain psychological well-being during stressful events. The process involves both cognitive and behavioural efforts that are associated with emotional distress. According to Lazarus and Folkman (1984, in Aldwin & Revenson, 1987), these efforts manage specific external or internal demands which are viewed as demanding or exceeding the resources of the individual. Begley (1998) maintains that the central purpose of

coping is to reduce tension and restore the homeostasis.

Holahan et al. (1996) state that the dispositional approaches to coping assume that individuals who succumb to stressful events are stable and those stable person-based factors are responsible for the selection of coping strategies. The focus of this approach lies in the manner in which the person can transcend situational influences. The contextual approach assumes that the situation and environment are responsible for the selection of coping strategies. The emphasis in this approach is on how the person copes with the events.

The literature usually draws a distinction between adaptive and maladaptive coping.

Cartwright and Cooper (1996, p. 208) define maladaptive coping as 'actions taken by the individual to temporarily alleviate stress that are usually perceived to be effective in the short term, but that are likely to have a negative impact on health and well-being if continued in the long term'. Compensatory or comfort behaviours are common forms of maladaptive behaviours. These compensatory or comfort behaviours may be anything, ranging from substance abuse, violent acting out behaviour (e.g. spouse battering) and physical symptom formation.

Holahan et al. (1996) argue that coping seems to be central to resilience and vulnerability. There is a dynamic interplay between the personal and social coping resources that come into effect when the individual is in a crisis. Predisposing personality factors, demographic variables and previous exposure and experience of stressful situations influences these resources. Holahan et al. conclude that a relatively stable personality (in which individuals exhibit such elements as self-efficacy, optimism and hardiness) and certain cognitive characteristics (such as a sense of coherence and an internal locus of control) is beneficial to personal coping resources. Although the term *stable personality* might be a contradiction in terms, the specific literature and Holahan et al. use the concept to refer to individuals who exhibit certain characteristics causing the individual to be coherent in nature.

The concept of the stable personality is somewhat misleading. First, it is difficult to define a stable personality, and secondly, the question could be raised about the context in which the so-called stable personality functions. Contexts differ and require certain personality traits of the individual to respond to a situation.

Social coping resources, on the other hand, strengthen coping resources, due to the fact that information, assistance with planning and help is available in the form of social support and a network of agencies designed to deal with stressful events. Emotional support from others bolsters self-confidence and self-esteem (Holahan et al.). A study by Holahan and Moos (1993, in Holahan et al.), found that individuals who lacked social and personal coping resources were more likely to use avoidance coping strategies.

Holahan=s theory confirms the literature (Arnold et al., 1995; Biggam et al., 1997; Brenner, 1985; Um & Harrison, 1998) regarding correctional and law enforcement officers. The literature indicates that there is a lack of social support from management in particular and that correctional and law enforcement officers may feel that they do not want to share their experiences with those outside the organisation.

The model, however, does not attend to the meaning created by the individual regarding stressful events. Even if an individual does have a stable personality (in which individuals exhibit such elements as self-efficacy, optimism and hardiness), the nature of the event and the meaning attributed to it may cause stressful reactions. Individuals who have more stable personalities than others are not less prone to stressful situations. The nature and meaning of the event determines the type of resources available and used by the individual. An individual who prefers a structured environment will perceive an unstructured environment where there are no guidelines, as stressful, as this individual attributes the meaning of disorganisation to the event. The meaning of an event to an individual will determine the manner in which he or she employs coping resources. Lazarus (1966) refers to this process as appraisal. The individual then has to restore some balance between the demands of the situation or environment and his/ her resources (Ross & Altmaier, 1994).

Correctional officers do not all perceive an event as stressful. If officers do perceive the event as stressful, they will act in a certain manner and with certain resources at their disposal to deal with the situation. These may be approach (e.g. seeking guidance and problem-solving) or avoidance (e.g. substance abuse, attempts to avoid thinking about the problem, and so on) coping resources.

2.2.2 Approach Coping and Avoidance Coping

Literature identifies two methods or styles of coping: approach and avoidance coping. These styles of coping will be discussed below.

2.2.2.1 Approach Coping

Individuals who rely on approach coping strategies have been found to be psychologically well adjusted and adapt better to stressful events (Arthur, 1998). These strategies are active and involve information seeking, problem-solving and negotiation. Such strategies moderate the impact of negative stressful life events (Boey, 1998; Holahan et al., 1996). This approach is also referred to as problem-focussed coping (Anshel et al., 1997). Arthur uses the term “instrumental coping” which attempts to alter the demand-coping balance. The demand-coping balance refers to the demands made on the person by the environment resulting in the utilisation of certain coping mechanisms to cope with the demand.

2.2.2.2 Avoidance Coping

Avoidance coping approaches imply that the individual uses defence mechanisms such as denial or withdrawal. The stressful event is usually appraised as being beyond the individual’s coping resources, which leads to psychological distress. This approach is more emotionally focussed (Arthur, 1998; Anshel et al., 1997) in nature, as psychological disturbance increases when situations are dealt with in this manner. Individuals who apply avoidance coping strategies are more prone to depression than those who apply approach coping strategies (Amir, Kaplan, Efroni, Levine, Benjamin, & Kotler, 1997; Boey, 1998; Holahan et al., 1996). Avoidance coping strategies are also found in the form of self-blame, self-pity, passivity, resignation, and ineffective escapism - helpless and reckless coping behaviours.

According to Arthur (1998), individuals may utilise both approach and avoidance coping. The use of both coping mechanisms largely depends on the individual’s perception of the stressful event. However, there have been studies regarding approach and avoidance coping strategies, which contradict these findings. Begley (1998) argues that successfully utilised coping mechanisms leave the person with a sense of being in control and a feeling of self-efficacy. Should a situation arise which is changeable, approach coping may be successfully

employed and would lead to well-being. On the other hand, in a situation that is unchangeable, employing avoidance coping strategies may be more successful and lead to well-being.

2.2.3. Appraisal and Coping

Lazarus' view on appraisal and coping has already been discussed earlier and therefore will not be mentioned here. However, other authors' understanding of appraisal and coping will be viewed here.

Arthur (1998) states that appraisal is a central issue in stress and coping. It is through appraising the situation as stressful or not stressful that the individual applies mechanisms to cope.

In a study by Brown and Grover (1998) it was found that situational, emotional and other factors impact on a process of assimilation and integration of stressful experiences. The cognitive task of accomplishing this may be influenced by an individual's beliefs in a just world, which are said to enhance feelings of security to the extent that, should the individual satisfy his/her own conditions of being good, then he/she is protected from injustice. Consequently, those who hold strong world beliefs regarding justice tend to appraise threats as challenges, whereas those who place little faith in justice perceive the threats as exceeding their capacity to cope.

Peeters et al. (1995a) examined the role of types of events that are stressful in the work of correctional officers and the role that appraisal of the stressful events plays. The daily events that were found to be stressful for the correctional officer were aggressive acts on the part of prisoners, prisoners' disobedience, quantitative and qualitative overload, conflicts between colleagues, and lack of understanding and support from management.

Cognitive appraisal seems to be an important facet in coping processes as it mediates the condition of the stressful events and regulates the meaning the individual gives to the event. Challenge appraisals are related to approach coping measures, while threat appraisals are related to avoidance coping. If a situation is seen by individuals as controllable, they are likely to use approach coping measures, whereas if it is perceived as uncontrollable,

avoidance coping measures will probably be used (Anshel et al., 1997). Although the controllability of the situation is not examined in this specific study, it does provide some insight into the type of coping measure used by individuals and presents an area for research with correctional services personnel.

The threats and challenges referred to are not limited to dangerous or life-threatening situations. Correctional or police officers may work in an office where they have to meet several deadlines - quantitative overload giving rise to occupational stress. Meeting the deadlines may be either perceived as a threat or a challenge. In a situation in which the officer views it as challenging, the situation becomes controllable, and the officer re-appraises the situation in a positive manner. This then enhances coping effectiveness. It may also happen that an officer is involved in the suppression of a riot, although the situation may seem and be viewed as uncontrollable, the officer might view it as a challenge, which enhances his coping resources. In such situations there is balance between the demands and the resources, with the situation being appraised positively. The situation is interactive in nature as it call on both the person and the environment and their influence on each other (Lazarus & Folkman, 1984)

According to Weiner's (in Peeters et al., 1995a) attribution model, three causal attributional dimensions are at play during events which are to be appraised:

- Locus of causality reflects the extent to which events are attributed to either internal or external causes of the person.
- Stability reflects the extent to which events are attributed to stable or unstable causes.
- Controllability reflects the extent to which events are attributed to controllable or uncontrollable causes.

In addition to this model, Peeters et al. (1995a) propose that individuals feel uncertain about handling an event when one or all of these attributions are at play. Lazarus and Folkman (1984) argue that individuals who are confident in their way of coping are less inclined to appraise an event as significant in terms of stressfulness. For an event to be significant, the individual has to have a lack of confidence in his or her ability to cope with the situation, depending on the locus of causality, stability and controllability.

Although appraisal as such is not measured directly in the study, it gives insight into the ways that officers utilise coping methods. The manner in which coping styles are utilised depends

not only on the nature of the situation, but also on the appraisal of the situation. The officer will then apply either an approach or an avoidance coping strategy.

2.2.4 Coping in Law Enforcement and Correctional Officers

In this section the literature reviewed focuses on coping within emergency and correctional services personnel. These occupations are very similar in nature and comparison is drawn between them due to the similarity.

Avoidant coping skills were found to be related to high levels of substance abuse among correctional officers as a way of dealing with job-related stressors (Burke, 1993). Police personnel who showed emotional detachment from their work refused to share the job-related stressors with non-police such as their partners and families. Evans and Coman (1993) argue that these responses to stress represent avoidant coping. Graf (1986) found that two-thirds of police in his study indicated that they could not deal properly with work hassles, were less confident about handling work-related issues and were not coping effectively with changes at work. Although poor coping skills were cited as the reason for this, avoidant or emotion-focused coping seemed to be employed by the officers.

Absenteeism among correctional staff is a huge problem for the organisation (Wright, 1990). Not only does it incur huge financial losses for the organisation, but also work days are lost and pressure is put on the other workers as absenteeism creates understaffing. Absenteeism is viewed as an expression of the avoidant coping measure. It is easier to avoid stressful situations by staying away from them than by dealing with the problem, which requires a measure of involvement and commitment to the problem.

Although the foregoing section has focussed mainly on avoidant coping, approach coping is well documented in the literature. It has been mentioned that officers who have a positive attitude towards the inmates and who are stimulated by their work cope more effectively with the work environment (Anshel et al., 1997; Kiely & Hodgson, 1990). Approach coping leads to a reduction in occupational stress.

In terms of the theory of appraisal and reappraisal, officers reappraise a stressful situation and

employ either approach coping strategies or avoidant coping strategies. The outcome of the type of strategy employed will depend on previous exposure, cognitive appraisal, and personality. In utilising one style or the other, the officer is able to cope with the situation at hand. Due to the factors mentioned above, the officer might cope positively in the short-term, but negatively in the long-term depending on the style of coping. This study will attempt to research the type of strategy applied by correctional officers.

2.3 Post-traumatic Stress Disorder (PTSD)

Certain occupations pose a greater risk for personnel to develop PTSD. Such occupations are law enforcement (police and traffic personnel) and emergency services personnel (ambulance and fire brigade personnel). When crimes such as murder or manslaughter are committed, usually the police are first at the crime scene. Police are at times led into ambushes or have to give chase after armed robbers. Emergency personnel like traffic, fire brigade and ambulance services are the next group to follow at scenes where accidents, fires and other traumatic incidents have occurred. There is copious literature on the development of PTSD among these individuals. In view of the very limited research on correctional services, the literature about these high-risk occupations (law enforcement and emergency services) will serve as comparative literature for correctional services.

Studies regarding the development of PTSD among correctional officers are rare. This is one occupation that has not been well researched; yet these officers work in an extremely violent and risky environment. The correctional officer and the prisoner are both exposed to violence, due to the violent nature of the environment. In this study the focus will be on the correctional officer who is exposed to this violence.

Various international studies indicate that the personnel of law enforcement and emergency services agencies who have been exposed to death and violence are prone to PTSD reactions (Carlier et al., 1994; Carlier et al., 1997; Robinson et al., 1997; Harvey-Lintz & Tidwell, 1997; Linton, 1995). The percentage of officers who develop partial or full-blown PTSD is estimated at between 17 % and 35%. Some of these officers also suffer from depression and burnout as a result of the nature of their work (Robinson et al., 1997).

An occupation such as that of correctional services is seen as one of the most stressful and

dangerous in the world. The researcher will therefore attempt to determine the prevalence of PTSD in a sample of the South African correctional services.

2.3.1 Development of Post-traumatic Stress Disorder (PTSD)

Post-traumatic stress has existed for as long as humans have been confronted with traumatic events such as earthquakes, volcanoes, violent deaths, wars and floods (Patrick, 1998), and traumatic crimes such as murder and rape. For decades, centuries and millennia, humans have had to survive and cope with these devastating events.

The investigation into PTSD has a long history, in which the diagnostic, nosological, and aetiological debates have shaped the construct (Kaplan & Sadock 1998; Louw, 1989). Although the diagnostic criteria state that it is individuals who have been exposed to traumatic events who develop the specific criteria for PTSD, Davidson and Foa (1993) and Weiss, Marmar, Metzler, and Ronfeldt (1995) argue that not all exposure to traumatic events leads to PTSD and that PTSD is the exception rather than the rule. A study by Carlier et al. (1997) asserts that not every traumatised individual will develop PTSD. For the disorder to develop in a traumatised individual, there must be an interplay between the nature of the trauma and pre-existing vulnerability factors. According to Davidson and Foa (1993), predisposing factors include genetic susceptibility to general psychopathology or to specific psychological disorders, early adverse or traumatic experiences, personality characteristics such as neuroticism and introversion, recent life stress or life change, deficient support systems, high intake of alcohol, external locus of control, and a pervasive sense of the uncontrollability of stressful events.

The DSM-IV (APA, 1994) defines PTSD as a set of typical symptoms that develop after a person sees, is involved in, or hears of an extreme traumatic stressor. The person reacts to this experience with fear and helplessness, persistently relives the event and tries to avoid being reminded of it. The stress causing PTSD is overwhelming enough to affect almost anyone. It can arise from experiences in war, torture, natural catastrophes, assault, rape and serious accidents. People re-experience the traumatic event in their dreams and their daily thoughts; they are determined to avoid anything that might bring the event to mind; and they undergo a numbing of responsiveness along with a state of hyperarousal (Kaplan & Sadock, 1998). Meyer and Salmon (1988) define PTSD as an anxiety disorder in which a traumatic event,

such as combat or a natural disaster, produces disabling psychological reactions and particularly emotional numbing (Weiss, Horowitz, and Wilner, 1984).

Within the violent context of the correctional system, it is argued that correctional officers are susceptible to PTSD. Officers are exposed daily to violent situations and are aware of the fact that their lives are constantly in danger (Atlas, 1983; Mahan, 1994; Shawver & Dickover, 1986; Shine, 1997). As the embedded violence is a given in the correctional system, the development of PTSD could be viewed as a stress-related disorder due to occupational hazards and the nature of the job.

Research (McFarlane, 1989; Solomon, Mukilincer, & Avitzer, 1988) on PTSD has found that where violence is an inherent part of the occupation, members of that occupation have created some sort of psychological preparedness (which may be due to the level of exposure, personal history and personality traits), whilst other research has found that although violence is expected, members or individuals of those occupations developed PTSD. Joseph, Williams, and Yule (1997) refer to the psychological preparedness as a form of 'survival skills' (p. 263). These skills include focused attention and concentration, hyperalertness, and so on. Horowitz (1976, in Green & Berlin, 1987) states that the individual's premorbid psychological state may be valuable in the creation of a psychological preparedness. Psychological preparedness is viewed as the individual's readiness at the psychological level, to deal with certain events that may appear to be traumatic to others. Factors may include a sense of coherence and hardiness.

2.3.2 An Aetiological Model of PTSD

When helping victims who have experienced traumatic events, it is very useful to have some knowledge of the onset of the experience. The use of a theoretical model is helpful in the quest to understand PTSD, as well as for designing prevention stress management programmes within the correctional services.

Previous theories and models of PTSD have dealt with cognitive reactions to unpredictable and uncontrollable aversive events. Individuals are vulnerable to these unpredictable and uncontrollable aversive events. When these events occur, the cognitive schemata and basic assumptions that individuals hold of themselves, are shattered. The schemata or assumptions

that individuals hold are that they are invulnerable. This causes memories to be dissociated from the consciousness and stored as visceral sensations (anxiety and panic) or visual images (nightmares and flashbacks) (Joseph et al., 1997).

2.3.2.1 The Integrative Theory

The integrative theory takes both the view of cognitive reactions to unpredictable and uncontrollable aversive events and the basic assumptions individuals have, into consideration. It integrates the two processes into one process giving a more dynamic nature.

Joseph et al. (1997) maintain that there are two main assumptions about the psychological processes underlying PTSD: the evolutionary perspective and conscious and nonconscious processes.

The cognitive features of chronic PTSD, found in combat veterans, include hyperalertness, excessive startle response and focused attention and concentration (Joseph et al.). These are viewed in the evolutionary perspective as 'survival skills' (p. 263). From this perspective, PTSD is viewed as a normal and adaptive reaction to a stressful situation.

In the memory of traumatic experiences, dual representations of the event are said to constitute the minimum cognitive architecture necessary to understand PTSD (Brewin et al., 1995, in Joseph et al.). The first set of representations reflects the conscious process, which is readily accessible as it can be retrieved from autobiographical stores (verbally accessible knowledge). The second set of representations includes the unconscious processes which cannot be verbally accessed, but which are accessed automatically when the person is in a context whose features or meanings are similar to that of the traumatic event. The traumatic event presents the individual with certain information, which then gives rise to emotional arousal. The emotional arousal causes an interference with information processing. The event stimuli are then held or stored in the memory. As the event stimuli are stored in the memory, ready to be accessed, they are referred to as event cognitions. The images of the traumatic event evoke a specific cognitive activity called appraisal and reappraisal. The appraisal of the situation is subject to the individual's perception of the event, but it is also very important in determining the subsequent reaction (Joseph et al.).

According to Joseph et al. appraisal cognitions differ from traumatic cognitions in that appraisal cognitions are thoughts about the information depicted by the event. Appraisal cognitions take on two forms: automatic thoughts and conscious thinking. The appraisal cognitions are thought to manifest in ruminative behaviour that may continue as an intrusive activity. Emotional states are a result of the event cognitions and automatic thoughts. Emotional states are subject to cognitive appraisal. There seems to be two-way interaction between emotional states and appraisal mechanisms as they influence each other.

The traumatic event and the appraisal and emotional states cause stress and people will try to cope through either avoidant or approach coping strategies. They may look for support in the environment and social context in terms of social support or substances (Anshel et al., 1997; Burke & Greenglass, 1996; Joseph et al., 1997;). Canadian studies (Holden et al., 1995; Svenson et al., 1995) on substance abuse among correctional officers reveal the extent to which the officers may find 'support' in a variety of substances. These studies showed that avoidant coping strategies were used to deal with the trauma.

The integrative theory (Joseph et al., 1997) not only focuses on the development of PTSD through internal processes such as the emotions and cognitions, but also takes into consideration the dynamic interplay which exists between the emotions and cognitions and how coping resources are influenced by them.

The model further demonstrates the use of appraisal during a traumatic event, which then leads to the application of a specific strategy. The theory thus informs the study in terms of the development of PTSD and ways of coping with it.

2.3.3. Risk Factors in the Development of PTSD with regard to Law Enforcement and Emergency Services Personnel

A number of risk factors will be mentioned to add perspective to the dangerous and violent nature of these occupations. As mentioned before the correctional services occupation is comparable with law enforcement and emergency services. As there is little literature available on PTSD in correctional services, the researcher felt it important to give the reader an overview of the risk factors that could be expected within the correctional services from a law enforcement and emergency services perspective.

Much of the literature examined included studies on law enforcement and emergency services, which have been viewed by some authors (eg. Finn, 1998; Patterson, 1992; Saylor & Wright, 1992) as comparative occupations to that of the correctional services. As insufficient literature exists concerning PTSD within the correctional system, this review will present the development of PTSD in the above-mentioned comparative occupations.

Horowitz (1976, in Green & Berlin, 1987, p. 843) argues that an “understanding of the nature of the stress response syndrome is dependent on exploration of pre-stressor psychological functioning”. He suggests that information about the individual’s pre-morbid psychological state of development is helpful in understanding the individual’s style of coping with the activities of daily living consequent to the stressor. Understanding the pre-morbid states of high-risk populations informs the development of stress management and prevention programmes.

A study by Carlier and Gersons (1994) indicates that certain risk factors could enhance the development of PTSD in emergency services personnel, other helpers, and public safety officers (Durham, McCammon, & Allison, 1985; Fullerton, McCarroll, Ursano, & Wright, 1992; Joseph, Yule, & Williams, 1993; Lanza, 1984; McFarlane, 1989; Morrison, 1988; Solomon et al., 1988). The risk of developing PTSD is seen as a function of the trauma (external factors) and as a function of the individual (internal factors)(Davidson & Foa,1993) . These risk factors could be the following: lack of social support, emotional or mental exhaustion, multiple or recent incidents, acute hyperarousal symptoms, avoiding thinking about it (although avoidance appears to be a defensive strategy against the distress generated by re-experiencing the trauma, rather than a link to the symptoms), occupational stressors such as job dissatisfaction and lack of support from superiors, and the recently postulated type-D personality (the tendency to suppress emotional distress) (Carlier et al., 1997).

McFarlane (1989) and Green and Berlin (1987) state that exposure plays a less significant role in the aetiology of PTSD. Rather, exposure only plays a role in the immediate post-traumatic morbidity experienced. In a study by Helzer et al. (1983, in McFarlane, 1989), it was found that depressive symptoms were influenced by previous combat experience and not necessarily exposure to combat. These findings were consistent with studies by Carlier et al. (1997), Green and Berlin (1987) and Linton (1995), who found that emergency services personnel and

law enforcement officers suffered from PTSD due to previous experiences. Pre-disaster variables are therefore a better predictor of PTSD or any psychological comorbidity (McFarlane, 1989) than the nature of the victim's exposure or losses (Green & Berlin, 1987).

McFarlane (1989) also found that life events perpetuated post-traumatic morbidity rather than contributing to its onset. Another factor that plays a role in the aetiology of PTSD is neuroticism, particularly in individuals who are anxiety-prone (Carlier et al., 1997; Green & Berlin, 1987; Weiss, Marmar, Metzler & Ronfeldt, 1995).

Other factors that seem to influence the aetiology of PTSD are previously treated psychiatric disorders and cognitive and emotional preoccupation (Carlier et al., 1997; Green & Berlin, 1987; McFarlane, 1989; Weiss et al., 1995). McFarlane (1989) suggests that any psychological stress that is related to the disaster, can cause a genetic vulnerability for depression or anxiety to manifest in such an environment. Although cognitive and emotional preoccupation with the disaster could lead to the development of PTSD, it seems rather to be an indirect marker of neuroticism.

Another factor that plays a significant role in the aetiology of PTSD is social support (Green & Berlin, 1987; Lanza, 1983). According to McFarlane (1989), although social support was found to help fire fighters to cope with disaster, it did not prevent PTSD from developing and did not serve as a buffer. A lack of social support has also been implicated as a cause of occupational stress.

Arguments have been presented to indicate which risk factors may lead to the development of PTSD in law enforcement and emergency services personnel. Correctional officers are exposed to dangers that are intrinsic to the job, and the arguments presented regarding risk factors found in law enforcement and emergency services may be characteristic of the correctional system due to the comparative nature of these occupations (law enforcement and emergency services).

As mentioned earlier, the following risk factors do play a role in the development of PTSD in correctional officers and are relevant to the study: lack of social support, multiple or recent incidents, avoiding thinking about it (although avoidance appears to be a defensive strategy against the distress generated by re-experiencing the trauma, rather than a link to the

symptoms), occupational stressors such as job dissatisfaction and lack of support from superiors.

2.3.4. PTSD in Law Enforcement Officers and Emergency Services Personnel

Due to the nature of the work, work-related trauma is a constant occurrence in the lives of law enforcement and emergency services personnel. Not only is it viewed as ever present, but it holds the status of being a major occupational stressor (Beaton, Murphy, Johnson, Pike, and Corneil, 1998; Biggam et al., 1997; Patterson, 1992). In a study by Spielberger, Westberry, Grier, and Greenfield (1994, in Robinson et al., 1997), it was found that the most stressful situations faced by police include violence and the use of force.

According to Ostov (1993, in Williams & Sommers, 1994), work-related trauma is a major contributing factor to police stress. Herman (1991, in Williams & Sommers) indicates that expectations of the officer include critical incidents of sudden death. Deaths generally occur within one of the following five categories: traffic collisions, suicides, homicides, non-traffic-related accidents and the taking of human life by officers. Besides involvement with death, an officer is expected to cope with other critical incidents, such as deeply depressing social situations, situations involving victims of serious accidents, hostage situations, riot control situations, violent confrontations, shooting incidents, raid or eviction situations, and assistance in disaster situations (Carlier et al., 1997; Robinson et al., 1997; Williams & Sommers, 1994). Similar incidents such as hostage situations, riot control situations, violent confrontations, shooting incidents, and raid or eviction situations are experienced by correctional officers (Atlas, 1983; Montgomery, 1994; Patrick, 1998; Shawver & Dickover, 1986).

Linton (1995) argues that, in addition to the chronic stress of emergency services, extraordinary professional events can cause exceptionally strong emotional reactions. These events have been labelled critical incidents (Linton). Mitchell (1993, in Linton) describes a critical incident as any situation faced by emergency personnel that causes them to experience emotional reactions at such a level as to potentially interfere with their ability to function, either during the event or after. The situation might affect a broad group of workers, or it might have personal significance for only one. Examples of critical incidents include contact with dead or severely injured children, work with close relatives or close friends who are

dying or injured, threats of violence against the worker, large-scale disasters, or any case with excessive media interest (Mitchell & Bray, 1990).

This section presented the situations that might give rise to PTSD - the so-called critical incidents. These and similar incidences are prevalent in the correctional systems. Research in this area is limited. Research mainly concentrates on types of violent situations, rather than the development of PTSD among correctional officers.

2.3.4. Prevalence of PTSD in the Correctional Officer

Violence in South African prisons occurs daily, yet there is not much research to indicate what the effects of violence are on the correctional officer. The lack of research in this area makes it difficult to conclude that correctional officers in the South African Correctional Services suffer from PTSD. It is an aim of this study to ascertain whether South African correctional officers suffer from PTSD. Most of the literature is drawn from international sources. These sources indicate that PTSD may be a problem of significant proportions. The literature indicates that the prevalence of PTSD lies between 12 - 35% of law enforcement, emergency services and correctional officers (Carlier et al., 1997; Light, 1991; Linton, 1995; Mahan, 1994; Shine, 1997).

According to the literature, violence in prisons is a serious problem (Atlas, 1983; Kiely & Hodgson, 1990; Light, 1991; Mahan, 1994; Martin & Zimmerman, 1991; Montgomery, 1994; Patrick, 1998; Shine, 1997). A high frequency of inmate-staff violence occurs which promotes the development of PTSD. The rate of violence in prisons, especially staff-inmate altercations, has tripled in some American prisons (Patrick, 1998).

According to Shawver and Dickover (1986), traditional prisons are uniquely designed to encourage violent men to pitch their wills against each other in a competitive demonstration of their aggressive, masculine dominance. This causes many problems for the staff as they are drawn into the altercations to protect the prisoners from one another. Lombardo (1984) further concludes that the two groups, inmates and guards, both act out aggressive behaviour based on certain stereotypical images that comprise their distorted, collective images of each other.

Kratcoski (1988) says that fear of assaults is part of the daily mindset of the prison guard. The

prison officer knows very well that violence is seldom far below the surface of prison life, which creates a great deal of fear and uncertainty.

The nature of these altercations is not only inmate-staff oriented, but inmate-inmate oriented. When inmate-inmate altercations occur, correctional officers do not stand by and observe the altercations, but get involved in the process by trying to put an end to the altercations.

Incidents of this nature may be life-threatening to correctional officers as prisoners sometimes turn on them (Atlas, 1983; Light, 1991; Mahan, 1994; Martin & Zimmerman, 1991; Montgomery, 1994; Patrick, 1998; Shine, 1997).

Although no research is available which examines the prevalence of PTSD among correctional officers, there is enough literature to suggest that correctional officers are prone to the development of full-blown PTSD. Overcrowding in prisons has become a huge challenge in the DCS in South Africa (S.A.P.A., 2000). Ellis (1984) and Gayes and McGuire (1985) mention facility crowding. Both these studies hold the view that overcrowding causes a situation of 'survival of the fittest'.

There seems to be competition for the very limited resources in a correctional facility, which may result in assaults and other forms of violence (Africa Watch Project, 1994). Not only is there competition for limited resources, but there is also an increase in escapes and an increase in gang-related activities (Foster et al., 1987; Houston & Prinsloo, 1998). Gang-related activities range from assault to drug dealing and money laundering. Assault is not only in the form of inmate-on-inmate but inmate-on-staff (Patrick, 1998). According to Bergh (1997), the literature indicates that most areas of the correctional services have been researched, with the exception of the effect of violence on correctional officers. Bergh stresses that there are numerous threats to the body and personal safety of these officers.

2.4. Summary of Chapter

This chapter has outlined the constructs of PTSD, stress and occupational stress. Stress and occupational stress were addressed as one broad concept, as stress is used in the literature in a broad sense to include occupational stress. The section on stress included a brief overview of the conceptualisation of the term, as well as a review of some multidimensional models. The discussion on occupational stress dealt with issues regarding occupational stress within a

correctional facility.

In the section on PTSD, an outline of the development of the construct of PTSD and the integrative model were discussed. The chapter further examined the issue of PTSD in comparative occupations such as law enforcement and emergency services. PTSD in the correctional services was then addressed. Given the intrinsic danger of the job in a correctional facility, this occupation is viewed as hazardous, which makes the staff vulnerable to PTSD. Vulnerability to PTSD was found to be subject to the role of certain variables as discussed in the chapter.

The section on coping processes dealt with the conceptualisation of the construct, a theory presented by Holahan et al. (1996), and the type of coping processes that are employed by law enforcement and correctional officers.

South African literature pertaining to this study has been hard to summon. Some research has been conducted in the South African Police Services, Fire Brigade and Ambulance Services, but very little within the Department of Correctional Services. Although the literature and norms which have been used in this study pertain to international conditions, local conditions seem similar. The full implications of this will be discussed in the results section of the study.

Chapter Three: Research Methodology

3.1 Method

The method carried out in this study was that of a probability random sampled survey by way of a set of biographical questionnaires and psychometric measures. The randomisation of the sample was to grant each officer a fair chance of participating in the sample and to obtain a representative sample (Babbie, 1989). The survey method was chosen for its accuracy as well as economy of time (Bailey, 1987).

Each of the psychometric measures measured a specific construct: occupational stress, post-traumatic stress, and coping strategies. The psychometric measures will be explained in detail in due course.

3.2 Aim of Research and Hypothesis

The aim of the study is to assess post-traumatic stress, occupational stress and coping styles as mediating variables in correctional officers. It further aims to integrate the findings into a profile of occupationally and traumatically stressed correctional officers by means of correlation analysis.

The present study is largely exploratory in nature. The literature reviewed in previous chapters reveals research in the areas of stress, occupational stress, PTSD and coping mechanisms. The researcher, however, is not aware of any research that relates to or investigates the correlation between these constructs in the context of South African correctional staff.

Hypothesis 1:

H₁: Correctional officers within the disenchantment phase (5 – 14 yrs of service) will experience higher levels of occupational stress compared with officers who have less years of service, as measured by the Occupational Stress Indicator (Osipow & Spokane, 1986).

H₀: Correctional officers within the disenchantment phase (5 – 14 yrs of service) will experience no difference in occupational stress compared with officers who have less

years of service, as measured by the Occupational Stress Indicator (Osipow & Spokane, 1986).

Hypothesis 2

H₁: Correctional officers with more years of service will utilise approach coping strategies, as measured by the Coping Resources Inventory (Moos, 1993).

H₀: There will be no difference in the coping strategies of correctional officers with more years of service, as measured by the Coping Resources Inventory (Moos, 1993).

Hypothesis 3

H₁: Correctional officers who are married utilise approach or problem-focused coping strategies to deal with occupational stress and traumatic situations, as measured by the Coping Resources Inventory (Moos, 1993).

H₀: There will be no difference in the coping strategies used by correctional officers who are married, to deal with occupational stress and traumatic situations, as measured by the Coping Resources Inventory (Moos, 1993).

Hypothesis 4

H₁: Correctional officers who work with prisoners and are exposed to traumatic situations will develop significant indices of PTSD symptomatology as compared to the administration officers, as measured by the Impact of Event Scale - Revised (Weiss & Marmar, 1997).

H₀: Correctional officers who work with prisoners will not develop indices of PTSD symptomatology as compared to the administration officers, as measured by the Impact of Event Scale - Revised (Weiss & Marmar, 1997).

Hypothesis 5

H₁: Correctional officers who work in prisons will experience higher levels of occupational stress, as measured by the Occupational Stress Indicator (Osipow & Spokane, 1986).

H₀: There will be no difference in occupational stress among correctional officers who work in prisons compared to administration workers, as measured by the Occupational Stress Indicator (Osipow & Spokane, 1986).

3.3 Psychometric Measures

The conceptualisation and description of post-traumatic stress, occupational stress and coping mechanisms in Chapter Two has prompted the operationalisation of concepts through instruments which will measure the subjective experiences of the subjects and which will comply with the general aim of this study.

The psychometric battery used in this study comprises four questionnaires:

- Biographical Questionnaire (Appendix AC@) - the biographical questionnaire was added to collect relevant data on the respondents and out of which the hypotheses were developed
- Impact of Event Scale-Revised (Weiss & Marmar, 1997) (Appendix AD@)
- Occupational Stress Inventory (Osipow & Spokane, 1986) (Appendix AE@)
- Coping Resources Inventory (Moos, 1993) (Appendix AF@)

Each measuring instrument is discussed in terms of its development and rationale, description, administration, interpretation, reliability and validity and the motivation for its use in the study.

3.3.1 Impact of Event Scale-Revised (IES-R)

3.3.1.1 Development and Rationale of the IES-R

The IES-R is a revision of the IES originally developed by Horowitz, Wilner, and Alvares (1979). The IES was developed as a self-report measure that assessed the level of personal symptomatic subjective distress in respect of traumatic life events in individuals (Horowitz et al., 1979; Weiss & Marmar, 1997). According to Weiss and Marmar (1997), the IES measured the specific categories of PTSD and other forms of traumatic events.

Weiss and Marmar (1997) developed the revised version of the IES in response to changes to the DSM IV criteria for PTSD which include hyperarousal as a criterion. They believed that the IES-R could be more useful if it tapped into all three sets of DSM IV criteria. The other criteria being those of intrusive and avoidance symptoms (Wilson and Keane, 1997).

3.3.1.2 Description of the IES-R

The IES-R is a self-report inventory consisting of 22 questions. The questions investigate the three sets of criteria of PTSD according to the DSM IV (Weiss & Marmar, 1997). The 22 questions are scored on a five-point Likert scale, ranging from 0 - 4.

3.3.1.3 Administration of the IES-R

The IES-R is a self-administering measure, which may be administered individually or to groups. In this study, the IES-R was administered to groups of respondents. Respondents were instructed to indicate the level of distress caused by a traumatic or stressful life event in the past seven days. According to Wilson and Keane (1997), the respondent selects a critical incident that was most distressing to him or her. According to Horowitz (1986, in Robinson et al., 1997), the IES-R was introduced as a self-report scale that could be representative of any traumatic life event. The meaning of critical incidents and stressful life events was explained to the respondents so that all had an understanding of the above constructs.

3.3.1.4 Interpretation of the IES-R

The IES-R is easily scored and interpreted. The administrator adds up the scores on each of the individual sheets. The raw score is used in the interpretation of results. Although the three subscales of PTSD are evident in the measurement, the total score is taken to determine the possibility of PTSD. Depending on test results, respondents with scores of 30 and over may present with PTSD symptomatology, as well as acute and chronic PTSD - relative to higher scores. As norms are not available for the IES-R in this country, the use of international norms could be problematic. However, international norms are used for interpretation.

3.3.1.5 Reliability and validity of the IES-R

In terms of the reliability of the IES-R, two issues were studied: (1) internal consistency of the subscales and (2) stability of variables over time (Weiss & Marmar, 1997). Regarding the internal consistency of the subscales, two traumatic events' disasters were studied. In the first study, scores were obtained from a sample of emergency workers who were involved in the San Francisco earthquake which occurred in 1989, N = 429. The results of the analysis produced the following coefficients: Intrusion alpha = .87, Avoidance alpha = .85 and Hyperarousal alpha = .79. The second study also obtained scores from a sample of emergency workers who were involved in the Los Angeles earthquake which occurred in 1994, N = 179. The results of the analysis produced the following coefficients: Intrusion alpha = .91, Avoidance alpha = .84 and Hyperarousal alpha = .90. Both sets of data indicate high internal consistent subscales (Weiss & Marmar).

The stability of variables over time was also examined. In both the above studies, test-retest data were available. The data from the San Francisco quake yielded the following test-retest correlation coefficients: Intrusion alpha = .57, Avoidance alpha = .51 and Hyperarousal alpha = .59. The Los Angeles quake yielded higher test-retest correlation coefficients: Intrusion = .94, Avoidance = .84 and Hyperarousal = .92. According to Weiss and Marmar, the higher correlations measured with the Los Angeles quake were due to shorter intervals between the assessments and recency of the quake. Test-retest reliability may vary due to time delays and intervals between events and measures taken at specific times.

The implications of the test-retest reliability on the above study is that if the interval between the actual event and the administration of the questionnaire is more than seven days, the results may be less reliable. The same conclusion could be made on this study. If officers had not experienced any traumatic event within the past seven days, results could be less reliable.

3.3.1.6 Validity of the IES-R

Weiss and Marmar (1997) indicate that the population studied was not a clinical sample seeking treatment for well-established PTSD. In a study by Amir et al. (1997), 47 patients with PTSD were compared to 42 anxiety patients and 50 healthy controls. Cronbach's alpha for the total score was .81, indicating a high validity in the study. A study by Weiss et al.

(1995) predicted that emergency services personnel suffered from PTSD.

3.3.1.7 Motivation for the use of the IES-R

The IES-R was chosen because the respondents could indicate which types of life events were perceived as distressing and because the measurement was standardised on a non-clinical population. The IES-R measures subjective distress during the past seven days. Horowitz et al. (1979) indicated that subjects reported forgetfulness and less conviction about the traumatic events after the lapse of seven days. Information obtained from the IES-R indicated that traumatic events would still be 'fresh in the minds' of the individuals. It could then be predicted that respondents who attain high scores may later, according to DSM IV criteria, develop PTSD symptomatology or full-blown PTSD.

3.3.2 Occupational Stress Inventory (OSI)

3.3.2.1 Development and Rationale of the OSI

The OSI was developed by Osipow and Spokane (1986). The OSI was designed out of the need for a focus on the work context dimension, which previous stress inventories had not done. It was developed for two reasons:

“(1) to develop generic measures of occupational stressors that would apply across different occupational levels and environments; and (2) to provide measures for an integrated theoretical model linking sources of stress in the work environment, the psychological strains experienced by individuals as a result of work stressors, and the coping resources available to combat the effects of the stressors and alleviate strain” (Osipow & Spokane, 1986, p.1).

3.3.2.2 Description of the OSI

The OSI yields three subscales assessing occupational stress and coping styles. The three domains are referred to as Occupational Roles Questionnaire (ORQ), Personal Strain Questionnaire (PSQ) and Personal Resources Questionnaire (PRQ)(Osipow & Spokane, 1986). The OSI items are contained in a booklet and responses are made on a separate answer sheet for this purpose.

The three domains comprise a series of subscales:

Occupational Roles Questionnaire (ORQ) (Osipow & Spokane, 1986, p. 1):

- Role Overload (RO) - measures the extent to which job demand exceeds resources, and the extent to which an individual is able to accomplish expected workloads
- Role Insufficiency (RI) - measures the extent to which the individual's training, education, skills and experience are appropriate to the job
- Role Ambiguity (RA) - measures the extent to which the priorities, expectations and evaluation criteria are clear to the individual
- Role Boundary (RB) - measures the extent to which the individual experiences conflicting role demands and loyalties in the work setting
- Responsibility (R) - measures the extent to which the individual has, or feels, a great deal of responsibility for the performance and welfare of others on the job
- Physical Environment (PE) - measures the extent to which the individual is exposed to high levels of environmental toxins or extreme physical conditions

Personal Strain Questionnaire (PSQ) (Osipow & Spokane, 1986, p. 1):

- Vocational Strain (VS) - measures the extent to which the individual experiences problems in work quality or output
- Psychological Strain (PSY) - measures the extent of psychological and/or emotional problems experienced by the individual
- Interpersonal Strain (IS) - measures the extent of disruption in interpersonal relationships
- Physical Strain (PS) - measures complaints about physical illness or poor self-care habits

Personal Resources Questionnaire (PRQ) (Osipow & Spokane, 1986, p. 1):

- Recreation (RE) - measures the extent to which the individual makes use of and derives pleasure and relaxation from regular recreational activities
- Self-Care (SC) - measures the extent to which the individual regularly engages in personal activities which reduce or alleviate chronic stress
- Social Support (SS) - measures the extent to which the individual seeks support and help from those around him or her
- Rational/ Cognitive Coping (RC) - measures the extent to which the individual possesses and uses cognitive skills in the face of work-related stresses

3.3.2.3 Administration of the OSI

The OSI takes about 20 - 40 minutes to complete, and requires that respondents have at least a seventh grade reading level. The OSI can be administered individually or to groups. The respondents are to read the instructions and then respond to the 140 questions that are indicated on the answer sheet (Osipow & Spokane, 1986).

3.3.2.4 Interpretation of the OSI

According to Osipow and Spokane (1986), normative data were gained from a sample of 909 adult subjects employed primarily in technical, professional and managerial positions in school, service organisations and manufacturing settings. Subjects in this sample were employed in 130 different occupations.

The ORQ, PSQ, and PRQ scales of the OSI are mainly used as an assessment of the client's overall physical and mental health and work adjustment. The OSI is normed according to T-scores. The T-score is a non-normalised linear transformation of raw scores, and has a mean of 50 and a standard deviation of 10 (Osipow & Spokane, p. 5). The ORQ and PSQ scales, when a high score is achieved, indicate that an individual has a significant level of occupational stress and personal strain. Usually only 2% of the population achieve T-scores above 70; such scores are statistically significant. Although T-scores between 60 - 69 are not statistically significant, they still indicate moderate levels of occupational stress and personal strain. Scores ranging from 40 - 59 are seen to be within the normal distribution.

On the PRQ where T-scores are the inverse of the ORQ and PSQ, high scores point to resourcefulness and strong coping skills. A T-score of lower than 30 indicates a lack of resourcefulness and maladaptive coping skills. T-scores higher than 60 indicate strong coping skills.

3.3.2.5 Reliability and validity of the OSI

3.3.2.5.1 Reliability

Internal consistency was analysed with a sample of working adults, N = 549. According to Osipow and Spokane (1986), the alpha coefficients for the questionnaire were .89 for the ORQ, .94 for the PSQ, and .99 for the PRQ. The coefficients for the 13 individual scales ranged from .71 to .94.

3.3.2.5.2 Validity

Validity of the OSI has been derived from the following studies:

- **Factor Analysis:** The three questionnaires were each subjected to factor analysis using the varimax rotation procedure. It seems that the scales produced factors which were accountable for between 4 and 6 or more percent of the variance. In a second and independent confirmatory study, Alexander (in Osipow & Spokane, 1986, p. 10) concluded that “there was substantial agreement between the scales of the OSI and patterns of factor loading”.
- **Correlation studies:** According to Osipow and Spokane, a large number of correlation and multivariate studies employ the OSI as an experimental measure. These studies provide evidence of the relationship between stress, strain and coping, and a variety of variables that form a nosological network of relationships between stress and these work-related variables. These studies provide a solid base and strong evidence for the validity of the OSI.
- **Treatment studies:** Two studies have been undertaken in which subjects were treated with relaxation exercises and cognitive behavioural techniques Higgins (1986, in Osipow & Spokane). From these studies it was found that the PSQ and PRQ scales were very sensitive to the treatment, i.e. dropping significantly.

3.3.2.6 Motivation for use of the OSI

Whereas previous stress type inventories focused only on certain aspects of the occupation, the OSI was the first measure to highlight the context of the working environment (Osipow & Spokane, 1986). The OSI not only indicates or gives evidence of occupational stress, but

focuses on psychological strain and coping mechanisms. As the questionnaire measures occupational stress in totality, it can be predicted that respondents who attain high scores on the ORQ and PSQ scales suffer from occupational stress.

3.3.3 Coping Resources Inventory-Adult (CRI-Adult)

3.3.3.1 Development and Rationale of the CRI-Adult

The CRI was developed by Moos (1993) as an instrument for the measurement of an individual's coping resources. The model or instrument uses two conceptual approaches. The first involves orientation or focus of coping which includes approach and avoidance coping. The second approach is the method of coping, be it cognitive or behavioural (Moos):

“In general, approach coping is problem-focussed; it reflects cognitive and behavioural efforts to master or resolve life stressors. In contrast, avoidance coping tends to be emotion-focussed; it reflects cognitive and behavioural efforts to avoid thinking about a stressor and its implications, or to manage the affect associated with it” (Moos, p. 1).

3.3.3.2 Description of the CRI-Adult

The questionnaire measures eight different responses to stressful life events. There are eight scales which measure eight sorts of response:

- Logical Analysis (LA): evaluates cognitive attempts to understand and prepare mentally for a stressor and its consequences
- Positive Reappraisal (PR): evaluates cognitive attempts to construe and restructure a problem in a positive way while still accepting the reality of the situation
- Seeking Guidance and Support (SG): evaluates behavioural attempts to seek information, guidance or support
- Problem-Solving (PS): evaluates behavioural attempts to take action to deal directly with the problem
- Cognitive Avoidance (CA): evaluates cognitive attempts to avoid thinking realistically about a problem
- Acceptance or Resignation (AR): evaluates cognitive attempts to react to the problem by

accepting it

- Seeking Alternative Rewards (SR): evaluates behavioural attempts to get involved in substitute activities and create new sources of satisfaction
- Emotional Discharge (ED): evaluates behavioural attempts to reduce tension by expressing negative feelings (Moos, 1993, p. 15).

The first set of four scales measures approach coping, while the second set of four scales measures avoidance coping. The first two scales in each set measure cognitive coping strategies; the third and fourth scales in each set measure behavioural coping strategies.

“Each of the eight dimensions or scales is composed of six items. In responding to the CRI-Adult, individuals select and describe a recent (focal) stressor and use a four point scale varying from ‘not at all’ to ‘fairly often’ to rate their reliance on each of the 48 coping items. The CRI-Adult also includes a set of 10 items that provide information on how the individual appraises the focal stressor” (Moos, p.1).

3.3.3.3 Reliability and Validity of the CRI-Adult

3.3.3.3.1 Reliability

To determine the reliability of the CRI-Adult researchers have focused on internal consistency, associations among the scales, and stability over time. Internal consistencies between men and women indicate coefficient alphas for men between .62 and .74, and for women between .58 and .71. Regarding the associations among scales, the researchers found that correlations among the eight scales were moderately positively intercorrelated (average r_s = .29 for men and .25 for women) (Moos, 1993).

Harvey-Lintz and Tidwell (1997) found the CRI-Adult to be psychometrically sound. They found that the internal consistencies were moderate, with an average alpha of .67 for men and .64 for women.

3.3.3.3.2 Validity

Validity of the CRI-Adult was based on formulating definitions of specific domains, preparing items to fit the construct definitions, and selecting items that were conceptually and

empirically related to a dimension. Moos (1993) found the CRI-Adult to be valid for the purposes for which it was designed.

In a study by Moos, he included 501 individuals who had drinking problems, compared to 609 non-problem drinkers. He found that the individuals with drinking problems tended to rely on avoidance coping strategies. Brennan and Moos (1991, in Moos) compared late-onset drinkers, early-onset drinkers and non-problem drinkers. Both early- and late-onset drinkers applied avoidance coping strategies.

3.3.3.5 Motivation for the use of the CRI-Adult

International literature views coping from the approach and avoidance perspective. The CRI-Adult used in this study is to measure the approach and avoidance coping styles used by correctional officers. The questionnaire attempts to explain the manner in which individuals perceive the stressor, and whether they react to it as a threat or a challenge. It could be useful in the development of prevention and stress management programmes.

The literature review indicated that correctional officers mainly utilised avoidance coping strategies, although not all officers did. Avoidance coping led to substance abuse, aggressive behaviour and many stress-related illnesses.

3.4 Sample

A computerised random sample process (Babbie, 1989) was used to draw a sample of 600 employees from a computer list of personnel, 91 of whom responded voluntarily. The sample was chosen to represent personnel from the various categories of prisons and administration offices. Two types of prisons were sampled: a maximum security prison which houses long-term, dangerous criminals such as murderers and rapists, and medium prisons which houses short-term, less dangerous criminals such as habitual criminals and white collar criminals. Officers in these prisons were not specifically trained in respect to the type of prison facility. (Appendix AA contains a letter to the Provincial Commissioner requesting permission to administer psychometrics tests.)

Bailey (1987) argues that sampling bias may occur with name lists and other lists. Individuals

who appear on certain lists due to the place where they reside and so on, may have relocated without changing the details. This happened with the researcher's sampling as officers were transferred to other prisons or resigned from the organisation.

The Pretoria Management Area (the geographical area under the Pretoria management) of the Department of Correctional Services has a population of 1492 staff. The number of respondents equals a figure of 6.1% of the total staff. The number of respondents represent a figure of 15% of the sample. (Addendum AB@ contains a letter to the members who participated in the study.)

The sample consisted of both males and females and represented three ethnic groups, although four groups were indicated in the questionnaire: Black, Coloured, Indian and White. No Indians were represented, however.

3.5 Demographic Details

The demographic information represents the variables that were chosen for the study. The variables include age, race, education, marital status, length of service, section employed in, and rank. The demographic information of participants is tabled below.

The following categories were included to determine whether any relationship existed between these demographic variables and the constructs of occupational stress, PTSD and coping.

Age: The majority of respondents were below 40 years of age (89%), of which 30.8% were between 26 and 30 years old.

Age	N	Percentage
18 – 25	14	15.4%
26 – 30	28	30.8%
31 - 35	22	24.2%
36 – 40	17	18.7%

41 – 45	4	4.4%
46 +	6	6.6%

Table 3.1 Sample distribution according to Age

Sex: Male respondents made up three quarters of the total number of respondents (74.3%).

Sex	N	Percentage
Male	68	74.7%
Female	23	25.3%

Table 3.2 Sample distribution according to Sex

Marital Status: Married respondents (61.5%) were the most represented in the study.

Divorced, Single, and Widowed respondents numbered 38.5%.

Marital Status	N	Percentage
Married	56	61.5%
Divorced	7	7.7%
Single	27	29.7%
Widowed	1	1.1%

Table 3.3 Sample distribution according to Marital Status

Level of Education: Of the total number of respondents, 61.5% have a matric qualification.

Education	N	Percentage
Gr. 8	3	3.3%
Gr. 10	13	14.3%
Gr. 12	56	61.5%
M + 1/2	7	7.7%

M + 3	9	9.9%
M + 4	3	3.3%

Table 3.4 Sample distribution according to Level of Education

Race: Black respondents (60.4%) were the group that was the most represented, while Coloured (1.1%) and Indian (0%) respondents were the least represented.

Race	N	Percentage
Black	55	60.4%
White	35	38.5%
Coloured	1	1.1%
Indian	0	0%

Table 3.5 Sample distribution according to Race

Rank: The largest rank groups represented were Correctional Officer Grade I (37.4%) and Grade II (40.7%). These two rank groups represent the lowest end of the hierarchy in the Correctional Services. There was only one Deputy Director who participated in the study.

Rank	N	Percentage
Correctional Officer Grade I	34	37.4%
Correctional Officer Grade II	37	40.7%
Correctional Officer Grade III	18	19.8%
Senior Correctional Officer	1	1.1%
Assistant Director	0	0%
Deputy Director	1	1.1%

Table 3.6 Sample distribution according to Rank

Section: Administrative staff composed 37.4 % of the sample, while 40.7% of respondents indicated that they worked in the prison (Discipline section).

Section	N	Percentage
Administration	34	37.4%
Community Corrections	16	17.6%
Discipline	37	40.7%
Professional	3	3.3%
Censors, Reception	0	0%
Catering	1	1.1%

Table 3.7 Sample distribution according to Section worked in

Years of Service: Most respondents (61.6%) had between five years and fifteen years experience.

Years of Service	N	Percentage
6 months - 1 year	5	5,5%
1yr 1mnth - 4yrs 11mnths	18	19.8%
5yrs 1mnth - 9yrs 11mnths	27	29.7%
10yrs 1mnth - 14yrs 11mnths	29	31.9%
15yrs 1 mnth - 19yrs 1 1mnths	7	7.7%
20 years +	5	5.5%

Table 3.8 Sample distribution according to Years of Service

3.6 Research Procedure

The steps taken in conducting this study include the administration of the psychometric battery, data analysis and data processing.

3.6.1 Administration of the Psychometric Battery

The battery of psychometric tests discussed in this chapter was bound together as a booklet and distributed to each of the 91 participants. A series of group sessions were held and conditions were standardised for each group. The battery of tests was administered under strict standard test conditions. Participation was voluntary and respondents were assured of anonymity. All respondents were invited to participate in the research. Times and dates were given to the selected members.

3.6.2 Data Analysis

All the responses on the answer sheets were checked for completion and then coded in preparation for statistical analysis. This was done in order to run reliability checks and to compare with published values.

3.6.3 Statistical Data Processing

Data obtained from this research were subjected to the following statistical analyses using the Statistical Package for Social Science programme (SPSS).

The routines used were:

- Pearson's Product Momentum-Correlations
- *T*-test
- Analysis of Variance

The statistical processing of data took the form of parametric and non-parametric testing. Tests (such as those mentioned above), which require the sample variance to be an estimate of the population variance as well as a normal distribution of the population from which the sample was drawn, are referred to as parametric tests. Non-parametric or distribution-free tests

do not rely on parameter estimation and/ or distribution assumptions (Canavos, 1984; Gibbons, 1971; Howell, 1992; Sprent, 1981).

3.7 Summary of Chapter

This chapter described the methodology used in the study. It described the various measures that were used, as well as the sample size. Ninety-one participants voluntarily took part in the study. All participants worked in the Pretoria Management Area of the Department of Correctional Services.

Chapter Four: Results

The chapter reports the results of the investigation and discusses the results.

4.1 Reporting and Interpretation of Results

Profiles of correctional officers are presented and discussed in the form of the IES-R, OSI and the CRI-Adult. The chapter, which presents the results of the research, then commences with an analysis of the correlation between demographic variables and the OSI. It then proceeds with an analysis of the significant differences between groups. The relationship between demographic variables and the CRI subscales are analysed. An ANOVA is used to determine the significant relationship between three or more heterogeneous groups. The relationship in demographic variables is analysed with regard to the IES-R and subscales of the OSI.

The aim of this chapter is to establish a link between occupational stress, PTSD and coping styles.

On each of these procedures, a non-parametric test was conducted. As explained, the data involved fewer than 100 respondents ($n = 91$), therefore the data cannot take the form of a normal distribution. The non-parametric tests were conducted to confirm the parametric tests, as non-parametric tests often have the same power that approach that of parametric tests - while making weaker assumptions of the data.

The research is then integrated and conclusions are drawn. Limitations and recommendations are discussed in the last part of the chapter.

4.2 Stress Profiles of the Psychometric Measures

4.2.1 Post-traumatic Stress Disorder

The IES-R profile for the whole sample shows that a mean score of 32,29 was achieved. This indicates that the average correctional officer is prone to the development of PTSD. Not

surprisingly it seems that officers who work with inmates and are exposed to violence measure higher (39.08) than those officers who work in the administration offices (25.50) do. The scores are significant ($p < 0.05$). The researcher felt it important for the purposes of this study to report only two scores, mainly that of officers who are in direct contact with prisoners and those who have no or little contact with prisoners.

In terms of different races, there was not much difference between black and white. It seems that black officers (30.85) experienced more PTSD symptoms than their white counterparts (29.28). It seems that black officers are slightly more prone to PTSD. This may be due to black officers being exposed more to violent situations as their numbers are far greater than white officers. It may also be due to the fact that black officers had been exposed to violent situations frequently outside of the work environment.

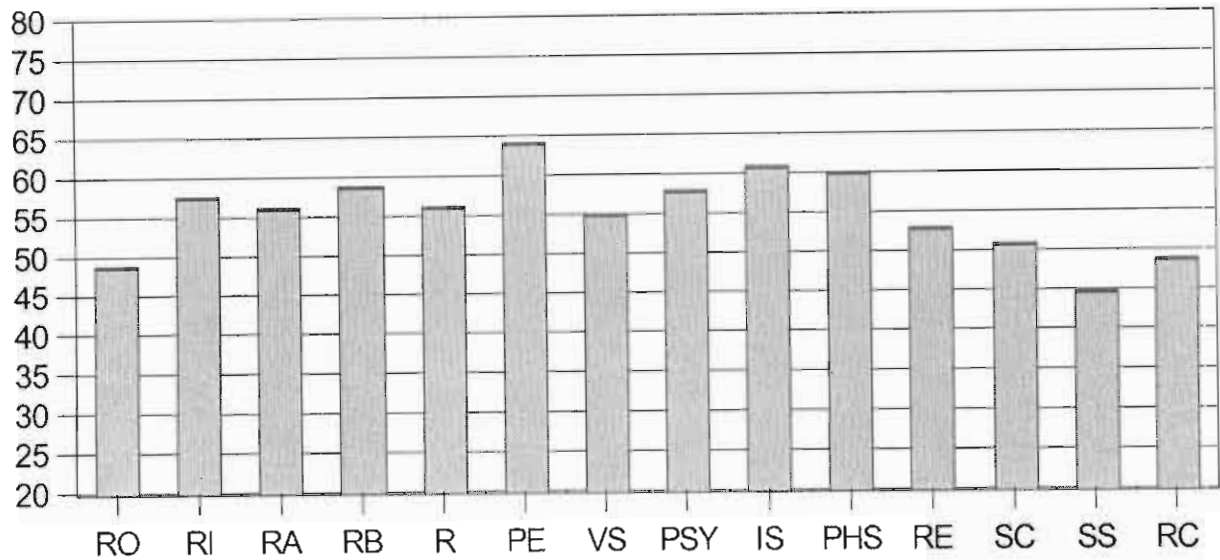
Results also indicated that males (28.9) were less affected by violent situations than females (30.26). Most females (70%) in this study worked in the administration offices and had little or no experience with violent inmates, albeit male or female inmates. These female officers may be more traumatised by what they actually hear (vicarious trauma) and see when exposed to violent situations. It could also be speculated that female officers show a vulnerability and proneness to PTSD. Shawver and Dickover (1986), however argue that females are less attacked than their male colleagues and tend to approach potentially violent situations less provocatively and more creatively. Further research could look into this area which shows a discrepancy with available research.

It seems that male officers are more able to cope with traumatic situations, or it may be due to over exposure to such events. Smith (1988 in Shine, 1997) mentions that the 'John Wayne syndrome' enables officers to cope with potentially violent situations. Denial and trivialisation of the situation takes place.

The results above which reflect race and gender has only been added for the purpose of interesting reading. These results have not been tested for significance and could be tested in further research in this area. It should also be mentioned that groups were too small to test for significance.

4.2.2 Occupational Stress

Occupational Stress Indicator



Key to OSI scale - Role Overload (RO), Role Insufficiency (RI), Role Ambiguity (RA), Role Boundary (RB), Responsibility (R), Physical Environment (PE), Vocational Strain (VS), Psychological Strain (PSY), Interpersonal Strain (IS), Physical Strain (PS), Recreation (RE), Self-Care (SC), Social Support (SS), Rational/ Cognitive Coping (RC)

Table 4.1 Profile of correctional officers on the Occupational Stress Indicator

According to Osipow and Spokane (1986), T-scores above 70 indicate maladaptive stress, while T-scores of 60 - 69 indicate mild levels of maladaptive stress. Scores in the range of 40 - 59 indicate that stress is in the normal range, whilst scores below 40 indicate an absence of occupational stress. On the coping scale of the OSI, scores of below 30 indicate inadequate coping resources. Scores that range between 30 - 39 indicate mild deficits in resources, whilst scores above 40 indicate adequate resources.

The mean scores that are represented above are representative of all the correctional officers who participated in the study. The mean scores indicate that the average correctional officer's experience of occupational stress falls in the normal range within the various occupational roles, except the variables 'Physical Environment'. It seems that the environment in which correctional officers function has extreme physical conditions, such as poor lighting, poor ventilation, extreme high and low temperatures with a high noise level. These findings are

contrary to the literature which indicates that correctional services is viewed as a high risk occupation and that levels of occupational stress are high.

Concerning the personal strain scale, it seems that correctional officers show mild levels of maladaptive stress, as indicated by 'Interpersonal Strain' and 'Physical Strain'. This may be due to the physical nature of the job and a lack of interpersonal relationships between officers and inmates, as well as a lack of support from management.

Results of the personal resources show that coping is within the normal range. It seems that officers are able to draw on their resources, which may be the reason that scores on the OSI are relatively low in comparison to the literature.

The following results were obtained when races were compared on the scales of the OSI:

	RO	RI	RA	RB	R	PE	VS	PS Y	IS	PHS	RE	SC	SS	RC
B	49.4	54.8	55.3	57.1	54.6	61.5	52.3	54.9	58.9	57.7	54.6	53.9	46.5	49.7
W	50.4	62.1	56.9	61.7	58.1	67.9	58.9	62.7	64.2	63.1	49.8	45.5	41.9	46.9

It seems that both black and white officers were affected by the physical environment in which they worked, although white officers were more affected by the conditions. It seems further that white officers have higher levels of stress than black officers, both on the occupational role and personal strain scales. The coping scales indicate that both black and white officers have adequate coping resources.

The following results were obtained when males and females were compared on the scales of the OSI:

	RO	RI	RA	RB	R	PE	VS	PS Y	IS	PHS	RE	SC	SS	RC
M	47.6	58.1	55.9	59.2	56.2	67.5	53.8	56.3	60.5	60.5	53.9	51.9	44.4	49.3
F	50.6	55.8	56.6	58	56.3	54	55.4	59.9	60.3	56.1	49.7	48.3	46.4	48.3

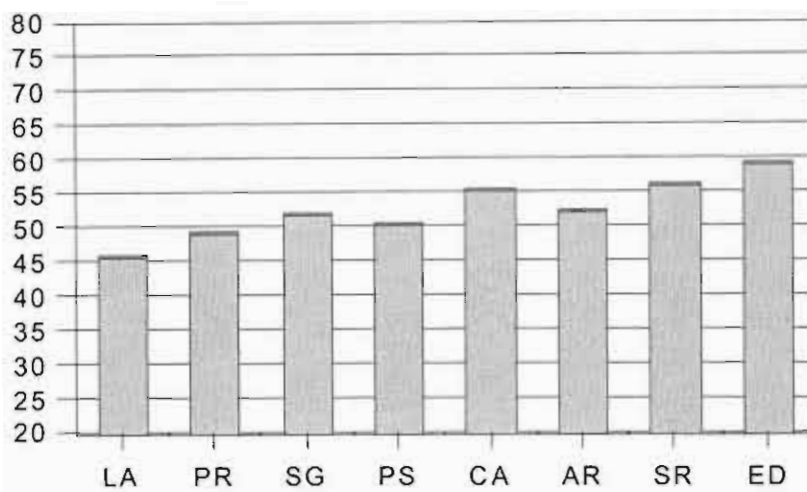
Results indicate that both sexes fall in the normal range for stress on the OSI. Males, however, experience higher levels of stress due to the poor conditions in which they work. Females experienced less stress, which may be due to the fact that most of the females (68 %) in this study worked in the offices.

Both male and female officers experienced mild levels of maladaptive stress in their interpersonal relationships. The questionnaire does not specify the nature of the type of interpersonal relationship, but it could be speculated that there is a lack of support from management and therefore strained relationships. Male officers experienced more physical illnesses than females, which indicates that females tend to take better care of themselves, or that men cope worse with stress.

Above results which reflect race and gender has only been added for the purpose of interesting reading. These results have not been tested for significance and could be tested in further research in this area. It should also be mentioned that groups were too small to test for significance. The same holds true for the CRI-Adult which follows.

4.2.3 Coping Styles

Coping Resource Inventory



Key to CRI-Adult scale - Logical Analysis (LA), Positive Reappraisal (PR), Seeking Guidance and Support (SG), Problem-Solving (PS), Cognitive Avoidance (CA), Acceptance or Resignation (AR), Seeking Alternative Rewards (SR), Emotional Discharge (ED)

Table 4.2 Profile of Correctional officers on the Coping Resources Inventory

According to Moos (1993), T-scores that range between 35 - 40 are below average, scores between 41 - 45 are somewhat below average, while scores between 46 - 54 are average. Scores between 55 - 59 are somewhat above average, while scores of 60 and upwards are considered to be above average. Average scores indicate that certain styles are used, but styles considered to be above average, are preferred over others.

The approach coping scales all measure in the average range, whilst the avoidance coping measure above average with the exclusion of the 'Acceptance or Resignation' scale. It seems that although the correctional officer uses approach coping strategies, he/ she prefers to use avoidance coping strategies more frequently.

The following results were obtained when races were compared on the scales of the CRI:

	LA	PR	SG	PS	CA	AR	SR	ED
B	44	49.1	51.3	49.8	54.3	50.6	57.1	57.9
W	48.5	49.9	53.1	51.7	57.6	55.1	54.5	61.1

On the approach coping scales, both black and white officers scored within the average range. On the avoidance scale, white officers scored in the above average range on the ‘Cognitive Analysis’ (CA) and ‘Acceptance or Resignation’ (AR) scales. It seems that white officers either avoid thinking about problems or accept it as a way of dealing with it. On the ‘Seeking Alternative Rewards’ (SR) scale, black officers scored in the above average range, indicating that they preferred to find substitute activities to gain satisfaction. This may be an expression of their frustration with the system and getting involved in unionised activities (Bergh, 1997; Chaka, 1998). This is also the opinion of the researcher as experienced. Both black and white officers scored in the above average range of the ‘Emotional Discharge’ (ED) scale, indicating that both were able to reduce tension by expressing negative feelings.

	LA	PR	SG	PS	CA	AR	SR	ED
M	45.4	49.7	52.3	51	56.4	53	56.4	58.1
F	45.7	47.5	50.8	49.7	55.8	51.6	55.4	62.3

On the approach coping scales, both male and female officers scored within the average range. Both male and female officers seemed to favour avoidance coping styles. They both scored in the above average range on the ‘Cognitive Analysis’ (CA), which suggests that both sexes tend to avoid thinking realistically about problems. On the ‘Seeking Alternative Rewards’ (SR) scale, both sexes scored in the above average range, indicating that they preferred to find substitute activities to gain satisfaction. Both sexes also scored above average on the ‘Emotional Discharge’ (ED) scale, indicating that both were able to reduce tension by expressing negative feelings.

4.2.4 Analysis of Data

4.2.4.1 Years of Service, Occupational Stress and Levels of Coping

The variable 'Years of Service' (Hypothesis 1) of the Demographic Questionnaire was correlated with the subscales of the OSI, using the Pearson's Product-Momentum Correlations. The correlations are presented in Table 4.3 and a detailed analysis follows thereafter.

	Occupational Stress Indicator							
Years of Service	RO	RI	RA	RB	R	PS	VS	PSY
r	.186 **	-.073	-.271 **	.259 **	.146	.357 **	.136	.170 **

	Occupational Stress Indicator					
Years of Service	IS	PS	RE	SC	SS	RC
r	.128	.092	.092	.161	-.122	.122

Key to OSI scale - Role Overload (RO), Role Insufficiency (RI), Role Ambiguity (RA), Role Boundary (RB), Responsibility (R), Physical Environment (PE), Vocational Strain (VS), Psychological Strain (PSY), Interpersonal Strain (IS), Physical Strain (PS), Recreation (RE), Self-Care (SC), Social Support (SS), Rational/ Cognitive Coping (RC)

(** p < 0.01)

(* p < 0.05)

Table 4.3 Correlational analysis between Years of Service and the Occupational Stress Indicator

According to the Pearson's Product-Momentum Correlations, there is an inverse significant relationship ($p < 0.01$) between 'Years of Service' and 'Role Ambiguity'. Therefore the more 'Years of Service' the correctional officer has, the less occupational stress the officer experiences in the form of 'Role Ambiguity'. It seems therefore that the correctional officer with more years service has clearer guidelines about the policies, priorities and evaluations of the organisation than those officers with less years of service.

The Pearson's Product-Momentum Correlations indicate that a positive significant relationship exists ($p < 0.01$) between 'Years of Service' and 'Role Overload'. The results indicate that the correctional officer who has more years of service has a variety of job descriptions that exceed personal and work resources, than those officers with less years of experience.

The Pearson's Product-Momentum Correlations show a positive significant relationship ($p < 0.01$) between 'Years of Service' and 'Role Boundaries'. The results indicate that the correctional officer who has more years of service experiences conflicting role demands and loyalties in the work setting.

The Pearson's Product-Momentum Correlations reveal a positive significant relationship ($p < 0.01$) between 'Years of Service' and 'Psychological Strain'. The results indicate that the correctional officer who has more years of service experiences more emotional and/or psychological problems, than officers with less years of service.

The Pearson's Product-Momentum Correlations further indicate that there was an significant positive relationship ($p < 0.01$) between 'Years of Service' and 'Physical Environment'. The results indicate that the correctional officer who has more years of service experiences the physical environment as a contributor to occupational stress, whereas those officers with less years of service do not.

There is no significant correlation between 'Years of Service' and the other subscales of the Occupational Stress indicator.

The Spearman's Rank Order test (non-parametric test) confirms the correlation found between 'Years of Service' and 'Role Overload', 'Role Ambiguity', 'Role Boundary', 'Psychological Strain' and 'Physical Environment'.

The variable 'Years Service' of the Demographic Questionnaire was correlated with the subscales of the CRI, using the Pearson's Product-Momentum Correlations. The correlations are presented in Table 4.4 and a detailed analysis follows thereafter.

	Coping Resources Inventory							
Years of Service	LA	PR	SS	PS	CA	AR	SR	ED
r	.127 **	.070	.525 **	.076	-.431 **	-.115	.059	-.042

Key to CRI-Adult scale - Logical Analysis (LA), Positive Reappraisal (PR), Seeking Guidance and Support (SG), Problem-Solving (PS), Cognitive Avoidance (CA), Acceptance or Resignation (AR), Seeking Alternative Rewards (SR), Emotional Discharge (ED)

(** p < 0.01)

(* p < 0.05)

Table 4.4 Correlational analysis between Years of Service and the Coping Resource Inventory

The Pearson's Product-Momentum Correlation was conducted to determine if there was any significant correlation between 'Years of Service' and Coping Resources. According to the Pearson's Product-Momentum Correlations, there is a significant positive relationship ($p < 0.01$) between 'Years of Service' and 'Logical Analysis' and 'Seeking Guidance and Social Support'. The results were confirmed by the Spearman's Rank Order test (non-parametric test). It seems that correctional officers with more years of service tend to seek guidance and support and were able to understand and prepare mentally for a stressor and its consequences. It seems that these officers prefer to use approach coping styles. Correctional officers with more years of service are able to understand and prepare mentally for a stressor and its consequences, whereas those officers with less years of service do not.

The Pearson's Product-Momentum Correlations indicate a significant inverted relationship ($p < 0.01$) between 'Years of Service' and 'Cognitive Avoidance'. It seems that correctional officers who have more years of service apply fewer avoidance coping strategies in the form of 'Cognitive Avoidance', than those officers with less years of service. These results were confirmed by the Spearman's Rank Order correlation.

4.2.4.2 Marital Status and Coping Style

The significance of the two groups (married and unmarried officers) of the variable 'Marital Status' were compared with each other, using the *t*-test. The 'Unmarried Group' consisted of the divorced, single and/or widowed officers. The means are presented in Table 4.5 and a

detailed analysis follows thereafter.

Coping Resources Inventory	Marital Status	Means
Logical Analysis	Married	45.61
	Unmarried	45.91
Positive Reappraisal	Married	50.04 *
	Unmarried	48.45 *
Seeking Support/ Guidance	Married	52.32
	Unmarried	51.46
Problem-Solving	Married	51.96*
	Unmarried	48.34*
Cognitive Avoidance	Married	54.98
	Unmarried	56.66
Acceptance or Avoidance	Married	52.45
	Unmarried	52.09
Seeking Alternative Rewards	Married	57.70
	Unmarried	53.60
Emotional Discharge	Married	58.36
	Unmarried	60.40

(** p < 0.01)

(* p < 0.05)

Table 4.5 Analysis between Marital Status and the Coping Resource Inventory

The *t*-test was conducted to determine if there is any significant difference between the mean scores of the two groups of 'Marital Status' and the Coping Resources Inventory. The results indicate a significant difference ($p < 0.05$) between married and unmarried officers on the 'Problem Solving' and 'Positive Reappraisal' subscales of the Coping Resources Inventory. The married officers' means were significantly higher than those of the unmarried officers. The results show that married officers apply approach coping strategies. Married officers are

more likely to solve a problem brought on by a stressful event by reappraising the event positively. These results were confirmed by the Mann Whitney U-test (non-parametric test) conducted on the variable 'Marital Status' and Coping Resources Inventory.

4.2.4.3 Section and Impact of Event Scale-Revised

The significance of the two groups (administration workers and prison workers) of the variable 'Section' were compared with each other, using the *t*-test. The variable 'Section' of the Demographic Questionnaire was compared with the subscales of the Occupational Stress Indicator and Impact of Event Scale-Revised to determine significant differences between mean scores. The results are presented in Table 4.6 and a detailed analysis follows thereafter.

Scale	Section	Means
Impact Of Event Scale-Revised	Administration Workers	25.50 **
	Prison Workers	39.08 **
Occupational Stress Indicator	Occupational Stress Indicator	Occupational Stress Indicator
Role Overload	Administration Workers	47.18
	Prison Workers	51.24
Role Insufficiency	Administration Workers	56.08
	Prison Workers	59.68
Role Ambiguity	Administration Workers	55.12
	Prison Workers	57.24
Role Boundary	Administration Workers	57.98 **
	Prison Workers	60.46 **
Responsibility	Administration Workers	54.40 **
	Prison Workers	59.59 **
Physical Environment	Administration Workers	61.72

	Prison Workers	67.89
Vocational Strain	Administration Workers	54.84
	Prison Workers	55.81
Psychological Strain	Administration Workers	53.26 **
	Prison Workers	59.57 **
Interpersonal Strain	Administration Workers	60.30
	Prison Workers	62.08
Physical Strain	Administration Workers	59.06
	Prison Workers	62.05
Recreation	Administration Workers	51.50
	Prison Workers	54.89
Self-care	Administration Workers	50.30
	Prison Workers	51.32
Social Support	Administration Workers	45.64
	Prison Workers	43.51
Rational/ Cognitive Coping	Administration Workers	50.58
	Prison Workers	46.16

(** p < 0.01)

(* p < 0.05)

Table 4.6 The correlation analysis of the different sections and the Impact of Event Scale-Revised and the Occupational Stress Indicator

T-tests were conducted to determine whether there is any significant difference between two groups of 'Section' and the Impact of Event Scale-Revised. Scores of the IES-R were converted to one score per section as to obtain differences in mean scores between the two groups. The results indicate that correctional officers who work directly with inmates have significantly ($p < 0.01$) higher mean scores on the Impact of Event Scale than officers who did administration work. Correctional officers who have more exposure to violent situations through contact with the inmates are therefore more prone to developing PTSD

symptomatology, than those officers with less exposure to violent situations.

T-tests were conducted to determine if there is any significant difference between the two groups of variable 'Section' and the subscales of the Occupational Stress Indicator. The results indicate two subscales on which there is a significant ($p < 0.05$) difference between the officers who work with inmates and those who do administration work. On the subscales 'Responsibility' and 'Physical Environment', the officers who work with the inmates, show significantly higher mean scores than their administrative counterparts. It seems that correctional officers who are more prone to PTSD symptomatology due to their contact with inmates also show a greater sense of responsibility for the welfare of others, which results in occupational stress. In addition, the correctional officers who work within the environment of the prison, experience more stress in terms of the physical environment in which they have to function, than those officers who work in administration offices.

A third subscale, 'Psychological Strain', indicates a significant ($p < 0.05$) difference between the officers who work with inmates and those who do administration work. Results indicate that officers who have more contact with inmates and function inside a prison show more psychological strain in terms of experiencing emotional problems, than officers who have less contact with inmates.

These results were confirmed by the Mann Whitney U-test (non-parametric test). Since some of the sets of IES-R scores of the two groups did not appear clearly normal, the Mann Whitney U-test was also run. It gave the same outcomes as the *t*-tests.

4.2.4.4 Years of Service and the Occupational Stress Indicator

An ANOVA was performed on the demographic variable 'Years of Service' to determine significant differences between three categories of the variable in respect of occupational stress. The variable 'Years of Service' was divided into three different categories. These categories were devised based on Patterson's (1992) phases of work according to the number of years of service. These categories are '6 months to 4 years 11 months', '5 years 1 month to 14 years 11 months', and '15 years to 20 years and over'.

The results for the variable 'Years of Service' are presented below in Table 4.7.

OSI Subscale	Years of Service	Mean
Role Overload	6mnths - 4yrs 11mnths	47.70**
	5yrs - 14 yrs 11mnths	48.36**
	15yrs - 20yrs +	52.08**
Role Insufficiency	6mnths - 4yrs 11mnths	59.57
	5yrs - 14 yrs 11mnths	56.34
	15yrs - 20yrs +	60.00
Role Ambiguity	6mnths - 4yrs 11mnths	62.00**
	5yrs - 14 yrs 11mnths	54.55**
	15yrs - 20yrs +	51.17**
Role Boundaries	6mnths - 4yrs 11mnths	59.78**
	5yrs - 14 yrs 11mnths	58.43**
	15yrs - 20yrs +	59.33**
Responsibility	6mnths - 4yrs 11mnths	55.09
	5yrs - 14 yrs 11mnths	55.84
	15yrs - 20yrs +	59.92
Physical Environment	6mnths - 4yrs 11mnths	62.04
	5yrs - 14 yrs 11mnths	64.86
	15yrs - 20yrs +	63.67
Vocational Strain	6mnths - 4yrs 11mnths	51.96
	5yrs - 14 yrs 11mnths	55.73
	15yrs - 20yrs +	56.50
Psychological Strain	6mnths - 4yrs 11mnths	57.13
	5yrs - 14 yrs 11mnths	57.29
	15yrs - 20yrs +	62.75
Interpersonal Strain	6mnths - 4yrs 11mnths	59.17

	5yrs - 14 yrs 11mnths	61.59
	15yrs - 20yrs +	61.42
Physical Strain	6mnths - 4yrs 11mnths	60.74
	5yrs - 14 yrs 11mnths	58.77
	15yrs - 20yrs +	63.17
Recreation	6mnths - 4yrs 11mnths	50.43
	5yrs - 14 yrs 11mnths	53.79
	15yrs - 20yrs +	52.83
Self-care	6mnths - 4yrs 11mnths	47.57
	5yrs - 14 yrs 11mnths	51.86
	15yrs - 20yrs +	51.33
Social Support	6mnths - 4yrs 11mnths	45.61
	5yrs - 14 yrs 11mnths	45.25
	15yrs - 20yrs +	40.92
Rational/ Cognitive Coping	6mnths - 4yrs 11mnths	48.04
	5yrs - 14 yrs 11mnths	48.36
	15yrs - 20yrs +	51.33

(** p < 0.01)

(* p < 0.05)

Table 4.7 The ANOVA of the Years of Service on the Occupational Stress Indicator

The ANOVA indicates that correctional officers who have the least years of experience have the least amount of role overload (47.70), while those in the middle range experience slightly more overload. The officers with the most years of service experienced the most overload. It seems that these officers have a variety of job descriptions that exceed their personal and work resources. The results reveal a significant ($p < 0.01$) difference.

The ANOVA indicates that correctional officers who have the least years of experience, score the highest level (62.00) for 'Role Ambiguity'. Officers who are in the medium range of years of service experience less 'Role Ambiguity' (54.55), while officers with the most years of service show even less (51.17). It seems that officers with the fewest years of service

experience occupational stress through 'Role Ambiguity'. It seems that guidelines and policies are not clear to the newer officers. The results indicate a significant ($p < 0.01$) difference which correlates with previous results, also indicating that officers with fewer years in the service show higher levels of occupational stress, than those officers with a medium (6 - 14 years) range of years of service.

The ANOVA indicates a significant ($p < 0.01$) difference on the 'Role Boundaries' scale. The newer and oldest officers (in terms of years of service), had scores of 59.78 and 59.33, respectively, while medium-range officers scored 58.43. It seems that medium-range officers experience less stress in the form of 'Role Boundaries' and experience less conflict with role demands. These results were confirmed on the Kruskal Wallis test (non-parametric test).

4.3 Qualitative Analysis of Written Responses on CRI-Adult

As indicated earlier, the CRI-Adult has a section in which respondents are asked to write down the most important problem or stressful event they experienced over the past 12 months. From the data it appeared that there were events outside the working environment which had an effect on the respondents, and which were appraised as stressful.

These events were: loss of a loved one (5%), relationship problems with either, spouse, partner or children (34 %), financial difficulties (48 %), suicide of a friend (2 %), and motor vehicle accidents and or other transport problems (6 %). Only a few respondents (5%) referred to problems within the working environment.

As indicated in the previous chapter, the OSI scores were in the normal range. From the data available it seems that the respondents were more stressed by events outside the work environment, and therefore only average scores were reported on the OSI. It may seem that officers who experience external stressors, find temporary relief in the working environment - such as support from colleagues and so on. It could also be speculated that either the work environment compromise their personal life, or that a John Wayne Syndrome has developed which may have influenced scores to be in the normal range.

4.4 Summary of chapter

A profile of the average scores on each measurement was drafted, considered and interpreted in terms of the international norms. The Impact of Event Scale-Revised indicated that the correctional officer who is exposed to violence is prone to the development of PTSD. The Occupational Stress Indicator indicated that the average correctional officer develops occupational stress in response to poor working conditions, inadequate interpersonal relationships and ineffective health care. The Coping Resources Inventory indicated that the average correctional officer uses avoidance coping strategies, rather than approach coping strategies.

A qualitative analysis of the CRI-Adult indicated that respondents experienced stress that appeared on the surface to not be directly related to the work environment. Independent variables were correlated with the subscales on the various measurements used. The correlations revealed that, on certain subscales, there are significant levels of occupational stress and PTSD; and that married correctional officers utilise approach coping strategies rather than avoidance coping strategies.

Chapter Five: Discussion, Limitations and Recommendations

5.1 Discussion

Profiles for the samples of the IES-R, OSI and CRI were drafted. The profile of the IES-R revealed that correctional officers who are exposed to violent situations and work with inmates are more vulnerable to PTSD than officers who work in the administration offices. The results confirm international literature on the effects of violence on law enforcement and emergency services personnel (Carlier et al., 1997; Durham et al., 1985; Robinson et al., 1997; Williams & Sommers, 1994). As indicated earlier in the study, the correctional services in South Africa could be compared to the international situation in corrections, law enforcement, and emergency services. The results of the study are not surprising however, administration workers could also be vulnerable as a result of vicarious exposure or as a result of traumatic experiences outside of the working environment. Future studies could research the extent of trauma and vulnerability amongst correctional officers who are not directly involved with prisoners.

Results indicate that black officers are slightly more prone to PTSD. This may be due to black officers being exposed more to violent situations as their numbers are far greater than white officers. It may also be due to the fact that black officers had been exposed to violent situations frequently outside of the work environment, especially in their places of living. Another possibility would be that there are more black officers in the lower ranks and therefore more in the frontline.

Results also indicated that males (28.9) were less affected by violent situations than females (30.26). Most females (70%) in this study worked in the administration offices and had little or no experience with violent inmates, albeit male or female inmates. These female officers may be more traumatised by what they actually hear (vicarious trauma) and see when exposed to violent situations. It could also be speculated that female officers show a vulnerability and proneness to PTSD. It seems that the female officers hold basic assumptions about themselves and the world that they are invulnerable, yet become traumatised, meaning that their basic assumptions are destroyed (Joseph et al., 1997). Shawver and Dickover (1986), however

argue that females are less attacked than their male colleagues and tend to approach potentially violent situations less provocatively and more creatively. Further research could look into this area which shows a discrepancy with available research. Future studies could also research the extent of trauma and vulnerability amongst correctional officers of different races and sexes.

Carlier et al. (1997) assert that not every traumatised individual will develop PTSD. Although this could be said of the male officers (73.5%) who participated in the study as opposed to female officers (25.5%), the group of female officers were too small to determine the significance. McFarlane (1989) and Green and Berlin (1987) state that exposure plays a less significant role in the aetiology of PTSD. Exposure in terms of gender in this study was not tested for significance due to the small size of the group. Theory informs us that individuals suffer from PTSD due to previous experience of violent situations.

Contrary to the literature (Bergh, 1997; Chaka, 1999; Finn, 1998; Gerstein et al., 1987; Grossi & Berg, 1991; Patterson, 1992), the profile of the OSI revealed that correctional officers in the study did not suffer from high levels of occupational stress which have been confirmed by the results of the CRI. Reasons for lower occupational stress levels could be that the correctional officers regard the working environment and conditions as acceptable. In view of Lazarus and Folkman's (1984) theory concerning appraisal it seems that some officers appraise the work environment as a challenge and therefore it is viewed as a potential gain. It could also be speculated that officers denied, trivialised (John Wayne syndrome) and perhaps rationalised accounting for average levels of stress. It seems that it is a tendency among correctional officers to develop a John Wayne syndrome. The masculine world of the correctional services and the tendency to deny problems seems to be supported by the culture of law enforcement. It could also be a coping strategy (avoidance coping) as they do not deal with the situation but rather avoid it all together. Lazarus and Folkman's theory informs the research that officers appraise situations as stressful (potential loss). They feel that they do not have adequate resources to cope or adopt avoidance coping strategies. Another reason for low scores could be that officers are wary of any person doing investigations into personal behaviour, perceptions or work records. This is confirmed by Inwald (1994). Officers are scared that it would influence their promotional ability or merit awards. Even if confidentiality is ensured,

officers are still wary of investigators.

Officers might feel that family pressures and financial difficulties are a cause of stress, rather than the working environment and conditions as such. In most cases (respondents who participated in the study) stressors other than the work were evident. These included the death of loved ones and friends, financial difficulties, relationship problems with spouses and children, and accidents. These conclusions were drawn from the CRI. It further gives insight into the connection between appraisal and coping and the transactional nature of stress. It could be speculated that some officers view their work as challenging and therefore cope, whilst they might not cope with a situation such as the death of a loved one, which may not be viewed as a challenge (Anshel et al., 1997; Lazarus & Folkman, 1984; Moos, 1993). It could be further suggested that some individuals are attracted to emergency services and comparative work, but are unable to deal with stress on another level (crises at home). A further implication for research would be to explore the issue of stress and coping in the area of work vs. home.

It seems that both black and white officers were affected by the physical environment in which they worked, although white officers were more affected by the conditions. It seems further that white officers have higher levels of stress than black officers, both on the occupational role and personal strain scales. This may be due to the equity policy of the department in which disadvantaged officers should be advanced to management positions, causing a great deal of stress and animosity (Begley, 1998; Bergh, 1997; DCS, 1994). The coping scales indicate that both black and white officers have adequate coping resources, though black officers seem to have more effective coping resources which may explain why white officers' stress levels on certain scales are higher.

Results indicate that both sexes fall in the normal range for stress on the OSI. Males, however, experience significant levels of stress due to the poor conditions in which they work. Females experienced less stress, which may be due to the fact that most of the females (68 %) in this study worked in the offices which are well equipped with carpets, chairs, tables, heaters, fans/air-conditioners, and so on. The office workers are not exposed to the extreme conditions in which their male counterparts function (Biggam et al., 1997; Furnham, 1997; Kiely &

Hodgson, 1990; Rout & Rout, 1997).

Both male and female officers experienced mild levels of maladaptive stress in their interpersonal relationships. The questionnaire does not specify the nature of the type of interpersonal relationship, but it could be speculated that there is a lack of support from management and therefore strained relationships. According to Finn (1998) managers often expect officers to adhere to the rules and regulations and to go 'by the book', yet they expect the officers to be flexible and use their judgement in the day-to-day treatment of inmates, and it was found that officers lacked the support of management when decisions were made by officers.

Male officers experienced more physical illnesses than females, which indicates that females tend to take better care of themselves, or that men cope worse with stress (Kiely & Hodgson, 1990; Morrison et al., 1992; Robinson et al., 1996).

Consistent with the literature, most correctional officers in this study utilised avoidance coping strategies to mediate stress (Arthur, 1998; Boey, 1998; Holahan et al., 1996). It seems that officers are more likely to employ maladaptive coping strategies such as substance abuse, spouse battering, assaulting of inmates and so on (Holden et al., 1995; Svenson et al., 1995). As a way of coping with the stressful situations in the prison environment and due to the possible macho culture which prevails among officers, officers regularly turn to alcohol and other substances and so on to alleviate stress (Bergh, 1997; Chaka, 1999).

Avoidance coping strategies only become maladaptive in the long run, whereas they seem to be effective in the short term. The strategies enable individuals either to avoid thinking about the problems or stressors, or to substitute activities, or tend to express their negative feelings. If the officer keeps denying the problem, he/she may revert to substance abuse (Cartwright & Cooper, 1996; Svenson et al., 1995). It might, however, be that officers are involved in sporting activities and/or hobbies, or accept the problems, which are positive. It seems that officers utilise coping strategies which have short-term stress-relieving characteristics, but which are in the long run, inadequate.

On the approach coping scales, both black and white officers scored within the average range. On the avoidance scale, white officers scored in the above average range on the 'Cognitive Analysis' (CA) and 'Acceptance or Resignation' (AR) scales. It seems that white officers either avoid thinking about problems or accept it as a way of dealing with it. On the 'Seeking Alternative Rewards' (SR) scale, black officers scored in the above average range, indicating that they preferred to find substitute activities to gain satisfaction. This may be an expression of their frustration with the system and getting involved in unionised activities or play sport. Both black and white officers scored in the above average range of the 'Emotional Discharge' (ED) scale, indicating that both were able to reduce tension by expressing negative feelings.

On the approach coping scales, both male and female officers scored within the average range. Both male and female officers seemed to favour avoidance coping styles. They both scored in the above average range on the 'Cognitive Analysis' (CA), which suggests that both sexes tend to avoid thinking realistically about problems. On the 'Seeking Alternative Rewards' (SR) scale, both sexes scored in the above average range, indicating that they preferred to find substitute activities to gain satisfaction, whilst they also scored above average on the 'Emotional Discharge' (ED) scale, indicating that both were able to reduce tension by expressing negative feelings.

5.1.1 Hypotheses

The quantitative analysis of data analysed seven hypotheses that were proposed.

5.1.1.1 Hypothesis 1

The first hypothesis proposed that the disenchantment phase (6 – 14 yrs of service) will lead to a higher incidence of occupational stress, as measured by the Occupational Stress Indicator (Osipow & Spokane, 1986). The subscales of the Occupational Stress Indicator were correlated with the variable 'Years of Service', using the Pearson Momentum-Product Correlation test. Significant positive correlations ($p < 0.01$) were found on 'Role Overload' (0.18), 'Role Ambiguity' (- 0.271), 'Role Boundaries' (0.259), 'Psychological Strain' (0.170), and 'Physical Strain' (0.357). It seems that the poor working conditions have

a negative effect on the officers (Physical Strain). It seems that officers may be taking strain due to the overcrowding of prisons, as well as taking responsibility for others. Officers have to deal with more people as the demands become greater. This causes an imbalance between the demands of overcrowding and resources of the officers, resulting in negative appraisal of the situation as being highly stressful (Ross & Altmaier, 1994). The results reveal that 'Role Ambiguity' was the only variable that had an inverse relationship. Due to the demands of the role, ambiguity is experienced. The ambiguity experienced is usually due to a lack of a clear job description, a lack of goals and a lack of responsibilities (Arnold et al., 1995; Anderson et al., 1996). It can therefore be concluded that the correctional officer with more years of service has clearer guidelines about the policies, priorities and evaluations of the organisation than those officers with less years of service. Although the demands of the job are greater (inverse relationship of the variable), the officer has better knowledge of what he has to do. Patterson (1992) concludes that officers who have six to fourteen years service are the most disenchanted with the job. He calls this phase the 'disenchantment phase'. In this phase Patterson found that officers experience higher incidences of occupational stress. Although these phases were applied in the USA context, it was suggested that South African correctional officers experience the same type of phases as shown in the results mentioned earlier.

Patterson (1992) also found that occupational stress or perceived stress increases with years of service and job experience, especially those officers in the disenchantment phase. The Occupational Stress Indicator (Osipow & Spokane, 1986) indicates that there is some level of occupational stress to be found among correctional officers with longer periods of service. At the beginning phase of a new job, there is much excitement and the job is perceived as a challenge. The appraisal made is of a positive nature (Biggam et al., 1997). This changes to the stage where the officer becomes disenchanted with the work and appraises the situation negatively, which results in stress (Patterson, 1992). The demographic variable predicted occupational stress that increases with length of service. The relationship predicted was curvilinear. The hypothesis can thus be accepted.

It seems that officers in the disenchantment phase regard role overload, responsibility, role ambiguity and so on as stressors and appraise situations of this nature as a potential loss. In some situations the stressors and resources are appraised to determine if the individual has the

necessary resources to cope - actual loss. In the disenchantment phase it seems that the situations or stressors are seen as a threat and the demands exceed the individuals capabilities. The results are short term coping (avoidance coping) styles or maladaptive coping styles.

5.1.1.2 Hypothesis 2

The second hypothesis proposed that longer years of service enabled officers to utilise approach coping strategies, as measured by the Coping Resources Inventory (Moos, 1993). The subscales of the Coping Resources Inventory were correlated with the variable 'Years of Service', using the Pearson Momentum-Product Correlation test. A positive significant correlation ($p < 0.01$) was found on the subscales 'Logical Analysis'(0.127), and 'Seeking Guidance and Support' (0.525). An inverse significant correlation ($p < 0.05$) was found on the subscale 'Cognitive Avoidance' (0.431). It seems that correctional officers in South African prisons confirm the evidence of studies conducted on their international colleagues. It can be further assumed that officers with more years of service become resilient in that they utilise approach coping strategies. The above warrants further research because it seems that officers with more years of experience 'learn' to utilise approach coping skills.

Correctional officers with longer length of service tend to utilise approach coping strategies and show fewer tendencies to utilise avoidance coping strategies. Anshel et al. (1997), Boey (1998) and Kiely and Hodgson (1990) argue that correctional officers do utilise approach coping strategies, while Burke (1993), Graf (1986) and Harvey-Lintz and Tidwell (1997) argue that officers may utilise avoidance coping strategies. This finding not only confirms international literature but also implies that different circumstances may call for different coping measures. An officer may be able to utilise certain coping strategies, but when a particular situation is perceived as too stressful, this may prove to be the "straw that breaks the camel's back". This leads to the fact that coping in this regard is complex. The personality of the individual, exposure to event, use of coping styles previously and outcomes obtained, all play significant roles in the appraisal of events and styles of coping adopted (Lazarus and Folkman, 1984). Officers are able to cope with events that are appraised as controllable, as opposed to events that are appraised as uncontrollable.

The coping resources profile indicated that correctional officers with less years of experience

or who are new to the organisation, utilise avoidance coping strategies, which seem to be adequate in the short term, but become inadequate in the long term. It seems that officers who have worked longer may have learned how to utilise approach coping strategies. The demographic variable 'Years of Service', in this sense, predicted the utilisation of approach coping strategies. The hypothesis can thus be accepted.

In terms of the interactional model (Lazarus and Folkman, 1994) it seems that officers with longer years service appraise certain situations as challenges. It could also be that the officer appraised the event as stressful, but after re-appraising it, found that he/ she have the adequate resources to cope. It indicates and acknowledges the dynamic process of the interactional model. The process is not only linear but certainly dynamic. According to their appraisal the demand of the situation does not exceed their capabilities, and are they able to meet the challenges. It also seems as if they are emotionally stronger to cope.

5.1.1.3 Hypothesis 3

The third hypothesis proposed that married officers utilise approach coping strategies to deal with occupational stress and traumatic situations, as measured by the Coping Resources Inventory (Moos, 1993). The variable 'Marital status' was correlated with the subscales of the Coping Resources Inventory, using *t*-tests to determine mean differences. A significant correlation ($p < 0.05$) was found between the mean differences on the subscales 'Positive Reappraisal' (4.10) and 'Problem-Solving' (3.62). It can thus be concluded that correctional officers who are married tend to utilise approach coping strategies. It seems that married life may serve as a buffer against stress, and that married officers do not have to carry the burden alone. In the light of the results (occupational stress not being very high), it cannot definitely be concluded that married officers have significantly lower levels of occupational stress than their unmarried counterparts. Grossi and Berg (1991) and Dignam et al. (1986) indicate that social support prevents and reduces occupational stress. Marital status could be viewed as an independent support variable (Graf, 1986). Brown and Grover (1998) found that spousal support is a factor that positively affects psychological well-being when officers have to cope with stressful situations.

Marriage status is viewed as an operational definition for social support in this study. It is

assumed that married officers are able to talk about their stress in a socially sanctioned setting, as opposed to unmarried officers (Peeters et al., 1995b). It could further be speculated that marriage provides an environment in which the officer may express or vent his/ her negative feelings. In this context many marriages contain a variety of maladaptive coping strategies. This could not be verified as the study did not focus on such attempts at stress alleviation. The demographic variable predicted approach coping strategies. Although the results support the third hypothesis, it does not show that approach coping is associated with lower levels of occupational stress or PTSD.

5.1.1.4 Hypothesis 4

The fourth hypothesis proposed that working with prisoners exposes the officers to traumatic situations as a result of which they may develop significant incidences of PTSD symptomatology, as measured by the Impact of Event Scale - Revised (Weiss & Marmar, 1997). *T*-test were used to determine the mean differences between the variable 'Section' and scores on the Impact of Event Scale-Revised. A significant difference ($p < 0.01$) was found between the mean differences of the two categories 'Administration Workers' (25.50) and 'Prison Workers' (39.08). Admin officers who are less exposed to contact with inmates and violent situations seem to be less prone to indices of PTSD. Further research on this issue could be conducted to determine what effect vicarious exposure has on the Admin workers.

It seems thus that officers, who work with prisoners and are exposed to traumatic situations develop indices of PTSD symptomatology and/or PTSD. The literature supports the argument that correctional officers who are exposed to traumatic and violent situations develop PTSD symptomatology and/or PTSD (Atlas, 1983; Kiely & Hodgson, 1990; Light, 1991; Mahan, 1994; Martin & Zimmerman, 1991; Montgomery, 1994; Patrick, 1998; Shine, 1997). The demographic variable predicted the development of PTSD symptomatology, therefore the hypothesis can be accepted.

Studies, as mentioned earlier, indicated that individuals who were exposed to violent situations did not necessary develop PTSD, but rather previous experience played an important role in the development of PTSD. This has a huge implication for the DCS as prison officers seemed more prone to indices of PTSD, than did the administration workers. This means that officers who had been previously exposed to violent situations had not been identified and treated appropriately. It seems that there is a lack of critical stress debriefing

programmes (Harvey-Lintz & Tidwell, 1997) in the correctional services.

The findings support the Integrative theory of PTSD in the sense that conscious and non-conscious processes are accessed. It also integrates appraisal of stressful situations and the manner in which a situation is handled. The traumatic event presents the individual with certain information, which then gives rise to emotional arousal. The emotional arousal causes an interference with information processing. The images of the traumatic event evoke a specific cognitive activity called appraisal and reappraisal. The appraisal of the situation is subject to the individual's perception of the event, but it is also very important in determining the subsequent reaction (Joseph et al., 1997).

5.1.1.5 Hypothesis 5

The fifth hypothesis proposed that a significant degree of occupational stress is experienced by correctional officers who work in the prisons, as measured by the Occupational Stress Indicator (Osipow & Spokane, 1986). A significant difference ($p < 0.05$) was found on the subscales 'Role Conflict' (boredom, shift work), 'Role Boundaries', 'Responsibility' (involvement with inmates) and 'Psychological Strain' (involvement with inmates and violence). It can be concluded that correctional officers who work in the prison develop higher incidences of occupational stress on certain of the subscales of the Occupational Stress Indicator, compared to those officers who do administration work. As explained earlier, it is possible that due to the fact of overcrowding, demands on officers exceed their resources and they become stressed. In terms of 'Role Conflict', 'Role Boundaries', 'Responsibility', stress results from the burden of being responsible for those who are employed as subordinates.

Managers are usually in positions that require them to take responsibility for their subordinates (Arnold et al., 1995; Anderson et al., 1996; Biggam et al., 1997; Kiely & Hodgson, 1990; Um & Harrison, 1998). Posen (1990, in Shine, 1997) reports that an overcritical management style was seen as a major stressor by correctional officers, as officers could not depend on managers for support. Correctional officers are responsible for the well-being of inmates, but find it increasingly difficult with overcrowded conditions. It is possible that the officers also experience stress in terms of conflict between roles, being that of rehabilitator and custodial officer. The one role requires a friendly, caring attitude, whilst the other role requires a stern disciplinarian (Kiely & Hodgson, 1990; Um & Harrison, 1998).

Overall results revealed that occupational stress among correctional officers generally were not high, yet when a distinction is made between administration officers and prison officers, it seems that there is a significant difference. It seems that in the case of prison officers, factors such as boredom, shift work, involvement with inmates, violence, and so on, contribute to the higher levels of occupational stress (Arnold et al., 1995; Biggam et al., 1997; Finn, 1998; Furnham, 1997; Kiely & Hodgson, 1990; Rout & Rout, 1997). From the study it seems that the correctional officer who is responsible for custodial and guard duties (and who is usually at the bottom end of the organisational hierarchy, and who is more likely to work within the prison), is the least committed to the organisation, sceptical about organisational change, least positive about rehabilitation, has poor work habits, and derives the least satisfaction from his job (Kiely & Hodgson, 1990; Morrison et al., 1992; Robinson et al., 1996). Because of their poor attitudes and negative outlooks, it could be concluded that these officers are the most likely to be at risk for occupational stress.

Although results revealed higher incidences of stress amongst prison workers, further research could examine occupational stress levels of admin workers.

Role conflict (OSI - Role Boundaries) seems to be a significant contributor to occupational stress (Anderson et al., 1996; Arnold et al., 1995; Biggam et al., 1997; Furnham, 1997; Kiely & Hodgson, 1990; Osipow & Spokane, 1986; Um & Harrison, 1998) and does not seem to be much different from role conflict in other large institutions. However, the results indicate that it remains a problem or area for concern in the correctional services. 'Role Conflict' and 'Responsibility for Others' further causes stress in the sense that officers have to accommodate two roles at once - that of rehabilitation and custody. Officers may find it difficult to separate their roles at times, which may adversely influence interpersonal relationships. Each of the roles involves a certain responsibility that the officer has to carry.

Responsibility for others and for the job causes a certain amount of stress (Anderson et al., 1996; Furnham, 1997; Kiely & Hodgson, 1990; Um & Harrison, 1998). Brodsky (1989, in Kiely & Hodgson, 1990) found that the relationship between officer and inmate has always been troublesome. Gerstein et al. (1987) and Kiely and Hodgson (1990) conclude that when staff - inmate relationships are sound, they cause less stress. Staff who felt that they were contributing to the well-being of inmates found their jobs stimulating and rewarding (Morrison et al., 1992). In this study it seems that officers may not be contributing to the well-being of inmates and therefore are not finding their work rewarding. Another reason could be

that due to a shortage of staff, officers have to carry an extra burden and find that they have to be responsible for more inmates, which could have a negative impact on their own psychological well-being.

Excessive demands are placed on the officer, which results in the officer appraising the situation and his/ her resources. Emotionally the officer might be at a low and then feel that he/ she does not have the necessary resources. The situation is appraised both in terms of potential loss and actual loss (secondary appraisal). This type of pressure ultimately leads to psychological strain. The demographic variable 'Section' partially predicted occupational stress as only some of the indices were elevated. The hypothesis is accepted.

In conclusion, the results show some measure of occupational stress among correctional officers. Although the occupational stress profile indicates that officers' stress occurs mostly in the normal range, certain groupings (in terms of independent variables that were selected) experience higher levels of occupational stress. The profile is based on the scores obtained from the measurements, which indicate that correctional officers' levels of stress and coping fall in the average range, but when independent variables are selected, results reveal the opposite. Variables such as length of service and the nature of the work predicted that certain officers develop higher levels of occupational stress compared to the rest of the sample.

Only certain independent variables were selected, representing those that the researcher felt might be pertinent. Variables were selected on the grounds of the availability of literature. Although most of the variables in the study could be covered and confirmed by literature, only certain were selected, otherwise the study would have been too lengthy and it would have been difficult to arrive at meaningful conclusions.

The results suggest that a small number of correctional officers suffer from PTSD, or present with PTSD symptomatology. From the results it seems that the majority of officers who suffer from PTSD symptomatology and/or PTSD are those who work within the prison and are frequently exposed to violence situations. Yet, not all that are exposed to violent situations are prone to develop PTSD. Literature supports the finding, but specific intervention needs to focus on programmes to treat individuals who suffer from PTSD and/or present with PTSD symptomatology.

The coping resources profile indicates that correctional officers utilise avoidance coping

strategies rather than approach coping strategies. As with occupational stress, it seems that certain groupings (in terms of independent variables that were selected) of officers utilise approach coping strategies. Marital status - being married - was the variable selected. Marital status is used here as an operational definition of social support. Married officers have access to a legitimate socially sanctioned condition, in which they are protected. They are able to share the burden with someone, without feeling threatened by having to seek other forms of social support where they are less protected, such as managerial support or seeking help from professionals.

The qualitative analysis of the CRI-Adult results yield an interesting finding - officers identify stressors outside the working environment. It is possible that occupational stress is a result of stressors experienced outside of the working place. These stressors may exacerbate occupational stress, yet officers may view the work place as a manner of escape from the problems at home, which then alleviates stress, accounting for average scores on the OSI. It is possible that work enables officers to shift their thinking to the job. 'Cognitive Avoidance' on the CRI resulted in above average scores. Results indicate that officers attempt to avoid thinking about their problems by focussing, e.g. on their work. It is possible that officers find alternative substitutes to their problems in the form of work, and are able to express the negative feelings.

The study confirms and supports some of the findings in a study by Chaka (1999), which was conducted in Pietermaritzburg, as well as a study by Bergh (1997), which was carried out in a national sample. Some of these findings were violent inmates, responsibility for inmates, boredom, shift work, poor physical conditions, role conflict and so on. It can therefore be argued that this study could be generalised to other correctional facilities in South Africa.

5.2 Limitations of the Research

To date the Impact of Event Scale-Revised (Weiss & Marmar, 1997), the Occupational Stress Indicator (Osipow & Spokane, 1986) and the Coping Resources Inventory (Moos, 1993) do not seem to have been used in a South African study concerning correctional services. These instruments have been standardised on American samples, and therefore the norms are not applicable to the South African context. Norms need to be developed and validated for South African samples, including emergency services, law enforcement personnel and correctional services personnel.

The instruments used in this study were developed in English, although they were administered to second language users of English. The sample reflected mainly Afrikaans, Sotho and Zulu speakers. This may reduce the validity and reliability of protocols, as the language and certain constructs may have been difficult to understand.

As all three of the measurements were self-measurements, the researcher relied on subjects' perceptions of themselves. The subjects' perception is a self-opinion, and it is possible that subjects who want to perceive themselves in a better light rate themselves according to this principle. Pines, Aronson, and Kafry (1981) argue that self-report questionnaires are influenced by respondents' honesty or their need to put themselves in a favourable light. More objective methods of measuring stress, PTSD and coping mechanisms need to be developed.

The researcher at times found the study too broad. The concepts of stress and occupational stress are broad areas and include many aspects such as role ambiguity, burnout, role boundaries, role conflict, responsibility, social support and working conditions. The concept of stress may include job stress, social stress, physical stress, technology stress and other types of life stress. Studies that may be conducted in future should perhaps be limited or narrowed down to one or two constructs in relationship to a specific population. An example of the above could be to research vicarious trauma in a group of admin officers or to research the relationship between overcrowding and occupational stress levels in the form of role boundaries, responsibility for others and psychological strain.

The Coping Resources Inventory has a descriptive section, in which the respondent may identify a stressor and describe it in written language. From the written commentary, it seems that some of the respondents were preoccupied with other stressors that may have had no direct relevance to the work environment, yet indirectly influencing job satisfaction and performance. The findings may have serious implications and further research with the instrument needs to take this in to account.

Individuals may not experience any occupational stress but other external stressors (such as intimate relationships outside the work context, financial problems, the death of loved ones) may impact on individuals. In such cases, work circumstances may merely aggravate existing stress.

5.3 Recommendations

As Gerstein et al. (1987) and Patterson (1992) observe, correctional officers are under tremendous stress and pressure. Absenteeism, substance abuse, job dissatisfaction and job performance problems are symptoms of the pressure and stress which correctional officers experience on the job. The purpose of this study was to determine the relationship between occupational stress, PTSD and coping mechanisms in correctional officers. Through understanding the problems faced by officers, the search for solutions may begin. By determining the causes, antecedents, incidence and intensity of occupational stress, the Department of Correctional Services will be better able to contain, prevent and better manage occupational stress.

As the OSI is a good measure of occupational stress, the development of norms for the South African context could be of immense value to the Human Resources Department. The department could then determine the levels of occupational stress and accordingly intervene on an organisational level. The same could be done with the CRI. Organisational intervention should focus on results of individual scales such as role boundaries, role ambiguity, responsibility, psychological and interpersonal strain, cognitive avoidance and so on. In this study these scales were elevated, indicating mild levels of maladaptive stress.

From the relatively average scores obtained on questionnaires it seems that officers develop a macho attitude or the John Wayne syndrome to stressful situations. It could be viewed as a form of avoidance coping (Cognitive Avoidance) which results in coping on the short term. Intervention programmes should be designed to combat this and aid officers in seeing the benefits of approach coping and long term coping strategies.

Results from the study indicated that officers in the disenchantment phase experience the most stress. Officers in this stage become pessimistic and cynical concerning the effect that they might have on crime and rehabilitation. Management, leadership, time management, conflict resolution courses, and so on are mainly presented to managers and senior managers to develop their skills. These officers have already moved through the disenchantment phase. The above-mentioned courses should be presented to officers in the disenchantment phase as most of these officers have not developed proper skills, which may add to further disenchantment. Further research could also focus on the area of occupational stress among officers in the disenchantment phase.

It also seems that officers in the disenchantment phase are over worked, take on more responsibilities which cause physical and psychological strain. It seems that more responsibility is either taken on by these officers (maybe due to guilt feelings about their minimal effect on crime and rehabilitation) or handed to by management as a result of the amount of experience these officers have gained. Management should guard against exceeded workloads on these officers.

Despite conflicting research (Grossi & Berg, 1991), social support is one of the few known mechanisms that can help contain or prevent stress. Social support seems to have a buffer effect on stress. Social support research has identified particular forms of support, including attachment, social integration, reassurance of worth, guidance and nurturance (Russell, Atmaier, & Van Velzen, 1987).

Cassel (1976) states that the mobilisation of social support is a more feasible direction for intervention, than attempting to reduce environmental stressors. From the literature it was evident that managers did not support subordinates, and that subordinates felt that they needed more support from their managers (Arnold et al., 1995; Furnham, 1997). The researcher recommends that the correctional services promote the 'buddy' system among its supervisors and employees, and actively encourages the informal support system structure. Group motivational activities should be strategically implemented as this supportive relationship may well be the most valuable stress prevention asset the correctional services could develop.

Research also needs to look at the relationship between education, training and individual expectations of work, compared with what actually occurs on the job (Cherniss, 1980). Rosefield (1981) recommends that correctional officers be educated and trained for job specifics. Education and training can give the employees sufficient knowledge and skills to become competent in their job, and therefore more able to overcome any stress arising from an inability to do the work. It can also give employees realistic expectations of the different aspects of the job as well as career prospects and role expectations. Job descriptions need to be clarified and developed, and used in conjunction with education and training. Three-year follow-up studies could be conducted to observe the influence of training on the occupational stress levels of officers.

Training should include programmes that teach officers different types of approach coping skills. Research could focus on officers who have acquired or who utilise approach coping skills so that programmes may be developed to enhance these skills among younger officers.

Training of personnel in the Department of Correctional Services should not only focus on acquiring new skills. Role-plays, stress rehearsal and stress inoculation techniques should be utilised as cognitive and affective preparation in handling stress. Pre-trauma preparation should also be emphasised, especially with those officers who are placed within the prison and who are at risk of developing PTSD.

Although pre-trauma preparation is ideal, contingency strategies are needed to cope with existing trauma and stress. The services of a professional counsellor may prove beneficial to the organisation. The counsellor should not only be responsible for individual counselling/therapy but could facilitate debriefing (Linton, 1995). Group counselling could also be effective and would enhance social support on a colleague-to-colleague level.

Research in this study has shown that there are officers who suffer the consequences of exposure to critical incidents or traumatic situations. An area that is under utilised (Bergh, 1997) in the correctional services is that of critical stress debriefing. Officers who are exposed to situations are not debriefed afterwards, and are left to seek their own remedy, which sometimes result in maladaptive coping strategies.

Lay counsellors may be trained to act as 'first aid' to those officers suffering from stress and depression or anxiety as a result of stress or PTSD. Officers may be identified and trained as lay counsellors. According to Brown and Grover (1998) and Peeters et al. (1995b), correctional officers are not keen to seek help outside the prison parameters, be it professional or not. Officers who are trained as lay counsellors would be beneficial in the sense that they are not only trained to counsel but are trained to identify stress symptoms. The training of lay counsellors may be a job function of the professional counsellor.

Within any career or profession which is people oriented, stress, burnout and depression are viewed as high-risk factors. Kiely and Hodgson (1990) highlighted the positive benefits of physical exercise and general fitness both as stress preventors and as a means of overcoming the harmful effects of stress. Although exercise relates to the multi-dimensional nature of stress management, it is only one method of stress relief.

Intervention is a continuous action, but for it to be effective in the organisation, it needs to be evaluated. The evaluation needs to adapt to the changing social and economic climate of the community and country. Questions need to be raised about the functioning of correctional officers, so that optimal job functioning can be attained and maintained. In this respect, boredom represents a worthwhile area of investigation. Such an investigation may reveal a need to introduce job rotations, for example, officers could also be encouraged to develop their careers.

As discussed in the section on limitations, a lack of motivation may be interpreted as either a form of resistance or an obstacle on the systemic level. Research could investigate the correlation or relationship between lack of motivation and resistance. It could also focus on management in general to determine the cause of resistance.

Results from the study indicated that officers worked under very poor physical conditions. According to an article by the African Prison Watch committee (1994) and Atlas (1983) prison structures are not friendly places. Conditions are very harsh resulting in stress to both inmates and officers. Prisons should be made more user friendly.

As indicated in the literature review, there is a lack of research regarding PTSD in the correctional services and its effect on correctional officers. In order to develop effective intervention and prevention programmes, research has to be conducted to determine levels of PTSD, protective factors, issues germane to high risk occupations, aetiology and so on.

As the findings of this study indicated surprising low levels of occupational stress which is contrary to literature, a larger study of this nature could be done to confirm this finding as well as to find reasons for the low reported stress levels.

5.4 An Overview of the Study

This overview of the study reiterates some of the key findings and recommendations. The literature review pointed out that the job of a correctional officer is regarded as a high-risk occupation. The job is regarded as very dangerous and hazardous, which makes staff vulnerable to PTSD. The dangerous nature of the job is conducive to occupational stress. Occupational stress is not only the result of danger, but occurs in response to other variables

such as role ambiguity, boundaries, role conflict, poor working conditions and interpersonal relationships. However, results indicated average stress levels of correctional officers.

The literature states that correctional officers' vulnerability to PTSD and occupational stress is subject to the role of variables such as age, personal background, education and previous exposure. Results indicated that officers working directly with inmates and who were exposed to violence had higher indices of PTSD.

The average scores of correctional officers reveal that officers utilise avoidance coping strategies to deal with stressors. Contrary to this, correctional officers who were married, tend to utilise approach coping strategies. Utilising approach coping strategies could aid officers and prevent them from using short-term avoidance coping with the associated long-term negative health consequences.

The recommendations include proposals for the further research in the South African context. Recommendations were also made for the National Department of Correctional Services regarding the training of supervisors in interpersonal skills and conflict management. Although a psychological and social work service exists for the benefit of the prisoners, a counselling service should be established for the members of the DCS.

Although the topic of occupational stress in the correctional services has been widely researched internationally, little research has been conducted in South Africa. Research specifically on PTSD in the correctional services, both internationally and locally, is non-existent. Much research has been conducted regarding violence in prisons, but has neglected to research the effects of violence on the correctional officer.

The lack of research on both occupational stress and PTSD has far-reaching effects, as indicated in the literature review. Annual budgets must make provision for medical costs due to stress-related illnesses, which is proving to be very costly. Alternatively, and perhaps better in the long run, would be that budgets make provision for prevention and education programmes.

This study focussed on some aspects of the correctional officer's work which contribute to job stress. As the study was exploratory in nature, future researchers need to focus on specific issues and act in an advisory capacity to management.

It would further be essential to do an in depth qualitative study examining the role ambiguity, role overload, physical and psychological strain relationships found in this study as it could have major implications for policy interventions in the correctional services. Other areas of needed research has been highlighted throughout the discussion and recommendation.

6. References

Africa Watch Committee. (1994). Prison conditions in South Africa. New York: Human Rights Commission Watch.

Aldwin, C.M. & Revenson, T.A. (1987). Does it help? A reexamination of the relationship between coping and helping. Journal of Personality and Social Psychology, 53 (2), 337 - 348.

American Psychiatric Association. (1994). Diagnosical and statistical manual of mental disorders. (4th ed., rev.). Washington, DC: APA.

Amir, M., Kaplan, Z., Efroni, R., Levine, Y., Benjamin, J., & Kotler, M. (1997). Coping styles in post-traumatic stress disorder (PTSD) patients. Personality and Individual Differences, 23 (3), 399 - 405.

Anderson, W.J.R., Cooper, C.L., & Willmot, M. (1996). Sources of stress in national health: A comparison of seven occupational groups. Work and Stress, 10 (1), 88 - 95.

Anshel, M.H., Robertson, M., & Caputi, P. (1997). Sources of acute stress and their appraisals and reappraisals among Australian police as a function of previous experience. Journal of Occupational and Organizational Psychology, 70, 337 - 356.

Arnold, J., Cooper, C.L., & Robertson, I.T. (1995). Work psychology: Understanding human behaviour in the workplace (2nd ed.). London: Pitman.

Arthur, N. (1998). The effects of stress, depression and anxiety on post-secondary students' coping strategies. Journal of College Student Development, 39 (1), 11 - 22.

Atlas, R. (1983). Weapons used in prison assault: A profile of four Florida prisons. Aggressive Behaviour, 9, 125 - 131.

Babbie, E. (1989). The practice of social research (5th ed.). Belmont: Wadsworth.

Bailey, K.D. (1987). Methods of social research (3rd ed.). New York: The Free Press.

- Beaton, R., Murphy, S., Johnson, C., Pike, K., & Corneil, W. (1998). Exposure to duty-related incident stressors in urban fire fighters and paramedics. Journal of Traumatic Stress, 11(4), 821 - 828.
- Begley, T.M. (1998). Coping strategies as predictors of employee distress and turnover after an organisational consolidation: A longitudinal analysis. Journal of Occupational and Organisational Psychology, 71, 305 - 329.
- Bergh, L. (1997). Trauma and stress among correctional officers and offenders in the Department of Correctional Services. Nexus, 20 -23.
- Bhagat R.S., Allie, S.M., & Ford, D.L. (1995). Coping with stressful life events: An empirical analysis. In R. Crandall & P. Perrewe (Eds), Occupational stress: A handbook (93 - 112). Washington DC: Taylor & Francis.
- Biggam, F.H., Power, K.G., MacDonald, R.R., Carcary, W.B., & Moodie, E. (1997). Self-perceived occupational stress and distress in a Scottish police force. Work and Stress, 11(2), 118 - 133.
- Boey, K.W. (1998). Coping and family relationships in stress resistance: A study of job satisfaction of nurses in Singapore. International Journal of Nursing Studies, 35, 353 - 361.
- Brenner, P.E. (1985). Stress and satisfaction on the job: Work meanings and coping of mid-career men. New York: Praeger.
- Brogmus, G.E. (1996). The rise and fall? of mental stress claims in the USA. Work and Stress, 10 (1), 24 - 35.
- Brown, J. & Grover, J. (1998). The role of moderating variables between stressor exposure and being distressed in a sample of serving police officers. Personality and Individual Differences, 24 (2), 181 - 185.
- Burke, R.J. (1993). Work-family stress, conflict, coping and burnout in police officers. Stress

Medicine, 9, 171 - 180.

- Burke, R.J. & Greenglass, E. (1996). Work stress, social support, psychological burnout and emotional and physical well-being among teachers. Psychology, Health and Medicine, 1 (2), 193 - 205.
- Buunk, B.P., De Jonge, J., Ybema, J.F., & de Wolf, C.J. (1998). Psychosocial aspects of occupational stress. In P.J.D. Drenth, H. Thierry, & C.J. de Wolf (Eds), Work psychology. East Sussex: Psychological Press.
- Canavos, G.C. (1984). Applied probability and statistical methods. Boston: Little, Brown & Co.
- Carlier, I.V.E. & Gersons B.P.R. (1994). Treatment of work-related trauma in police officers: Post-traumatic stress disorder and post-traumatic decline. In M.B. Williams & J.F. Sommers (Eds), Handbook of post-traumatic therapy. Westport: Greenwood.
- Carlier, I.V.E., Lamberts, R.D., & Gersons, B.P.R. (1994). Vroege psychische gevolgen van traumatische politie-ervaringen: Enkele eerste bevindingen. Tijdschrift voor Psychiatrie, 36 (2), 81 - 93.
- Carlier, I.V.E., Lamberts, R.D., & Gersons, B.P.R. (1997). Risk factors for post-traumatic stress symptomology in police officers: A prospective analysis. The Journal of Nervous and Mental Disease, 185 (8), 498 - 506.
- Cartwright, S. & Cooper, C.L. (1996). Coping in occupational settings. In M. Zeidner M. & N.S. Endler (Eds), Handbook of coping: Theory, research, application (pp. 202 - 218). Chichester: John Wiley.
- Cassel, J. (1976). The contribution of the social environment to host resistance. American Journal of Epidemiology, 104, 107 - 123.
- Chaka, L.T. (1998). An investigation into the perceived sources of stress amongst correctional officers of the Department of Correctional Services. Unpublished Master's thesis. University of Natal, Pietermaritzburg.

Cherniss, C. (1980). Staff burnout: Job stress in human services. Beverly Hills, CA: Sage.

Cox, T. (1978). Stress. Baltimore: University Park Press.

Davidson, J.T.R. & Foa, E.B. (1991). Diagnostic issues in posttraumatic stress disorder: Considerations for the DSM IV. Journal of Abnormal Psychology, 100, 346 - 355.

Davidson, J.T.R. & Foa, E.B. (1993). Posttraumatic stress disorder, DSM IV and beyond. Washington, DC: American Psychiatric Press.

De Board, R. (1978). The psychoanalysis of organisations: A psychoanalytic approach to behaviour in groups and organisations. London: Tavistock.

Department of Correctional Services. (1994). White paper on the policy of the Department of Correctional Services in the new South Africa. Pretoria: DCS.

Devenish, G. (1992). The death penalty in South Africa and its relationship with constitutional and political reform. South African Journal of Criminal Justice, 5 (1), 1 - 31.

De Villiers, J.L. (1988). A study of the causes, effects, diagnosis and treatment of stress with relevance to fire brigade personnel. Fire and Civil Defence, 13 - 21.

Dietrich, J.K. & Hattingh, S. (1993). Kritiese insidentstres in nooddienpersoneel. Brand, Redding en NMD, 12 - 17.

Dignam, J.T., Barrerra, M. Jr., & West, S.G. (1986). Occupational stress, social support, and burnout among correctional officers. American Journal of Community Psychology, 14(2), 177 - 193.

Durham, T.W., McCammon, S.L., & Allison, E.J. (1985). The psychological impact of disaster on rescue personnel. Annals of Emergency Medicine, 14, 664 - 668.

Eden, D. (1990). Acute and chronic job stress, strain and vacation relief. Organizational

- Behaviour and Human Decision Processes, 45, 175 - 193.
- Edwards, J.R. & Rothbard, N.P. (1999). Work and family stress and well-being: An examination of person-environment fit in the work and family domains. Organisational Behaviour and Human Decision Processes, 77 (2), 85 - 129.
- Ellis, D. (1984). Crowding and prison violence: Integration and prison violence. Criminal Justice and Behaviour, 11 (3), 277 - 308.
- Evans, B.J. & Coman, G.J. (1993). General versus specific measures of occupational stress. Stress Medicine, 9, 11 - 20.
- Finn, P. (1998). Correctional officer stress: A cause for concern and additional help. Federal Probation, 62 (2), 65 - 74.
- Foster, D.H., Sandler, D., & Davis, D.M. (1987). Detention, torture and the criminal justice process in South Africa. International Journal of the Sociology of Law, 15 (2), 105 - 120.
- Fullerton, C.S., McCarroll, J.E., Ursano, R.J., & Wright, K.M. (1992). Psychological responses of rescue workers: Fire fighters and trauma. American Journal of Orthopsychiatry, 62, 371 -378.
- Furnham, A. (1997). The psychology of behaviour at work. Hove East Essex: Psychological Press.
- Gayes, G.G. & McGuire, W.J. (1985). Prison violence: The contribution of crowding versus other determinants of prison assault rates. Journal of Research in Crime and Delinquency, 22 (1), 41 - 65.
- Gerstein, L. H., Topp, C.G., & Correll, G. (1987). The role of the environment and person when predicting burnout among correctional personnel. Criminal Justice and Behaviour, 14 (3), 352 - 369.
- Gibbons, J.D. (1971). Nonparametric statistical inference. New York: McGraw-Hill.

- Gibbons, J.A. (1998). Women prisoners in South Africa. Prison Journal, 78 (3), 330 - 343.
- Graf, F.A. (1986). The relationship between social support and occupational stress among police officers. Journal of Police Science and Administration, 14, 178 - 186.
- Green, M.A. & Berlin, M.A. (1987). Five psychological variables related to the existence of post-traumatic stress disorder symptoms. Journal of Clinical Psychology, 43 (5), 643 - 649.
- Grossi, E.L. & Berg, B.L. (1991). Stress and job dissatisfaction among correctional officers: An unexpected finding. International Journal of Offender Therapy and Comparative Criminology, 35 (1), 73 - 81.
- Gulle, G., Tredoux, C., & Foster, D. (1998). Inherent and organisational stress in the SAPS: an empirical survey in the Western Cape. South African Journal of Psychology, 28 (3), 129 - 134.
- Hamalengwa, M. (1991). The death penalty in the context of commission of crimes against humanity in South Africa: An historical perspective. Social Justice, 18, (1 - 2), 95 - 104.
- Harvey-Lintz, T. & Tidwell, R. (1997). Effects of the 1992 Los Angeles civil unrest: Post traumatic stress disorder symptomatology among law enforcement officers. The Social Science Journal, 34 (2), 171 - 183.
- Hofmeyer, K. (August, 1997). A key dimension in organisational success: Employee attitudes. People Dynamics, 31 - 35.
- Holahan, C.J., Moos, R.H., & Schaefer, J.E. (1996). Coping, stress resistance and growth: Conceptualising adaptive functioning. In M. Zeidner & N.S. Endler (Eds), Handbook of coping: Theory, research, application (pp. 24 - 43). Chichester: John Wiley.
- Holden, R.G., Jarvis, G.K., Lagace, D.R., Svenson, L.W., Campbell, R.L., & Backs, B.J. (1995). A survey of drinking behaviours of Canadian correctional officers.

- Psychological Reports, 76, 651 - 655.
- Horowitz, M.J., Wilner, N., & Alvarez, W. (1979). Impact of event scale: A measure of subjective stress. Psychosomatic Medicine, 41 (3), 209 - 218.
- Houston, J. & Prinsloo, J. (1998). Prison gangs in South Africa: A comparative analysis. Journal of Gang Research, 5 (3), 41 - 52.
- Howell, D.C. (1992). Statistical methods for psychology (3rd ed.). Belmont: Duxbury.
- Inwald, R.E. (1994). Research problems in assessing stress factors in correctional institutions. International Journal of Offender Therapy and Comparative Criminology, 250 - 254.
- Joseph, S., Williams, R., & Yule, W. (1997). Understanding post-traumatic stress: A psychosocial perspective on PTSD and treatment. Chichester: John Wiley and Sons.
- Joseph, S., Yule, W., & Williams, R. (1993). Post-traumatic stress: Attributional aspects. Journal of Traumatic Stress, 6 (4), 501 - 513.
- Kaplan, H.I. & Sadock, B.J. (1998). Synopsis of psychiatry (8th ed.). Baltimore, MD: Williams & Wilken.
- Kiely, J. & Hodgson, G. (1990). Stress in the prison service: The benefits of exercise programs. Human Relations, 43 (6), 551 - 572.
- Kratcoski, P.C. (1988). The implications of research explaining prison violence and disruption. Federal Probation, March, 27 - 32.
- Lanza, M.L. (1983). The reactions of nursing staff to physical assault by a patient. Hospital and Community Psychiatry, 34 (1), 44 - 47.
- Lanza, M.L. (1984). A follow-up study of nurses' reactions to physical assault. Hospital and Community Psychiatry, 35 (3), 492 - 494.

- Lazarus, R.S. (1966). Psychological stress and the coping process. New York: McGraw-Hill.
- Lazarus, R.S., & Folkman, S. (1984). Stress, appraisal and coping. New York: Springer.
- Light, S. (1991). Assaults on prison officers: Interactional themes. Justice Quarterly, 8 (2), 243 - 261.
- Linton, J.C. (1995). Acute stress management with public safety personnel: Opportunities for clinical training and pro bono community service. Professional Psychology: Research and Practice, 26 (6), 566-573.
- Lombardo, L. (1984). Guards imprisoned: Correctional officers at work. New York: Elsevier.
- Louw, D.A. (1989). Suid-Afrikaanse handboek van abnormale gedrag. Johannesburg: Southern.
- Mahan, S. (1994). An 'Orgy of Brutality' at Attica and the 'Killing Ground' at Santa Fe: A comparison of riots. In M. Braswell, R. Montgomery, & L. Lombardo (Eds), Prison violence in America (2nd ed.) (92 - 123). Cincinnati: Anderson.
- Martin, R. & Zimmerman, S. (1991). A typology of the causes of prison riots and an analytical extension to the 1986 West Virginia riot. Justice Quarterly, 7 (4), 711 - 737.
- McFarlane, A.C. (1989). The aetiology of post-traumatic morbidity: Predisposing, precipitating and perpetuating factors. British Journal of Psychiatry, 154, 221 - 228.
- Meyer, R.G. & Salmon, P. (1988). Abnormal psychology. (2nd ed.). Boston: Allyn and Bacon.
- Mitchell, J.T. & Bray, G. (1990). Emergency services stress. Englewood Cliffs, NJ: Brady.
- Monat, A. & Lazarus, R.S. (1977). Stress and coping: An anthology. New York: Columbia University Press.
- Montgomery, R. (1994). American Prison Riots: 1774 - 1991. In M. Braswell, R. Montgomery & L. Lombardo (Eds), Prison violence in America (2nd ed.) (150 - 172).

Cincinnati: Anderson.

Moos, R.H. (1993) Coping Resources Inventory. Odessa, FL: Psychological Assessment Resources.

Morrison, D.L., Dunne, M.P., Fitzgerald, R., & Cloghan, D. (1992). Job design and levels of physical and mental strain among Australian prison officers. Work and Stress, 6 (1), 13- 31.

Morrison, E.F. (1988). The assaulted nurse: Strategies for healing. Perspectives in Psychiatric Care, 23 (3,4), 120 - 126.

Ochberg, F.M. (1988). Post-traumatic therapy and victims of violence. New York: Brunner/Mazel Publishing.

Odendal, F.J. & Van Wyk, J.D. (1991). Die taksering van die sindroom uitbranding. South African Journal of Psychology, 18 (2), 41 - 49.

Osipow, S.H. & Spokane, A.R. (1986). Occupational Stress Inventory: Research version. Odessa, FL: Psychological Assessment Resources.

Parkinson, F. (1983). Post-trauma stress. London: Sheldon Press.

Patel, C. (1989). The complete guide to stress management. London: Vermillion.

Patrick, S. (1998). Differences in inmate-inmate and inmate-staff altercations: Examples from a medium security prison. The Social Science Journal, 35 (2), 253 - 263.

Patterson, B.L. (1992). Job experience and perceived job stress among police, correctional, and probation/ parole officers. Criminal Justice and Behaviour, 19 (3), 260 - 285.

Peeters, M.C., Schaufeli, W.B., & Buunk, B.P. (1995a). The role of attributions in the cognitive appraisal of work-related stressful events: An event-recording approach. Work and Stress, 9 (4), 463 - 474.

- Peeters, M.C., Buunk, B.P., & Schaufeli, W.B. (1995b). Social interactions and feelings of inferiority among correctional officers: A daily event-recording approach. Journal of Applied Psychology, 25 (12), 1073 - 1089.
- Pines, A., Aronson, E., & Kafry, D. (1981). Burnout: From tedium to personal growth. New York: Free Press.
- Puritz, P. (1987). Children in detention in South Africa. Children=s Legal Rights Journal, 8 (3), 8 - 10.
- Robinson, D., Frank, J. P., & Simourd, L. (1996). Do different occupational groups vary on attitudes and work adjustment in corrections? Federal Probations, 60 (3), 45 -53.
- Robinson, H.I., Sigman, M.C., & Wilson, J.P. (1997). Duty-related stressors and PTSD symptoms in suburban police officers. Psychological Reports, 81. 835 - 845.
- Rosefield, H.A. (1981). Self-identified stressors among correctional officers. Unpublished Ph.D. North Carolina State University, North Carolina.
- Ross, R.R. & Altmaier, E.M. (1994). Intervention in occupational stress: A handbook of counselling for stress at work. London: Sage Publications.
- Rout, U. & Rout, J.K. (1997). A comparative study on occupational stress, job satisfaction and mental health in British general practitioners and Canadian family physicians. Psychology, Health and Medicine, 2 (2). 181 - 190.
- Russel, D.W., Altmeir, E., & Van Velzen, D. (1987). Job-related stress, social support, and burnout among classroom teachers. Journal of Applied Psychology, 72, 269 - 274.
- Saylor, W.G. & Wright, K.N. (1992). Status, longevity, and perceptions of the work environment among federal prison employees. Journal of Offender Rehabilitation, 17, (3 - 4), 133 - 160.
- South African Press Association. (2000, 13 August). Beeld, p. 3.

- Selye, H. (1956). The stress of life. New York: McGraw-Hill.
- Selye, H. (1976). Stress in health and disease. London: Butterworths.
- Shawver, L. & Dickover, R. (August, 1986). Exploding a myth. Corrections Today, 30 - 34.
- Shine, J. (1997). Appraisal and coping processes used by staff in a prison based therapeutic community, to deal with occupational stress. Therapeutic Communities, 18 (4), 271 - 283.
- Sparrus, S.K. (1992). Occupational stressors among ambulance and rescue services workers. South African Journal of Psychology, 22 (2). 87 - 91.
- Spielberger, C.D. & Reheiser E.C. (1995). Measuring occupational stress: The job survey. In R. Crandall & P. Perrewe (Eds). Occupational stress: A handbook (199 - 215). Washington, DC: Taylor and Francis.
- Sprent, P. (1981). Quick statistics: An introduction to non-parametric methods. Middlesex: Penguin Books.
- Solomon, Z., Mukilincer, M. & Avitzer, E. (1988). Coping, locus of control, social support, and combat-related posttraumatic stress disorder: A prospective study. Journal of Personality and Social Psychology, 55. 279 - 378.
- Svenson, L.W., Jarvis, R.G., Campbell, R.L., Holden, G.K., Lagace, D.R., & Backs, B.J. (1995). Past and current drug use among Canadian correctional officers. Psychological Reports, 76, 977 - 978.
- Terry, D.J. & Callan, V.J. (1997). Employee adjustment to large-scale organisational change. Australian Psychologist, 32 (3), 203 - 210.
- Um, M.Y. & Harrison, D.F. (1998). Role stressors, burnout, mediators, and job satisfaction: A stress-strain-outcome model and an empirical test. Social Work Research, 22 (2), 100 - 115.

- Violanti, J. (1983). Stress patterns in police work: A longitudinal study. Journal of Police Science and Administration, 11, 211 - 216.
- Weiss, D.S., Horowitz, M.J., & Wilner, N. (1984). The stress response rating scale: A clinician's measure for rating the response to serious life-events. British Journal of Clinical Psychology, 23, 202 - 215.
- Weiss, D.S. & Marmar, C.R. (1997). The Impact of Event Scale-Revised. In J.P. Wilson & T.M. Keane (Eds.), Assessing psychological trauma and PTSD (399 - 411). New York: Guilford Press.
- Weiss, D.S., Marmar, C.R., Metzler, T.J., & Ronfeldt, H.I. (1995). Predicting symptomatic stress in emergency services personnel. Journal of Consulting and Clinical Psychology, 63 (3), 361 - 368.
- Williams, M.B. & Sommers, J.F. (1994). Handbook of post-traumatic therapy. Westport: Greenwood.
- Wilson, J.P. & Keane, T.M (1997). Assessing psychological trauma and PTSD. New York: Guilford Press.
- Wright, T.A. (1990). Coping and job performance. Perpetual and Motor Skills, 71, 403 - 408.
- Zilberg, N.J., Weiss, D.S., & Horowitz, M.J. (1982). Impact of Event Scale: Across-validation study and some empirical evidence supporting a conceptual model of stress response syndromes. Journal of Consulting and Clinical Psychology, 50 (3), 407 - 414.

APPENDIX A Letter of Permission to Provincial Commissioner



UNIVERSITY OF NATAL

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School of Psychology

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Tel: (0331) 260 5369 Fax: (0331) 260 5809

14 December 1998

Mr T. Nxumalo
Provincial Commissioner: Gauteng Province

Dear Mr Nxumalo,

Dissertation: Permission to Administer Psychometric Tests to Members of the Pretoria Prison

Part of the Master's Course that I am currently busy with, requires that I do a dissertation. The dissertation requires lengthy research on a certain topic chosen by the student.

As you know correctional officers find themselves in situations which are life threatening. The topic that I have chosen will study the effects which exposure to violent situations have on the correctional officers, and how they cope with these situations. The study will further focus on other types of stresses that have a bearing on their functioning as correctional officers.

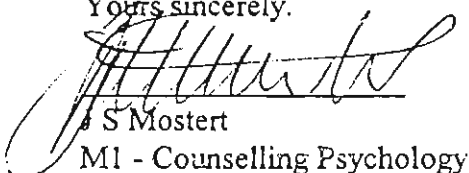
With your permission, I would like to administer a set of questionnaires to the correctional officers of the Pretoria Management Area which will assist me in my study. I would appreciate it if the training facilities at the Pretoria Management Area could be made available for this purpose.

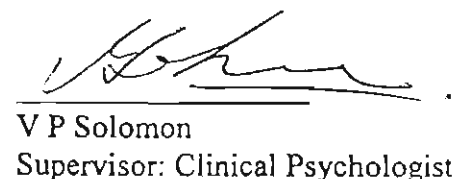
To maximise the opportunity, I would appreciate it if I could make use of the psychometrists' services to help with the administration of the questionnaires.

I look forward to hearing from you soon.

Kind regards.

Yours sincerely.


S Mostert
M1 - Counselling Psychology


V P Solomon
Supervisor: Clinical Psychologist

APPENDIX B Letter to Participants of Study



UNIVERSITY OF NATAL
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School of Psychology

Private Bag X01 Scottsville
Pietermaritzburg 3209 South Africa
Tel: (0331) 260 5369 Fax: (0331) 260 5809

Dear Correctional Officer,


Thank you for taking time from your busy schedule to participate in this study. I am presently doing some research regarding the way in which Correctional Services' employees experience and cope with their unique working environment.


You will be requested to complete a set of questionnaires. As the findings of this study is of a serious nature I would urge you to be as honest as possible. You can be sure of absolute confidentiality and therefore the reason that the questionnaires are totally anonymous. This means that you would not have to fill in your name on any of the questionnaires, which guarantees the nature of confidentiality.

Your inputs in this study are very valuable and highly regarded.

Kind regards

Yours Sincerely


J S Mostert
MI - Counselling Psychology


V P Solomon
Supervisor
Clinical Psychologist

Biographical and Demographical Questionnaire

Dear Correctional Officer,
 Please complete this questionnaire as honest and accurate as possible. It is a confidential document and therefore you do not have to fill your name in.
 Mark the appropriate box with an X, as indicated in the example below:

Example:

1. Age:

18 - 25 yrs	<input checked="" type="checkbox"/>
26 - 30 yrs	2

1. Age:

18 - 25 yrs	1
26 - 30 yrs	2
31 - 35 yrs	3
36 - 40 yrs	4
41 - 45 yrs	5
46 yrs +	6

2. Sex:

Male	1
Female	2

3. Marital Status:

Married	Divorced	Single	Widowed
1	2	3	4

4. Education.

St. 6	St. 8	St. 10	RVQ 11/12	RVQ 13	RVQ 14 +
1	2	3	4	5	6

5. Race:

Black	1
White	2
Coloured	3
Indian	4

6. Religion:

Christianity	1
Hinduism	2
Muslim	3
Judaism	4
African Traditional Religion	5
No Religion	6

7. Present Rank:

Correctional Officer Grade 1	1
Correctional Officer Grade 11	2
Correctional Officer Grade 111	3
Senior Correctional Officer	4
Assistant Director	5
Deputy Director	6

8. Income per year (Basic Allowance only):

R 20 000 - R 29 999	1
R 30 000 - R 39 999	2
R 40 000 - R 49 999	3
R 50 000 - R 59 999	4
R 60 000 - R 69 999	5
R 70 000 +	6

9. In what section do you work?

Administration (Personnel, Registration, Accounts, etc)	1
Community Corrections	2
Discipline (Custodial, Disposal, Labour, Operational Services, etc.)	3
Professional (Psychology, Nursing, Education, Social Work, etc.)	4
Censors, Reception, Records	5
Catering	6

10. How many years service do you have?:

6 months - 1 year	1
01 yr 1 m - 4 yr 11 m	2
05 yr 1 m - 9 yr 11 m	3
10 yr 1 m - 14 yr 11 m	4

15 yr 1 m - 19 yr 11 m	5
20 yrs +	6

11. What type of training have you received?

Basic Training	1
Tonfa Training/ Fire Arms Training	2
Dog Handling	3
Hostage Negotiations	4
Riot Control	5

12. What type of violent situations have you witnessed?:

Physical Assaults	1
Stabbing	2
Shootings	3
Gang Warfare	4
Hostage taking	5

13. Has any of the following happened to you?

Physical Assaults	1
Stabbing	2
Shootings	3
Gang Warfare	4
Hostage taking	5

Thank you.

Directions

Read each statement carefully. For each statement, fill in the circle with the number which fits you best.

Fill in (1) if the statement is *rarely* or *never* true.

Fill in (2) if the statement is *occasionally* true.

Fill in (3) if the statement is *often* true.

Fill in (4) if the statement is *usually* true.

Fill in (5) if the statement is true *most of the time*.

For example, if you believe that a statement is often true about you, you would fill in the (3) circle for that statement on your rating sheet.

Example					
1.	(1)	(2)	(3)	(4)	(5)

Fill in only one circle for each statement. Be sure to rate ALL of the statements for each section you are asked to complete. DO NOT ERASE! If you need to change an answer, make an "X" through the incorrect response and then fill in the correct circle.

Section One (ORQ)

Make your ratings in Section One of the Rating Sheet.

1. At work I am expected to do too many different tasks in too little time.
2. I feel that my job responsibilities are increasing.
3. I am expected to perform tasks on my job for which I have never been trained.
4. I have to take work home with me.
5. I have the resources I need to get my job done.
6. I feel competent in what I do.
7. I work under tight time deadlines.
8. I wish that I had more help to deal with the demands placed upon me at work.
9. My job requires me to work in several equally important areas at once.
10. I am expected to do more work than is reasonable.
11. I feel that my career is progressing about as I hoped it would.
12. I feel that my job fits my skills and interests.
13. I am bored with my job.
14. I feel I have enough responsibility on my job.
15. I feel my talents are being used on my job.
16. I feel my job has a good future.
17. I am able to satisfy my needs for success and recognition in my job.
18. I feel overqualified for my job.
19. I learn new skills in my work.
20. I have to perform tasks that are beneath my ability.
21. My supervisor provides me with useful feedback about my performance.
22. It is clear to me what I have to do to get ahead.
23. I am uncertain about what I am supposed to accomplish in my work.

- 24. When faced with several tasks I know which should be done first.
- 25. I know where to begin a new project when it is assigned to me.
- 26. My supervisor asks for one thing, but really wants another.
- 27. I understand what is acceptable personal behavior on my job (e.g., dress, interpersonal relations, etc.)
- 28. The priorities of my job are clear to me.
- 29. I have a clear understanding of how my boss wants me to spend my time.
- 30. I know the basis on which I am evaluated.
- 31. I feel conflict between what my employer expects me to do and what I think is right or proper.
- 32. I feel caught between factions at work.
- 33. I have more than one person telling me what to do.
- 34. I feel I have a stake in the success of my employer (or enterprise).
- 35. I feel good about the work I do.
- 36. My supervisors have conflicting ideas about what I should be doing.
- 37. I am proud of what I do for a living.
- 38. It is clear who really runs things where I work.
- 39. I have divided loyalties on my job.
- 40. The work I do has as much payoff for me as for my employer.

- 41. I feel I deal with more people during the day than I prefer.
- 42. I spend time concerned with the problems others at work bring to me.
- 43. I am responsible for the welfare of subordinates.
- 44. People on the job look to me for leadership.
- 45. I have on the job responsibility for the activities of others.
- 46. I worry about whether the people who work for/with me will get things done properly.
- 47. People who work for/with me are really hard to deal with.
- 48. If I make a mistake in my work, the consequences for others can be pretty bad.
- 49. My job demands that I handle an angry public.
- 50. I like the people I work with.
- 51. On my job I am exposed to high levels of noise.
- 52. On my job I am exposed to high levels of wetness.
- 53. On my job I am exposed to high levels of dust.
- 54. On my job I am exposed to high temperatures.
- 55. On my job I am exposed to bright light.
- 56. On my job I am exposed to low temperatures.
- 57. I have an erratic work schedule.
- 58. On my job I am exposed to personal isolation.
- 59. On my job I am exposed to unpleasant odors.
- 60. On my job I am exposed to poisonous substances.

Section Two (PSQ)

Make your ratings in Section Two of the Rating Sheet.

1. I don't seem to be able to get much done at work.
2. I dread going to work, lately.
3. I am bored with my work.
4. I find myself getting behind in my work, lately.
5. I have accidents on the job of late.
6. The quality of my work is good.
7. Recently, I have been absent from work.
8. I find my work interesting and/or exciting.
9. I can concentrate on the things I need to at work.
10. I make errors or mistakes in my work.
11. Lately, I am easily irritated.
12. Lately, I have been depressed.
13. Lately, I have been feeling anxious.
14. I have been happy, lately.
15. So many thoughts run through my head at night that I have trouble falling asleep.
16. Lately, I respond badly in situations that normally wouldn't bother me.
17. I find myself complaining about little things.
18. Lately, I have been worrying.
19. I have a good sense of humor.
20. Things are going about as they should.
21. I wish I had more time to spend with close friends.
22. I quarrel with my spouse.
23. I quarrel with friends.
24. My spouse and I are happy together.
25. Lately, I do things by myself instead of with other people.
26. I quarrel with members of the family.
27. Lately, my relationships with people are good.
28. I find that I need time to myself to work out my problems.
29. I wish I had more time to spend by myself.
30. I have been withdrawing from people lately.
31. I have unplanned weight gains.
32. My eating habits are erratic.
33. I find myself drinking a lot lately.
34. Lately, I have been tired.
35. I have been feeling tense.
36. I have trouble falling and staying asleep.
37. I have aches and pains I can not explain.
38. I eat the wrong foods.
39. I feel apathetic.
40. I feel lethargic.

Section Three (PRO)

Make your ratings in Section Three of the Rating Sheet.

1. When I need a vacation I take one.
2. I am able to do what I want to do in my free time.
3. On weekends I spend time doing the things I enjoy most.
4. Lately, my main recreational activity is watching television.
5. A lot of my free time is spent attending performances (e.g., sporting events, theater, movies, concerts, etc.).
6. I spend a lot of my free time in participant activities (e.g., sports, music, painting, woodworking, sewing, etc.).
7. I spend a lot of my time in community activities (e.g., scouts, religious, school, local, government, etc.).
8. I find engaging in recreational activities relaxing.
9. I spend enough time in recreational activities to satisfy my needs.
10. I spend a lot of my free time on hobbies (e.g., collections of various kinds, etc.)
11. I am careful about my diet (e.g., eating regularly, moderately, and with good nutrition in mind).
12. I get regular physical checkups.
13. I avoid excessive use of alcohol.
14. I exercise regularly (at least 20 minutes most days).
15. I practice "relaxation" techniques.
16. I get the sleep I need.
17. I avoid eating or drinking things I know are unhealthy (e.g., coffee, tea, cigarettes, etc.).
18. I engage in meditation.
19. I practice deep breathing exercises a few minutes several times each day.
20. I set aside time to do the things I really enjoy.
21. There is at least one person important to me who values me.
22. I have help with tasks around the house.
23. I have help with the important things that have to be done.
24. There is at least one sympathetic person with whom I can discuss my concerns.
25. There is at least one sympathetic person with whom I can discuss my work problems.
26. I feel I have at least one good friend I can count on.
27. I feel loved.
28. There is a person with whom I feel really close.
29. I have a circle of friends who value me.
30. I gain personal benefit from participation in formal social groups (e.g., religious, political, professional organizations, etc.)
31. I am able to put my job out of my mind when I go home.
32. I feel that there are other jobs I could do besides my current one.
33. I periodically re-examine or reorganize my work style and schedule.
34. I can establish priorities for the use of my time.
35. Once they are set, I am able to stick to my priorities.
36. I have techniques to help avoid being distracted.
37. I can identify important elements of problems I encounter.
38. When faced with a problem I use a systematic approach.
39. When faced with the need to make a decision I try to think through the consequences of choices I might make.
40. I try to keep aware of important ways I behave and things I do.

Impact of Event Scale - Revised

APPENDIX E Impact of Event Scale-Revised

Instructions: The following is a list of difficulties people sometimes have after stressful life events. Please read each item, and then indicate how distressing each difficulty has been for you during the past seven days with respect to _____. How much were you distressed or bothered by these difficulties.

		not at all	a little bit	moderately	quite a bit	extreme
1	Any reminder brought back feelings of it.	0	1	2	3	4
2	I had trouble staying asleep.	0	1	2	3	4
3	Other things kept making me think about it.	0	1	2	3	4
4	I felt irritable and angry.	0	1	2	3	4
5	I avoided letting myself get upset when I thought about it or was reminded of it.	0	1	2	3	4
6	I thought about it when I didn't mean to.	0	1	2	3	4
7	I felt as if it hadn't happened or wasn't real.	0	1	2	3	4
8	I stayed away from reminders of it.	0	1	2	3	4
9	Pictures of it popped into my mind.	0	1	2	3	4
10	I was jumpy and easily startled.	0	1	2	3	4
11	I tried not to think about it.	0	1	2	3	4
12	I was aware that I still had a lot of feelings about it, but I didn't deal with it.	0	1	2	3	4
13	My feelings about it were kind of numb.	0	1	2	3	4
14	I found myself acting or feeling like I was back at that time.	0	1	2	3	4
15	I had trouble falling asleep.	0	1	2	3	4
16	I had waves of strong feelings about it.	0	1	2	3	4
17	I tried to remove it from my memory.	0	1	2	3	4
18	I had trouble concentrating.	0	1	2	3	4
19	Reminders of it caused me to have physical reactions, such as sweating, trouble breathing, nausea, or a pounding heart.	0	1	2	3	4
20	I had dreams about it.	0	1	2	3	4
21	I felt watchful and on guard.	0	1	2	3	4
22	I tried not to talk about it.	0	1	2	3	4

APPENDIX F Coping Resources Inventory

CRI-ADULT FORM**Item Booklet****Directions:**

On the accompanying answer sheet, please fill in your name, today's date, and your sex, age, marital status, ethnic group, and education (number of years completed). Please mark all your answers on the answer sheet. **Do not write in this booklet.**

Part 1

This booklet contains questions about how you manage important problems that come up in your life. Please think about the most important problem or stressful situation you have experienced **in the last 12 months** (for example, troubles with a relative or friend, the illness or death of a relative or friend, an accident or illness, financial or work problems). Briefly describe the problem in the space provided in Part 1 of the answer sheet. If you have not experienced a major problem, list a minor problem that you have had to deal with. Then answer each of the 10 questions about the problem or situation (listed below and again on the answer sheet) by circling the appropriate response:

Circle "DN" if your response is **DEFINITELY NO**.

Circle "MN" if your response is **MAINLY NO**.

Circle "MY" if your response is **MAINLY YES**.

Circle "DY" if your response is **DEFINITELY YES**.

<input checked="" type="radio"/>	DN	<input type="radio"/>	MN	<input type="radio"/>	MY	<input type="radio"/>	DY
<input type="radio"/>	DN	<input checked="" type="radio"/>	MN	<input type="radio"/>	MY	<input type="radio"/>	DY
<input type="radio"/>	DN	<input type="radio"/>	MN	<input checked="" type="radio"/>	MY	<input type="radio"/>	DY
<input type="radio"/>	DN	<input type="radio"/>	MN	<input type="radio"/>	MY	<input checked="" type="radio"/>	DY

1. Have you ever faced a problem like this before?
2. Did you know this problem was going to occur?
3. Did you have enough time to get ready to handle this problem?
4. When this problem occurred, did you think of it as a threat?
5. When this problem occurred, did you think of it as a challenge?
6. Was this problem caused by something you did?
7. Was this problem caused by something someone else did?
8. Did anything good come out of dealing with this problem?
9. Has this problem or situation been resolved?
10. If the problem has been worked out, did it turn out all right for you?

Part 2

Read each item carefully and indicate how often you engaged in that behavior in connection with the problem you described in Part 1. Circle the appropriate response on the answer sheet:

Circle "N" if your response is NO, Not at all.

<input checked="" type="radio"/> N	<input type="radio"/> O	<input type="radio"/> S	<input type="radio"/> F
------------------------------------	-------------------------	-------------------------	-------------------------

Circle "O" if your response is YES, Once or Twice.

<input type="radio"/> N	<input checked="" type="radio"/> O	<input type="radio"/> S	<input type="radio"/> F
-------------------------	------------------------------------	-------------------------	-------------------------

Circle "S" if your response is YES, Sometimes.

<input type="radio"/> N	<input type="radio"/> O	<input checked="" type="radio"/> S	<input type="radio"/> F
-------------------------	-------------------------	------------------------------------	-------------------------

Circle "F" if your response is YES, Fairly often.

<input type="radio"/> N	<input type="radio"/> O	<input type="radio"/> S	<input checked="" type="radio"/> F
-------------------------	-------------------------	-------------------------	------------------------------------

There are 48 items in Part 2. Remember to mark all your answers on the answer sheet. Please answer each item as accurately as you can. All your answers are strictly confidential. If you do not wish to answer an item, please circle the number of that item on the answer sheet to indicate that you have decided to skip it. If an item does not apply to you, please write **NA** (Not Applicable) in the box to the right of the number for that item. If you wish to change an answer, make an **X** through your original answer and circle the new answer. Note that answers are numbered across in rows on Part 2 of the answer sheet.

1. Did you think of different ways to deal with the problem?
2. Did you tell yourself things to make yourself feel better?
3. Did you talk with your spouse or other relative about the problem?
4. Did you make a plan of action and follow it?
5. Did you try to forget the whole thing?
6. Did you feel that time would make a difference—that the only thing to do was wait?
7. Did you try to help others deal with a similar problem?
8. Did you take it out on other people when you felt angry or depressed?
9. Did you try to step back from the situation and be more objective?
10. Did you remind yourself how much worse things could be?
11. Did you talk with a friend about the problem?
12. Did you know what had to be done and try hard to make things work?
13. Did you try not to think about the problem?
14. Did you realize that you had no control over the problem?
15. Did you get involved in new activities?
16. Did you take a chance and do something risky?
17. Did you go over in your mind what you would say or do?
18. Did you try to see the good side of the situation?
19. Did you talk with a professional person (e.g., doctor, lawyer, clergy)?
20. Did you decide what you wanted and try hard to get it?

21. Did you daydream or imagine a better time or place than the one you were in?
22. Did you think that the outcome would be decided by fate?
23. Did you try to make new friends?
24. Did you keep away from people in general?

25. Did you try to anticipate how things would turn out?
26. Did you think about how you were much better off than other people with similar problems?
27. Did you seek help from persons or groups with the same type of problem?
28. Did you try at least two different ways to solve the problem?
29. Did you try to put off thinking about the situation, even though you knew you would have to at some point?
30. Did you accept it; nothing could be done?
31. Did you read more often as a source of enjoyment?
32. Did you yell or shout to let off steam?

33. Did you try to find some personal meaning in the situation?
34. Did you try to tell yourself that things would get better?
35. Did you try to find out more about the situation?
36. Did you try to learn to do more things on your own?
37. Did you wish the problem would go away or somehow be over with?
38. Did you expect the worst possible outcome?
39. Did you spend more time in recreational activities?
40. Did you cry to let your feelings out?

41. Did you try to anticipate the new demands that would be placed on you?
42. Did you think about how this event could change your life in a positive way?
43. Did you pray for guidance and/or strength?
44. Did you take things a day at a time, one step at a time?
45. Did you try to deny how serious the problem really was?
46. Did you lose hope that things would ever be the same?
47. Did you turn to work or other activities to help you manage things?
48. Did you do something that you didn't think would work, but at least you were doing something?