Job Engagement and Coping Strategies as Moderators of the Relationship between Occupational Stress and Burnout among Police Officers in the Eastern Cape, South Africa

BY

Mtutuzeli Dywili

Dissertation to Be

Submitted In Fulfilment of the Requirements for the Degree Of

DOCTOR OF COMMERCE

in

INDUSTRIAL PSYCHOLOGY

in the Faculty of

MANAGEMENT AND COMMERCE

of the

UNIVERSITY OF FORT HARE

SUPERVISOR: Prof Q.T. Mjoli

2016.

REMARKS

The reader is reminded of the following:

☐References and the editorial style as prescribed by the *Publication Manual (5th edition)* of the American Psychological Association (APA) were followed in this thesis. This is in line with the policy of the Programme in Industrial Psychology of the University of Fort Hare, to use APA-style in all scientific documents.

ACKNOWLEDGEMENTS

"We are like dwarfs on the shoulders of giants, so that we can see more than they, and things at a greater distance, not by virtue of any sharpness of sight on our part, or any physical distinction, but because we are carried high and raised up by their giant size" (Bernard of Chartres, 12th Century).

To the following giants, a word of sincerest gratitude:

• The Ultimate Creator for convergence of this energy in space and time

• Prof. Temba Mjoli, my mentor, inspiration and friend

• Prof. Temba Mjoli for guidance in terms of the statistical analysis

• Zandile Peter, my beautiful better half, inspiration, my purpose

• Tembeka Dywili, my sister, inspiration, my will to meaning, she is like a mother

• Dr. Nicole Dodd, Head of Department, Industrial Psychology for making me believe that the project is within reach

• My family for caring and support

• Friends and colleagues for caring and support.

ABSTRACT

Police work in South Africa is demanding and stressful. Literature reveals that occupational stress when fully manifest amount to emotional burnout. It was therefore the aim of this study to examine job engagement and coping strategies as moderators of the relationship between occupational stress and burnout among police officers. Using a sample of 377 police officers from the Eastern Cape, South Africa, data was collected using various scales namely; the Effort – Reward Imbalance (ERI) questionnaire (occupational stress), the Maslach Burnout Inventory – General Survey MBI-GS (emotional burnout), the Utrecht Work Engagement Scale (job engagement), and the Coping Orientation to Problems Experienced questionnaire (coping strategies). Correlation tests and regression analysis were ministered on the data to test the research hypotheses. The major finding of the study indicated that job engagement and coping strategies collectively significantly moderate the relationship between occupational stress and emotional burnout. However, job engagement on its own was reported to be an insignificant moderator of the relationship between occupational stress and emotional burnout.

Key words: Job engagement; occupational stress; emotional burnout; coping strategies; police officers.

TABLE OF CONTENTS

1 CHAPTER ONE: BACKGROUND OF STUDY

1.1 BACKGROUND

The police work in South Africa is associated with a high level of occupational stress, and such occupational stress is associated with a high level of emotional burnout (Anshel, 2000). A South African police officer in other words is exposed on a daily bases to gruesome street violence. In the light of critical importance of the physically and psychologically healthy police force in the community, it is important that ways and methods be found through which this occupational stress and emotional burnout among the South African police officers can be reduced so that they do not lead to adverse and dangerous consequences for example such as, poor work performance and high rate of employee turnover. High occupational stress in the South African police force particularly occurs in circumstances, where high levels of violence and crime are prevalent (Pienaar & Rothmann, 2003).

In south Africa, numerous studies (Mostert and Rothmann, 2006; and Rothmann, Steyn and Mostert, 2005) that were carried out on police officers are available which focused on, among other topics, job satisfaction, emotional burnout, occupational stress and work engagement. In addition to dealing with the illegal and risky actions of lawbreakers, there are other factors such as abusive treatment in the workplace, organisational inefficiency and general lack of social and managerial support that have been found to be associated with occupational stress among police officers (Koortzen, 1996). As mentioned earlier, South African police officers are exposed to gruesome street violence, it is the duty of these police officers to curb that violence. Operational chasing, stabbing, shooting, car crashes and murder are some of the characteristics of South

African police work. SAPS officers face stressful circumstances that have resulted from the turmoil in politics and socio-economics of the years dating from as early as the 1970's to the present day, exhibited by extreme violence (Mostert & Joubert, 2005). In addition, increasing number of personnel in the service delivery profession are reportedly experiencing emotional burnout as well as some symptoms of persistent occupational stress. (Dorz, Novara, Sica & Sanavio, 2005; Friedman, 2000).

 The experiences of SAPS officers are similar to those of other personnel in various professions as far as negative stress-related outcomes are concerned (Mostert & Joubert, 2005). The South African Government is not helping much in this regard. Furthermore, according to Mostert & Joubert, (2005), such affected personnel find it exceedingly hard to cope efficiently and effectively with daily routines such that in certain instances, suffer from symptoms and diseases like psychosomatic disturbances, cardiac dysfunction and depression, to name but a few. The South African Government is aware of the challenge, as the Minister of Police mister Nathi Mthethwa said on the 21st of June 2012, policing remains a very difficult and challenging duty that requires a committed and selfless personality. Mister Nathi Mthethwa went on saying, there is a need to investigate occupational stress which exists within the South African Police Service and how it can be avoided or reduced from affecting the work of police officers because clearly a crisis exists in the profession in South Africa. Paradoxically, some officers exposed to the same circumstances and conditions are said to reflect a vigorous and energetic life, a phenomenon which stress and coping researchers often do not consider researching (Mostert & Joubert, 2005). It is this gap in the research literature that the present study seeks to address.

1.2 STATEMENT OF THE PROBLEM

This study seeks to investigate the extent to which job engagement and the use of coping strategies can ameliorate the degree of emotional burnout among police officers suffering from occupational stress in the Eastern Cape. There have previously been conflicting results of studies regarding the relationship between occupational stress and emotional burnout. Conversely there is literature like Violanti and Aron (1994) who argued that sources of police stress that are on-going and long-term will result in emotional burnout, poor job performance, reduced motivation and eventual dropout from the police profession. There has, on the other hand, been evidence that suggests that emotional burnout does not always develop as a result of occupational stress (Pines, 2000). The present study seeks to investigate the possibility that these conflicting results are partly because of the moderating effects of job engagement and coping strategies. The study also seeks to add literature in the republic of South Africa with regard to the relationship between occupational stress and emotional burnout. Furthermore, although much of the previous research literature makes reference to occupational stress, emotional burnout and coping strategies, the same is not true of job engagement. Job engagement, as used in the present study, is a new concept that emerged from the research of Rich, Lepine and Crawford (2010). It seems that its moderating effect on the relationship between occupational stress and emotional burnout has hitherto not been investigated in any research, especially not in combination with coping strategies. These conflicting findings and gaps in existing literature are a strong motivation for further research regarding occupational stress and emotional burnout and the relationship that exists between the two. The present study will address these issues.

1.3 RESEARCH OBJECTIVES

The main objectives of this study are:

- To examine the role of job engagement and coping strategies as moderators of the relationship between occupational stress and emotional burnout.

- To provide results that may help to improve the quality of work life of police officers in South Africa.

- To provide results that may lead to a deeper understanding of the nature and extent of the relationship between occupational stress and emotional burnout.

1.4 HYPOTHESES

The hypotheses to be tested are as follows:

1.4.1 Hypothesis1

H_0 – Occupational stress is not significantly positively related to emotional burnout.

H_1 – Occupational stress is significantly positively related to emotional burnout.

This means that, high occupational stress will result in high burnout, assuming no mediating factors.

Violanti and Aron (1994) have argued that sources of police stress that are an on-going and long-term will result in emotional burnout, reduced motivation, poor performance and eventual dropout from the police profession. There has, on the other hand, been evidence that suggests that emotional burnout does not always develop as a result of occupational stress (Pines, 2000). The inconclusiveness in the existing literature prompt for further investigation in this regard.

1.4.2 Hypothesis 2

H_0 – Job engagement is not significantly positively related to emotional burnout.

H_2 – Job engagement is significantly positively related to emotional burnout.

Maslach, Schaufeli and Leiter (2001) have argued that, the focus of job engagement, the positive antithesis of emotional burnout, promises to yield new perspectives on intervention to alleviate emotional burnout. According to Rich, Lepine and Crawford (2010), there is strong evidence suggesting that higher levels of job engagement lead to outcomes that organizations value. People who are engaged in their work are more likely to meet the needs of their customers, thereby improving customer loyalty, profits and sales. Personnel with high work engagement are more likely to stay longer with the organization and thereby significantly slushing down any costs and disruption resulting from high personnel turnover.

1.4.3   Hypothesis3

H_0 – The use of coping strategies is not significantly negatively related to emotional burnout.

H_3 – The use of coping strategies is significantly negatively related to emotional burnout.

Some researchers have suggested that individual coping strategies may be important in ameliorating or exacerbating psychological burnout (Anshel, 2000). In a study on coping strategies and emotional burnout among veteran child protection workers, on the other hand, neither the use of active nor that of avoidant coping strategies saved workers from emotional exhaustion (Anderson, 2000).

1.4.4 Hypothesis 4

H_0 – Coping strategies do not moderate the relationship between occupational stress and emotional burnout.

H_4 – Coping strategies moderate the relationship between occupational stress and emotional burnout.

This means that, (1) high occupational stress and low use of coping strategies will result in high emotional burnout, (2) low occupational stress and high use of coping strategies will result in low emotional burnout, (3) high occupational stress and high use of coping strategies will result in moderate emotional burnout, (4) low occupational stress and low coping strategies will result in moderate emotional burnout.

This hypothesis is partly based on Bhagat, Ford, O'Driscoll, Frey, Babakus and Mahanyele's (2001) contention that the level of occupational stress an individual experiences in his or her organisational context, and the extent to which adverse effects such as psychological and other strains occur, depend on how effectively he or she copes with stressful organizational situations. In a study on coping strategies and emotional burnout among veteran child protection workers, on the other hand, neither the use of active nor avoidant coping strategies saved workers from emotional exhaustion (Anderson, 2000).

1.4.5 Hypothesis 5

H_0 – Job engagement does not moderate the relationship between occupational stress and emotional burnout.

H_5 – Job engagement moderates the relationship between occupational stress and emotional burnout.

This means that: (1) high occupational stress and low job engagement result in high emotional burnout, (2) low occupational stress and high job engagement result in low emotional burnout, (3) high occupational stress and high job engagement result in moderate emotional burnout, and (4) low occupational stress and low job engagement result in moderate emotional burnout.

This hypothesis is partly based on the work of Roberts and Davenport (2002) who argued that people who are highly involved in their jobs, identify personally with the job and are motivated by the work itself. They tend to work harder and more productively than others and are more likely to produce the results their customers and organizations want. According to Rich, Lepine and Crawford (2010), job involvement is an aspect of job engagement.

1.4.6 Hypothesis 6

H_0 – Job engagement and use of coping strategies combined do not moderate the relationship between occupational stress and emotional burnout to a greater extent than each of them separately.

H_6 – Job engagement and use of coping strategies combined moderate the relationship between occupational stress and emotional burnout to a greater extent than each of them separately.

This means that: high occupational stress, low job engagement, and low use of coping strategies will be associated with higher emotional burnout than (1) high occupational stress and low job engagement, on the one hand, and (2) high occupational stress and low use of coping strategies, on the other hand.

As stated before, Roberts and Davenport (2002) have argued that people who are highly involved in their jobs show signs of less burnout than those who are not. Bhagat et al., (2001), on the other hand, contend that the use of coping strategies reduces the effect of occupational stress on emotional burnout. It is therefore more appropriate to assume that the combination of job engagement and the employment of coping strategies significantly diminish the predicting power of occupational stress on emotional burnout than their separate effect.

1.5   SIGNIFICANCE OF THE STUDY

Occupational stress and emotional burnout in the police personnel are said to be occurring increasingly all over South Africa (Anshell, 2000). The occurrence of occupational stress and emotional burnout bring about many challenges in the management of police personnel in the country that must be solved. As mentioned earlier in the chapter, police work has been identified as a stressful job (Anshell, 2000). This is particularly correct in South African circumstances, where high levels of violence and crime are prevalent (Pienaar & Rothmann, 2003). This study will explore the relationship between occupational stress and emotional burnout in an attempt to unravel some of the complexities of the relationship. Job engagement, as used in the present study, is a new concept that emerged from the research of Rich, Lepine and Crawford (2010). It seems that its controlling influence on the link between occupational stress and emotional burnout has hitherto not been investigated in any research, especially not in combination with coping strategies. These conflicting findings and gaps in previous research literature are a clear indication of a need for further research with regard to the relationship between occupational stress and emotional burnout. The present study will address these issues. The possible findings

will be useful to managers in the South African Police Service, to the police officers themselves, and to the country at large.

1.6 PARADIGMATIC

This study was carried out within the profession of Industrial and Organisational Psychology, with particular interest on occupational wellness (Louw, 2007). The thematic focus of this research is on occupational stress and emotional burnout, and the theories explaining this phenomenon are utilised as a basis. The philosophical paradigm in which the research is conducted, is logical positivism, according to which there are only two sources of knowledge, namely: logical reasoning and empirical experience. Positive knowledge is generated from an induction process. Empirical methods that allow for measurement and comparison of constructs are used. The nomothetic method and induction were incorporated as part of the research methodology. Meyer, Moore and Viljoen (1989) refer to the nomothetic method as a description of psychological processes by making inferences about general principles which apply to all people, without considering individual differences. The inductive method is one in which generalisations are made from specific deductions to general principles (Meyer et al., 1989). In conducting empirical investigation on psychometrics, a sub-discipline within Industrial and Organisational Psychology, psychometric principles are utilized. The psychometric principles involve the use of mathematical and statistical processes (Gregory, 2004). The empirical investigation of this research depends mostly on measurement theory, in order to determine the relationship between variables. The systems theory is used in the integrating of the different aspects of job-demands, organizational social support and self-efficacy in the organizational personal system. This is done with the aim of determining the manifestation of work-family

imbalance as a function or outcome of the relationships within these factors and the observable facts under study. According to Cummings (1980) the systems perspective is one way to consider all the interactions between individuals or groups and their relationships in comparison to other contexts within and outside the organisation. Mouton and Marais (1992, p. 21) proposed a model that can be employed to form a framework that allows an effective investigation of the afore mentioned problem and set objectives. The research addresses the sociological dimension under the assumption that research is a social process which describes a systematic research framework of the research process. These authors refer to the dimensions as the sociological, ontological, teleological, epistemological and methodological dimensions. The sociological dimension is addressed in this research. In accordance with this model, the assumption can be made that research is a social process. It explains a theoretical and systemic framework and underlines the three sub-systems and the research domains that interact with each other, as identified in a particular discipline. In this case, the discipline under study is Industrial and Organisational Psychology with sub-systems which include the intellectual climate, the intellectual sources market and the research process itself.

1.7 RELEVANT THEORETICAL DEFINITIONS

1.7.1 Occupational stress

Occupational stress is stress involving work. Occupational stress is defined in terms of its physical and physiological effects on the person, and can be physical, mental or emotional strain. It can also be tension or factor or a situation that can cause stress. Occupational stress can occur when there is a discrepancy between the demands of the environment or workplace and an individual's ability to carry out and complete these demands. A stressor often causes the body to

psychologically react and this can strain a person's physical and mental wellbeing. A variety of factors contribute to occupational stress such as negative workload, extensive hours worked, isolation, toxic work environments, lack of autonomy, management bullying, difficult relationships among co-workers and management, harassment and lack of opportunities or motivation to advancement in one's skill level.

Basically, stress is divided into distress and eustress. Eustress is positive or good stress, whereas distress (negative stress) is the stress reactions to those events and actions appraised as being negative. Stress-related disorders comprise a broad collection of conditions which include psychological disorders, maladaptive behaviours, cognitive impairment and other types of emotional strain. Consequently, these conditions may cause below average work performance, increased absenteeism, low productivity or even injury. Job stress is also associated with various biological reactions that may lead ultimately to compromised health, such as cardiovascular disease, or in extreme cases death (Spielberg, Vagg and Wasala, 2003).

1.7.2   Emotional burnout

Emotional burnout is a psychological term that refers to long-term exhaustion and diminished interest in work. Maslach Burnout Inventory is the wildly used and studied measurement of burnout, developed by Professor Christina Maslach and Susan Jackson at the University of California, Berkeley. The two colleagues first identified the construct "burnout" in the 1970s and went on to develop a measure that tests the effects of emotional exhaustion and reduced sense of personal accomplishment. It grew up to be a benchmark tool for measuring burnout in many studies on the subject. The Maslach Burnout Inventory is a three-dimensional measurement on exhaustion, cynicism and inefficacy. However, other researchers have proposed for an

"exhaustion only" model that uses the exhaustion symptom as the ultimate measure of burnout. Maslach and Michael Leiter, defined the antithesis of burnout as engagement. Engagement is characterized by energy, involvement and efficacy, the opposites of exhaustion, cynicism and inefficacy.

Quite a number of theories on burnout highlight the negative outcomes resulting from burnout relating to job function (performance, output), physical health (levels of stress hormones, coronary heart issues, circulatory issues) and mental health (depression). Literature reveals that patients with chronic burnout have specific cognitive disorders which should be given attention during symptoms and treatment evaluation routines. Other symptoms were found on the patient group which include significant reductions in nonverbal memory, as well as auditory and visual attention. In psychology, the term burnout was devised by Hebert Freudenberger in 1974, with foundations from the 1960 novel by Graham Greene entitled "A Burnt-out Case" which emphasized on a protagonist suffering from burnout.

1.7.3 Job engagement

Job engagement is defined as a person's enthusiasm and involvement in his or her job. When people are highly engaged in their jobs, they become personally identified with those jobs and are easily motivated by the job itself. They tend to work harder and more productively than others and are more likely to produce the results their customers and organisations want. For instance, engaged employees report that;

- Their jobs make good use of their skills and abilities.
- Their work is challenging and stimulating.

12

- Their work provides them with a sense of personal accomplishment.

1.7.4 Stress coping strategies

The effective development of coping strategies should be founded on a good comprehension of the signs and symptoms of stress. Despite individual human differences, common physical symptoms exists which include; trouble sleeping, weight loss, trouble sleeping, constantly feeling tired, poor performance at work and increased dependency on alcohol or drugs.

10 coping strategies for stress:

1. **Write a list.** The list should comprise of all the stressing things and these things should be ranked. This exercise allows an individual to focus on the big issues that would make the most significant difference

2. **Manage your time.** Write a list of all the things you need to do and categorise them into must do's and should do's. If they aren't must do's cross them off the list for another time. Sometimes simply organising your time better is often the best strategy in coping with stress. This can help you avoid leaving things to the last minute creating unnecessary stress. For example can you pack your bag the night before and save time in the morning?

3. **Speak to others.** If an individual is feeling stressed and struggling to cope, there is need to tell someone. Usually people are willing to help and share the workload.

4. **Do some exercise.** This will help give you time to unwind. There is a strong link between those that are physically fit and those that are mentally fit. Exercise will not remove the

stress from your life but it will help you organise your thoughts allowing you to deal with the problem more effectively.

5. **Avoid foods high in sugar and caffeine.** The foods that are high in sugar and caffeine often release bursting energy which can cause one to crash. The crashes may cause tiredness, affect one's mood and can cause a worse feeling in the long run. Healthy food stuffs may actually help in reducing stress.

6. **Revisit your goals.** Goals need to be checked for their attainability and reality. An individual needs to change all their goals to be realistic and achievable and not stress over those that cannot be attained.

7. **Avoid drugs and alcohol.** "Many drugs like alcohol may provide you with a short term high, however they are also depressants which can make you feel worse and affect your mood. Drugs are not a long term strategy in coping with stress. If you feel that you may becoming dependant on drugs or alcohol you should seek advice from your local GP".

8. **Stop worrying about things that you cannot change.** Ask yourself, is the problem real or not. If you cannot do anything to change the situation forget about it.

9. **Do something you enjoy.** There is no better way to relax than by doing something you love. Whether it's skydiving, kicking back and watching TV or reading a book doing something you enjoy is a great way to manage your stress.

10. **Learn to say no.** Don't say you will do something if you realistically do not have time to do it. This will only add to your stressful life and allow things to build up.

1.8   RESEARCHDESIGN

1.8.1   Research Design

A non-experimental exploratory quantitative tradition is followed in this research. Members of the South African Police Service in the Eastern Cape Province served as a target population in the study. The study employed the cross-sectional field survey method with a sample of 377 respondents drawn from the SAPS officers within the Eastern Cape Province. Questionnaires were used to gather data from respondents and the Social Sciences statistical package was used in analysis of the findings. The methodology chapter explicitly discusses the research method, the respondents to the research, instruments of measurement, research procedure and the data analysis as well as research ethical parameters.

1.9   ETHICAL CONSIDERATIONS

The researcher complied with certain ethical principles in carrying out the research which include (De Vos et al., 2005):

1.9.1   Participants should not be harmed during a research study

One of the eminent rights of respondents to a research is to be protected from harm, whether physical or emotional. It is the duty of the researcher to protect this right by playing down all possibilities to physical discomfort or emotional inconvenience. Emotional harm is very difficult

to predict yet it carries further reaching consequences to an individual. This research has no known physical or emotional threat to respondents. The researcher controlled the existence of any threats by fully informing the respondents before-hand, obtaining their consent and pledging confidentiality of the responses and identities of participants. Such information offered the respondents the opportunity to withdraw from the investigation if they so wished.

1.9.2   Informed Consent

Terre Blanche and Durrheim (1999), explain that obtaining informed consent from participants is not merely the signing of a consent form. Consent should be voluntary and informed. This requires that participants receive a full, non-technical and clear explanation of the tasks which are expected of them so that they may make informed choices with regard to voluntarily participating in the study. The researcher avoided coercion, threats and undue influences in the knowledge that these may limit participants' voluntary involvement in the study. Consent was obtained from the participants and from their respective organisations. Consent forms were presented to potential participants to sign and grant their permission to carry out the study on them.

1.9.3   Privacy, anonymity and confidentiality

De Vos et al. (2005) states that the "right to privacy is the individual right to decide when, where, to whom, and to what extent his/her attitudes, beliefs, and behaviour will be revealed." Privacy implies the element of personal privacy, while confidentiality indicates the handling of information in a confidential manner. He further mentioned that participants hold the right to have their responses treated with confidentiality and the non-revealing of their identities. The

researcher assured the participants that their rights of privacy will be protected by means of confidentiality. The participants were also assured of their anonymity.

1.10 LAYOUT OF THE RESEARCH REPORT

The study consists of the following chapters:

Chapter 1: Research orientation

This chapter provides a background for the study with a general introduction, purpose of the study, scope of the study and the hypotheses to be tested.

Chapter 2: Occupational stress and emotional burnout among police officers

This chapter sets out to discuss the literature on occupational stress and emotional burnout as documented by various subject experts in various books and articles.

Chapter 3: Research method

This chapter outlines the method followed by the researcher during the research process.

Chapter 4: Empirical research results

This section highlights the empirical results of the study as captured by the researcher using a questionnaire as the research instrument.

Chapter 5: Discussion

Here we discuss the results in relation to the hypotheses and previous research findings. The limitations focus on the factors which restrict the study. Recommendations for future research and for future managerial practice.Lastly, chapter and dissertation conclusion.

1.11 CHAPTER SUMMARY

This chapter demonstrates the main objectives to be achieved in this study and the methodology taken to achieve them. Research hypotheses, the research methodology, data collection methods and data analysis procedures were all explicitly describe and stated. The chapter concluded by giving the layout of the research report and the ideas for dissemination. The next chapter deals with literature review.

2 CHAPTER TWO: LITERATURE REVIEW

2.1 INTRODUCTION

The police work is regarded as stressful and hazardous (Selye, 1974; Alexander, 1999; Anshel, 2000; Paton &Violanti, 1999). The star newspaper in 2012 reported that about 100 to 130 police officers commit suicide every year due to the stress caused by their work and organisational stressors. From the report the stressors encountered by police officers are lack of support from management and corruption amongst leaders of SAPS. Hitchens (2012) further argued that even women police officers are affected by the stress with the story of a women constable that killed herself due to high stress levels. The negative effects of job stress on employees and their work makes it quite important to explore the processes involved when job stress is studied (Mostert & Joubert, 2005).

South Africa is characterised by political disturbances and civil unrest, with the police role being associated with unwarranted oppression of the majority of the SA citizens. They have been considerable changes within SAPS as an organisation where roles had to be redefined and certain structures re-arranged (Nel & Burgers, 1996). On top of that the nature of work for police officers creates stress in the organisation (Gull et al, 1998). They have been various transitions in the police service where there was transition from a police force to a police service and a community policing took place and also the rank structure changed from a military structure and an affirmative action policy was also implemented (Van der Walt, 2002). The SAPS as an organisation is seen as no longer cohesive and has been regarded as a body that has stopped to effectively perform and deliver its services (Nel & Burgers, 1996). Most employees in the

service feel abandoned by the new structures being implemented and they become anxious and curious about their present circumstances.

The new structures in SAPS require that members of the police to be accountable to the community. This again creates more stress on police officers as they will need to be open to public opinion with regards to the quality of their work performance. Organisational factors have been regarded as the most significant stressors in police organisations (Kop & Euwema, 2001). According to Schaufeli and Enzmann (1998) organisational stressors are divided into two groups. The first group consists of job demands and the second group consists of a lack of resources. Job demands refer to the required sustained physical or mental effort aspects of the job and can therefore be associated with certain physiological and psychological costs (Schaufeli & Enzmann, 1998). These consist of factors like meeting deadlines, shift work, working overtime, excessive paper work and handling crisis situations. Job resources are aspects of the job that may be functional in achieving work goals, reducing job demands and the expected physiological and psychological costs, and stimulating personal development (Schaufeli & Enzmann, 1998).

Job resources consist of factors such as adequate equipment, good supervision, an adequate salary, recognition and sufficient personnel. One factor that has been seen to be contributing to police officers committing suicide are the stressors encountered in their job McCafferty (1992). It is the responsibility of police officers to provide a safe environment to the citizens residing in the country but their duties are not always carried out in a safe environment. Several factors such as an authoritarian structure, lack of participation in decision-making, poor inter-personal relationships with supervisors, lack of administrative support, unfair discipline, unfair promotion and the nature of police work are regarded as contributing to distress among police officers. The unstable working hours, the unfavourable working conditions and the recurrence of fear and

trauma all make police officers become vulnerable to the suicidal thoughts (Maynard, Maynard, Mccubin & Shao, 1980; Rothmann and Strijdom, 2002).

Kruger (1996) and Lott (1995) reported that working in shifts, the low salaries and the dangers that are involved in police work seem to be related to stress and suicidal tendencies. According to Rothmann and van Rensburg (2002) suicidal behaviour may be considered a domain of psychological disturbance and is associated with potentially severe mental and/or physical health outcomes. Suicidal behaviour varies in severity from the mere thought of it through intended attempts to the actual deed of suicide.

2.2   THEORIES SUPPORTING THE STUDY

2.2.1   Person – Environment Fit Model

In understanding the nature and/or consequences of occupational stress various theories revealed the significant part played by both the person and the environment in fully comprehending the nature or consequences of occupational stress. The person constructs that are relevant to occupational stress research include Type – A behaviour (Friedman & Rosenman, 1959), the locus of control (Rotter, 1966), hardiness (Kobasa, 1979), and the coping styles (Menaghan, 1983). The person-environment (P-E) theory of stress formalized the contributions of the person and environment to stress (Caplan & Harrison, 1993). The environment has been understood to be a stressful event (Rabkin & Struening, 1976), which encompasses daily hassles (DeLongis, Coyne, Dakof, Folkman, & Lazarus, 1982), and enduring stressors such as role conflict and ambiguity (Kahn, Wolf, Quinn, Snoeck, & Rosenthal, 1964), role overload and underload (French &Caplan, 1972), and job demands and decision latitude (Karasek& Theorell, 1990). One

characteristic of the interactive perspective in psychology is the dual emphasis on the person and environment in stress research (Pervin, 1989) which strongly indicates that an individual behaviour, attitude, and well-being are determined by the person and environment jointly.

The core principle of Person-Environment fit theory is that stress arises not from the person or environment separately, but rather by their fit with one another. This simple yet powerful notion is reflected in numerous theories of stress and well-being (Edwards, 1992) and is largely responsible for the widespread impact of Person-Enviroment fit theory in stress research (Edwards & Cooper, 1990). The person-environment fit theory relates to how an individual fits into a workplace environment. It discusses the factors affecting how the person relates to the work environment which can be through motivation, ability, or several other factors (Caplan & Harrison, 1993).

Not only is it concerned with how a person relates to work environment but also how a person fits in with the demands of the job or supplies presented by a job. One thing that results in serious conflict in the business environment is the incorrect person-environment fit. When the incorrect person-environment fit situation arises, stress and lack of productivity results (Edwards, 1992).

The person-environment fit theory refers expressly to occupational stress especially due to the fact that if a person does not feel belonging to the work environment he/she could easily stress about the work. Similarly if an individual employee does not have the same motives as his or her colleagues at the workplace, stress can occur (Edwards, 1992).

This theory implies that person-environment misfit can result in stress which over a long period of time, can result in burnout.

2.2.2 Cognitive Activation Theory of Stress

The cognitive activation theory of stress (CATS) puts across a formal system of methodical definitions which is purposed to reduce the dependency on words with unclear meanings and context use. This is very valuable in a field with numerous contradictory terms and ascriptions among the professionals and the general public. This is not only a matter of concern for experts and theoretical discussions. Consequently, erroneous attributions could be very costly, causing complications for both experts and the society. When expensive and ambitious preventive and curative initiatives are built on superstition the net results may be negative, or even become a disaster.

The term "stress" is used to refer to a stress stimuli, a stress experience and the non specific general stress response. For CATS the most basic assumption is that the stress response is a normal, healthy, and necessary alarm response. If otherwise, then in all species, individuals and cultures the stress response would not be present. The stress response can be hereditary and cannot be seen as a past circumstance. In principle, the response is simply an increase in arousal. However, if sustained it may contribute to illness and disease.

It seems to be a consensus that physical demands and psychological characteristics that produce the stress response have nothing in common. The evaluation or filtration of all stimuli happens before the stimuli enter the response system. The main "filters" are related to response outcome expectancy and stimulus expectancy. The individual's experience of demands and expectancies of the outcome are the major determinants of how the demands affects stress responses which it

turn may cause diseases in man and animals over time. Within this cognitive tradition CATS define coping as positive response outcome expectancies. This means that the individual expects that he or she will be able to handle the situation with a positive result. Subjectivity in health complaints, levels of psychophysiological, psycho-endocrine and psycho-immune arousal are all minimized in these circumstances.

When it is impossible for the individual to establish coping, other expectancies may develop. When the individual learns that there are no relationships between anything the individual can do and the outcome, we refer to this as helplessness in CATS. Two of R.L. Solomon's students, Overmier and Seligman, found that dogs with previous experience with inescapable shocks did not learn avoidance tasks. They found that this state of "helplessness" generalized to situations where control is possible. Translated to CATS, helplessness occurs when the perceived probability of avoiding the aversive stimulus with a response is the same as for no response. Put differently, the response always has a perceived consequence for the happening of the aversive event. The living being has no control which led to the acceptance of this expectancy as a model for anxiety and depression. The CATS constructs can be used as theoretical basis for modelling depression and anxiety in animals.

In CATS hopelessness is a worse acquired expectancy that almost all responses result in negative outcomes. Hopelessness is more directly opposite of coping than helplessness, since it is a negative response outcome expectancy. The negative outcomes from responses can be blamed on the individual who could have controlled these outcomes. Inevitably, guilt kicks in and complicates the whole situation, thus, hopelessness becomes a better model for depression than helplessness.

CATS is a general and comprehensive stress theory, compatible with other theoretical positions. In working life in humans, the most influential model is the demand–control model. It is the combination of psychological demands, task control, and skill use at work, which predicts stress-related ill health and behavioral correlates of work. Jobs with high work volumes, limited control and low social interaction probably increase the likelihood of illness and disease. On the other hand, jobs with low psychological demands and high control may carry low risk to illness and disease. The model asserts that the control dimension is the major predictor to the possibility of disease, especially related to cardiovascular issue. However, newer tradition argues that the individual stress management, coping abilities and subjectivity in control or being able to cope, all collectively predict an individual's proneness to disease and illness. In CATS, it is the expectancy of being able to cope that is the essence, not the objective possibility of having control. In addition, CATS can be applied to animal experimentation and has a pathophysiological model integrated into the theory.

The effort-reward imbalance model focuses on the reward and contractual equality in employment and is used as a model for human work relations without basing on pathophysiology.

The most common health complaints are subjective health complaints like muscle pain, tiredness, and mood changes. These pains and complaints are normal short term ones with no severity for most people. However, for some, the aches and complaints may be severe and may last longer affecting normal functioning. There are no clear cut parameters between normal and pathological levels in subjective health complaints distinguishing normal, tolerable pain and complaints; and unbearable pains that need professional help. These conditions are usually not

explicit and are the major reasons for consulting health experts and most recurrent reason for sick leave and disability.

A range of personal illnesses with few or no objective conclusions have been discovered consistently as epidemics of different names in the society. These may include chronic fatigue syndrome, food intolerance, myalgic encephalitis, "yuppie flu," whiplash, fibromyalgia, post viral syndrome, and the Gulf War syndrome. Patients who suffered of these illnesses complained of muscle pain, tiredness, depression, fatigue, headaches, sleep disturbances, concentration problems, memory lapses, flu-like symptoms, and "allergies." However, few or no conclusive findings are available to explain the disease or the complaints go beyond what is regarded as "reasonable" by the physician.

National surveys have recorded very high incidence of subjective health complaints. A recent study carried out in Norway found out that 96% reported that they had experienced at least one type of complaint during the preceding 30 days. However, the incidence of significant complaints has been moderate with only 13% having musculoskeletal complaints, 5% "pseudoneurological" complaints (tiredness, mood changes), 4% gastrointestinal complaints, 2% allergy, and 18% flu-like complaints. The high prevalence makes the finding of such complaints "normal"; most people have them. It does not hinder them or make them seek medical advice or help from society; neither does it signal that they are in any inherent danger of developing dangerous and debilitating conditions. However, they might grow into circumstances where complaints are for a long time and severe requiring medical and social attention, as well as sickness compensation. The change from a normal complaint to an intense condition appears to

be an incessant process, with not distinctive thresholds to indicate change. We suggest that this transition is due to a psychobiological sensitization.

It appears reasonable to assume that humans in every culture and environment experience health complaints like pains, fatigue, itching, dizziness etc., ranging from minor and transient to disabling and permanent. The understanding and comprehension of complaints and sensations depends on the culture and eccentric attitudes. A headache can be interpreted as a sign from the body that it needs rest, but can also be a cause of worry: is this the first sign of a brain tumor, harmful radiation from mobile phone, or evil spirits released to harm me?

In media, as well as by professionals, it is often assumed that these complaints, as well as serious somatic disease, are a result of a misfit between our physiological constitution and the modern, civilized life. Historical analyses contend the conception that the subjective health complaints, or psychosomatic conditions, fatigue, or hysteria really are new phenomena, typical for our time.

Similarly, it does not appear as if these complaints are specific for industrialized societies. In a comparative study of 120 aborigine Mangyans living in the jungle of Mindoro Island in the Philippines, the frequency of subjective health complaints was found to be more frequent than a representative sample from the Norwegian population, indicating that these complaints are not specific for industrialized societies. A similar study on subjective health complaints conducted on 320 Masai people living in the East Africa savannah, reported the same finding. The Masai people live along the Great Rift Valley in southern Kenya and northern Tanzania, are seminomadic with substantially high levels of subjective health complaints than the regular Norwegian population. A different life style from the stressed Nordic European population,

feeding on milk, meat and cattle blood diet, and living in a highly organized society, does not infer minimal level of subjective health complaints, or "psychosomatic" complaints.

There is a striking comorbidity for subjective health complaints, or the unspecific conditions that constitute the main reasons for sickness absence and common health complaints. This may be explained by psychobiological sensitization within neural loops, which has been suggested as a mechanism for these conditions.

Sensitization is an increased efficiency in a neural circuit, due to a change in the synapses from repeated use. This feed-forward mechanism increases the response to a stimulus. Sensitization is a distinctive characteristic of pain, pain produces pain. Patients who are referred to the clinic for back pains, also complain about general pain like headaches, tiredness, anxiety, and depressed thoughts. Patients hospitalized for irritable bowel disease have similar comorbidity. The level of comorbidity is also a significant prognostic factor for spinal pain.

This basic neurobiological process may be assumed to have a cognitive analogue. Brosschot *et al*. have suggested that this cognitive correlate is an attentional bias, giving priority to thoughts and information related to fears and somatic complaints. They gathered that patients with unexplained medical complaints also show sensitization and extensive instigation of reasoning networks related to illness and pain. Brosschot refers to this as the "night and day watch" of the sensitized organism.

It is believed that this is an acceptable theoretical construct for the design and effects of cognitive behavioural treatment programs for low back pain and other complaints like fatigue. Within CATS, this night and day watch is related to sustained activation, which is the motor sustaining

the activation of specific pain and illness-related cognitive networks. Employees in work situations with high risk of developing sickness leave and muscle pain complain about "stress." The prevalence of subjective health complaints is high in populations that experience low job satisfaction and low levels of coping. These are all cases where CATS predicts high and sustained activation.

Stress complaints are very prevalent, so are subjective health complaints. It seems important to note that most of the typical pains and bodily sensations are normal trends, where movements in the guts are felt, with muscles and joints hurting occasionally. In fact, almost all of us have had such experiences the last 30 days. In spite of this, the plurality of us is happy, in good health, and satisfied with our working conditions.

Only when these sensations become very strong do we need attention and care. Sickness absence is a major problem for those that are involved, and it is also a major economic and social problem in the modern welfare society.

When we need care, it is reasonable to demand that the interventions are based on rational thinking and evidence-based methods. There is far too much emphasis on interventions that do not have any proven effect. Very large interventions are being performed on a bogus theoretical basis, without the necessary research control to identify whether the intervention was effective, what part of the interventions that was effective, and for whom the effect was beneficial.

2.2.2 The systems theory

What is Cybernetics?

There are many varying definitions of Cybernetics with numerous individuals influencing its direction. Cybernetics takes as its domain the discovery or design and application of principles of regulation and communication. Cybernetics treats ways of behaving and not things. Cybernetics does not ask "what is this thing?" but "what does it do?" and "what can it do?" Because numerous systems in the living, technological and social world may be understood in this way, Cybernetics is a combination of many traditional disciplines. The concepts which Cyberneticians develop thus form a meta-disciplinary language through which we may better understand and modify complex systems.

History

Deriving from the Greek word for steersman (kybernetes), Cybernetics was first introduced by the mathematician Wiener, as the science of communication and control in the animal and the machine (to which we now might add: in society and in individual human beings). It grew out of Shannon's information theory, which was designed to optimize the transfer of information through communication channels (e.g. telephone lines), and the feedback concept used in engineering control systems. Couffignal (1958), who was among the pioneers of Cybernetics suggested a more philosophical definition which considers Cybernetics to be "the art of assuring efficiency of action". Cybernetics in General Systems Theory is defined as the study of control within a system, typically using combinations of feedback loops. This can be within machines or

living structures. First order Cybernetics relates to closed systems, second order includes the observer perspective and third order looks to how these co evolve.

Cybernetics and the systems theory generally addresses the same issue of an organization to be independent of the substrate in which it is represented. Insofar as it is appropriate to find the difference between the two approaches we might say that systems theory has focused more on the structure of systems and their models, whereas Cybernetics has focused on how systems function, that is to say how they control their actions, how they communicate with other systems or with their own components. Since structure and function of a system cannot be understood in separation, it is clear that systems theory and Cybernetics should be viewed as two facets of a single approach.

Cybernetics Contributions

Cybernetics made early contributions mostly to technology leading to development of communication technology, feedback control devices, automation of production processes and computers. Another convention, deriving from human and social matters, puts emphasis on epistemology, how people get to know, and utilize self-reference theories to comprehend such phenomena as identity, autonomy, and purpose. Some Cyberneticians seek to create a more humane world, while others seek merely to understand how people and their environment have co-evolved. Some Cyberneticians are interested in systems as we observe them, others in systems that do the observing. Some attempt to develop techniques for conceptualizing the relationships that exist among measurable variables, whilst others try to understand the link between theories and social systems. Early work has tried to define and apply principles that could control systems. More recently, Cyberneticians try to understand how systems describe

themselves, control themselves, and organize themselves. Despite its short history, Cybernetics has developed a concern with a wide range of processes involving people as active organizers, as autonomous, and as sharing communicators, responsible individuals. Interest has shifted to several sciences, making application of Cybernetics to cognition processes, to practical pursuits like psychiatry, family therapy, the development of information and decision systems, government, management, and to all efforts channeled towards understanding complex forms of social organization including communication and computer networks.

Pillars of Cybernetics

Cybernetics is somehow founded on four basic pillars namely: circularity, variety, process and observation. Circularity occurs in its earliest theories of circular causation or feedback, later in theories of recursion and of iteration in computing and now involving self-reference in cognitive organization and in autonomous systems of production. This circular form allows Cybernetics to describe systems from within, making no recurse to higher principles or a priori purposes, expressing no preferences for hierarchy. Variety is fundamental to its communication, information and control theories and emphasises multiplicity, alternatives, differences, choices, networks, and intelligence rather than force and singular necessity. Most if not all Cybernetic theories implicate process and change to explain the difference between two states of uncertainty and models on adaptation, evolution and growth processes. One characteristic of Cybernetics is that it can explain such processes basing on the organization of the system manifesting it, e.g., the circular causality of feedback loops is taken to account for processes of regulation and a system's effort to maintain equilibrium or to reach a goal. The process underlying Cybernetics theories of information processing and computing is observation that includes decision making.

By extending theories of self-reference to processes of observation including cognition and other manifestations of intelligence, Cybernetics has been applied to itself and is developing an epistemology of systems involving their observers (second-order Cybernetics) qualitatively unlike the earlier interest in the ontology of systems which are observed from the outside (first-order cybernetics).

Focus

The principles and conceptions of Cybernetics and Systems Science, as a meta-theory, are meant to be applicable to anything and focus on complex systems such as organisms, ecologies, minds, societies, and machines. Cybernetics and Systems Science regards these systems as complex, multi-dimensional networks of information systems. Cybernetics postulates that there are fundamental laws and principles which can be employed to further the explanation of such seemingly contrasting types of systems. The features of these systems expressly influence the nature of cybernetic theory, leading to serious challenges to traditional methodology. Some of these characteristics are complexity, mutuality, complementarity, evolvability, constructivity and reflexivity (for additional information consult the appendix). The domain of computing applications has grown so rapidly that labelling anything that uses a computer as "cybernetic" is more obscuring than enlightening. Therefore we would limit the label "cybernetic technology" to those information processing and transmitting tools that somehow increase the general purpose "intelligence" of the user, that is to say the control the user has over information and communication.

The analytic approach aims to narrow down a system to its elementary features to enable detailed study and understanding on the kind of association between them. The modification of variables,

one at a time, attempts to derive general laws that will allow one to predict the features of a system under varying conditions. In order to make the forecast possible, the laws of the additives of basic features must be invoked. It is the same case with homogeneous systems which comprise of consonant elements and weak interactions among them. This is where statistical laws are applicable to enable understanding of the behavior of the multitude of disorganized complexity. The laws of the additivity of elementary properties do not apply in very complex systems composed of a large diversity of elements linked together by strong interactions. These systems must be explained by methods similar to those which are grouped together by the systemic approach. The idea of the new methods is to analyze a system in its complexity, its totality, and its own dynamics. Through simulation one can "animate" a system and observe in real time the effects of the different kinds of relations among its elements. Investigation of this behavior helps the determination of rules that can modify the system or design other systems.

2.2.3   Conservation of Resources Theory

This theory puts forward a model for avoiding resource loss, maintenance of the available ones, and accessing new ones useful for practicing healthy behaviours. In order to enhance public health, communities and individuals must be in possession of the resources appropriate for engaging in healthy behavior. Conservation of Resources (COR) theory offers a framework for implementing public health promotion strategies by focusing on the resources of individuals and communities. The development of COR theory was in response to the need to integrate more explicitly the both the objective and perceived environment into the process of coping with stress.

Homeostatic and transactional models of stress and coping (McGrath, 1970; Lazarus, 1966) define stress as the perception of imbalance between coping capacity and the environment. These theories emphasize that individuals' perceptions of imbalance are important. Furthermore, these cognitively based models suggest that individuals must perceive the consequences of the imbalance as important, asserting individual difference factors. In homeostatic and transactional models, coping demand and capacity are not separately defined (Hobfoll, 1989). By emphasizing perception and values when defining stress and coping, secondary emphasis is place on environmental contingencies.

In relation to the establishment of public health promotion strategies, homeostatic and transaction models of stress and coping present problem in their conceptualization of coping demand and coping capacity. Coping capacity is referred to as the one which off-sets coping demand, whilst coping demand is one which challenges coping capacity (Lazarus &Folkman, 1984). All the more so when perceptions are taken into account, it is group and broad-based social perceptions, not individual differences, that must be considered foremost.

Clearly, this rational is circular and is only derived from an individual's idiographic conception. Owing to the fact that demand and capacity are not distinctly defined, they and the principles concerning them are not pliable to empirical testing. Therefore, when left to individual appraisal, it is difficult to assert which resources targets groups will require and what common obstacles will empede their applying resources to goal –directed efforts. In addition to all this, anchor point for defining capacity and demand are objectively non-existent. Thus, it would prove arduous for public health promotion endeavors to explain and target coping resources needful for enhancing public health. Intervention efforts do not need to wait for individuals to assess what is stressful to

them, otherwise it would be difficult and the wait might extend until stressful events happen so as to know what to do.

Along with the problems in defining demand and capacity, de-emphasis of the objective environment in transactional homeostatic models might be particularly challenging for public health promotion. Focusing on perception without closely considering the objective environment may lead to some demands remaining unnoticed since individuals may be successfully coping in the course of the process.

Individuals in possession of vast resources may be unconscious to stressful situations whilst those lacking the resources may feel subjugated by in handling the same circumstances. In the light that many threats to public health emanate from environmental sources, it would be reasonable for public health promotion efforts to be centered on objective environmental circumstances. COR theory bridges the cognitive and environmental viewpoints. Unlike homeostatic transactional models, COR emphasised the environment in the coping process foremost and person-centred variable secondarily. Hobfoll(1998) proposed that perceptions of most major stressful events of interest to public health promotions are universally held e.g. contraction of human immunodeficiency virus (HIV) and living through a natural disaster are events that are universally perceived as stressful. This is not to suggest that perceptions are not useful in coping with such events. Perception may influence the strategies that one uses in trying to offset the losses related to these circumstances. However, COR theory debates that resources are the major elements determining individual's appraisals of events as stressful, and resources define how individuals are able to cope with such situations.

2.2.4 Description of Conservation of Resource Theory

COR theory proposes that individuals seek to create circumstances that will protect and promote the integrity of the individual, nested in the "tribe" (Hobfoll,1998). That is, the individual must always be viewed in a social context and acts to protect and preserve the self and the attachments that establish self in social context relationship. The focus of this theory is on reactions towards the environmental events that affect the resources. Psychological distress is thus defined as a reaction to the environment in which there is a threat of net loss of resources, actual net loss of resources, or lack of resources gain following the investment of resources. The loss or threat of loss of resources is especially stressful owing to the fact that individuals are faced with diminishing coping capabilities in dealing with future challenges. The lack of gain from resources following an investment is stressful because individuals would have been unsuccessful to enhance their coping capabilities following the expenditure of resources. In other words, the lack of gain on resources can be seen as resource loss. In each case, resources are the singly unit necessary for understanding stress.

Resources are defined as objects, personal characteristics, conditions, or energies. Object resources are valued because of some aspect of their physical nature of because of their acquiring secondary status based on their rarity and expense. A small economic car is valuable in the sense that it provides transportation, while a BMW which is expensive is more valuable especially that it enhances status. Conditions refer to those resources that are more valuable and are pursued after which include marriage and tenure. Personal characteristics are termed as resources because they generally support stress resistance. Personally held skills are a secondary type of personal resources, especially as these skills relate to acquiring or protecting valued resources. Mastery and optimism are personal attributes that can influence the stress resistance. Energies are

typically intrinsically valued in that they aid in acquisition of other resources, such as time, money and the knowledge. In addition to resources being broadly defined, COR theory proposes that resources are interrelated and changes in one or more types of resources can affect the availability of other resources. In summary, COR theory defines resources broadly and proposed that they are interrelated.

It has been argued that change in general is a stressful event. COR theory predicts that positive and negative changes in resources will have markedly differential effects. Literature confirms the theory's assumption that when furrowing out positive and negative results of change, the results will have significantly varying impacts. COR theory proposes that resources lost are psychologically stressful, whereas resources gained buffer against the effects of resources lost. Thus, loss and gain have discrepant outcome for individuals.

In addition, COR theory proposed the following principles in relation to change in resource:

1. Resource loss is more powerful than resource gain

2. Resources must be invested in order to gain resources or prevent their loss

In addition this suggests that those already holding very few resources will be more susceptible to the experience of loss spirals than those rich in resources who have many opportunities for resource gain. In other words, the theory proposes that initial loss drives individuals, groups and communities to more vulnerability to the negative adverse bearing of recurrent resource challenges. Those bequeathed with greater resources will be more resistant, but recurrent resources loss will challenge even richly resources-endowed individuals or groups. Thus, loss spirals are a powerful force that is evident in individuals and communities already lacking resources.

COR theory does not only provide the basis for handling stressing and coping as an individual, but also postulates a framework for promoting public health. It also provides the agenda for conceptualizing the resources critical in promoting public health. In addition, public health promotion efforts that use COR theory can target loss spirals and prevent future losses in individuals and communities. Finally, the theory provides public health promotion with the framework to instil resources necessary to the individual and community for promoting public health.

Hobfoll's (1989) conservation of resources theory covers a general perspective of stress with relevance to burnout in organisations (Cooper, Dewe&O'Driscoll, 2001). The conservation of resources theory (COR theory) suggests that individuals have access to four main categories of resources: objects (e.g. houses, cars and furniture), conditions (e.g. relationships, steady jobs), personal characteristics (e.g. self- esteem) and forms of energy (money, favours). Of importance for the present study is that, this theory explains how occupational stress develops and how it may lead to burnout. It is argued that the potential loss of these resources, the loss of resources or failure to regain resources following resource investment, threaten individuals and subsequently result in stress. The theory further proposes that burnout can develop, when resources are lost or when resources are inadequate to meet the burden the individual faces. Emotional burnout will result where continuous loss of resources is evident and not as a result of a single event (Cooper *et al,* 2001). According to Cooper *et al*. (2001) the COR theory is well matched to the transactional model of stress, developed by Lazarus and Folkman (1984).

2.2.5   The Transactional Model of Stress

2.2.5.1   History and Orientation

Stress is essentially an upset of a person's psychological balance. According to the current World Health Organization's (WHO) definition, occupational or work-related stress "is the response that individuals may have when they are presented with work demands and pressures that are not matched to their abilities and knowledge to such an extent that such demands and pressures challenge their ability to cope.

Beginning in the 1960's, psychologists began to view stress as a transaction depending on what a stressor meant to the individuals. The core assumptions are as follows. When a person is faced with a stressor that person does what is known as primary appraisal were the individual assesses the potential threat and makes a judgment whether the event is stressful, positive, controllable, challenging, irrelevant. For example if a student is required to make a presentation in class, the student may enjoy the opportunity and find it as a positive challenge while another student may see it as a fate worse than death. The secondary appraisal is where the person evaluates how controllable the stressor is and determines what his coping resources are. If a person has lost a job and has no reasonable alternatives or loved ones to reach out for support, he/she will view this as a much greater stressor than one who loses a job and has many employment prospects as well as supportive networks of friends and family.

Fundamentally, the model provides a guide on how one should perceive conflict and stress with emphasis on revising how one perceives challenges. A psychiatrist may attempt to modify an individual's coping skills and perception of a situation through biofeedback, relaxation techniques, visual imagery, problem-focused coping, emotion-based coping, and meaning-based

coping. When it is difficult to deal with certain life issues, one should seek the counsel of professionals, thus psychiatrists, to determine coping strategies.

Stressors can be describes as those demands emanating from the internal or external environment which upset balance and consequently affecting the physical and psychological stability and in turn requiring balance restoration (Lazarus & Cohen, 1977). Beginning in the 1960s and 1970s, stress was considered to be a transactional phenomenon dependant on the meaning of the stimulus to the perceiver (Lazarus, 1966).

2.2.5.2 Core Assumptions and Statements

The Transactional Model of Stress and Coping provides a framework for evaluating the processes of coping with stressful events. Stressful experiences are understood as person-environment connections. These connections depend on the impact of the external stressor. This is mediated by firstly the person's appraisal of the stressor and secondly on the social and cultural resources at his or her disposal (Cohen 1984; Lazarus & Cohen, 1977).

Generally when an individual is faced with a stressor the person evaluates the potential threat associated with such a stressor a stage known as primary appraisal. During this stage an individual makes a judgement as to whether an event is stressful, positive, controllable, challenging or irrelevant. If the event is judged to be a stressor the second appraisal follows, which is the judgement of the individuals coping resources and options (Cohen, 1984). This is the stage were ones identifies how he or she will deal with a stressful situation. Actual coping efforts aimed at regulation of the problem give rise to outcomes of the coping process. The table below summarises the key constructs of the Transaction Model of Stress and Coping.

Concept	*Definition*
Primary Appraisal	Evaluation of the significance of a stressor or threatening event.
Secondary Appraisal	Evaluation of the controllability of the stressor and a person's coping resources.
Coping efforts	Actual strategies used to mediate primary and secondary appraisals.
Problem management	Strategies directed at changing a stressful situation.
Emotional regulation	Strategies aimed at changing the way one thinks or feels about a stressful situation.
Meaning-based coping	Coping processes that induce positive emotion, which in turn sustains the coping process by allowing re-enactment of problem- or emotion focused coping.
Outcomes of coping	Emotional well-being, functional status, health behaviours.
Dispositional coping styles	Generalized ways of behaving that can affect a person's emotional or functional reaction to a stressor; relatively stable across time and situations.
Optimism	Tendency to have generalized positive expectancies for outcomes.
Information Seeking	Attentional styles that are vigilant (monitoring) versus those that involve avoidance (blunting)
Extracted from Glanz et al, 2002, p. 214.	

- **Favourite Methods**

Surveys, experiments and quasi-experiments are used. Glanz et al (2002) use therapeutically techniques as well to demonstrate this. Techniques such as biofeedback, relaxation and visual imagery are used. Biofeedback aims to develop awareness and control of responses to stressors. Biofeedback is the process of gaining greater awareness of many physiological functions primarily using instruments that provide information on the activity of those same systems, with a goal of being able to manipulate them at will. Some of the processes that can be controlled include brainwaves, muscle tone, skin conductance, heart rate and pain perception.

Furthermore, biofeedback reduces stress and tension in response to everyday situations. Relaxation procedures make use of a constant mental stimulus, passive attitude and a quiet environment. Methods that are employed include relaxation training, hypnosis and yoga. The method used for enhancing one's mood and coping skills is called visual imagery. This can be done for example with visualizing host defenses destroying tumor cells.

- **Scope and Application**

The Transactional Model of Stress and Coping is useful for health education, health promotion and disease prevention. Stress can lead to illness and negative experiences and it does not affect people equally. This therefore shows that coping with stress is an important factor and it affects whether and how people search for medical care and social support and how they believe the advice of the professionals.

- **Example**

In order to comprehend the predictors of lifestyle of a cancer patient, numerous treatments are needed. The treatment should comprise of primary appraisals, secondary appraisals and specific coping strategies. Primary appraisals in this example might be perceptions of risk of recurrence. Secondary appraisals can be self-efficacy in adopting health behaviour recommendations. Certain coping strategies can be employed which include problem-focused coping, emotion-focused coping and meaning-based coping can be used (Glanz et al, 2002). These evaluations may generate useful knowledge on appraisals that facilitate or hinder lifestyle practices. Such knowledge could prove important for interventions such as motivational messages and coping skills training techniques.

2.2.6   Expectancy theory

Expectancy theory proposes that an individual will decide to behave or act in a certain way because they are motivated to select a specific behavior over other behaviors due to what they expect the result of that selected behavior will be. In principle, the stimulation of the behavior selection is influenced by the desirability of the outcome. However, central to the theory is the cognitive process of how one deal with the different motivational elements. This is done before making the ultimate choice. The result is not the only predicting factor in decision making on how to behave.

Expectancy theory is about the mental processes regarding choice, or choosing. It elucidates on the processes that one goes through to make decisions. In the study of organizational behavior, expectancy theory is a motivation theory first proposed by Victor Vroom of the Yale School of Management.

"This theory emphasizes the needs for organizations to relate rewards directly to performance and to ensure that the rewards provided are those rewards deserved and wanted by the recipients."

Vroom (1964) defines motivation as a process governing choices among alternative forms of voluntary activities, a process controlled by the individual. The individual decides on what to do by making use of estimates of how well the expected outcomes of a certain behavior are going to determine the desired outcomes. Motivation is a product of the individual's expectancy that a certain effort will lead to the intended performance, the instrumentality of this performance to achieving a certain result, and the desirability of this result for the individual, known as *valence*.

Key elements.

The Expectancy Theory of Motivation explains the behavioral process of why individuals choose one behavioral option over another. The theory explains that individuals can be motivated towards goals if they believe that: there is a positive correlation between efforts and performance, the outcome of a favorable performance will result in a desirable reward, a reward from a performance will satisfy an important need, and/or the outcome satisfies their need enough to make the effort worthwhile. Three variables are introduced by Vroom within the expectancy theory namely; valence (V), expectancy (E) and instrumentality (I). The three variables are explicitly defined and therefore important on choosing one variable over another: effort-performance expectancy (E>P expectancy), performance-outcome expectancy (P>O expectancy).

Three components of Expectancy theory: Expectancy, Instrumentality, and Valence

| 1. | Expectancy: | Effort | $\rightarrow$ | Performance | (E$\rightarrow$P) |

| 2. | Instrumentality: | Performance | $\rightarrow$ | Outcome | (P$\rightarrow$O) |

3. Valence: V(R)

Expectancy: Effort → Performance (E→P)

Expectancy is the belief that one's effort (E) will result in attainment of desired performance (P) goals. 1. Self-efficacy- the person's belief about their ability to successfully perform a particular behavior. The individual will assess whether they have the required skills or knowledge desired to achieve their goals.

2. Goal difficulty- when goals are set too high or performance expectations that are made too difficult. This will most likely lead to low expectancy. This occurs when the individual believes that their desired results are unattainable.

3. Perceived control - Individuals must believe that some degree of control over the expected outcome. When individuals perceive that the outcome is beyond their ability to influence, expectancy, and thus motivation, is low.

Instrumentality: Performance → Outcome (P→O)

Instrumentality can be described as belief that one will receive a reward if they meet the expected performance mark. This reward may present itself in the form of a pay increase, promotion, recognition or sense of accomplishment. When the reward for varying performances is maintained the same then instrumentality becomes low.

Another way that instrumental outcomes work is commissions. With commissions performance is directly correlated with outcome (how much money is made). If performance is high and many goods are sold the more money the person will make.

The factors predicting an individual's instrumentality for outcomes are trust, control and policies: •Trusting the people who will decide who gets what outcome, based on the performance, •Control of how the decision is made, of who gets what outcome, •Policies understanding of the correlation between performance and outcomes.

Valence V(R)

Valence: the value an individual places on the rewards of an outcome, which is based on their needs, goals, values and Sources of Motivation. Influential factors include one's values, needs, goals, preferences and sources that strengthen their motivation for a particular outcome.

Valence is explained by the degree to which an individual values a given outcome or reward. This can be seen as the expected satisfaction of a specific outcome not to be confused with the actual level of satisfaction.

The valence refers to the value the individual personally places on the rewards. -1 →0→ +1

-1= avoiding the outcome 0 = indifferent to the outcome +1 = welcomes the outcome

There should be high preference to attain the outcome in order for valence to be positive.

Valence is one behavioral alternative, where the decision is measured on the value of the reward. The model below shows the direction of motivation, when behavior is energized:

Motivational Force (MF) = Expectancy x Instrumentality x Valence

Individuals choose the alternative with the highest score of MF when deciding among behavioural alternatives. Expectancy and instrumentality are attitudes (cognitions), whereas valence is rooted in an individual's value system.

Examples of valued outcomes in the workplace include, pay increases and bonuses, promotions, time off, new assignments, recognition, etc. If management can clearly determine what their personnel values, then they have the opportunity to motivate the employees to achieve the best outcomes in the workplace.

Management

The expectancy theory by Victor Vroom is one of the management theories centered on motivation. According to Holdford and Lovelace-Elmore (2001, p. 8), Vroom asserts, "intensity of work effort depends on the perception that an individual's effort will result in a desired outcome".

Managers could use procedures or structures that attach rewards very closely to performance in order to enhance the performance-outcome tie. Managers also need to make sure that the rewards made available are according to merit and are wanted by the recipients. Effort-performance tie could be improved by engaging in training that enhances capabilities

- Emphasizes self-interest in the alignment of rewards with employee's wants.

- Emphasizes the connections among expected behaviors, rewards and organizational goals

Expectancy Theory, as well known work on motivation, is however unpopular among scholars or practitioners outside this discipline.

Computer users[edit]

Lori Baker-Eveleth and Robert Stone, University of Idaho, conducted an empirical study on 154 faculty members' behavioral intentions/responses to use of new software. The antecedents with previous computer experience ease of the system, and administrator support for they are linked to behavioral intentions to use the software through self-efficacy and outcome expectancy. Self-efficacy and outcome expectancy impacts a person's effect and behavior separately. Self-efficacy is the belief a person has that they possess the skills and abilities to successfully accomplish something.

The belief that when an individual completes the specific task, has achieved the desired outcome is referred to as outcome expectancy. Employees receive technology if they believe that the technology will bring value to them. Employees may feel that a technology is not beneficial to them but may, however, use it under instances where they are mandated to. Otherwise, the employee will have to be influenced by other factors to use the technology.

The self-efficacy theory may be used to predict and perceive an employee's belief for making use of computers (Bandura, 1986; Bates & Khasawneh, 2007). This theory tests the integration or relationship between an individual's cognitive state and affective behavioural outcomes (Staples, Hulland, & Higgins, 1998). Motivation, performance, and feelings of failure are examples of self-efficacy theory expectations. The self-efficacy theory has constructs that affect attitudes and intentions to perform which are as follows; past experience or mastery with the

task, vicarious experience performing the task, emotional or physiological arousal regarding the task, and social persuasion to perform the task.

Models of Teacher Expectancy Effects

Jere Brophy and Thomas Good specified a complete model of how teacher expectations could affect students' achievement. Their model posits that teachers' expectations indirectly affect children's achievement: "teacher expectations could also affect student outcomes indirectly by leading to differential teacher treatment of students that would condition student attitudes, expectations, and behavior" (Brophy, 1983, p. 639). The model also stipulates that teachers formulate distinct expectations for their students early in the school year. In the light of these expectations, they conduct themselves differently towards different student leading the students to a better understanding of the teachers' expectations from them. Acceptance of these expectations implies the students willingness to act appropriately to the teacher's expectations. This will in turn have an effect on students' achievement to confirm teacher's initial expectations.

Brophy's 1983 work related to this model, made quite a number of critical observations about teacher expectation effects. Majorly, he debates that most of the beliefs teachers have about students are correct and therefore what they expect of students might reflect on students' actual performance. Consequently, Brophy added that self-fulfilling prophecy bears relatively weak impact on student achievement, changing achievement 5% to 10%, although he did note that such effects usually are negative expectation effects rather than positive effects. Secondly, he postulates that several situational and individual difference factors determine the degree to which the teacher's expectations are self-fulfilling. Brophy, as an example, postulated that expectancy

50

in the lower elementary grades may be many due to the fact that teachers have more one-on-one relations with students to socialize them into their student roles. Teachers delve to whole-class teaching methods in upper elementary grades which may lower the expectation effects. Some evidence supports this claim; expectancy effects in Rosenthal and Jacobson's (1968) study were strongest during the earlier grades. Meta-analysis of data from various teacher expectancy studies by Raudenbush (1984) in which expectancy were stimulated by availing artificial information to teachers on students' intelligence, indicated that expectancy effects were stronger in Grades 1 and 2 than in Grades 3 through Grade 6, especially when the information was given to teachers during the first few weeks of school. These findings are specifically significant because they exhibit a form of the expectancy theory of how teachers develop particular expectations of students, and how they treat the students differently because of those expectations.

Criticisms

The expectancy theory was criticized by Graen (1969) Lawler (1971), Lawler and Porter (1967), and Porter and Lawler (1968) contending that the model was too simplistic in nature and these critics started to adjust the Vroom's model first.

Edward Lawler argues that the simplicity of the expectancy theory is deceptive due to the fact that it presumes that if an employee earns a reward, such as a financial bonus or promotion, enticing enough, employees will increase their productivity to obtain the reward. However, this is only applicable where the employee has strong belief that the reward is valuable to their immediate needs. An employee, for example, may not desire a $2 salary increases if it lands him/her into a higher tax bracket in which her net salary is reduced, which is actually impossible

in the United States with marginal tax brackets. Analogously, an employee may not be very keen on a promotion than comes with a higher status but requiring longer working hours, especially when the employee values ample time with family.

In addition to that, if anyone in the armed forces or security agencies is promoted, there is a must condition for such promotions, that they he/she will be transferred to other locations. If the new place is far from family permanent residence, there might not be any motivations from such promotions, the results will be parallel to the expected because the outcome from the reward will not be beneficial to the recipient.

Lawler's new proposal for expectancy theory is not against Vroom's theory. Lawler debates that the various developments in the expectancy theory since its conception in 1964, means that the expectancy model needs to be updated. Lawler's model is centered on four assumptions which are as follows; 1) whenever there are numerous expected outcomes, individuals tend to have a preference among these outcomes, 2) it is the individual's belief that their action will enable attainment of their desired outcome, 3) any desired outcome was produced by the individual's actions, and 4) the individual's behavior was produced by the preferred outcome and expectation.

Maloney and McFillen looked beyond expectancy and instrumentality and found out that the expectancy theory rationalize the motivations of those individuals who were employed by the construction industry. They, for example, utilized the worker expectancy and instrumentality. Worker expectancy is when managers establish an equal match between the worker and their job. Worker instrumentality is the awareness of the employee to know that increased performance results in the achievement of their goals.

2.2.7 Two-factor theory

The **two-factor theory** (also known as **Herzberg's motivation-hygiene theory** and **dual-factor theory**) states that there are certain factors in the workplace that cause job satisfaction, while a separate set of factors cause dissatisfaction. It was developed by psychologist Frederick Herzberg, who theorized that job satisfaction and job dissatisfaction act independently of each other.

Two factor theory is based upon the assumption that attitudes and their connection with industrial health are connected to Abraham Maslow's theory of motivation. These findings bear significant theoretical and practical impact on attitudes towards administration. Herzberg emphasizes that individuals are not gratified with the satisfaction of their work's lower-order needs, for instance, those needs relating to minimum salary levels and conducive working environment. Preferably, individuals seek satisfaction from higher-level psychological needs relating to achievement, recognition, responsibility, advancement, and the nature of the work itself. This appears to parallel Maslow's theory of a need hierarchy. However, a new dimension has been added to this theory by Herzberg who proposed a two-factor motivation model. The two-factor model is founded on the assumptions that an employee gets satisfaction from one set of job characteristic or incentives whilst another set of characteristics results in dissatisfaction of work. This satisfaction and dissatisfaction are not on a scale where one increases as the other decreases, but are independent of each other. In order to allow improvement on job attitudes and productivity, the theory suggests that administrators should give ample attention to both sets of characteristics and not presume that the increase in satisfaction leads to decrease in dissatisfaction.

Herzberg developed the two factor theory using data generated in Pittsburg from interviews with 203 engineers and accountants because of the growing importance these professions have in the business. Regarding the collection process:

"Briefly, we asked our respondents to describe periods in their lives when they were exceedingly happy and unhappy with their jobs. Each respondent gave as many "sequences of events" as he could that met certain criteria—including a marked change in feeling, a beginning and an end, and contained some substantive description other than feelings and interpretations...

The proposed hypothesis appears verified. The factors on the right that led to satisfaction (achievement, intrinsic interest in the work, responsibility, and advancement) are mostly unipolar; that is, they contribute very little to job dissatisfaction. Conversely, the dis-satisfiers (company policy and administrative practices, supervision, interpersonal relationships, working conditions, and salary) contribute very little to job satisfaction.   "

In making analysis of the interviews, he discovered that the job characteristics associated with what an individual does, that is, to the nature of the work one performs — evidently have the capability to fulfill such needs as achievement, competency, status, personal worth, and self-realization, thus making him happy and satisfied. Importantly, the absence of these fulfilling job characteristics does not seem to cause unhappiness and dissatisfaction. Instead, dissatisfaction emanates from unfavourable evaluations of certain job-related factors like company policies, supervision, technical problems, salary, interpersonal relations on the job, and working

conditions. In order to increase satisfaction on the job, management needs to pay attention to the nature of the work itself — the opportunities it presents for gaining status, assuming responsibility, and for achieving self-realization. When management wants to reduce dissatisfaction, it must give attention to on the job environment — policies, procedures, supervision, and working conditions. If management is equally concerned with both, then managers must give attention to both sets of job factors.

Two-factor theory distinguishes between:

- **Motivators** (e.g. challenging work, recognition, responsibility) that give positive satisfaction, arising from intrinsic conditions of the job itself, such as recognition, achievement, or personal growth, *and*

- **Hygiene factors** (e.g. status, job security, salary, fringe benefits, work conditions) that do not give positive satisfaction or lead to higher motivation, though dissatisfaction results from their absence. The term "hygiene" is used in the sense that these are maintenance factors. These are extrinsic to the work itself, and include aspects such as company policies, supervisory practices, or wages/salary. Herzberg often referred to hygiene factors as "KITA" factors, which is an acronym for "kick in the ass", the process of providing incentives or threat of punishment to make someone do something.

Herzberg postulates that hygiene factors are the ones that result in dissatisfaction among employees in a workplace. These hygiene factors must be eliminated in order to iron out dissatisfaction in the work environment. There are many ways to do this but the most effective ways to reduce dissatisfaction would be to offer reasonable salaries, enhance job security and to create a positive culture in the workplace. Herzberg has ranked the following hygiene factors in

order of importance from highest to lowest: company policy, supervision, employee's relationship with their boss, work conditions, salary, and relationships with peers. Ironing out dissatisfaction is just but a part of what is satisfied by the two factor theory, with increasing satisfaction the other part which can be achieved by improving on motivating factors. Motivation factors are necessary to enhance higher performance from employees. Herzberg also further classified our actions and how and why we do them, for example, if you perform a work related action because you *have* to then that is classed as "movement", but if you perform a work related action because you *want* to then that is classed as "motivation". Herzberg thought it was important to eliminate job dissatisfaction before going onto creating conditions for job satisfaction because it would work against each other.

The two-factory theory posits four possible combinations:

1. High Hygiene + High Motivation: The perfect situation where employees are highly motivated and barely have any complaints.

2. High Hygiene + Low Motivation: Employees have few complaints but are not highly motivated. The job is viewed as a paycheck.

3. Low Hygiene + High Motivation: Employees are motivated but have a lot of complaints. A situations where the job is exciting and challenging but salaries and work conditions are not up to par.

4. Low Hygiene + Low Motivation: This is the worst situation where employees are not motivated and have many complaints.

In contrast with Maslow who had little support evidence for his ideas, Herzberg and others have put forward substantial evidence to support the hygiene theory of motivation, although their work has been criticized on methodological grounds.

Workarounds

Herzberg's theory is centered on internal job factors as important in motivating employees. He designed it to increase job enrichment for employees. Herzberg intended to establish the room for employees to have a say in planning, performing, and evaluating their work. He suggested to do this by:

- Increasing employee autonomy by reducing the control that management has over employees whilst increasing worker accountability and responsibility over their specific task.

- Establishing complete and natural work units where applicable. An example would be allowing employees to create a whole unit or section instead of only allowing them to create part of it.

- Giving interval and consistent feedback directly to employees on their productivity and performance on their jobs.

- Encouraging employees to take on new and challenging tasks and becoming experts at a task.

Validity and criticisms

According to Herzberg, by 1968 his two factor theory had already been contextualized 16 times in various populations including Communist economies. These studies confirmed his original findings concerning intrinsic employee motivation making it popular among job attitudes studies.

The motivator-hygiene idea is still well employed; however, satisfaction and dissatisfaction do not exist on separate scales any more. The separation of scales on the two has been discovered to be a relic of the Critical Incident Technique (CIT) used by Herzberg to record events. Moreover, the theory has been criticized on disallowing room for personal differences which would impact on individual's distinct responses to motivating or hygiene factors.

Numerous behavioural scientists have indicated inadequacies in the need for hierarchy and motivation-hygiene theories. The most fundamental is that both theories have been criticized to contain moderately express assumption that happy and satisfied workers produce more, even though this might not be the case. For example, if playing a better game of golf is the means chosen to satisfy one's need for recognition, then one will find ways to play and think about golf more often, perhaps resulting in a lower output on the job due to a lower amount of focus. Another criticism is that these and other statistical theories are centered on describing average behavior, regardless of the substantial individual differences that may impact one's motivational factors. In the quest for status a person, for example, may take a balanced view and attempt to follow several behavioural ways in an attempt to achieve a combination of personal status objectives.

Put differently, an individual's anticipation that a given behavior will yield a desirable result affects their choice of means and the effort they will commit to those means. In effect, this figure of expectancy exhibits an employee asking themselves the question, "*How much payoff is there for me toward attaining a personal goal while expending so much effort toward the achievement of an assigned organizational objective?*" The expectancy theory by Victor Vroom also provides a framework for motivation based on expectations.

This approach to the study and understanding of motivation would appear to have certain conceptual advantages over other theories: First, unlike Maslow's and Herzberg's theories, it is capable of handling individual differences. Second, its focus is toward the present and the future, in contrast to drive theory, which emphasizes past learning. Third, it specifically correlates behavior to a goal and thus eliminates the problem of assumed relationships, such as between motivation and performance. Fourth, it relates motivation to ability: Performance = Motivation*Ability.

A study by the Gallup Organisation, as reported in the book *First, Break All the Rules: What the World's Greatest Managers Do* by Marcus Buckingham and Curt Coffman, seemingly support Herzbeg's separation of satisfaction and dissatisfaction scales. The book discusses how the study discovered twelve questions that give an outline for establishing high-performing individuals and organizations. These twelve questions align squarely with Herzberg's motivation factors, while hygiene factors were determined to have little effect on motivating high performance.

2.2.8 Maslow's hierarchy of needs
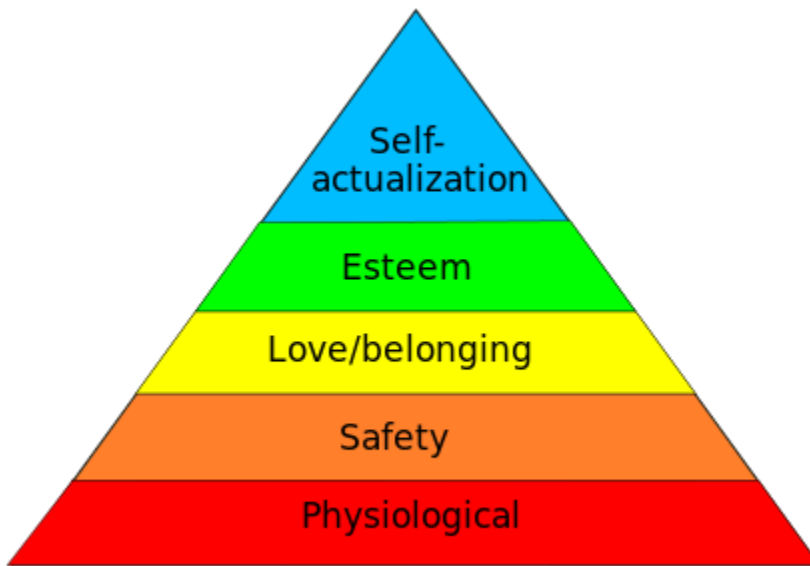
Maslow's hierarchy of needs, represented as a pyramid with the more basic needs at the bottom

In 1943 Abraham Maslow proposed for his hierarchy of needs in his paper entitled "A Theory of Human Motivation" in *Psychological Review*. Maslow then developed the concept to include observations of humans' distinctive inquisitiveness. His conceptions were not consistent with existing theories of human developmental psychology, some which give attention to human stages of growth. Maslow used the terms "physiological", "safety", "belongingness" and "love", "esteem", "self-actualization" and "self-transcendence" to describe the pattern that human motivations generally move through.

Maslow studied what he called exemplary people such as Albert Einstein, Jane Addams, Eleanor Roosevelt, and Frederick Douglass rather than mentally ill or neurotic people, writing that "the study of crippled, stunted, immature, and unhealthy specimens can yield only a cripple

psychology and a cripple philosophy." Maslow studied the healthiest 1% of the college student population.

Maslow's hierarchy of needs was fully detailed in the book he wrote (Maslow, 1954). The hierarchy remains a very popular framework in sociology research, management training and secondary and higher psychology instruction.

2.2.8.1 Hierarchy

Maslow's hierarchy of needs is usually regarded in the pyramid figure with the base representing the most basic needs and the apex representing the self-actualisation need. Even though the pyramid is used to depict the needs levels, Maslow himself never described these needs on a pyramid.

The most bottom layers of the pyramid depict what Maslows termed "deficiency needs" or "d-needs": esteem, friendship and love, security, and physical needs. If these "deficiency needs" are not met – with the exception of the most fundamental (physiological) need – there may not be a physical indication, but the individual will feel anxious and tense. Maslow's theory suggests that the most basic level of needs must be met before the individual will strongly desire (or focus motivation upon) the secondary or higher level needs. Maslow also coined the term "meta-motivation" to describe the motivation of people who go beyond the scope of the basic needs and strive for constant betterment.

The human mind and brains are intricate and have comparable processes running simultaneously, meaning that various motivations for the needs on Maslow's hierarchy can happen at the same time. Maslow expressed explicitly about the needs ranking and their fulfilment in terms such as

"relative," "general," and "primarily." Instead of stating that the individual focuses on a certain need at any given time, Maslow stated that a certain need "dominates" the human organism. Maslow recognized the possibility that motivations for different needs fulfilment could occur at any time in the human mind, but he focused on identifying the basic types of motivation and the order in which they should be met.

2.2.8.2 Physiological needs

These refer to the physical necessities for human continued existence. If these requirements are not met, the human body cannot function properly and will ultimately fail. Physiological needs are deemed to be the utmost vital and should be satisfied first.

Air, water, and food are metabolic requirements for survival in all animals, including humans. Clothing and shelter provide necessary protection from the elements. While upholding that a passable birth rate influences the strength of the human sexual predisposition, sexual competition may also shape said instinct.

2.2.8.3 Safety needs

When physiological needs are met, the individual becomes motivated to satisfy the safety needs. In the absence of physical safety – due to war, natural disaster, family violence, childhood abuse, etc. – people may (re-)experience post-traumatic stress disorder or transgenerational trauma. In the absence of economic safety – due to economic crisis and lack of work opportunities – these safety needs manifest themselves in ways such as a preference for job security, grievance procedures for protecting the individual from unilateral authority, savings accounts, insurance

policies, reasonable disability accommodations, etc. This level is more likely to be found in children because they generally have a greater need to feel safe.

Safety and Security needs include:

- Personal security

- Financial security

- Health and well-being

- Safety net against accidents/illness and their adverse impacts

2.2.8.4 Love and belonging

The fulfilment of the physiological and safety needs invites motivation for the third level needs which are interpersonal and they refer to the sense of belonging. The need is usually strong in childhood and can take precedence over the safety needs as observed of children who are raised by abusive parents. Deficiencies within this level of Maslow's hierarchy – due to hospitalism, neglect, shunning, ostracism, etc. – can impact the individual's ability to form and maintain emotionally significant relationships in general, such as:

- Friendship

- Intimacy

- Family

Maslow postulates that humans need to have the sense of belonging and acceptance in their social affiliations irrespective of the group size. Some large social groups, for example, may include clubs, co-workers, religious groups, professional organizations, sports teams, and gangs.

Some examples of small social connections include family members, intimate partners, mentors, colleagues, and confidants. Humans need to love and be loved – both sexually and non-sexually – by others. Many people become susceptible to loneliness, social anxiety, and clinical depression in the absence of this love or belonging element. This need for belonging may overcome the physiological and security needs, depending on the strength of the peer pressure.

2.2.8.5 Esteem

All humans have a need to be important and worth of respect, thus the needs to have self-esteem and self-respect. Esteem shows the human instinct to be accepted and valued by others. People often engage in a profession or hobby to gain recognition. These routines lead a person to the sense of contribution. Low self-esteem may emanate from disparities during this level in the hierarchy. Respect by others may cause a person with low self-esteem to feel the need for fame and glory. However, fame or glory will not help the person to build their self-esteem until they accept who they are internally. Psychological imbalances such as depression can hinder the person from obtaining a higher level of self-esteem or self-respect.

A great number of people have the need for unchanging self-respect and self-esteem. Maslow pointed out two kinds of esteem needs: a "lower" version and a "higher" version. The "lower" version of esteem is the need for respect from others. This may include a need for status, recognition, fame, prestige, and attention. The "higher" version manifests itself as the need for self-respect. For example, the person may have a need for strength, competence, mastery, self-confidence, independence, and freedom. This "higher" kind overrides the lower one due to the fact that it depends on an inner competence established through experience. Deprivation of these needs may lead to an inferiority complex, weakness, and helplessness.

Maslow states that while he originally thought the needs of humans had strict guidelines, the "hierarchies are interrelated rather than sharply separated". This means that esteem and the subsequent levels are not strictly separated; instead, the levels are closely related.

2.2.8.6 Self-actualization

"What a man can be, he must be." This quotation shapes the foundation of the professed need for self-actualization. This level of need refers to what a person's full potential is and the realization of that potential. Maslow referred to this level as the propensity to achieve everything that one can, to be the best one can be. Individuals may perceive or focus on this need very specifically. One individual may, for example, have significant motivation to become a perfect parent. In another, the desire may be expressed athletically. For others, it may be expressed in paintings, pictures, or inventions. As previously mentioned, Maslow believed that to understand this level of need, the person must not only achieve the previous needs, but master them.

2.2.9 Self-Transcendence

Maslow later studied an additional dimension of needs, whilst opposing his one conception on self-actualization. The self only finds its actualization in giving itself to some higher goal outside oneself, in altruism and spirituality.

2.10 RESEARCH

Upcoming literature seems to confirm the existence of universal human needs, although Maslow's hierarchy is criticized.

Following World War II, the unmet needs of homeless and orphaned children presented difficulties that were often addressed with the help of attachment theory, which was initially based on Maslow and others' developmental psychology work by John Bowlby. Originally dealing primarily with maternal deprivation and concordant losses of essential and primal needs, attachment theory has since been extended to provide explanations of nearly all the human needs in Maslow's hierarchy, from sustenance and mating to group membership and justice.

2.11 CRITICISM

In their explicit evaluation of research centered on Maslow's theory, Wahba and Bridwell gathered little evidence for the classification of needs that Maslow described or for the existence of a definite hierarchy at all.

The way in which the hierarchy is ordered (with self-actualization described as the highest need) has been questioned as being ethnocentric by Geert Hofstede. Maslow's theory unsuccessfully explains the distinction between social and intellectual needs of those brought up in individualistic societies and those raised in collectivist societies. The motivations and desires for those in individualistic societies are more self-centered than those in collectivist societies, focusing on improvement of the self, with self-actualization being the apex of self-improvement. In collectivist societies, the desire for acceptance and belonging will prevail over the desire for freedom and individuality.

The concept of self-actualisation might not commonly communicate Maslow's findings; this motivation signifies the desire to be the best one can possibly endeavor for both self and others. Maslow's idea of self-actualisation may not fully portray the whole capacity of this level; quite

often, when a person is at the level of self-actualization, much of what they accomplish in general may benefit others or, "the greater self".

The concept of sex on the hierarchy of needs has been criticized, in that Maslow positions it among physiological basic needs, making it more individually perceived. For example, sex is grouped with other basic needs which must be met before a person aspire for higher level ones. Some critics view this placement of sex as not regarding the emotional, familial, and evolutionary implications of sex within the community, although others point out that this is true of all of the basic needs.

2.12 CHANGES TO THE HIERARCHY BY CIRCUMSTANCE

The classification by Maslow of higher (self-esteem and self-actualization) and lower order (physiological, safety, and love) needs is not universally accepted and may differ depending on culture to individual differences and availability of resources in the region or geopolitical entity/country.

Exploratory factor analysis (EFA) was done on a thirteen item scale and it indicated two specifically important levels of needs in the US were present during the peacetime of 1993 to 1994: survival (physiological and safety) and psychological (love, self-esteem, and self-actualization). In 1991, a retrograde peacetime measure was instituted and collected during the Persian Gulf War and US citizens were requested to remember the significance of needs from the preceding year. Consequently as before, only two levels of needs were ascertained meaning that people possess the ability and competence to remember and attach value the importance of needs. In the Middle East (Egypt and Saudi Arabia), findings discovered three levels of needs

regarding importance and satisfaction which surfaced during the 1990 retrospective peacetime. The discovered three levels of needs were ascertained to be wholly different from those of the US citizens.

The recorded changes concerning the importance and fulfillment of needs from the retrospective peacetime to the wartime were because of stress varying significantly across cultures (the US vs. the Middle East). The US citizens recognized only one level of needs because they regard all needs to be equally important. In the US during the war, three levels of needs needed fulfilment and these were: physiological needs, safety needs, and psychological needs (social, self-esteem, and self-actualization). This is because the fulfillment of physiological needs and the safety needs which would be combined into one needs bracket during peacetime, are separated into two independent needs during the war. In the Middle East, however, the satisfaction of needs changed from three levels to two during wartime.

A 1981 study concentrated on how Maslow's hierarchy of needs might be influenced by people's age groups. Participants of different ages were requested to rank a set number of statements from most important to least important. The researchers discovered that young children had significantly higher physical need scores than the other groups; the love need increased from childhood to young adulthood; adolescents scored the highest on the esteem need; young adults had the highest self-actualization level; and senior citizens had the highest level of security even though it was needed by all age groups similarly. The findings geared the researchers to debate that the Maslow's hierarchy may be inadequate a theory to mode the developmental sequence since the sequence of the love need and the self-esteem need should be reversed according to age.

2.13 Engagement Theory

The concept of engagement emerged in recent years as a key to effective work and learning. Engagement occurs when people undertake tasks related to their competence, learn continuously, immerse themselves and persist because of the value they attribute to the work.

The concept and theory of engagement has been developed lately as an important idea in work and learning. The highlights of the concept comprise the following:

- Self-determination: one chooses to engage; assignment invalidates the process

- Direct participation is essential: observation does not suffice

- Activity is assumed (it is not the goal), as is some measure of interest or pleasure

- A delicate balance between sufficient competence and expertise to engage with components of challenge is important

- An open-ended situation is key; collaborative problem-solving is ideal

- Routine work is not engaging

- Persistence is characteristic

- Coercion destroys engagement while communication regarding intent and purpose is fundamental

Engagement is a process and ongoing activity, not an event. Learning and involvement are its determining characteristics. Davenport and Prusak (1997) employed the concept to information management by utilizing a sliding scale of engagement starting out with passive observation, moving to discussion, to presentation or teaching, and finally to use in practice. This instrument

is important to handle information overload, an ongoing problem, and complements the activity-engagement approach.

Engagement is very similar to intrinsic motivation (IM). According to Kenneth Thomas (2009) the IM basics comprise of meaningfulness, choice, competence, and progress. However, rewards continue to be instrumental in influencing IM, as does a focus on leadership qualities to enhance motivation. There continues to be an inevitable drive on the part of the "motivation industry" to presuppose that it can be taught and managed. The assumption here is that engagement cannot be "made to happen." The individual, be it worker or student, is still responsible to be creative. Engagement is a "bottom up," grassroots phenomenon that cannot be directed from above.

Engaged agents make the choice to take part in the belief that can influence the decision on subject and method. Engagement is an ongoing process rather than episodic with learning and knowledge enhancement and skill as its goals. Knowledge, skill, and engagement rest in an individual eventually; they cannot be coerced or induced to happen. The goal of motivation is to instigate some pre-determined activity. Engagement gives meaning to the participant whilst motivation attempts to induce the participant to accomplish the motivator's goal. In other words motivation amounts to manipulation (which can be quite sophisticated) while engagement is about the agent's goals of learning, growth, and improved knowledge and skills. The engagement motif has an important uniqueness in that it begins and ends with the individual who chooses to engage, for whatever reason. It is not something that can be initiated or managed by anyone other than the active agent.

In summary engagement takes place when an individual or group accepts to carry out tasks appropriate for their interests and competence. The individuals learn about the tasks

continuously, participate liberally with colleagues, immerse themselves deeply, and continue the tasks with persistence and commitment because of the value they attribute to the work.

2.13 RESEARCH LITERATURE

2.13.1 Occupational Stress and Burnout among Police Officers in South Africa

Occupational stress is stress involving the work that an individual performs. According to the current World Health Organization's (WHO) definition, occupational or work-related stress "is the response an employee have when presented with work demands and pressures that he or she can't cope with due to limited abilities or knowledge.

Prior research on occupational stress often suggests that police officers/personnel face a work environment that is commonly depicted as one of the most stressful occupations because police officers can encounter violent criminals and crime scenes during the course of their daily work (Alkus and Padesky, 1983; Anshel, 2000; Violanti and Aron, 1994). Additionally, the police officers possess a great amount of discretion that requires them to make tough decisions about arresting certain individuals or even using deadly force (Crank and Caldero, 1991). Furthermore, the nature of the law enforcement organization that govern police officers is often identified as a primary source of work related stress in that it is characterized by impersonal rules and a rigid chain of command (Violanti and Aron, 1993). The consequences of occupational or job related stress can eventually cause sickness, mood changes, and sleep disturbances in the short-term and perhaps to cardiovascular disease and psychological disorders in the long-term. Literature on the police profession has that serious levels of stress and associated emotional burnout among police officers can negatively affect job performance (Goodman, 1990), increase alcohol use (Violanti

et al., 1985), and severely diminishes the ability to relate with others (Kop *et al.*, 1999; McCreedy, 1974).

The first major source of occupational stress identified in South African Police Service work pertains to the unique work environment faced by police officers. Referred to as inherent police work factors, these stressors involve elements of danger that are unique to the policing profession (Violanti and Aron, 1993). The danger associated with police work is often the focus of various surveys that ask police officers to identify stressors and potential sources of emotional burnout (Lazarus, 1981). For example, Violanti and Aron (1995) found that among a sample of full time sworn police officers in the state of New York, killing someone in the line of duty was the greatest stressor faced by the respondents. These findings are similar to those found by Spielberger *et al.* (1981). Violanti and Aron (1995) found that the second greatest stressor identified by officers was experiencing a fellow officer being killed. Furthermore, Dowler (2005) found that officers who experience frequent physical contact with suspects report heightened levels of emotional burnout. Certain instances relating to in-built police work factors include responding to a felony in progress or seeing a gruesome crime scene (Violanti and Aron, 1993).

Thankfully, many of the afore-mentioned incidents, like killing someone in the line of duty, and/or experiencing a fellow officer being killed, are not common experiences for police officers (Bureau of Justice Statistics, 2001). In this light, the conceivable occurrence of these dramatic events builds an environment in which heightened occupational stress and emotional burnout are distinct possibilities (Cullen *et al.*, 1983). It is for this cause that violent and unpredictable incidents are often considered to be the primary sources of occupational stress and emotional burnout among police officers (He *et al.*, 2002). The officer's gender may also influence how

these dangerous events affect occupational stress and emotional burnout. For example, Goolkasian *et al.* (1985) discussed how female officers often feel additional pressure from their male colleagues to prove themselves on the job.

The next source of occupational stress among police officers involves the bureaucratic characteristics of the South African Police Service itself. Symonds (1970) first made the distinction between Occupational stress that is caused by the nature of police work and occupational stress that is due to the characteristics of the South African Police Service. Violanti and Aron (1993) expanded upon this distinction by defining organizational stressors as those events precipitated by the South African Police Service that are troubling or bothersome to members of the organization. For example, the bureaucratic nature of police organizations may make it difficult for police officers to feel that they have sufficient input about changing the policies or procedures that they view as problematic or unfair (Coman and Evans, 1991). Other specific stressors found in the police organization include conflicting policies, poor supervision, and the potential for disciplinary actions to be taken against a police officer (Kroes, 1985). The overall tension that exists between the great amount of discretion given to police officers and the seemingly tight and endless litany of rules held by the police organization creates a work environment conducive to occupational stress and emotional burnout (He *et al.*, 2002). The bureaucratic nature of the department may also affect occupational stress and emotional burnout differently among male and female officers. Ellison and Genz (1983), for example found that some characteristics of the work organization were especially stressful for female officers.

Prior research has often focused on the significant part played by peer support and trust among fellow police officers and supervisors in ironing out occupational stress and emotional burnout in

police work (Dignam *et al.*, 1986; Morris *et al.*, 1999). Generally speaking, support that originates within the work environment has been found to reduce negative outcomes, such as stress (Etzion, 1984). Support from within the organization may take on a greater level of salience in the realm of policing since police officers depend on other fellow police officers to ensure their lives and safety (Graf, 1986). Consequently, police officers may feel that the only people capable of understanding the strain and stress of police work may be their fellow officers. In the light of this cause, compelling amounts of identified peer support and trust among police officers should facilitate cushion the amount of occupational stress and emotional burnout experienced. Empirical studies have confirmed this claim, stating that officers who express a high level of peer support report lower levels of stress (LaRocco *et al.*, 1980; Morash *et al.*, 2006). In regards to gender, Kirk-Brown *et al.* (1999) argued that female police officers may be more vulnerable to a lack of social support than their male counterparts due to their status as a minority group and the overall masculine nature of police work (see also Walker, 1985).

Another source that is directly linked with occupational stress is the choice of various coping strategies employed by male and female police officers in order to reduce their levels of occupational stress or emotional burnout. Many scholars confirm that only the planned employment of a cognitive or a behavioral strategy aimed at reducing the presupposed levels of occupational stress or strengthen a person's ability to deal with occupational stress reflects the coping process (Anshel, 2000; Evans *et al.*, 1993). Individuals often choose to adopt two distinctively different approaches in an effort to cope with feelings of occupational stress or emotional burnout (Burke, 1993). The first approach comprises of positive coping mechanisms channeled to improve associations with family members or develop a set of activities handle stressful events at work. Commonly utilized positive coping mechanisms may also include

74

increased communication with a spouse or relative, exercise, or spiritual support through religion. The second approach to reduce stress is deciding on one or more destructive coping strategies. Exceedingly stressed or burned out individuals, for example, may distance themselves from friends or family members, increase smoking, or increase consumption of alcohol. Earlier work on police officer stress has indicated that alcohol is a commonly used coping mechanism that is related to the "demands" of policing (Kroes *et al.*, 1974; Violanti *et al.*, 1985).

2.14 STRESS MODELS

Occupational stress is not a result of a single variable but it emanates from complex interactions between a large system of interrelated variables. It is useful to distinguish a stressful job conditions or stressors from an individual's reactions or strains. Strains can be mental, physical or emotional. Occupational stress can occur when there is incongruity between the demands of the environment or workplace and an individual's ability to carry out and complete the job demands. The diathesis-stress model is a psychological theory that aims to make clear of behaviours as a susceptibility burden together with occupational stress from life experiences.

A stressor often leads the body to have a physiological reaction that can strain an individual physically as well as mentally. Excessive workload, isolation, extensive hours worked, toxic work environments, lack of autonomy, difficult relationships among co-workers and management, management bullying, harassment and lack of opportunities or motivation to advancement in one's skill level have been regarded as the factors that contributes to occupational stress. A concern with stress research is that studies often neglect to consider the broader organizational context.

2.14.1 Categories

Categories associated with occupational stress are

- factors unique to the job,

- career development ,

- role in the organization,

- interpersonal work relationships,

- organisational structure/climate.

From the categories listed above there is evidence that occupational stress occurs when conflict arises between the job demands and the employee itself. If the conflict is not handled properly, the occupational stress can become distress.

The first category is concerned with the employee's ability to cope with factors related to the job such as the specific hours worked, the level of productive rate expected from the employee, the physical environment, as well as the expectancy of the work desired by management. For instance it is regarded that night shift to most employees is a stressful situation as compared to day shift and has a negative impact on employees health. Research has reported that night shift results in workers experiencing psycho-physiological dysfunctions and heart diseases. Such conditions have negative effects on employees and results in occupational stress. Extreme stress levels affect employee's competence levels.

The role that an individual occupies in the organisation is in second category and is regarded as a stressor. This is concerned with the hierarchical rank occupied by a particular employee within the organization. Employees who take management roles are entitled to oversee the overall

functioning of the organization and this causes potential distress to such employees as they are often required to perform simultaneous tasks. The employee is having supervisory responsibilities.

The third category is concerned with career development opportunities. This category contains factors such as job security, promotion opportunities. Such factors are sources of occupational stress as globalisation and technology is changing business market hence employees become scared and have to keep up to date with changes in the environment they operate in.

Interpersonal relationships within the workplace occupy the fourth category of occupational stress. The workplace is an environment where employees need to communicate and interact with one another in order for the organisation to be successful. Interpersonal relationships either developed in the workplace or are developing can be problematic or positive. Common stressors involved with interpersonal relationships include factors such as harassment, discrimination, biased opinions, hearsay, and other derogatory remarks.

The organizational climate or structure occupies the last category of workplace stress. This category encompasses factors such as the overall communication, management style, and participation among groups of employees. In essence, the resultant influence of the high participation rate, collaborative planning, and equally dispersed responsibilities provides a positive effect on occupational stress reduction, improved work performance, job satisfaction, and decreased psychosomatic disorders.

2.14.2 Prevalence

Distress is prevalent in the workplace and it is one costly problem. Distress is defined as unhappiness or pain, a suffering that affects the mind or body, a very difficult situation in which you do not have enough money or food. A number of employees report high levels of stress. Twenty-five percent of employees regard their jobs as the major determinant of stress in their lives. Three quarters of the employees believe that there is more on-the-job stress than a generation ago. Evidence also highlights that distress is the major cause of turnover in organizations and this has led to organisations investing in practices to alleviate stress among its employees. With continued distress in the workplace, employees will develop psychological and physiological dysfunctions and decreased motivation in excelling in their position.

A survey report released by the Kenexa Research Institute reported that females suffer more workplace distress than males. According to the survey, women's occupying supervisory roles encounter more stress than other levels of jobs. Employees in service and production jobs even males encounter less stress as compared to females in supervisory roles. Similarly males in middle and upper management face little stress as compared to females occupying the same role.

2.15 STRESS-RELATED DISORDERS

Stress-related disorders encompass a broad array of conditions which includes psychological disorders, emotional strain, maladaptive behaviours and cognitive impairment. Psychological disorders include factors such as depression, anxiety and post-traumatic stress disorder. Emotional strain involves factors such as dissatisfaction, fatigue and tension. Maladaptive behaviours include aggression and substance abuse among other factors. Cognitive impairment encompasses factors such concentration and memory problems. These conditions lead to poor

work performance, higher absenteeism, less work productivity or even injury and eventually turnover of employees. Job stress can also result in various biological reactions such as cardiovascular disease that compromise employee's health and case result in death.

2.16 GENDER

Men and women are exposed to many of the same stressors. From the different categories of stressors listed above it is reported that women may be more sensitive to interpersonal conflict while men might be more sensitive to things that waste time and effort and women are more susceptible to experience more psychological distress and strain as compared to males. A new study found out that when men are under stress they show angry faces and they seem to be disengaged. Desmarais and Alksnis (2005) suggested two explanations why females experience more distress compared to males. The first reason is that males and females differ in their awareness of negative feelings thus leading women to express and report strains, whereas men deny and inhibit such feelings. The second reason is that the demands to balance work and family result in more overall stressors for women, that leads to increased strain.

2.17 FACTORS

Female employees as faced with the responsibilities of combining housework, childcare, shopping and cooking with the responsibilities and demands of the job. They have to balance the family demands and the job demands within limited time which therefore becomes a stressful situation for such employees. 60% of women who have children under the age six and have an outside job are more prone to work family conflict which results in strain especially for most single mothers and other married mothers.

2.18 HEALTH AND HEALTHCARE UTILIZATION

The problems that employees encounter at work results in more health complaints compared to financial problems or family problems. Employees experience more stress that results in increased chances of having cardiovascular diseases when they engage in psychologically demanding jobs that allow employees little control over the work process. Cardiovascular disease refers to any disease that affects the cardiovascular system. This includes cardiac diseases, vascular diseases to the brain and the kidney and peripheral arterial disease. The major causes of cardiovascular disease have been reported to be atherosclerosis and/or hypertension. Most back and upper-extremity musculoskeletal disorders have been reported by the National Institute for Occupational Safety and Health and many other organizations as a result of job stress. Musculoskeletal disorders (MSDs) involves injuries or pain to body's joints, ligaments, muscles, nerves, tendons on structures that support limbs, neck and back. MSDs are deteriorating diseases and inflammatory conditions that lead to pain and impair normal activities. They have an impact on various human body parts including upper and lower back, neck, shoulders and extremities parts such as arms, legs, feet, and hands.

Persistent and prominent stress is related to increases in health service usage. Workers who report experiencing stress at work also show excessive health care utilization. In a 1998 study of 46,000 workers, those with high levels of stress indicated approximately 50% more health care costs as compared to "low risk" workers. The difference increased to almost 150%, indicating an increase of over $1,700 per person annually, for workers reporting high levels of both stress and depression. The combination of both depression and stress is a health hazard to employees. Periods of disability due to job stress tend to be much longer than disability periods for other occupational injuries and illnesses.

The physiological reactions that individuals have towards stress can have consequences for health over time. Researchers have been conducting studies on how stress affects the cardiovascular system and how work related stress result in hypertension and coronary artery disease. In American workplace such diseases are found to be prevalent together with other stress-induced illnesses. There are four main physiological reactions to stress:

- Blood is shunted to the brain and large muscle groups, and away from extremities, skin, and organs that are not currently serving the body.

- An area near the brain stem, known as the reticular activating system, goes to work, causing a state of keen alertness as well as sharpening of hearing and vision.

- Fatty acids and glucose energy providing compounds are released into the bloodstream.

- The immune and the digestive system are temporarily shut down.

2.19 CAUSES

The interaction of an employee with the conditions of work results in job stress. Various thoughts and ideologies have been placed on the importance of worker characteristics versus working conditions as the principal cause of job stress. These differing viewpoints provide different ways on how to prevent stress at work. A person's personality or individual characteristics and his or her ability to cope with stress are important in determining if an individual will experience stress from a certain job. Job stress differs from one person to another. In other words, what is stressful for one person may not be stressful on another person. This viewpoint underlies prevention strategies that focus on workers and ways to help them cope with demanding job conditions.

Stress is regarded as the interaction an individuals have with the burdens and demands of the external environment in which he or she is exposed to. Anything that poses a challenge or a threat to an individual's well-being is a stress. To some individuals stress gets people going. Without experiencing stress in some part of life lives would be boring and pointless. However excessive experiences to stress have negative consequences on individual's mental and physical health.

Stress emanates from the work demands that exceed the individuals coping ability, disturbing the psychological equilibrium of trying to balance job demands and coping ability. When employees perceive a situation to be difficult to handle and as a threat to their well-being stress will be experienced. Stress is usually a result of external forces that contribute to the employee's ability to adapt to the demands of the environment. These external forces include factors such as management style, night shift, and work overload. The ever-changing technological society individuals are exposed to can result in stress on some employees as they may have inadequate skills and resources to cope with the changing environment.

Individual differences play a part in influencing the level at which employees experience stress together with certain working conditions such much noise or heat. Emphasis has been placed on working conditions as the major cause of job stress and job redesign as the principal strategy to prevent it. Large surveys of working conditions, including conditions recognized as risk factors for job stress, were conducted in member states of the European Union in 1990, 1995, and 2000. Results showed a time trend suggesting an increase in work intensity.

 In 1990, the percentage of workers reporting that they worked at high speeds at least one-quarter of their working time was 48%, increasing to 54% in 1995 and to 56% in 2000. Likewise, half

the number of workers indicated to be working in pursuit of nearing due dates at least a quarter of their working time in 1990, increasing to 56% in 1995 and 60% in 2000. However, there was absence of significant change realised from 1995–2000 (data not collected in 1990) in the ratio of workers indicating ample time to finish their jobs.

A significant number of employees in America work very long hours. In 2000 more than 26% of men and more than 11% of women reported that they work 50 hours per week or more. These percentages represent a significant increase over the previous three decades, especially for women. They have been significant increases in the number of hours worked by women as well increased works weeks by man as well a significant increase in the combined working hours among working couples with young children (Primm, 2005).

The status one holds in the workplace affect the level of stress one encounters at work. Regardless of the status that an individual's holds all employees in the organisation experience stress. Workplace stress affects employees of all categories including those with little influence and those who make major decisions in the organisation. It is reported however that different employees experience levels of stress as less powerful employees those who have little control over their work are likely to experience more stress than powerful workers. Managers as well as other kinds of workers are vulnerable to work overload that can result in stress (Primm, 2005).

Economic factors that employees are experiencing have been associated with increased stress for employees. Researchers have highlighted that technological revolutions have made organisations more efficient and effective than ever before. This however has negative consequences on employees as they are faced with higher expectations and greater competition thus putting more stress on the employees (Primm, 2005).

Many economic factors may have notable effect on stress in the workplace including:

- Pressure from investors, who can promptly retract their investments.

- The lack of trade and professional unions in the workplace.

- Inter-company competition resulting from the efforts of companies to compete globally

- The readiness of companies to quickly dismiss workers to cope with changing business environments.

Bullying is a predictor of stress in the workplace and can be classified into five, thus;

- Threat to profession status

- Threat to personal status

- Isolation

- Excess Work

- Destabilization i.e. lack of credit for work, meaningless tasks etc.

This in effect can create a hostile work environment for the employees that, which in turn, can affect their work ethic and contribution to the organization.

2.19.1 Sexual harassment as a cause of workplace stress

Sexual harassment has been regarded as another factor contributing to stress in the workplace. It is believed that females are subjected to sexual harassment than males. Sexual harassment has been regarded as the bullying or coercion of a sexual nature, sexual advances or the unwelcome or inappropriate promise of rewards in exchange for sexual favours. Sexual harassment is illegal. The CCMA states that "it is unlawful to harass a person either an applicant or employee with

regards to his or her sex." Harassment can include "sexual harassment" or unwelcome sexual advances, requests for sexual favours, and other verbal or physical harassment of a sexual nature.

Sexual harassment has a negative impact on employee's psychological well-being. Studies have found out that level of harassment at workplaces result in differences in performance of work. Employees who are subjected to high levels of harassment result in lower performances and those with little or no harassment have better performance levels. Female employees who experience sexual harassment in the workplace perform poorly at work.

2.20 EFFECTS

Excessive stress interferes with productivity and performance of an individual and it affects the physical and emotional health of an employee. Three types of strain are associated with stressful working conditions. There is behavioural which includes absenteeism or poor performance. The second strain is physical which includes headaches or coronary heart disease. The last strain is psychological which includes anxiety or depressed mood. The workplace creates physical stress as a result of the noise, lack of privacy, poor lighting, poor ventilation, poor temperature control or inadequate sanitary facilities. Organisational structures where there is organizational confusion, an excessively authoritarian structure and a crisis-centered managerial style result in psychologically stress.

Fatigue, headache, upset stomach, muscular aches and pains, chronic mild illness, sleep disturbances and eating disorders have been regarded as the physical symptoms that may result from occupational stress. The psychological and behavioural problems that may arise from work stress include anxiety, irritability, alcohol and drug use, feeling powerless and low morale.

Occupational stress has serious organisational effects such as absenteeism, poor decision making, lack of creativity, accidents, organizational breakdown or even sabotage, employees can even resign. Chronic health problems that include strokes can occur if employees are exposed to prolonged stressors in the workplace. An examination of the physical and psychological effects of workplace stress conducted on female blue collar employees of a microelectronics facility found out that job-related conflicts are associated with depressive symptoms, severe headaches, fatigue, rashes, and other multiple symptoms, of which most of them are dangerous to the mankind. Stroke was found to be the outcome of stress among the Japanese population as a result of the strain employees encounter from the combination of high job demand and low job control. Stroke comes together with its negative impacts such as high blood pressure and immune system dysfunction. Burnout will result from the increased exposure to stressful situations or environment.

The effect that job stress does have on inveterate illnesses is not easy to determine since these illnesses evolve over a lengthy passage of time and are caused by other things besides stress. However there is strong evidence supporting that stress is significant in the evolvement of several types of chronic health problems such as cardiovascular disease, musculoskeletal disorders and psychological disorders.

2.21 PREVENTION

One best way to prevent stress is a combination of organizational change and stress management. Stress management is concerned with the wide spectrum of techniques and psychotherapies that are aimed at controlling an individual's level of stress, especially chronic stress. These are practices aimed at improving everyday functioning of an employee. Stress produces various

symptoms which differ according to persons, conditions, and severity. The most common symptoms are physical health decline and depression. In modern society stress management is regarded as one of the means to a happy and successful life. Despite life providing numerous demands and challenges that can be difficult for employees to handle, stress management has been regarded as a means to manage anxiety and maintain overall employee well-being.

Strategies must be employed by both the organisation and employees at organizational and individual levels so as to manage stress. Job procedure modifications and employee assistance programs fall under organizational. Individual level strategies include taking vacation. Understanding the normal workload and schedules of the job helps employees identify if the job fits the people conducting the work.

Changing an organisation to prevent occupational stress:

- Design jobs that give value, motivation and opportunities for workers to use their skills.
- Explicitly outline workers' roles and responsibilities.
- Managers should monitor the amount of work given out to the employees. In training sessions employees should also be alerted and taught of stress awareness.
- Give workers opportunities to participate in decisions and actions affecting their jobs.
- Improve communications-reduce uncertainty about career development and future employment prospects.
- Provide opportunities for social interaction among workers.
- Establish work schedules that are compatible with demands and responsibilities outside the job.

- Combat workplace discrimination (based on race, gender, national origin, religion or language).

- Bringing in an objective outsider such as a consultant to suggest a fresh approach to persistent problems.

- Introducing a participative leadership style to involve as many subordinates as possible to resolve stress-producing problems.

- Encourage work-life balance through family-friendly benefits and policies

Several studies were carried out by the St. Paul Fire and Marine Insurance Company centred on the effects of stress prevention programs in hospital settings. The program activities include educating both employees and management on occupational stress. The second program involves changes in organisational policies and procedures to reduce organizational sources of occupational stress. The institutionalisation of employee assistance programs has been indicated as a third program that can be used to prevent occupational stress. It is believed that with increased practices to prevent occupational stress chronic illnesses will be reduced.

Telecommuting has been regarded as one other way organizations can use to reduce stress for their workers. Telecommuting is an alternative work arrangement where employees perform the tasks at home or elsewhere other the work place that are normally performed at the workplace through the use of electronic media to interact with members inside and outside the organisation. It is a work arrangement where the employee works outside the office usually from home or hotels especially when someone is on a vacation. Instead of an employee coming to work he or she can perform organisational duties while at home through internet, telephones and mails.

Telecommuting is becoming important because it enables employees to have more control over how they do their work. Telecommuters are reported to be satisfied in their jobs and have hardly any desire to look for new jobs. Employees working from home were reported not to have a lot of stress, improved work/life balance and higher performance rating by their managers.

Stress is a complex process that consists of three major mechanisms which are sources of stress that are encountered in the work environment, the discernment and assessment of a specific stressor by an employee, and the emotional reactions that are a response to perceiving a stressor as threatening (Spielberger, Vagg&Wasala, 2003).Spielberger"s State-Trait (ST) model of occupational stress stresses on the intensity and frequency of occurrence of two major categories of stressors.

Stress resulting from work is described as the mind-body arousal resulting from physical or psychological job demands. When a stressor is perceived as threatening a person reacts with anger and anxiety and this result in the activation of autonomic nervous system. Stressors are situations that are perceived as a threat to one's wellbeing or position in life when the challenge of dealing with such threat exceeds the person's abilities and available means to solve it. When a stressor is encountered, stress response in the body is triggered and a series of physiological changes take place that allow the person to fight or run.

 If the reaction continues to be severe, the resulting physical and psychological strain may cause adverse behavioural consequences (Spielberger et al., 2003). They are various factors that employees take into consideration when they are judging their work environment. Employees judge their work environment according to how frequently and severely certain job demands and

pressure are and the level of support provided by other supervisors and co-employees. They also judge the environment with the support they get from the management, as well as organisational policies and procedures. In human relations approach, managers realise that employees are affected not only by their wages, but also by certain social and psychological factors such as, working conditions, relationship with other workers and management, style of leadership and support from managers and involving employees in decision making. If management take these into consideration, they will result in less stress. The STP model has identified two categories of occupational stressors in policing (Alexander, Walker, Innnes& Irving, 1993; Biggam, Powers, McDonald, Carcary&Moodie, 1997; Brown & Campbell, 1990, 1994). Organisational issues of police work, including a lack of confidence in management, as evidenced by the corruption case of former police chief BhekiCele, the ineffective internal communication and persistent organisational change represents the first category of significant stressors. The physical threat, force, exposure to danger, facing the unknown and shift work makes the second category which all falls under the broad category known as nature of police work.In the police service the organisational aspect has been identified as the most prominent one (Crank, &Caldero, 1991; Crowe &Stradling, 1993; Evans &Coman, 1993; Hart, Wearing &Headey, 1995; Kop &Euwema, 2001).

A study was conducted by (Gulle et al. 1998) to explore the inherent and organisational stress in the South African Police Service. The study interviewed 91 Police officers within the 21 to 53 age range. The study discovered that unlike the American stressors, comes with the nature of the job, stressors among South African police officers are organisationally-oriented. Factors like the management style, working conditions, employees being involved in decision making affect

employees in the South African Police service. South African sample of police employees indicate higher stress levels than the USA sample (Violanti& Aron, 1994). The SAPS ways of operations pave way for stress, adding to the inevitable pressure that comes with the nature of police work. As mentioned earlier police work is associated with high strain. In the South African Police service the paperwork, insufficient person power, fellow officers not doing their jobs, inadequate or poor quality equipment and inadequate salaries were cited among the stressors which occur most frequently (Violanti& Aron, 1994). Basson (2005) reported that police officers are faced with family violence, child abuse cases and sexual offences which are more stressful. In most police stations there is a shortage of staff which in turn increases the levels of stress among the work force. The average number of criminal cases a detective must investigate is 18 however most detectives are investigating close to 32 and 50 cases due to shortages of staff. This creates more job demands for police detectives thus increased stress (Pienaar&Rothmann, 2006). A study conducted by Martocchio and O'Leary (1989) to determine if there is a relationship between gender and occupational stress concluded that there were no differences in stress experienced by males and females. Various studies have reported that officers have indicated several causes of stress related to work and the position an employee holds (Brown & Campbell, 1990; Brown, Cooper & Kirkcaldy, 1996; Kaufmann &Beehr, 1989), race and ethnicity (Violanti& Aron, 1995), and gender (Wexler & Logan, 1983). According to Cooper and Bramwell (1992) possible sources of stress differ across different sub-cultures and status groups of employees within the same organisation. A study by Terry and Calan (1997) indicated that employees who hold top ranks in the organisation encounter intense levels of perceived stress.

According to Pienaar and Rothmann (2006) in their study on stress among 2145 police officers, race is a significant predictor of occupational stress in the SAPS. All the race groups encounter comparably higher levels of stress due to lack of support e.g. salary, promotion and recognition (compared to other occupational stressors), however, after the first democratic elections in South Africa, Whites and Indians experience relatively higher stress levels than Blacks and Coloureds. The results are reported to have been influenced by the implementation of police equity in the police. Rank was reported to have also impacted significantly on the experience of occupational stress in the police. Constables, in relation to other police positions, experienced stress less frequently as a result of job demands and lack of support and also experienced stress less frequently as a result of job demands, crime-related stressors and lack of support. In addition, the findings indicated that constables were not exposed to the same demands and lack of support as intense and severe as other police officers. Gender was reported to substantially influence occupational stress, with females experiencing crime-related stressors less intensely and frequently than their male counter-parts. Pienaar and Rothmann (2006) contends that "the fact that females are less operationally involved also explains why they experienced crime-related stressors less intensely and frequently".

According to Patterson (2001), there is a link between various demographic variables and law enforcement work stress including age, education, gender, race, rank, section-assignment, and years of police experience. Violanti and Aron (1995) have also found that race, ethnicity, and gender are not associated with experiences of law enforcement work stress while Ayres and Flanagan (1992) found that having a college education e.g. a degree or a diploma, resulted in greater dissatisfaction with the bureaucratic organisation of law enforcement agencies. However

Worden (1990) did not find any empirical support for the latter and the effects of college education remain inconclusive. Brown and Campbell (1990) found that sergeants reported a higher number of work events compared with other ranks and experienced greater perceptions of stress than did patrol officers (Savery, Soutar & Weaver, 1993). Patrol officers are having a lesser job demands than sergeants.

The years of influence seemed to be inversely influenced by the perception of work stress (Violanti, 1983) such that officers with many years of experience lower levels of perceived work stress (Patterson, 1992). In addition to the stressful work events and situations experienced in law enforcement such as traumatic incidents, Alexander (1999) stated that some officers encountered extra environmental factors (sexual harassment, discrimination) because of their gender or race, which ultimately impacted on cultural differences in coping and social support. Studies which have been conducted among non-police samples indicate that gender differences are associated with the number and types of traumatic incidents as well as psychological reactions to such incidents (Kessler, Sonnega, Bromet, Hughes & Nelson, 1995; Vrana & Lauterbach, 1994). Martin, McKean, and Veltkamp (1986) reported that women to have been open to more traumatic incidents such as natural disasters, suicide, child and spousal abuse than did their male counterparts. Their suggestion was that maybe women officers were open to such incidents and not necessarily prone to stressful events and situations, and that gender differences in psychological responses are dependent on the degree of identification with the victim, frequency of exposure to victims, and coping styles. According to Edwards and Holden (2003) other interpretations of suicidal behaviour in women focus on suicide as a coping response.

Literature has also highlighted that traditional gender socialisation may not allow women to have liberty in choosing healthy, active coping strategies when they face difficult situations (Stillion& McDowell, 1996). According to Wilson (1981) individuals who have few resources have attempted to commit suicide as a means of coping with their stress. Wilson suggests that female officers have fewer resources than do men in terms of economic power, autonomy, self-concept, and power over others. Female officers may attempt suicide in order to communicate to those around them of their difficulty in coping as caused by the inadequacy of sources of influence. Patterson (2001) carried out a research to analyse the impact demographic features has on exposure to traumatic events among police officers and focused on family violence, child abuse, and situations requiring the use of force as frequently occurring incidents.

The most common occurring distressing events for police officers were the disturbing events that would have occurred involving their family and children, followed by those situations that would have exposed police officers and other individuals to risk of being fatally injured or killed in primarily non-family related situations as the case in South Africa. These results were compared to those obtained by Violanti and Aron"s (1994) in which officers ranked situations such as battered children, high speed car chases, use of force, and aggressive crowds as among the most stressful situations. The results of Patterson's (2001) study suggested that these incidents were disturbing and carried with them sources of stress for the police officers. It was also found that age, gender, race, military service experience and section assignment caused fewer traumatic incidents to occur. Age was significantly correlated with years of police experience, rank and military service experience. Women reported fewer traumatic incidents than men, officers with more years of police experience reported fewer traumatic incidents than officers with less years

of experience, and officers assigned to specialty units were they perform fewer patrol duties reported fewer traumatic incidents than officers assigned to patrol units who were consequently exposed to more traumatic incidents.

A study by Ortega et al., (2007) analysed the association that exists among demographic factors such as personality, tenure and gender; occupational stress; coping strategies; well-being; organisational commitment; and job satisfaction. The study had the objective to weigh the association and test whether the association among the variables was present in the sample. The sample comprised of 1, 535 police officers from British police force; 20.78% of whom were female. The results of the study showed that only personality and tenure were significantly related to occupational stress and coping; and gender, age and rank did not show a meaningful relationship with any of the variables. Personality was discovered to be strongly related to the feelings of being worn out, but no significant relationship was recorded between coping strategies and well-being factors. The findings were also allusive of a strong express relatedness of personality traits and the type of coping strategies police officers use.

The 1994 elections in South Africa marked the end of 30 years of the socio-economic and political turmoil under the apartheid. The changes resulting from the dissolution of apartheid has made police work undoubtedly extremely stressful in this country (Gulle, Tredoux& Foster, 1998). The South African Police Service (SAPS) has also undergone tremendous transformation since the first democratic elections in 1994 due to changes in the politics of the country. The police force has transformed to a police service, with the ranking structure changed, and an affirmative action policy has been implemented (Van der Walt, 2002).

According to Maslach&Schaufeli (1993), burnout is a particular type of occupational stress reaction among human service professionals, emanating from demanding and emotionally charged interactions with recipients. It can also be termed in psychology as a long-term exhaustion and diminished interest in work.

Recent literature has indicated that burnout is not only inherent in the service professions (Bakker, Demerouti&Schaufeli, 2002), however, the syndrome is most common among human services providers (Schaufeli&Enzmann, 1998). There are two distinct core dimensions of burnout which are emotional exhaustion and depersonalization (Demerouti*et al*., 2001). Human service providers sometimes feel emotionally over drained as they attempt to respond to the chronic emotional strain in daily interactions with recipients (Leiter&Maslach, 1988). According to Maslach, Jackson &Leiter (1996), human service providers can reduce their commitment to relationships with recipients as a way of coping with emotional exhaustion. Decreasing involvement is expressed by a cynical and dehumanizing attitude toward recipients, reduced empathy, and by "blaming the victim" (Schaufeli&Enzmann, 1998). This indifferent assertiveness differs from nurses, who refer their patients as impersonal objects -"that kidney on the operation table"- to police officers, who blame a raped woman for walking the streets alone at night. Consequently, the human service providers may not be able to sufficiently perform their jobs, ultimately leading the diminishing of their feelings of professional efficacy (Bakker, Schaufeli, Sixma, Bosveld, & Van Dierendonck, 2000). However, several scholars (e.g. Demerouti*et al*., 2001) debate that reduced professional efficacy does not amount to burnout, it is insignificantly related to emotional exhaustion and depersonalization and has many different predictors.

The productivity, motivation and health of police officers are important determinants to a country's economic stability and developmental (Rothmann& Van Rensburg, 2002). It is therefore important that the police officers are fervently motivated always to benefit the country. Physically and psychologically well police officers that are fully committed to their work are the ones needed to accomplish these goals. However, police officers are confronted with several stressor that disturb their well-being and these include; physical assault, the violent death or suicide of an officer who is a close friend, a response to the death of a child, overt violence, work overload, time pressure and inadequate resources are among the frequently occurring stressors that confront police officers (Kirkcaldy, Cooper &Ruffalo, 1995).

Burnout can be defined as "a persistent, negative, work-related state of mind in 'normal' individuals that is primarily characterised by exhaustion, accompanied by distress, a sense of reduced effectiveness, decreased motivation, and the development of dysfunctional attitudes and behaviours at work" (Schaufeli&Enzmann, 1998). Burnout is a psychological term that refers to long-term exhaustion and diminished interest in work. Studies like that by Schaufeli&Enzmann (1998), have found out that burnout is not only related to negative outcomes for the individual, including depression, a sense of failure, fatigue, and loss of motivation, but also to negative outcomes for the organisation, including absenteeism, high turnover rates and lowered productivity. Schaufeli and Enzmann (1998) classified possible factors contributing to burnout into four categories namely biographical characteristics, personality characteristics, work-related attitudes and work and organisational characteristics (Schaufeli&Enzmann, 1998). For the

purpose of this research, the focus will be on occupational stress, which falls under work and organizational characteristics.

Stress occurs in individuals or groups when their situation is overly complex, ambiguous and unclear, as well as highly demanding with regard to competence or structural means to deal with the demands (Bass, 1990). Previous literature has highlighted that most of the stressors for nurses to be from the organization. Stressors that are organizational in nature include stress-generating nursing work situations, which can be physical, psychological, or social in nature (Duquette*et al.,* 1994). Giving support to people with severe health problems like kidney failure, although personally rewarding, can prove to be a source of stress especially when patients are not appreciative of the efforts nurses make to assist them (Bakker *et al.,* 2000). Similarly, responsiveness to patient emotion is a key aspect of excellence in nursing care leading to beneficial responses from patients (Phillips, 1996) but, it is also a major determinant of nursing stress and burnout (Omdahl& O'Donnell, 1999). The other predictors of emotional exhaustion include; increased job demands due to employment of complex technologies, competition among hospitals (Janssen *et al.,* 1999), nursing shortage (Janssen et al. 1999), high work overload, lack of social aid from peers, superiors and government, and of task autonomy and feedback, as well as reduced advancement opportunities (Boumans&Landeweerd, 1996, Janssen *et al.,* 1999, Bakker *et al.,* 2000).

In the same light, Gray-Toft and Anderson (1981) developed the Nursing Stress Scale (NSS) to explore particular stressful situations that nurses encounter in executing their jobs. They identified three sources of stress: (1) from the physical environment, (2) from the psychological

environment, and (3) from the social environment. The findings by Gray-Toft and Anderson (1981) indicated that the scores on the NSS were negatively related to job satisfaction, and positively to trait anxiety and turnover. Research has also indicated that role characteristics such as role ambiguity and role conflict are major work stressors (Kahn et al. 1964). Role ambiguity can be defined as lack of clarity about tasks and goals and unpredictability about the consequences of role performance. Role Ambiguity describes the norms for a particular rank that are not explicitly defined. Disagreement exists among actors on role expectations, not because there is role conflict but because role expectations are unclear, for instance job descriptions and clinical objectives.

According to O'Driscoll&Beehr (1994), the definition could be made clearer by including information deficiency. A consistent link between role ambiguity and job dissatisfaction, psychological strain and turnover has been demonstrated (O'Driscoll&Beehr, 1994). Role conflict is defined as a lack of congruent expectations between roles and within a work role. It involves contradictory requirements, competing demands, and inadequate resources (Bass, 1990). It occurs when there are incompatible demands placed upon an employee such that compliance with both would be difficult. Role ambiguity and role conflict may thus play a vital role in determining burnout. When a person is overwhelmed to handle the source of stress, a behavioural manifestation, called burnout, is a result. Burnout can be described as the stress experienced by those who carry out interpersonally intense jobs which are prone to chronic tension such as nursing (Cunningham, 1983). According to the commonly adopted definition, burnout includes three components: (a) emotional exhaustion, which leads to loss of concern for others and eventually progresses to feelings of inadequacy and failure; (b) depersonalization, which occurs when nurses treat patients as objects and develop unfavourable attitudes towards

them;and (c) lack of personal accomplishment with regard to helping others (Maslach& Jackson 1981; Cordes& Dougherty 1993, Maslach, 1993). Lee and Ashforth (1996) and Bakker et al. (2000), eluded that emotional exhaustion and depersonalization are related to job stressors whereas lack of personal accomplishment is strongly related to lack of adequate resources.

According to Cordes& Dougherty (1993) and Lee &Ashforth (1993) emotional exhaustion dimension can be seen as the preliminary stage of the burning out process and can be analysed separately from leadership and burnout. A supervisor is usually the most prominent person in the work environment possessing the ability stand for the organization's culture and to put express impact on his/her subordinate behaviour (Kozlowski & Doherty, 1989). The moderating effects of leadership practices on employee behaviour can be explained by different theoretical models (Perlman & Hartman, 1982, Numerof 1983,Golembiewskiet al. 1986), which concentrate on the importance of supervisory support as a buffer of the effects of occupational stress on employees (Kirmeyer& Dougherty, 1988). Rowney and Cahoon (1988) allude that leadership practices are very significant in the prevention or occurrence of occupational stress and burnout. It can also help employees cope with stress factors. However, leadership can increase occupational stress if it is tyrannical and too much control-orientated: a leader who continuously gives subordinates instructions such as `work more quickly', `work accurately', `you could do more', `hurry up, we haven't much time left', generates detectable physiological symptoms of occupational stress among the staff (e.g. increased levels of systolic and diastolic blood pressure) (Misumi 1985, McCormick & Powell 1988). Fifteen years ago, Bass (1985) proposed a leadership model that has now become the mainstream in leadership research. This model is based on the distinction between two higher-order components: transactional leadership and transformational leadership.

Transactional leadership, also known as managerial leadership, focuses on the role of supervision, organization and group performance.

Transactional leadership is rooted in day-to-day transactions between leaders and their employees and comprises three factors: active management-by-exception (MBEA), passive management-by-exception (MBEP), and contingent reward (Hater & Bass 1988, Howell &Avolio1993). With MBEA, leaders continuously monitor followers' performance to anticipate mistakes before they become a challenge and immediately takes corrective action when required, while with MBEP, they intervene with criticism and reproof only after mistakes are made and standards are not met (Howell &Avolio 1993). Contingent reward leadership is viewed as a positive exchange whereby subordinates are rewarded or recognized for accomplishing agreed-upon objectives (Howell &Avolio 1993). Transactional or managerial leadership can be influential in groups under stress, because such leaders can supply solutions for immediate members' needs, even if the effectiveness of such a style in the long run is questionable (Bass 1990). In contrast, transformational leadership enhances the motivation, morale, and performance of followers through a variety of mechanisms. In addition, transformational leadership aims to match an employee's sense of identity and self with the nature of the project and the collective identity of the organization. This is done through role modelling to inspire subordinates to be interested in their work, challenging them to take more responsibility for their work, and understanding their strengths and weaknesses, as well as aligning followers with tasks that enhance their performance. Transformational leaders motivate their followers to do more than initially expected; they are change agents, are concerned by long-term objectives, and transmit a sense of mission (Dunham &Klafehn 1990). These leaders instil faith and respect (charisma), treat each worker as an individual (individualized consideration).

Transformational leadership does not replace transactional leadership instead it adds to it (Waldman *et* al. 1990). In their study of part-time MBA students, Seltzer et al.(1989) reported emotional burnout to be inversely related to all transformational facets and to one transactional leadership dimension (contingent reward). Conversely, emotional burnout was found to be positively and significantly associated with management by-exception. However, Bass's (1985) model in the context of stress in nursing was proved to be more conservative than the model by Seltzer et al. (1989) in that it aimed to test the unique effect of leadership practices, besides the variance accounted for by work stressors. The unique effect of leadership on staff emotional exhaustion may stem from the support that transformational leaders are likely to provide to their subordinate employees. According to Constable and Russell(1986) the strong support and appreciation of employees from supervisors reduce the feelings of emotional exhaustion and crowd out negative effects of the job environment (Kirmeyer& Dougherty 1988, Schmieder& Smith 1996). These results are consistent with House's (1977) conclusion that supervisory support, more than co-workers' or family and friends' support, alleviated the deleterious effects of occupational stress factors on health outcomes. A transformational leadership encompasses supportive behaviours (Bass 1985), it also should buffer the negative effects of stress factors on emotional exhaustion.

2.21.1 Occupational Stress, Job Engagement and Burnout

The different components of work-related wellbeing could be related, but could also be separate dimensions (Warr, 2002). For example, it is possible to experience low work-related depression (e.g. disengagement), but high levels of work-related anxiety (e.g. occupational stress). Strain

results from a combination of two or more negative forms of wellbeing, such as anxiety (e.g. occupational stress) and depression (e.g. disengagement).

Regarding the relationship between occupational stress and job engagement, research has shown that even when exposed to high job demands and long working hours, some individuals do not show symptoms of disengagement. Instead, they seem to find pleasure and enjoyment in dealing with these stressors (Schaufeli& Bakker, 2004). However, according to Terry, Nielson and Perchard (1993), high levels of occupational stress are negatively associated with low levels of job satisfaction – a component of job engagement (which represents the pleasure component of work-related wellbeing). Fairbrother and Warn (2003) confirm that occupational stress is negatively related to job satisfaction. Furthermore, it seems that job satisfaction has a protective effect on the relationship between occupational stress and disengagement (Visser, Smets, Oort&deHaes, 2003). Visser *et al*. (2003) confirms that job satisfaction has a protective effect against the negative consequences of occupational stress. They suggest that when occupational stress is high and satisfaction is low, the risk of low energy, a central aspect of low work engagement, increases considerably.

Emotional burnout thrives in the workplace and is most likely to occur when there has been a mismatch between the nature of the job and the nature of the person doing the job (Maslach&Leiter, 1997). Different studies that have been conducted reveal that occupational stress that consists of job demands and a lack of resources leads to emotional burnout (Lee &Ashforth, 1996). Sources of occupational stress that lead to emotional burnout may originate within the organisation, although individual characteristics may play a role in an individual's inability to cope with high occupational stress work environments. In terms of individual

characteristics, younger workers and women tend to be more vulnerable to emotional burnout than older workers and men (Gilligan, 1982; Koeske & Kirk, 1995).

Initial research on emotional burnout has viewed it as a consequence of workaholism or of overachievement (Strumpfer, 2003). According to Maslach and Jackson (1981) emotional burnout is a syndrome of emotional exhaustion and cynicism. Three key aspects of emotional burnout have been outlined, the first being increased feelings of emotional exhaustion, where the individual's emotional resources are depleted and she/he feels no longer able to give of themselves at a psychological level. Emotional Exhaustion is "characterised by a lack of energy and a feeling that one's emotional resources are used up. This may co-exist with feelings of frustration and tension" (Cordes& Dougherty, 1993). Emotional exhaustion can be noted in physical characteristics such as waking up just as tired as when having gone to bed, or lacking the required energy to take on another task or face to face encounter (Maslach&Leiter, 1997). A number of determinants of emotional exhaustion have been defined by Cordes and Dougherty (1993) with the three most important ones being work overload, role conflict and interpersonal relationships. Work overload is defined as "the perception of too much work to accomplish in the time available" (Powell, 1993) in other words you have work overload, which is suggestive of the existence of a mismatch between the person and the job. Role conflict is the second source of emotional exhaustion and it occurs when an individual has certain job expectations which may be in conflict with individuals already within the organisation. Trying to reconcile these differences can lead to frustration and emotional exhaustion (Jackson, Schwab, & Schuler, 1986). Personal expectations also add further to emotional exhaustion. Having unrealistic expectations of the job that one has newly undertaken and coming to the realisation that these expectations are not met, further add up to this frustration (Philip, 2004). The third source of

emotional exhaustion is interpersonal relationships, especially when the relationships are very intense and emotional.

Another aspect has been defined as the development of negative, cynical attitudes and feelings, which may be linked to the experience of emotional exhaustion, i.e. a callous or dehumanized perception of others. Cynicism also indicates that an employee is no longer willing to perform duties due to decreasing tolerance levels to put in any effort (Mostert&Joubert, 2005). This is the stage where depersonalisation occurs, and is characterised by a detachment from work and people where people are treated as impersonal objects; especially by those in disciplines which work closely with people on a daily basis (Philip, 2004). The third aspect of the burnout syndrome is the tendency to evaluate oneself negatively, particularly with regard to one's work which may result in feelings of unhappiness about self as well as dissatisfaction with accomplishments on the job in question. The individual feels inadequate and unproductive which in turn, has a direct effect on the quality of the work produced (Cordes& Dougherty, 1993; Philip, 2004). Thus emotional burnout is regarded as comprising three components: exhaustion, cynicism and professional efficacy (Schaufeli, Leiter, Maslach& Jackson, 1996). Emotional burnout can have many negative consequences such as stress-related illness, interpersonal problems, increased use of alcohol and drugs and behavioural problems. Workers suffering from emotional burnout tend to neglect important aspects of their jobs or to provide a lower level service (Freudenberger, 1975; Maslach&Leiter, 1997). The consequences of emotional burnout are reported to possibly lead to a deterioration in the quality of service and appears to be a factor in job turnover, absenteeism, and low morale among employees (Freudenberger, 1975).

Furthermore, emotional burnout has been linked with different self-reported indices of personal distress, including physical exhaustion, insomnia, increased use of alcohol and drugs, and marital and family problems. Later Maslach and Leiter (1997) described emotional burnout as "the index of the dislocation between what people are and what they have to do. It represents an erosion of values, dignity, spirit and will, an erosion of the human soul". Dislocation has been traced and described in terms of less intrinsic worth, global economics, technology, the redistribution of power, and failing corporate citizenship. These factors among other things have been recognised as producing personal consequences where individuals feel, overloaded, lack control over what they must do, are not rewarded for their work, experience a breakdown in community, are not treated fairly, and have to deal with conflicting values. Relatively low correlates of professional efficacy have been linked with exhaustion and cynicism whereas these two emotional burnout components have been correlated very strongly (Lee &Ashforth, 1996). It has also been observed that cynicism may develop in response to exhaustion (Leiter, 1993) and as such cynicism and exhaustion are seen as the core components of emotional burnout (Maslach&Joubert, 2005). Numerous research studies have been devoted to understanding the factors contributing to emotional burnout (Schaufeli&Greenglass, 2001). Possible factors such as biographical characteristics, personality characteristics, work-related attitudes and work and organisational characteristics have been considered to be particularly significant (Leiter, 1990). Evidence suggests that occupational stress influences the degree of emotional burnout experienced (Burke, 1997).

A process model of emotional burnout which assumes that job demands and resources are differently associated with the three emotional burnout component has been suggested (Leiter,

1993). It has been found that job demands are more strongly related to exhaustion, while job resources are more strongly related to cynicism and professional efficacy (Leiter, 1993). Lee and Ashforth(1996) conducted a meta-analysis that included over sixty studies and their results confirm that the three components of emotional burnout are differently related to job demands and resources and that job demands were strongly associated with exhaustion. It was found that cynicism was associated with both resources and demands, however the correlations for resources were lower than for demands. The dimension of professional efficacy was found to be largely uncorrelated to job demands and job resources whereas any significant correlations found were concerned with job resources rather than demands. Taris, Schreurs and Schaufeli (1999) found that job demands were strongly correlated with exhaustion rather than cynicism or professional efficacy as the latter were both related to resource variables. It has been found that organisational demands relate only to exhaustion (Peeters& Le Blanc, 2001) and that exhaustion is strongly associated with job demands while cynicism and professional efficacy were significantly associated with job resources (Janssen, Schaufeli&Houkes, 1999).

2.21.2 Occupational Stress, Coping Strategies and Burnout

According to Bhagat *et al*. (2001), the level of occupational stress an individual experiences in his or her organisational context, and the extent to which adverse effects such as psychological and other strains occur, depend on how effectively he or she copes with stressful organizational situations. Some other research also supports the contention that the ways people cope with occupational stress and daily living affect their psychological, physical and social well-being (Violanti& Paton, 1999).

2.22 COPING

According to psychological terms, coping refers the efforts individuals exert to deal with their individual or relational circumstances with the aim of minimizing and curbing stress or conflict. These psychological coping processes are also referred to as coping strategies or coping skills. Unconscious or non-conscious strategies (e.g. defense mechanisms) are generally excluded. The term coping generally refers to adaptive or constructive coping strategies, i.e. the strategies reduce stress levels. It is unfortunate that some of the coping strategies, instead of curbing stress, end up increasing it, thus they would be maladaptive. Maladaptive coping simply means that the strategies of coping with stress and conflict will not be accomplishing the aim of reducing stress levels. A maladaptive coping technique will just reduce symptoms while maintaining and strengthening the disorder. Furthermore, the term coping generally refers to reactive coping, i.e. the coping response follows the stressor. This contrasts with proactive coping, in which a coping response aims to head off a future stressor.

There are many models of the coping process and psychologists agree that it involves a series of stages. These begin with identifying a threat, for one cannot cope with something that is not recognized, except serendipitously. Next, most models of coping refer to a process of appraisal: an assessment of the severity of the threat, and of our resources available to handle it. There are different ways of appraising threats, and experience plays a major role here. Next, a response is implemented and the effects are evaluated by returning to the appraisal process in a circular loop.

The time frame is very varied. Coping with an insult may be extremely rapid and automatic (even if later regretted!) Coping with marital discord may take months or even years, and involve numerous attempts to apply different strategies. The process often begins unconsciously and may

only become conscious if the threat is not readily resolved. Typically a person feels tense or uneasy but may not be able to describe what is wrong. If initial coping attempts do not resolve the tension, however, and if there are successive circuits around the coping loop, the person becomes more conscious of the process as their concern mounts. This is similar to immune reactions: symptoms reflect failed attempts to cope with an infection.

Antonovsky brought a sociologist's perspective in *Health, stress and coping*. (Jossey-Bass, 1980). He observed that many people are exposed to pathogens but but few get sick. He proposed a model of resistance & susceptibility that depends on "generalised resistance resources". These seek to resolve problems (rather then Selye's holding process). GRRs may refer to a person or a group of people. They include: physical factors (cf. Dubos), material resources (wealth), information (knowledge is power), emotional flexibility (cf. emotional intelligence),

There is immense variety in the coping responses of humans; indeed, one of our endearing characteristics is our ability to invent bizarre and even self-destructive coping styles.   Each person's style of coping reflects their personality and describes their enduring approach to handling life experiences. A typical contrast would be between the person who copes with challenges passively by avoiding situations or denying them, and coping based on more active confrontation and tackling of situations. Within general styles of coping, particular tactics are as varied as people themselves. Not only do we each have a characteristic approach to handling challenging situations, but the size and diversity of our repertories of coping responses also varies. Some people seem able to handle virtually any circumstance, while most are comfortable with a much narrower range of situations. Some perennially use the same type of approach; others can be remarkably resourceful in finding different ways to handle situations.

A hypothetical model in which a person draws on successively deeper levels of experience in inventing a way to cope with a situation that does not go away can be presented. We can debate this model in class. In a first phase (which could represent several loops around the circuit), the person applies familiar, "tried and true" coping strategies. Their level of concern and distress rises with each failure; there is an exaggeration of emotions which begins to appear uncomfortable; aspects of "nervousness." If and when these fail to resolve the situation, the person is forced to resort to rarely used strategies; this increases the level of apprehension and therefore of distress. Should these coping strategies also fail, they must dig deeper and resort to tactics they have not tried, although may have heard of others using in similar situation. This is new territory and the level of apprehension rises further. The ego responds with a second order of regulating devices, characterized by a partial detachment from the world of reality: withdrawal or fantasies, which precede outbursts of violence, anger and so on. The failure of these processes only implies that an individual must be adaptive enough to find new mechanisms of coping with stress. This must happen because higher levels of stress can be difficult to cope with making chances of success slimmer.

Now, a crucial theme of this model is that the height of the bars illustrates the size of the person's coping repertoire at each stage. The hypothesis is that a person who has had varied life experiences (e.g., has travelled, held many jobs, met many people) will tend to have accumulated a broader repertoire of coping styles than a person with less experience. This may contribute to explaining the association of socioeconomic status and health if, indeed, higher SES is associated with a broader range of coping strategies.

While we may judge that a person does not cope well with difficult situations, no coping strategy seems wholly good or bad; following evolutionary principles, perennially useless styles should die out with their users. (Note the humorous annual "Darwin Awards" on the internet, awarded to the most idiotic people whose removal from the gene pool is held to benefit everyone). Active or passive styles may suit different circumstances; each may also work well in the short term but not on a long term basis.

There are many possible taxonomies of coping strategies, but a common distinction is between practical strategies which seek to deal with the situation, and cognitive strategies which seek to handle the symptoms of emotional distress that arise. Alternative terms are behavioural and emotional coping. Intuitively, there seems to be a gender difference in predominant coping styles, and the discovery that "Men are from Mars, women are from Venus" may reflect this (although we may wish to debate the fuller implication of links with Zodiac signs!) Both behavioural and emotional coping may be classified along the dimension of confrontation versus avoidance which is also commonly called active or passive coping or even control versus helplessness (the terms differ).

Some examples of coping strategies are given in the following table; you may wish to discuss this and fill in the blanks

	Active		Passive	
	Behavioural	Emotional	Behavioural	Emotional
Exam	study hard; ensure adequate rest	express your concern to friends; (take medications?)	sleep a lot; watch movies to take your mind off it	complain to friends
Lousy teacher	make suggestions; contribute to improving course	discuss with counsellor how important the *&*# course is anyway	wait until end of term and give teacher a lousy rating	look glum in class
Personal conflicts	leave the person (giving no forwarding address)	talk to friends; seek counselling		

Insufficient income				
Chronic health problem				

Many authors delight in taxonomies of coping responses. Here are a few examples:

- use of alcohol, drugs

- day-dreaming, escapism

- trying to see the humorous side of the situation

- sleeping more (the teenage response to school)

- use of food or food substitutes (chewing gum, smoking)

- getting prepared to expect worst

- curse & carry on bad

- get busy with other activities to take mind off the situation

- crying

- talk it out with friends; seek social support

- work feelings off by physical exercise

- information seeking: find out more about situation; make alternative plans for handling situation

- take some definite action on basis of your understanding, drawing on past experiences

Cognitive coping: mind games

- make positive comparisons ("We were worse off under the previous government")

- selective ignoring; denial. There's a hierarchy:

first order denial = denial of facts, avoiding speaking about or seeking facts;

second order denial = denial of feelings and refusal to perceive oneself as sick. Orr found first order denial to be associated with poor adjustment following a diagnosis of breast cancer; second order denial was associated with positive adjustment. There have been similar findings in the cardiac rehabilitation literature (Orr E. Open communication as an effective stress management method for breast cancer patients. J Hum Stress 1986;12:175-185.)

- optimistic faith; belief in supernatural power who cares about you

- rejection (feel yourself the victim of an unjust situation)

- try to exert control (become an agent facing a challenge)

- resignation (feeling powerless and events externally determined by fate)

- avoidance and postponing confrontation

- minimization or negation (view yourself as secure and the situation as non-threatening)

A sense of humour is notoriously valuable in coping with adversity. Perhaps self-deprecating humour is most effective, for it reduces the need to protect the ego from reality. Personal humour deflects self-pity, which is a corrosive emotion. Consider this letter to the Ottawa Citizen, written by a man suffering from Tourette's syndrome. He illustrates the use of a factual understanding of his condition, laced with a good dose of humour:

"Most people know nothing about Tourette's syndrome, and I was one of them until three years ago. Tourette's makes the body and mind do and say things you don't want them to do. It is caused by your body producing too much dopamine, which blocks your nerve network to your brain.

In my case, Tourette's consists of cursing out loud, head shaking, hand trembling and severe panic attacks. It isolates you; it's very hard to go to restaurants or get on a bus. I have often been asked to leave some of these premises. (...) Job interviews are terrible, if you manage to even get there. Sometimes you are just too panic-stricken to leave your apartment. And if you do get there, you don't make a great first impression.

Sometimes I cannot even get to my mail box, which is only 20 feet away. At least you have a good reason for not getting your bills paid on time and doctors to back you up. I never go to

quiet movies; if I do go, I see a loud action one in which the actors swear as much as I do. It helps me blend in. And first dates are no pleasure either...

My head shaking is painful; it gives me headaches and affects my neck. I shake my head to the left most often, so I had my barber part my hair in that direction, hoping people will think I'm just shaking the hair from my face. And I now wear hats in winter; I prefer ear muffs, but they end up wandering all over your head and you end up looking like you have Brillo pads over your eyes.

I don't mean to make light of this disease, but I have found that keeping a sense of humour, as in other diseases, helps me get through the rough times and accept my lot."

The letter also illustrates catharsis. It is moving and well-written; we sense the value to the writer who is playing the role of teacher, informing the public objectively about this disease, in place of his normal role as an object of derision, a lone crazy person cursing on a street corner.

This role of self-expression in coping takes us back to the very beginning: the connection between social class and disease. The skill to make a public statement of this poignancy will tend (although by no means inevitably) to be associated with education. Self expression increases humanity, allowing others to establish contact with a disabled person, thereby reducing isolation and prejudice. The process of coming out of the closet for homosexuals offers another example of reducing the tension born of a discrepancy between reality and public image. Again, being from a higher social class may predict greater opportunity for this: wealth brings greater tolerance of deviance because individuality is less directly threatening.

Humour can also be used among certain groups of people in order to provide them with help to cope with the dynamics of life. Cynicism can protect against the possible instability of the good times, and black humour reminds us how much worse things might be when times are bad. An analyst of political jokes in the communist era in the USSR and Eastern Europe said that "Jokes pay tribute to the triumph of the human spirit over repression. They attest to the usefulness of wit, tact and ingenuity when faced with overwhelming odds. A joke is a miniature grievance and a consolation against an injustice." (Colombo JR. Laughs in the USSR. *Stitches, the Journal of Medical Humour*. March 1997:29.) The self-deprecation of Jewish humour protects Jews from the sting of criticism by exaggerating those criticisms in parody and thereby deflecting them.

Coping responses to stress are partially limited by personal characteristics, and also by the social context, especially the inherent nature of the stressful environment.

2.23 TYPES OF COPING STRATEGIES

Hundreds of coping strategies have been identified, though classification into a broader architecture of these strategies has not yet been agreed upon. Common differences are often made between various contrasting strategies, for example: problem-focused versus emotion-focused, engagement versus disengagement, cognitive versus behavioural. The psychology textbook by Weiten has provided a useful summary of three broad types of coping strategies:

• appraisal-focused (adaptive cognitive)

• problem-focused: Any coping behaviour that is directed at reducing or eliminating a stressor, adaptive behavioural

• emotion-focused: Directed towards changing one's own emotional reaction to a stressor

Appraisal-focused strategies occur when the person makes partial changes to the way they think, for example, employing denial or distancing oneself from the problem. People may modify the way they think about a problem by altering their goals and values, for example, seeing the humour in a situation, "some have suggested that humour may play a greater role as a stress moderator among women than men".

People employing problem-focused strategies push towards dealing with the cause of their problem. They accomplish this by searching for relative information on the problem and acquiring new skills to manage the problem. Problem-focused coping is aimed at changing or getting rid the source of the stress.

Emotion-focused strategies involve setting free closely confined or held back emotions, distracting oneself, managing antagonistic feelings, meditating or using systematic relaxation procedures. Emotion-focused coping "is oriented toward managing the emotions that accompany the perception of stress".

People generally make use of a blended mechanism of all three types of coping strategies, making their coping skills to gradually evolve dependent on time. All these methods can prove useful, but some postulate that employers of problem-focused coping strategies will adjust better to life. Problem-focused coping mechanisms may foster greater perceived control over the individual's problem, in contrast with emotion-focused coping which may at times lead to a reduction in perceived control (maladaptive coping).

Folkman and Lazarus (1985) identified five emotion-focused coping strategies:

- disclaiming

- escape-avoidance

- accepting responsibility or blame

- exercising self-control

- positive reappraisal

The three problem-focused coping strategies: seeking social support and "taking action to try to get rid of the problem is a problem-focused strategy, but so is making a list of the steps to take".

Lazarus "notes the connection between his idea of 'defensive reappraisals' or cognitive coping and Freud's concept of 'ego-defenses'" coping strategies thus overlapping with a person's defense mechanisms.

2.23.1 Positive techniques (adaptive or constructive coping)

One positive coping strategy, "anticipating a problem is known as proactive coping." Proactive coping includes positive reinforcements and positive approach to dealing with stressors. Anticipation is when one reduce the stress of some difficult challenge by anticipating what it will be like and preparing for how one is going to cope with it.

Two others are "social coping, such as seeking social support from others, and meaning-focused coping, in which the person concentrates on deriving meaning from the stressful experience". Yet another way of coping is keeping away or refraining thoughts or circumstances that cause stress.

Keeping fit, when you are well and healthy, when nutrition, exercise and sleep are adequate, it is much easier to cope with stress and learning to lower the level of arousal by relaxing muscles the message is received that all is well are also positive techniques.

One of the most positive coping mechanisms people use to deal with painful situations is humour, Hostile situations are viewed on the lighter side, and turned into pleasure and fun.

While dealing with occupational stress, it is of great significance to deal with your physical, mental, and social well-being. One should be able to maintain good health, and learn to use relaxation methods found under stress. Mentally it is important to think positive, have self-worth, demonstrate good time management, plan and think ahead, and positive expression of emotions. One must establish social connections and networks and find new ways of doing things. Adoption of these mechanisms enables an individual to have better response to stress that comes with life events.

2.23.2 Negative techniques (maladaptive coping or non-coping)

While adaptive coping methods improve functioning, a maladaptive coping technique will simply reduce symptoms while maintaining and strengthening the disorder. Maladaptive techniques are therefore more appropriate and effective in the short term rather than long term coping process.

Maladaptive behavioural strategies may be exemplified in issues of dissociation, sensitization, safety behaviours, anxious avoidance, and escape (including self-medication).

These coping strategies interfere with the person's ability to dissociate, or separate, the paired association between the situation and the associated anxiety symptoms. These are termed maladaptive strategies as they maintain the disorder, and not provide adequate or appropriate adjustment to the current situations.

Dissociation is the ability of the mind to separate and compartmentalize thoughts, memories, and emotions. It involves separation of normally related mental process, resulting in one group

functioning independently from the rest. This is often associated with Post Traumatic Stress Syndrome.

Sensitization is when a person seeks to recognize and/or anticipate fearful events in a protective effort to prevent these events from occurring in the first place.

Safety behaviours are exhibited when individuals with anxiety disorders come to depend on something, or someone, as a means of coping with their excessive anxiety.

Anxious avoidance is when a person avoids worry or unease, or anxiety provoking, situations by all means. This is the most common strategy.

Escape is closely related to avoidance. This technique is often exhibited by people who often experience panic attacks or have phobias. These people want to flee the situation at the first sign of anxiety.

2.24 FURTHER EXAMPLES

Further examples of coping strategies include:

- emotional or instrumental support

- self-distraction

- denial

- substance use

- self-blame

- behavioural disengagement

- indulgence in drugs or alcohol

Many people think that meditation not only calms our emotions, but...makes us feel more together, as too can the kind of prayer in which you're trying to achieve an inner quietness and peace.

Low-effort syndrome or low-effort coping refers to the coping mechanisms employed by minority groups in an attempt to fit with the dominant culture. For example, minority students at school may adjust and put in only minimal effort as they believe they are being discriminated against by the dominant culture.

Coping strategies refer to the energies, both behavioural and cognitive, that people invest in order to deal with stressful encounters (Lazarus &Folkman, 1985). According to Livneh, Antonak& Gerhardt (2000), coping has been comprehended in different ways; (1) both as a personality trait and a situationally-determined response; (2) a dynamic process and a static construct; (3) a strategy that is mature, flexible and adaptive, but also a reaction that is neurotic, maladaptive and rigid; and (4) a global, generally dichotomous concept, but also an intricate, hierarchically structured, multilevel concept.

One of the most common coping taxonomy was proposed by Folkman and Lazarus (1985). The authors described coping as either problem-focused or emotion-focused. Problem-focused coping strategies target at dealing with the problem actively. In contrast, emotion-focused coping is directed at dealing with the emotional distress that is evoked by the problem. Emotion-focused coping strategies aim to reduce and manage the intensity of the negative and distressing emotions that a stressful situation has caused rather than solving the problematic situation itself.

According to Endler and Parker (1992), avoidance may be employed as the third fundamental strategy to coping with occupational stress. Avoidance can include either person-oriented or task-oriented strategies. There are differences between avoidance and problem- and emotion-focused coping in that avoidance takes an individual away from the stressful environment, whilst problem- and emotion-focused coping helps the individual in the management of the stressful situation without being taken away from it (Kowalski & Crocker, 2001). In psychology, avoidance coping, or escape coping, is a maladaptive coping mechanism characterized by the effort to avoid dealing with a stressor.

Literature on police stress like the study by Evans, Coman, Stanley and Burrows (1993) defined effective coping as the efficacy with which individuals deal with their emotional responses to stressors and act to resolve the stressors, and/or the cost of their effectiveness to individuals. The important issue is the extent to which police officers emphasise the use of one coping strategy over the other (Hart, Wearing &Headey, 1995).

Studies on coping among police members have conceptualized and measured coping strategies in various ways, but several significant patterns have emerged (Patterson, 1999). Maladaptive behaviours such as excessive alcohol abuse, drug use, smoking and overeating have been found to be ineffective and maladaptive as coping strategies among the police (Burke, 1993). It has also been stated that poor coping skills appear to be a significant factor in determining the intensity with which occupational stress is experienced in police work (Anshel, 2000). The use of maladaptive coping skills in police work leads to the experience of chronic, long-term stress (Hurrel, 1995), and often results in emotional burnout and police members leaving the profession (Burke &Deszca, 1986).

Lazarus and Folkman (1985) emphasise that occupational stress is a result of the mismatch between job demands and an individual's coping capabilities. Therefore occupational stress refers to the temporary adaptation process that is accompanied by mental and physical symptoms, and is caused by a disturbance in the equilibrium between job demands and the ability of the worker to respond to the demands. When job demands overwhelm a person's coping abilities, stress responses may start to maifest. The term coping is used in reference to perceptual, cognitive or behavioural responses that are used in managing, avoiding or controlling situations that could be regarded as difficult (Folkman& Lazarus, 1985) coping as a term could be used to refer to the strategies or results. As a strategy, coping refers to the different methods that a worker may use in managing his/her condition connected with or relevant to an even or action. In coping as a result, reference is made to the eventual outcome of this strategy for the employee. Non-coping is defined as efforts that have failed to cope, accompanied by various physical and psychosocial disturbances, which result in increased occupational stress (Callan, 1993). According to Carver, Sheier & Weintraub (1989), non-coping may also amount to higher levels of depression and anxiety. Coping can be grouped into two categories, i.e. problem focused and emotion-focused (Amirkhan, 1994; Callan, 1993; Folkman& Lazarus, 1985). Problem-focused coping has the major aim to clearly comprehend the problem and finding solutions to rectify the problem. Emotion-focused coping refer to the efforts that are intended to the effects of stressful feelings caused by obnoxious experiences through relaxation, the use of substances (alcohol and drugs), social activities and/or defense mechanisms, including avoidance (Edwards & Holden, 2003; Rothmann& van Rensburg, 2002). The coping strategy that is employed by a worker is to some extent dependant on the worker's perception of the situation's

pliability to change (Edwards & Holden, 2003). Some studies have suggested that cognitive appraisal of a situation can be associated with coping strategies (Anshel, 2000). This suggests that coping strategies will change according to context and can be important in determining health outcomes (Cooper, Dewe&O'Driscoll, 2001; Shimazu&Kousig, 2003). According to Folkman and Lazarus (1985), when a person believes that the situation cannot be changed, emotion-focused coping is the most likely to be used. It has been recognised that coping strategies in particular of police officers are limited (Ortego, Brenner & Leather, 2007) and that the literature available concluded that police officers tend to use maladaptive emotion-focused behaviours in order to promptly reduce (Evans &Coman, 1993; Richmond, Wodak, Kehoe &Heather, 1998; Violanti, Marshall & Howe, 1985). According to Parker and Endler (1996) avoidance-coping along with problem-focused and emotion-focused coping, is another view of classifying types of coping. These avoidance strategies can be further classified into person-oriented resources or task-oriented responses. Avoidance coping has been associated with psychological stress and poor well-being (Ingledew, Hardy & Cooper, 1997). Many studies like those by Brown & Campbell (1990); Evans, Coman&Stankey, (1992); and Kaufmann & Behr (1989) have concluded that certain demographic variables such as gender, age, rank, and tenure happen to influence occupational stress and choice of coping strategies among police officers.

Endler and Parker (1990) added that an individual's reaction to a certain circumstance can be very crucial in determining the outcome of that situation. How the individual chooses to cope with a stressful situation determines whether the outcome can be a negative one (Lazarus &Folkman, 1984). It was also expected by Zeidner and Saklofske (1996) that a correctable situation should be managed by employing problem-solving strategies as people delve into their adaptive mode. According to a meta-analysis done by Suls and Fletcher (1985) on coping

strategies there is no significant evidence to suggest any superiority of one strategy over another between what they referred to as "attention" strategies and avoidance strategies. However, in the short-term, emotion-focused coping was associated with more negative outcomes than was avoidance, and problem-focused coping was the most advantageous to use. The two types of attention strategies were both found to be related with more positive outcomes over long period time than avoidance strategies. A positive relationship both emotion-oriented and distraction coping and various dimensions of psychopathology was found. Task-oriented and social diversion coping and distraction were both positively correlated with psychiatric symptoms, whilst social diversion increased depression in individuals (Higgins & Endler, 1995). Smari and Valtysdottir (1997) reported emotion-oriented coping as positively correlated to depression in both males and females alike whereas task-oriented coping was negatively related to depression for women only. Feelings of meaninglessness or lack of purpose in life made individuals to respond in such a way that that females resort to substance use while men react with thoughts of suicide (Harlow, Newcomb, &Bentler, 1986). Carver et al. (1989) outlines five different ways of coping which are:

1. Active coping – which involves taking certain steps necessary to eliminate the cause of stress and its negative outcomes. Active coping takes a direct route, increasing one's efforts, and implementing the coping attempt in a step-by-step manner.

2. Planning – is the thinking process on how to cope with the stressor. An individual at this point identifies and analyses all the alternative ways that could possibly solve the problem.

3. Suppression of competing activities – only means the avoidance of any distraction from other events by stalling other projects in order to deal with the stressor.

4. Restraint coping – this is choosing to wait until the most appropriate time to deal with the problem. It also involves avoiding premature actions and letting one's behaviour be focused on dealing effectively with the stressor.

5. Seeking social support for instrumental reasons. This deals with looking for advice, help or information.

Carver et al. (1989) discusses five varieties of emotion-focused coping which are;

1. Seeking social support for emotional reasons – this involves reaching out to others for moral support, sympathy and understanding.

2. Positive reinterpretation and growth – this has the goal of managing stress emotions rather than the stressors themselves by reinterpretation.

3. Denial – is the refusal to accept that the stressor exists or trying to act as though the stressor isn't real.

4. Acceptance – is believing that the stressor exists and acting appropriately to curb it.

5. Turning to religion – this involves turning to religious subscriptions for emotional support, positive reinterpretation and active coping.

Carver et al. (1989) also highlighted those coping strategies that are not commonly used which are;

•	Focusing on and ventilating emotions. Including focusing on a stressful situation and expressing feelings about it.

•	Behavioural disengagement. Involves ignoring and avoiding stressors and becoming more helpless and powerless.

•   Mental Disengagement. The excessiveness of sleeping or daydreaming to escape from stressors.

•   Alcohol-disengagement. The use of substances to manage stress.

"A maladaptive coping strategy used in police work has been identified as the excessive intake of alcohol in an attempt to reduce stress and improve psychological well-being" (Rothmann& van Rensburg, 2002). Alcohol or the use of drugs may be used to cope with occupational stress but it is an ineffective measure (Anshel, 2000). Police officers have a tendency toward ineffective coping by not being sentimental and emotionally detached and reluctant to share their emotional reactions to occupational stressors with partners or families (Evans &Coman, 1992). Burke (1993) reported "high use of alcohol, drugs, cigarettes and physical isolation from others as strategies of coping with job-related stress by police officers".

2.24.1 Primary and Secondary Appraisal of A Stressor

In the face of stressful situation, an individual makes evaluation for any possible threat and this is called primary appraisal. It is an individual's judgment on the significance of an event as stressful, positive, controllable, challenging or irrelevant. Facing a stressor, the secondary appraisal follows, which is an assessment of people's coping resources and options (Cohen, 1984). Secondary appraisals refer to what can be done by an individual about the work situation. Actual coping effortsaimed at regulation of the problem give rise to outcomes of the coping process.

Job Engagement

"People who are engaged in their jobs—those who are enthusiastic and involved in their day-to-day work—tend to do better work. This statement makes intuitive sense to most people and is the researcher's basic premise in this article. They cover three main questions related to this premise. First, what specifically does job engagement mean? Second, what is the economic case for the importance of job engagement—in other words, what is the hard evidence that job engagement really matters? Third, what can be done to improve job engagement? Throughout this article, they focused on employee surveys as an important means of measuring and improving job engagement."

WHAT JOB ENGAGEMENT MEANS

They defined job engagement as a person's enthusiasm and involvement in his or her job. People who are highly engaged in their jobs identify personally with the job and are motivated by the work itself. They tend to work harder and more productively than others and are more likely to produce the results their customers and organizations want. For instance, engaged employees report that:

• Their jobs make good use of their skills and abilities;

• Their work is challenging and stimulating and

• Their work provides them with a sense of personal accomplishment.

Job engagement is related to organizational commitment, but the two have important differences. Organizational commitment is most commonly defined in terms of an individual's identification with the organization's goals and values, willingness to exert effort for the organization, and

desire to continue as part of the organization. For example, those who are high in organizational commitment say that:

• They would recommend the company to a close friend as a good place to work;

• They are proud to work for the company; and

• They think the company is doing what it takes to be a leader in its industry.

"All else being equal, people who are engaged in their jobs tend to be committed to their organizations, and vice versa. In fact, in many organizations, job engagement and organizational commitment are closely related often enough that it makes sense to talk about a more general outcome—organizational engagement— that combines key elements of job engagement and organizational commitment.

Job engagement and organizational commitment do not always track closely together, however—people can be engaged in their jobs but not committed to their organizations.

A good example of this is Silicon Valley engineers, especially during the late 1990s Internet boom—in many cases, these people were enthusiastic about their work but liable to switch companies without a second thought. People can also be committed to their organizations but not engaged in their jobs. They imagined many readers have encountered a classic example of this at least once: a time serving employee, just going through the motions of the job day-to-day with a low level of job engagement, but highly committed to the organization until full retirement benefits or other "golden handcuffs" kick in.

The research literature provides more systematic evidence that job engagement and organizational commitment are related but not identical. For example, Steven Brown conducted a statistical review (meta analysis) of 212 studies concerned with job involvement, defined as "engagement of core aspects of the self in the job." The correlation of job involvement and organizational commitment, statistically aggregated across 71 studies covering over 26,000 people, was 0.496. To put this in perspective, correlations range from 0 (meaning two things are unrelated) to 1 (meaning two things are perfectly related). A correlation of 0.496 indicates that job engagement and organizational commitment are related to each other in a relatively strong way—generally people high on one are high on the other—but that it is still quite possible for people to be high on one and low on the other.

There are other related ideas as well. One is occupational commitment—the extent to which people identify with their occupations, a concept that extends beyond a person's current job and current organization.3 Discussion continues in the research literature about how these various concepts relate to each other. Our purpose in mentioning things related to job engagement is not to delve into all the nuances of how these ideas relate to each other, but simply to make it clear that our focus is specifically on the enthusiasm and involvement people have regarding their day-to-day work, not their views about their organization or occupation more generally."

BENEFITS OF JOB ENGAGEMENT

A vast body of literature indicates that effective job engagement may be a substantial predictor to the desired outcomes for organizations. Employees who are more engaged in their jobs enhance the chances of fulfilling customer needs, and ultimately leading to customer loyalty, increased sales, and profits.

People high in work engagement are also less likely to leave the organization, reducing the considerable costs and disruption of turnover. Other evidence also suggests that job engagement may be inversely related to costs. The following section describes two recently published studies and one recent case study that demonstrate the importance of job engagement.

Selected Published Evidence

Linkage analysis possibly provides the most reliable results on the advantages of job engagement. It is an accurate method for establishing insights on the relationship between job engagement (and other employee attitudes and behaviors) and business outcomes that are based on facts. Roberts and Davenport conducted linkage analysis through the creation of a database that comprises the employee data and business outcome data (e.g., customer loyalty, sales growth, profitability). A database that allows information reference to multiple time periods was more objective, it gives room to analyse relationship trends. There was substantial information to suggest that higher levels of job engagement result into desired outcomes valued by the organizations. This is important for two reasons. First, it often takes time for changes in employee attitudes and behaviours to filter through to customer and financial outcomes. Second, data from multiple time periods permits more accurate determination about what is causing what. That is, if we observe that job engagement at one point in time is related to financial results at a later point in time, we can have higher confidence that job engagement is contributing to financial results and not the other way around. The linkage database enables business entities to utilise statistical procedures in order to find out the strength of the relationship that exist between employee factors and business outcomes, and to establish what employees could do to best towards achieving the desired business outcomes. Relationship analysis, for instance, may provide solutions to questions such as, "If job engagement improves by 5 percent, how much is

customer loyalty likely to improve (all else being equal)? And, what are the best ways to improve job engagement?" Proper determination of the possible return on investment from taking certain actions could be made easier by quantifying the linkages between specific employee factors and business outcomes. Establishment of relationships makes it easier for business entities to make better decisions on investment prospects.

One of the best known published linkage analyses was conducted by Sears as part of its 1990s turnaround.4 The analysis incorporated data from multiple time periods. After considerable analysis, Sears developed two employee attitude measures—one focused on job engagement (with questions such as "I like the kind of work I do") and one focused on organizational commitment (with questions such as "I feel good about the future of the company"). Sears found that both these measures were related to customer and financial outcomes. Specifically, a 5-point improvement in employee attitudes would drive a 1.3-point improvement in customer satisfaction, which would then drive a 0.5 percent increase in revenue growth (e.g., from 5 percent revenue growth to 5.5 percent revenue growth).

In another recent linkage analysis incorporating data from multiple time periods, telecommunications firm GTE (now part of Verizon Communications) built a seven-item employee engagement index from employee survey data. When GTE's network services unit (a 60,000-employee organization) looked at linkages between employee engagement and customer outcomes, it found that a 1 percent increase in employee engagement was associated with an increase in customer satisfaction of almost 0.5 percent.

Case Study

Roberts and Davenport have conducted linkage analysis with clients in a variety of industries, including software, retail, property management, hotels, and media. A recent project with a specialty retailer (Case 1) illustrated the financial benefits of job engagement. In this work, they measured job engagement of store employees with a three-item survey index and measured organizational commitment with another three-item survey index. They also had employee turnover and financial performance data for each store. The data covered multiple time periods, so we were able to look at the linkages between measures over time.

The results the researchers discuss here refer to job engagement and organizational commitment at one point in time, and employee turnover and financial results six months later. They found a statistically significant relationship between job engagement, employee turnover intentions, and actual turnover statistics. Stores with high job engagement had low turnover, and stores with low job engagement had high turnover. There was not a statistically significant relationship between organizational commitment and turnover—for store employees in this particular organization, it was job engagement, not more general views about the organization that related to turnover. The relationship between job engagement and turnover was almost one-to-one. For example, a 5 percent increase in job engagement was associated with a 4.7 percent reduction in turnover. Reduced turnover, in turn, improved store profitability in two ways:

1. Through reduced turnover costs (costs of separating exiting employees and finding and hiring new employees). The organization estimated turnover costs at approximately 10 percent of a store employee's annual pay. This is a fairly typical, although conservative, figure for jobs of this nature. Some organizations estimate higher turnover costs for jobs of this kind, and most

organizations estimate much higher costs of turnover for professional and managerial jobs (in some cases a multiple of annual pay)

2. Through reduced levels of missing merchandise (shrinkage) and other costs. There were statistically significant relationships between turnover and several significant cost items stores with lower turnover had lower costs, and stores with higher turnover had higher costs. The difference in financial performance between stores low and high in turnover was quite large in this organization. We compared the lowest 25 percent of stores, in terms of turnover rates, with the highest 25 percent and found that turnover costs were over \$25,000 higher per year, per store, in the high-turnover stores. Shrinkage and other costs were also more than \$25,000 higher per year, per store, in high-turnover stores. In total then, costs were over \$50,000 per year higher in high-turnover stores. To put this figure in perspective, net profit per store—given the single-digit margins in the stores, which are common in the industry—is well below \$100,000 per year in this organization.

WHAT DRIVES JOB ENGAGEMENT

In order to improve job engagement, organizations must know what drives it—in other words, what are the leverage points with the greatest impact on employees' engagement in their work. Researchers have seen some common patterns of what drives job engagement in their client work. To illustrate this, they described two other companies they have worked with recently and identify some common themes across the cases. They should note that their focus there, as in their client work, was on things that organizations can change over a reasonable period of time to increase peoples' engagement in their job. Researchers found a statistically significant relationship between job engagement, employee turnover intentions, and actual turnover

statistics. Evidence also suggests that some relatively stable personality traits can influence job attitudes. Looking at personality traits, however, tends to be more useful for selection decisions and matching people to jobs than for improving overall levels of job engagement in organizations.

In each case, researchers used statistical analysis to look at relationships between a job engagement measure and other questions on employee surveys. The goal of the analyses was to identify a short list of items with the greatest linkage to job engagement. The three analyses provided clear evidence about what drives job engagement, explaining 50 to 60 percent of the variation in job engagement. The multiple-item measures of job engagement used in each case also had good statistical reliability (people answered the individual questions measuring job engagement in a consistent way, so the multiple-item indices formed cohesive, meaningful measures).

Three key drivers of job engagement emerged at the specialty retailer in Case 1:

1. "The company provides me with opportunities to learn new skills and develop myself";

2. "If the company is financially successful, I will share in that success"; and

3. "The company offers a positive, fun work environment.

2.25 CONSOLIDATION OF THE LITERATURE REVIEW

A thorough examination of the literature reviewed above shows that most of the research has noted conflicting results regarding the relationship between occupational stress and burnout. Violanti and Aron (1994) have argued that sources of police stress that are ongoing and long-term will result in burnout, reduced motivation, poor job performance, and eventual dropout

from the police profession. There has, on the other hand, been evidence that suggests that burnout does not always develop as a result of stress (Pines, 2000). The above literature review also shows that most of the research was carried out in industrialised countries where working conditions may be different from those prevailing in a developing country like South Africa. Furthermore, although the research dealt with occupational stress, burnout, and coping strategies, job engagement is hardly mentioned. This is because job engagement, as used in this study, is a new concept that emerged from the research of Rich, Lepine and Crawford (2010). It thus seems that its moderating effect on the relationship between occupational stress and emotional burnout has hitherto not been investigated in any research, especially not in combination with coping strategies. It is these conflicting findings and gaps in the research literature that the present study seeks to address.

3   CHAPTER THREE: RESEARCH METHODOLOGY

3.1   INTRODUCTION

This chapter provides an overview of the research design and methodology employed in the study. An explanation of the population and sampling methods is given which is followed by a brief discussion on the measuring instruments used. Subsequently, the research procedure and the method of data analysis are also explained. This chapter concludes with a summary. The next section gives an overview of the research design.

3.2   RESEARCH DESIGN

This section discusses the design of the study. This research is of a survey of a non-experimental and quantitative nature. A survey was conducted to collect the empirical data. Exploratory research is done to explore relatively unknown areas in order to gain new insight and understanding into a phenomenon. The researcher wants to gain knowledge or insight into the phenomenon and feels that not enough knowledge is available on the subject especially in South Africa (Shaughnessy &Zechmeister, 1997).

3.3   POPULATION AND SAMPLING

3.3.1 Population

In research, the term "population" refers to the entire group from which the sample is drawn. Hair, Black, Babin, Anderson and Tatham (2006) define a population as the identifiable set of elements of interest that are pertinent to the researcher and to the research problem. The

population of this study were the members of the police service (N = 19109) from all police stations in the Eastern Cape Province. It involves six district municipalities, namely, Alfred Nzo District Municipality, Amathole District Municipality, Cacadu District Municipality, Chris Hani District Municipality, JoeGqabi District Municipality and O.R.Tambo District Municipality.

3.3.2 Sampling

Researchers normally use a sample, which is a small part of the population with the same attributes as the entire population. In the present study, selection of the sample was done carefully to allow generalisability of the results. The primary idea of sampling is that by selecting some elements of a population the researcher can draw conclusions about the entire population. Cluster random sampling was used. The researcher divided members of the police population into clusters. A few police stations in each district municipality were chosen, and each of these police stations served as a cluster. Simple random sampling was then conducted in each cluster using a list of all police officers in that police station as a sampling frame. The list was obtained from the Station Commander of each of the police stations. The researcher ensured that some of the police stations sampled were located in rural areas while others were located in urban areas. This is because the sources of occupational stress associated with police work in rural areas may be different from those in urban areas.

 The sample size used in the study was calculated using the Raosoft Sample Size Calculator which resulted in a sample size of 377.

The inclusion criteria for the present study are as follows:

a) 377 police officers,

b) Participants of all age groups,

c) Participants from any racial background,

d) Police officers whether in managerial or non-managerial positions,

e) Police officers employed on a full time basis,

f) Marital status, single, married, separated, divorced or widowed.

The measuring instruments used in the study are discussed in the next section.

3.4   MEASURING INSTRUMENTS

This section discusses the measuring instruments used in this study. These are all Self-administered questionnaires in paper-and-pencil format. They consist of different sections divided as follows:

3.4.1   Part 1: General information

This section includes all general instructions which accompany the questionnaire with regard to the completion. The participants were requested to read the instructions carefully and to answer all the questions as accurately as possible.

3.4.2   Part II: Biographical information

The second section deals with the participant's biographical details. It was developed in order to gain biographical data, such as the age of the participant, marital status and educational qualifications.

3.4.3 Occupational stress scale

The Effort Reward Imbalance (ERI) questionnaire (Pikhard, Bobak, Siegrist, Pajak, Rywick, Kyshegyi, Goatautas, Skodova & Marmot, 1996) for stress at the work-place was used. This is a 16-item, five-point rating scale in which "5" represents "applies and distresses me" and "1" represents "does not apply". Cronbach's alpha for the whole questionnaire, according to Pikhard et.al (1996) is .89.

3.4.4 MaslachBurnout Inventory – General Survey. {MBI – GS}

The Maslach Burnout Inventory – General surveyMBI-GS (Maslach, Jackson &Leiter, 1996) was used to measure the degree of burnout experienced by the participants in the study. The version of the scale used in the present study consist of 15 items and has three subscales, which are Exhaustion (five items, e.g. 'I feel used up at the end of the workday'); Cynicism (four items, e.g. 'I have become less enthusiastic about my work'); and Professional Efficacy (six items, e.g. 'In my opinion, I am good at my job'). All items are scored on a seven-point Likert-type frequency rating scale, ranging from "1" (Never) to "7" (Everyday). The three components of the Burnout construct are conceptualised in broader terms relating to the job, rather than just to the personal relationships that might form part of the job (Maslach, Schaufeli&Leiter, 2001). Together, the subscales of the Maslach Burnout Inventory –(GS) provide a three-dimensional perspective on burnout. Cronbach's alpha coefficient for the three scales of the questionnaire are as follows: The exhaustion scale has a Cronbach alpha of 0.89, the cynicism scale, 0.84 and the professional efficacy scale, 0.84. Test–retest reliabilities after one year were 0.65 (exhaustion), 0.60 (cynicism) and 0.67 (professional efficacy).

3.4.5 Job Engagement Scale

The Job Engagement Scale (Rich, Lepine & Crawford will be used to measure job engagement. Initially, engagement was viewed as the positive antithesis of burnout, but according to the scale developers, engagement can be operationalised in its own right. The Job Engagement is scored on a seven point frequency scale, ranging from "1" (Never) to "7" (Every day). Three dimensions of engagement can be distinguished, namely Vigour (6 items; e.g. "I am bursting with energy in my work"), Dedication (5 items; e.g. "I find my work full of meaning and purpose") and Absorption (6 items; e.g. "When I am working, I forget everything else around me"). Engaged individuals are characterised by high levels of Vigour and Dedication and also elevated levels of Absorption. Empirically, certainty needs to be obtained whether burnout and engagement are indeed opposites of the same continuum, while theoretically there seems to be a dichotomous relationship. Burnout and Engagement can be described as related but distinct concepts (Schaufeli *et al*., 2002). In terms of internal consistency, reliability coefficients for the three job engagement subscales have been found to range from 0.68 and 0.91.

3.4.6 Coping Orientation to Problems Experienced

The short form of the Coping Orientation to Problems Experienced (COPE) scale will be used to measure participants' coping strategies. The COPE is a multidimensional 53-item questionnaire indicating the different ways in which individuals cope in different circumstances. For this research, brief cope will be used (Carver, 1997). This is a 28-item questionnaire which measures 14 conceptually differentiable coping reactions, comprised of two items each. Respondents rate themselves on a 4-point frequency scale, ranging from "1" (Usually not doing it at all) to "4" (Usually doing it a lot). The COPE has been proven both reliable and valid in different cultural

groups (Clark, Bornman, Cropanzano& James, 1995; Van der Wateren, 1997). Bief COPE was administered to hundred and thirty six Employee Assistance Programme (EAP) counselors randomly selected from the Employee Assistance Programme Association database. Results indicated that three subscales existed which the researcher named positive coping, passive coping and negative coping. Reliability for each subscale ranged from 0.75 to 0.82. Acceptable reliability and validity levels have been determined for the COPE in the South African context, rendering it suitable for usage in the country (Van der Wateren, 1997; Wissing& Du Toit, 1994).

3.4.6.1 Administration and interpretation

The paper-and-pencil questionnaire is in a statement and self-administered format (Higgins & Duxbury, 1992).The respondent is expected to circle the degree to which occupational stress, emotional burnout, coping strategies and job engagement are experienced. The questionnaire can be administered in groups or individually.

3.4.6.2 Rationale and motivation for using the scale

The above questionnaire measures occupational stress, emotional burnout, coping strategies and job engagement, it is a cheap instrument for collection of data.

3.4.7 Validity and reliability

According to Babbie (2004), validity refers to the extent to which an empirical measure accurately reflects the concept it is intended to measure. The above measures have been shown to be psychometrically sound. The developers of the scales report high correlations between scales and the constructs they measure. A high construct validity is therefore demonstrated.

Reliability refers in general to the extent to which independent administration of the same instrument (or highly similar instruments) consistently yields the same (or similar) results under comparable conditions. Reliability is primarily concerned not with what is being measured, but with how well it is being measured (De Vos et al, 2005). De Vos et al. (2005) states that Cronbach'salpha coefficient is a measure of internal reliability.

3.5   RESEARCH PROCEDURE

Upon receiving approval from the Research committee at Fort Hare University for the commencement of the study, the researcher approached the SAPS Eastern Cape, South Africa, where the researcher sought permission to conduct the study. In order to gain access to each of the identified police stations for purposes of data collection, firstly, the Police Commissioners' permission was also requested. In consultation with the management of each police station, participants were invited to take part immediately, where they were gathered in the refreshments halls and invited to take part voluntarily in the study anonymously. The police officers were then addressed during the lunch hour and the researcher conducted the random sample selection. All the officers who have been selected randomly from the list will be informed. The purpose of the study was explained to the participants prior to participation. Instructions were given verbally and participants were given three days to complete the questionnaires. A box was provided in the commander's office for the submission of completed questionnaires. Questionnaires were handed out to individuals in a booklet format. The researcher collected completed questionnaires after a week. After the data collection phase, the researcher checked the questionnaires for missing data. Those with missing data were discarded.

3.6 STATISTICAL PROCESSING OF DATA

The statistical processing of data is presented in terms of quantitative procedures and statistical techniques. The statistical package SPSS programme was used to analyse the data. Because the sample was small, appropriate statistical techniques were limited. Descriptive statistics include frequencies, means, standard deviations, and chi-square analyses as categorical data was used to summarise and convert the raw data to an understandable format. Inferential statistics are statistical techniques that make it possible to draw inferences about population parameters using sample statistics, e.g. to test claims about the population mean u based on the sample mean (0). The generic name for these techniques is hypothesis tests (De Vos et al, 2005). The pearson correlation and t-test will be used to test the hypotheses.

- T-tests were used to compare means between the constructed groups on variables of interest (Terre Blanche & Durrheim, 1999).

- The means which were used to describe the results are the sum of all squares in the distribution divided by the number of scores in the distribution. The calculated mean is used to compute the average scores which are obtained for the different components of the questionnaire (Kerlinger & Lee, 2000). The advantage of using the mean is that it can be algebraically manipulated and it is also a far superior estimate of the population mean than are other measures of central tendency. Examples of this would be mode or median. A disadvantage of using the mean is that it is influenced by extreme scores.

- The standard deviations (SD) as well as the minimum and maximum values were used to describe the results. The standard deviation is the positive squared root of the variance. The value of the standard deviation indicates how much the scores vary. The larger the value of the standard deviation the more the scores will vary (Kerlinger& Lee, 2000).

- One - Way Analysis of variance (ANOVA) is considered to analyse the variances between and within groups of a particular sample. ANOVA relies on an assumption of equal variance (De Vos et al, 2005).

- The Chi Square test is used to test for the association between two nominal variables (Terre Blanche & Durrheim, 1999).

- A multiple regression analysis was conducted to determine the relationship between occupational stress and emotional burnout and the job engagement and coping strategies combined.

- Correlations are concerned with the degree of relationships between two or more variables (Babbie, 2004). The purpose of correlation is to show how much two variables go together or convey (Babbie, 2004). Correlations were found to be an important part to the research as the method calculating correlations plays a major role in describing the results of the research. In this research the correlation coefficients were used to indicate for example the relationship between perceived occupational stress and emotional burnout.

3.7   CHAPTER SUMMARY

This chapter has described aspects of the empirical research by initially focusing on the research design and methodologies. Other sections have focused on the participants, sampling methods used, measuring instruments, procedure, statistical analysis as well as the consideration of ethics. The next chapter will present and discuss the results of the data analysis.

4 CHAPTER FOUR: DATA ANALYSIS PRESENTATION AND INTERPRETATION

4.1 INTRODUCTION

The previous chapter gave a description of the methodology and techniques applied to conduct the empirical research. This chapter presents the results. Cronbach alpha coefficients for the occupational stress, emotional burnout, job engagement and coping strategies questionnaires are first presented. The descriptive statistics relating to all the variables are then presented. Lastly, the results relating to the inferential statistical analyses relevant to the hypotheses of the study are presented. The chapter concludes with a summary.

4.2 INTERNAL CONSISTENCY OF THE MAIN MEASURING SCALES

Below are the results for the internal consistency of the main data collection instruments. Cronbach's alpha coefficient was used to test for the reliability of the research instrument. Table 4.1 below presents Cronbach's alpha coefficients which were obtained for the respective scales.

Table 4.1: Cronbach alpha for the measuring instruments

Instruments	Cronbach alpha	Number of items
Effort-Reward Imbalance Scale	0.90	16
Maslach Burnout Inventory- GS Scale	0.96	15
Job engagement Scale	0.98	18
Coping Orientation to Problems Experienced Scale	0.96	28

The cronbach alpha for the Effort Reward Imbalance scale (measuring stress) was 0.90 while that for burnout was 0.96, that for job engagement 0.98 and that for coping strategies 0.96. As all these coefficients exceeded 0.70, the scales can be considered to have an acceptable degree of internal consistency.

4.3   DISCRIPTIVE STATISTICS

Below is a table summarizing the demographic characteristics of the study sample. A Chi-square test for equal proportions was used to test for differences in frequency distribution within each demographic variable.

Table 1: Biographical Data – Frequencies, Percentages and Chi-Square test for equal proportions

VARIABLE	LEVELS	df	f	%	Chi-square	p-value
GENDER	MALE	1	204	54.11	2.5491	0.1104
	FEMALE		173	45.89		
AGE	20 - 30 YEARS	3	100	26.53		<.0001**
					111.1167	
	30 - 40 YEARS		158	41.91		
	40 - 50 YEARS		104	27.59		
	>50 YEARS		15	3.98		
MARITAL STATUS	SINGLE	4	190	50.53	283.9202	<.0001**
	MARRIED		105	27.93		
	DIVORCED		28	7.45		
	WIDOW		39	10.37		
	OTHER		14	3.72		
QUALIFICATION	PRIMARY SCH	3	41	10.88	218.3846	<.0001**
	HIGH SCHOOL		216	57.29		
	TERTIARY		77	20.42		
	OTHER		43	11.41		
CHILDREN	0 CHILDREN	4	35	9.28	783.1459	<.0001**

	1 – 3 CHILDREN		291	77.19	
	4 – 6 CHILDREN		38	10.08	
	7 – 9 CHILDREN		11	2.92	
	>9 CHILDREN		2	0.53	
POSITION	W/OFFICER	6	33	8.75	702.0955 <.0001**
	CONSTABLE		233	61.80	
	SERGEANT		15	3.98	
	CAPTAIN		22	5.84	
	COLONEL		13	3.45	
	ASSISTANT DIRECTOR		31	8.22	
	DIRECTOR		30	7.96	

Variables with a significant difference in proportions are marked with **

Below is a graphical presentation and description of the descriptive statistics of the biographical information. Significant different levels within a demographic measure are highlighted with a (*) in table 1 above. A significant p-value is <0.05. All demographic variables, except for gender have significantly unequal proportion within their levels.

4.3.1 Gender
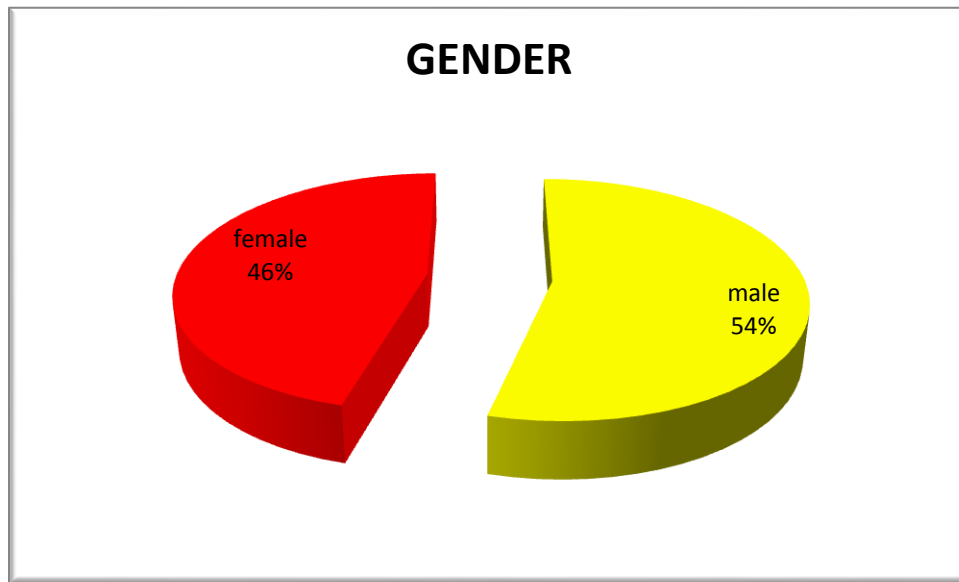
Figure 3.1 Gender distributions of respondents

Figure 3.1 depicts the gender of respondents. The majority of the respondents (54%, n= 204) are male employees, while female employees comprised 46% of the respondents (n = 173). The Chi-square tests for equal proportions failed to reject the null hypothesis (p=0.1104) hence there is no significant difference between the distribution of men and women within the respondents.

4.3.2 Age

Figure 3.2 below shows that the majority of the respondents (41.91%, n = 158) are in the age group 31-40 years, while 27.59% (n=100) are in the age group 41-50 years. One hundred and four respondents (26.53%) fall in the age category 20-30 years and fifteen respondents (3.98%) fall in the age category of above 50 years old. The Chi-square tests for equal proportions showed that there is a significant difference (p=<.0001) within the different age groups and this can be

clearly seen from the bar graph were the majority of the respondents are in the age group 31 to 40.
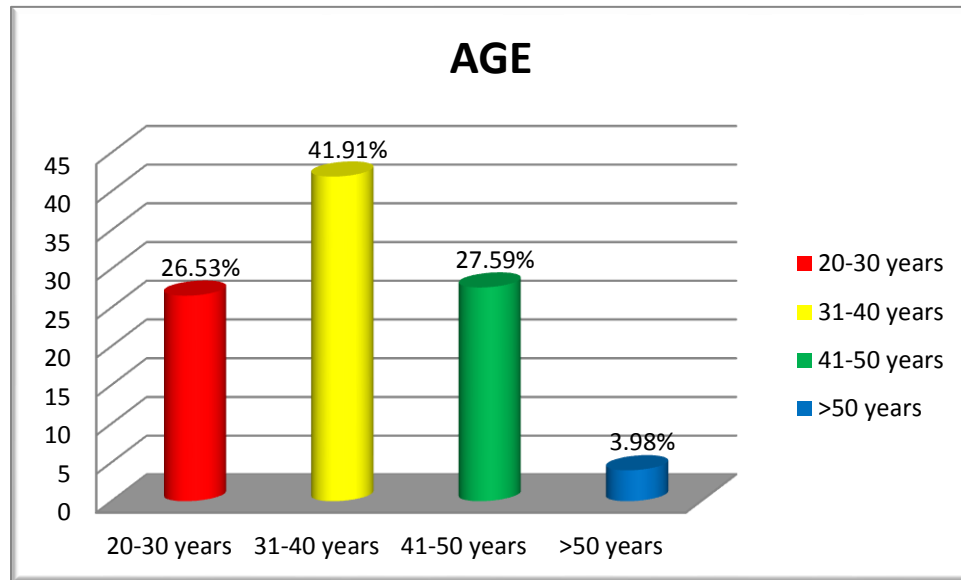
Figure 3.2 Age distribution of respondents

4.3.3 Marital status

Figure 3.3 illustrates that of the 376respondents who participated, 190 (50.53%) of the respondents are single, one hundred and five (27.93%) are married, thirty-nine respondents (10.37%) aredivorced, twenty-eight (7.45%) respondents are separated and fourteen (3.72%) of them are widowed

152
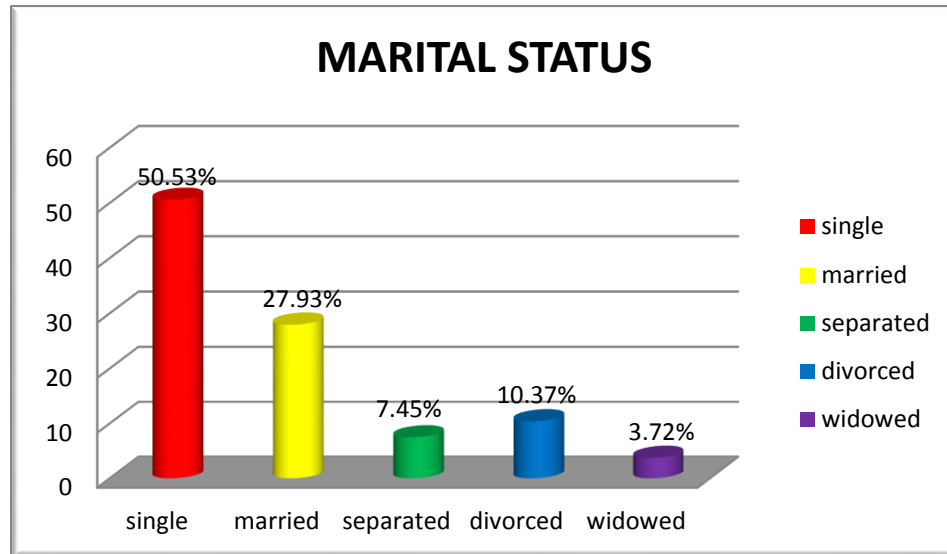
Figure 3.3 Marital statuses of respondents

4.3.4 Education
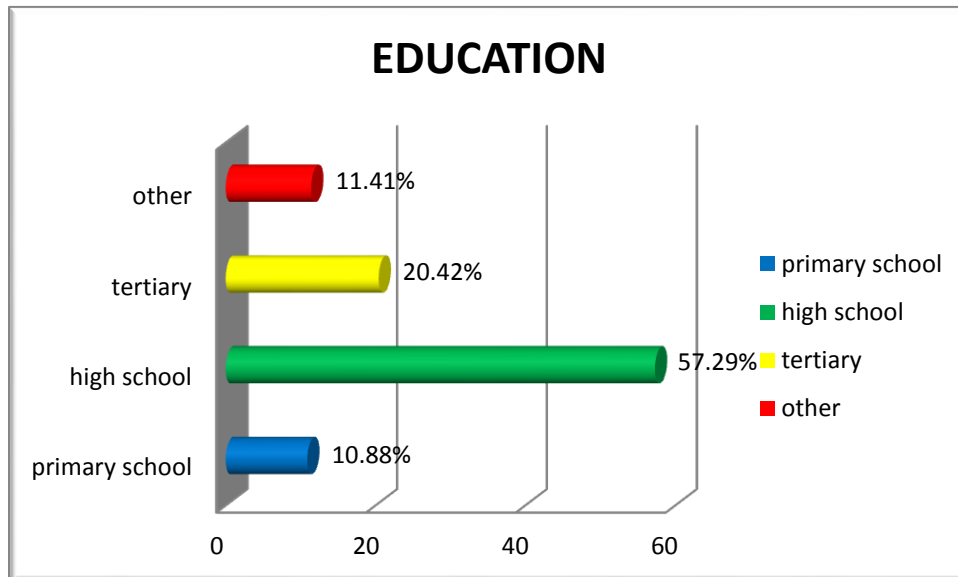
Figure 3.4 Education qualifications of respondents

153

Figure 3.4 illustrates the education level of the sample. The graph depicts that themajority of the respondents, 57.29% (n = 216) has an educational level of a high school certificate whilst 20.42% (n = 77) possess a tertiary qualification. Forty-three respondents (10.88%) has a primary school education and 11.41% (n = 41) possess other educational levels. The Chi-square tests for equal proportions showed that there is a significant difference (p=<.0001) within the different educational levels and this can be clearly seen as the majority of the respondents have a high school certificate as compared to the rest.

4.3.5 Children

The Chi-square tests for equal proportions showed that there is a significant difference (p=<.0001) within the different categories of the variable children. Figure 3.5 show the different number of children the respondents had. Majority of the employee (77.19%, n=291) had 1 to 3 children while 10.08% (n=38) of the respondents had 4 to 6 children. A total of 35 (9.28%) respondents had no children, 2.92% (n=11) had 7 to 9 children and 0.53% (n=2) had more than 9 children.
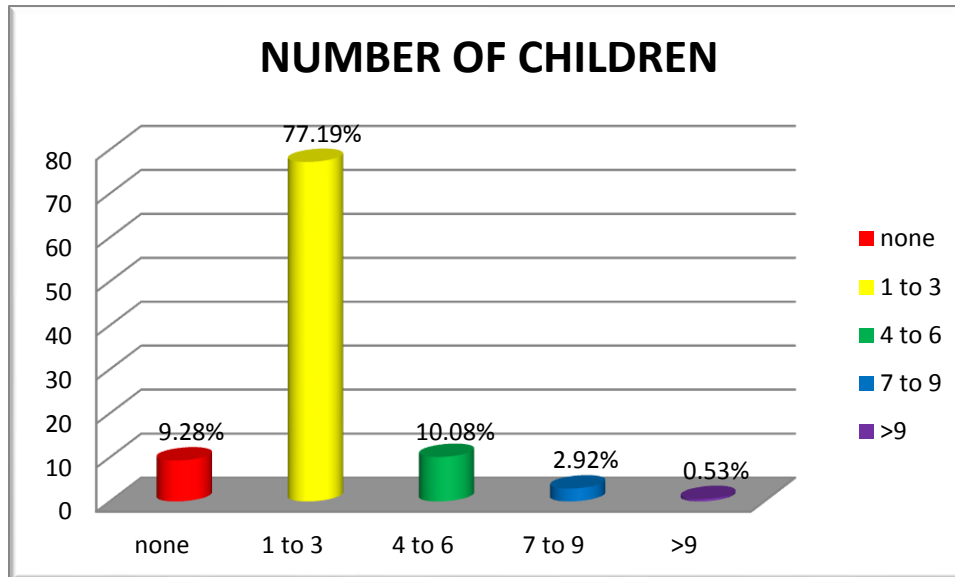
Figure 3.5 Number of children of respondents

4.3.6 Position in organization

Figure 3.6 below shows the job titles held by respondents. The job titles of the sample comprises 61.8% (n =233) constables, 8.75% (n =33)w/officers, 8.22% (n = 31) assistant directors, 7.96% (n =30)directors, 5.84% (n =22) captains, 3.98% (n = 15) sergeants, and 3.45% (n =13)colonels.

POSITION HELD

Position	Percentage
director	7.96%
assistant director	8.22%
colonel	3.45%
captain	5.84%
sergeant	3.98%
constable	61.8%
w/officer	8.75%

Legend: w/officer, constable, sergeant, captain, colonel, assistant director, director
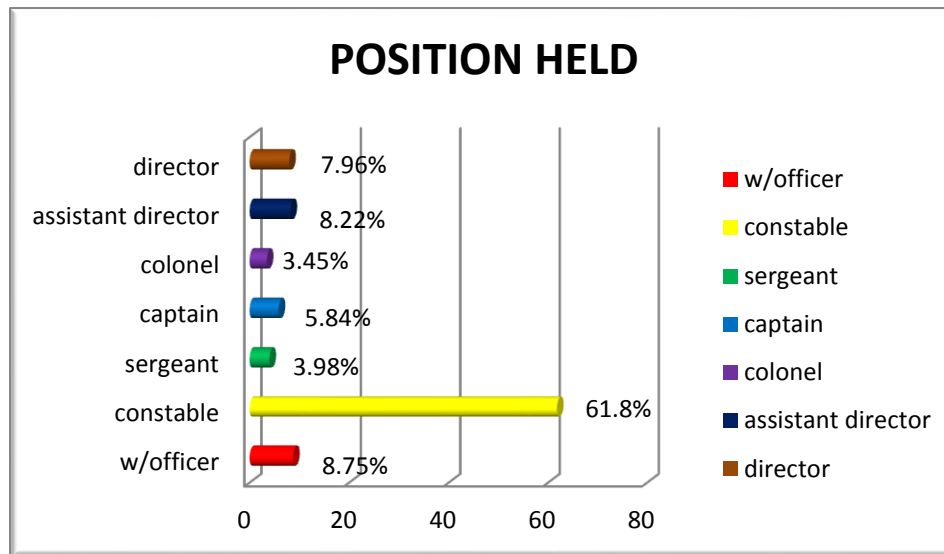
Figure 3.6 Position held by respondents in the organization

4.4   INFERENTIAL STATISTICS

The inferential statistical analyses conducted in this study are shown under each hypothesis below:

Hypothesis 1: The Occupational Stress/Emotional Burnout Hypothesis

H_0 – Occupational stress is not significantly positively related to emotional burnout.

H_1 – Occupational stress is significantly positively related to emotional burnout.

Table 4.2: Pearson Correlation for Occupational Stress and Emotional Burnout

   Correlations

		OCCUPATIONAL_STRESS	BURNOUT
OCCUPATIONAL_STRESS	Pearson Correlation	1	.387^{**}
	Sig. (2-tailed)		.000
	N	377	377
BURNOUT	Pearson Correlation	.387	1
	Sig. (2-tailed)	.000	
	N	377	377

**. Correlation is significant at the 0.01 level (2-tailed).

The results in Table 4.2 show that occupational stress is significantly positively related to emotional burnout (r=0.387; p=<.0001). Hence, we reject the null hypothesis in favour of the alternative hypothesis and conclude that occupational stress is significantly positively related to emotional burnout. Thus, a high level of occupational stress is associated with a high level of emotional burnout and vice-versa.

Hypothesis 2: The Job Engagement/Emotional Burnout Hypothesis

H_0 – Job engagement is not significantly negatively related to emotional burnout.

H_2 – Job engagement is significantly negatively related to emotional burnout.

The results in Table 4.3 show that there is a significant positive correlation between job engagement and emotional burnout (r=0.381; p=<.0001), a case of unexpected results. We then reject the alternative hypothesis in favour of the null hypothesis and conclude that job engagement is significantly positively related to emotional burnout.

Table 4.3: Pearson Correlation for Job Engagement and Emotional Burnout

Correlations

		JOB_ENGA GEMENT	BURNOU T
JOB_ENGAGEM ENT	Pearson Correlation	1	.381
	Sig. (2-tailed)		.000
	N	377	377
BURNOUT	Pearson Correlation	.381	1
	Sig. (2-tailed)	.000	
	N	377	377

**. Correlation is significant at the 0.01 level (2-tailed).

Hypothesis 3: The Coping Strategies/Emotional Burnout Hypothesis

H_0 - The use of coping strategies is not significantly negatively related to burnout.

H_3 - The use of coping strategies is significantly negatively related to burnout.

Table 4.4: Pearson Correlation for Coping Strategies and Emotional Burnout

Correlations

		COPING_STRATEGIES	BURNOUT
COPING_STRATEGIES	Pearson Correlation	1	.572
	Sig. (2-tailed)		.000
	N	377	377
BURNOUT	Pearson Correlation	.572	1
	Sig. (2-tailed)	.000	
	N	377	377

**. Correlation is significant at the 0.01 level (2-tailed).

The Pearson Product Moment Correlation Coefficient was used to determine the relationship between emotional burnout and the use of coping strategies. The results indicate that there is a significant positive relationship between the use of coping strategies and emotional burnout (r=0.572; p=<.0001). This relationship is, however, not in the hypothesized direction, a case of unexpected results. We therefore accept the null hypothesis rather than the alternative hypothesis.

Hypothesis 4: The Occupational Stress/Coping Strategies and Emotional Burnout Relationship

H_0 - Coping strategies do not moderate the relationship between occupational stress and emotional burnout.

H_4 - Coping strategies moderate the relationship between occupational stress and emotional burnout.

To quantify the effect of the moderating variable (coping strategies), occupational stress and coping strategies were modelled as explanatory variables on emotional burnout using multiple linear regression models. The resulting F-value (F=82.83; df=3; Pr>F=<.0001) shows that the model was highly significant. A total of 39.5% of the variation in emotional burnout is explained by the model. The parameter estimates output showed that the moderator effect i.e. the interaction of occupational stress and job engagement (β_3=-5.74; p=<.0001) has a significant negative effect on emotional burnout. The output is presented in Table 4.5.

Table 4.5: Multiple Linear Regression Model for Occupational Stress, Coping Strategies and Emotional Burnout

Table 4.5(a): Significance of Model

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	133.994	3	44.665	82.833	.000[b]
	Residual	201.128	373	.539		
	Total	335.122	376			

a. Dependent Variable: BURNOUT

b. Predictors: (Constant), INTERACTION_EFFECT, OCC_STRESS, COP_STRATEGIES

Table 4.5(b): Variation Explained by Explanatory Variables

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.632[a]	.400	.395	.7343144

a. Predictors: (Constant), INTERACTION_EFFECT, OCC_STRESS, COP_STRATEGIES

Table 4.5(c): Parameter Estimates

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.876	.039		72.847	.000
	OCC_STRESS	.619	.105	.255	5.896	.000
	COP_STRATEGIES	.667	.064	.455	10.398	.000
	INTERACTION_EFFECT	-.574	.137	-.173	-4.177	.000

a. Dependent Variable: BURNOUT

The overall F statistic for the model is significant (Pr $>$ F=<.0001). The model fits, with an R^2 of 0.395. The table of parameter estimates indicates that the estimated regression equation is

Emotional Burnout = 2.876 + 0.255*Occupational Stress + 0.455*Coping Strategies − 0.173*(Occupational Stress*Coping Strategies)

The regression coefficient for the interaction term, $\beta_3 = -.173$, (t=-4.177; p=<.0001) shows that there is significant moderation of the occupational stress-emotional burnout relationship in the data. Thus there is sufficient evidence at 5% significance level to reject the null hypothesis that coping strategies do not moderate the relationship between occupational stress and emotional burnout in favour of the alternative hypothesis and conclude that coping strategies moderate the relationship between occupational stress and emotional burnout.

To visualize the nature of the moderation effect, a simple scatter plot of the effect of occupational stress on emotional burnout (dependent variable) at low, moderate and high values of coping strategies was done.
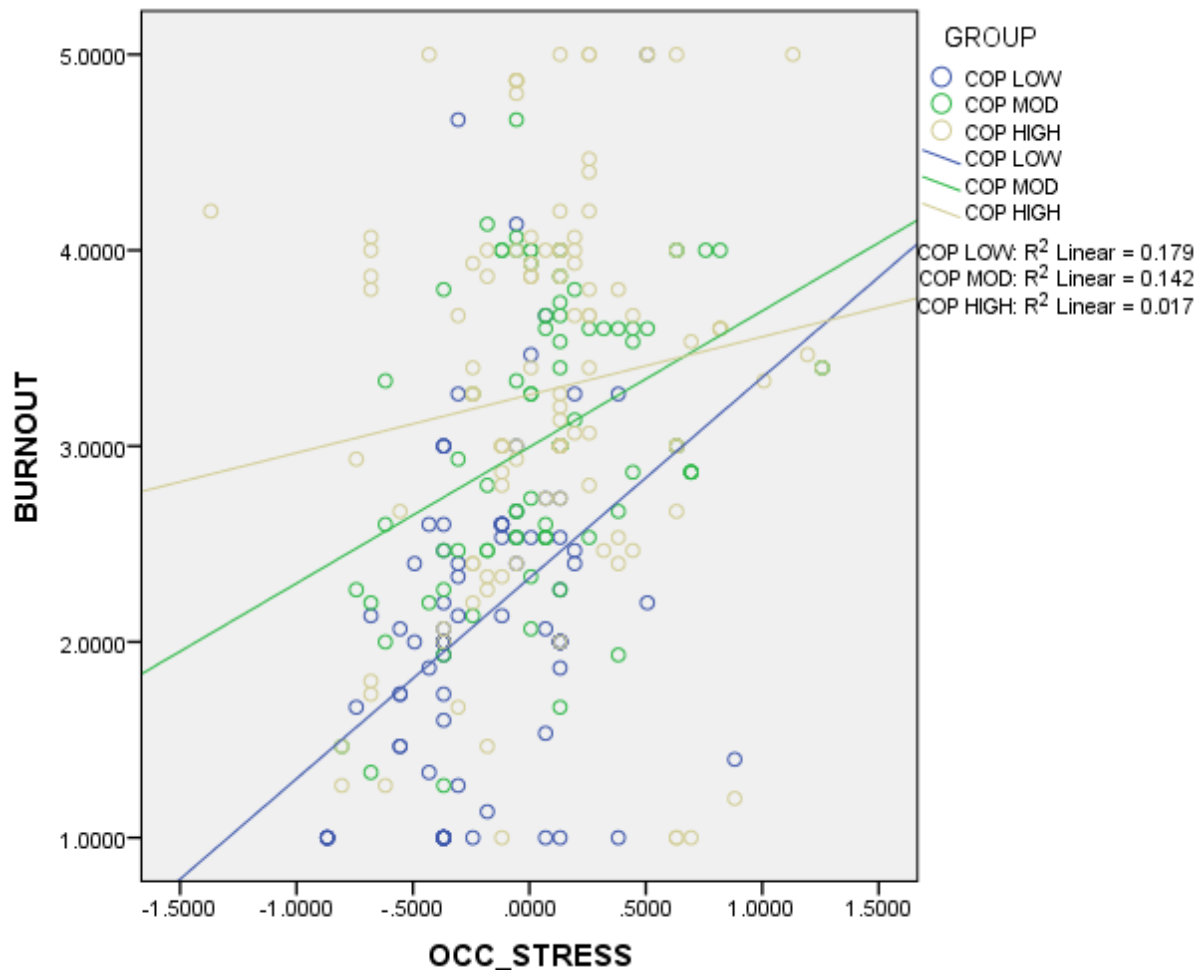
Fig 4.1: Interaction Plot for the Relationship of Occupational Stress and Emotional Burnout at Low, Moderate and High Values of Coping Strategies

Examination of the interaction plot in Fig 4.1 supplemented by Table 4.6 shows that as the levels of coping strategies increase, from low to high, the correlation between occupational stress and emotional burnout becomes weaker. Thus, individuals with low levels of coping strategies had a

higher correlation between emotional burnout and occupational stress (r=0.423) than those with high levels of coping strategies who had a relatively weaker correlation between emotional burnout and occupational stress (r=0.130). Thus, higher levels of coping strategies result in weaker correlations between emotional burnout and occupational stress.

Table 4.6: Coping Strategies Moderator Effect on Emotional Burnout and Occupational Stress

Coping Strategies Levels	R-Square Linear	Correlation Between Occupational Stress and Emotional Burnout
Low Coping Strategies	0.179	r=0.423
Moderate Coping Strategies	0.142	r=0.377
High Coping Strategies	0.017	r=0.130

A chi-square test was then done to see if there exist any significant differences on the correlation coefficients and variability explained by the different models and correlations at low, medium and high levels of coping strategy models on emotional burnout and occupational stress. Bonferroni corrections of the Mantel-Haenszel Exact Chi-Square tests *P* values were then used for a post-hoc analysis for the pairwise comparison of the resultant R-square values and correlation coefficients. The results of this analysis are shown in Table 4.6.1.

Table 4.6.1: Chi-square and Post-hoc Pairwise Comparisons for Coping Strategies Moderator Effect on Emotional Burnout and Occupational Stress

Coping Strategies Levels Comparisons	DF	P-Value R-Square Values	P-Value Correlation Coefficients
Low Vs Medium Vs High	2	<0.0001**	<0.0001**
Low Vs Medium	1	0.5634	0.6651
Low Vs High	1	<0.0001**	<0.0001**
Medium Vs High	1	<0.0001**	<0.0001**

** Significant difference

The overall p-value for the R-square and correlation coefficient comparisons is <0.0001 with 2 degrees of freedom. This is significant and there are three possible pairwise comparisons for each, so the Bonferroni-adjusted *p*-value needed for significance is 0.0001/3, or 0.00003. The *p* value for Low vs. High is less than 0.00003, so there exists a significant difference (p=<0.0001) on the variability explained by low coping strategies levels Vs high coping strategies levels (as well as medium Vs. high) on emotional burnout and occupational stress and the same applies to the correlation effects.

These results significantly support the interaction term, $\beta_3 = -173$, (t=-4.177; p=<.0001) and hence there is sufficient evidence at 5% significance level to reject the null hypothesis that coping strategies do not moderate the relationship between occupational stress and emotional burnout in favour of the alternative hypothesis and conclude that coping strategies moderate the relationship between occupational stress and emotional burnout.

Hypothesis 5: The Occupational Stress/Job Engagement and Emotional Burnout Relationship

H_0 – Job engagement does not moderate the relationship between occupational stress and emotional burnout.

H_4 - Job engagement moderates the relationship between occupational stress and emotional burnout.

To determine if job engagement moderates the relationship between occupational stress and emotional burnout, occupational stress and job engagement were modelled as explanatory variables together with their interaction effect on emotional burnout using multiple linear regression models. The resulting F-value (F=44.13; df=3; Pr>F=<.0001) shows that the model was highly significant. A total of 25.6% of the variation in emotional burnout is explained by the model. The output is presented in Table 4.7.

Table 4.7: Multiple Regression Model for Occupational Stress, Job Engagement and Emotional Burnout

Table 4.7(a): Significance of Model

ANOVA[a]

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	87.787	3	29.262	44.130	.000[b]
Residual	247.336	373	.663		
Total	335.122	376			

a. Dependent Variable: BURNOUT

b. Predictors: (Constant), INTERACTION_EFFECT, OCC_STRESS, JOB_ENGAGE

Table 4.7(b): Variation Explained by Explanatory Variables

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.512[a]	.262	.256	.8143086

a. Predictors: (Constant), INTERACTION_EFFECT, OCC_STRESS, JOB_ENGAGE

Table 4.7(c): Parameter Estimates

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.830	.042		66.980	.000
	OCC_STRESS	.843	.111	.347	7.600	.000
	JOB_ENGAGE	.190	.027	.333	7.030	.000
	INTERACTION_EFFECT	-.019	.064	-.014	-.294	.769

a. Dependent Variable: BURNOUT

The overall F statistic for the moderated model is significant (Pr > F=<.0001). The model fits, with an R^2 of 0.262. The table of parameter estimates indicates that the estimated regression equation is

Emotional Burnout = 2.830 + 0.345*Occupational Stress + 0.333*Job Engagement

The parameter estimates output showed that the interaction effect (β_3=-0.014; t=-0.294; p=0.769) is not significant. Thus there is sufficient evidence at 5% significance level to fail to reject the null hypothesis and conclude that job engagement does not moderate the relationship between occupational stress and emotional burnout.
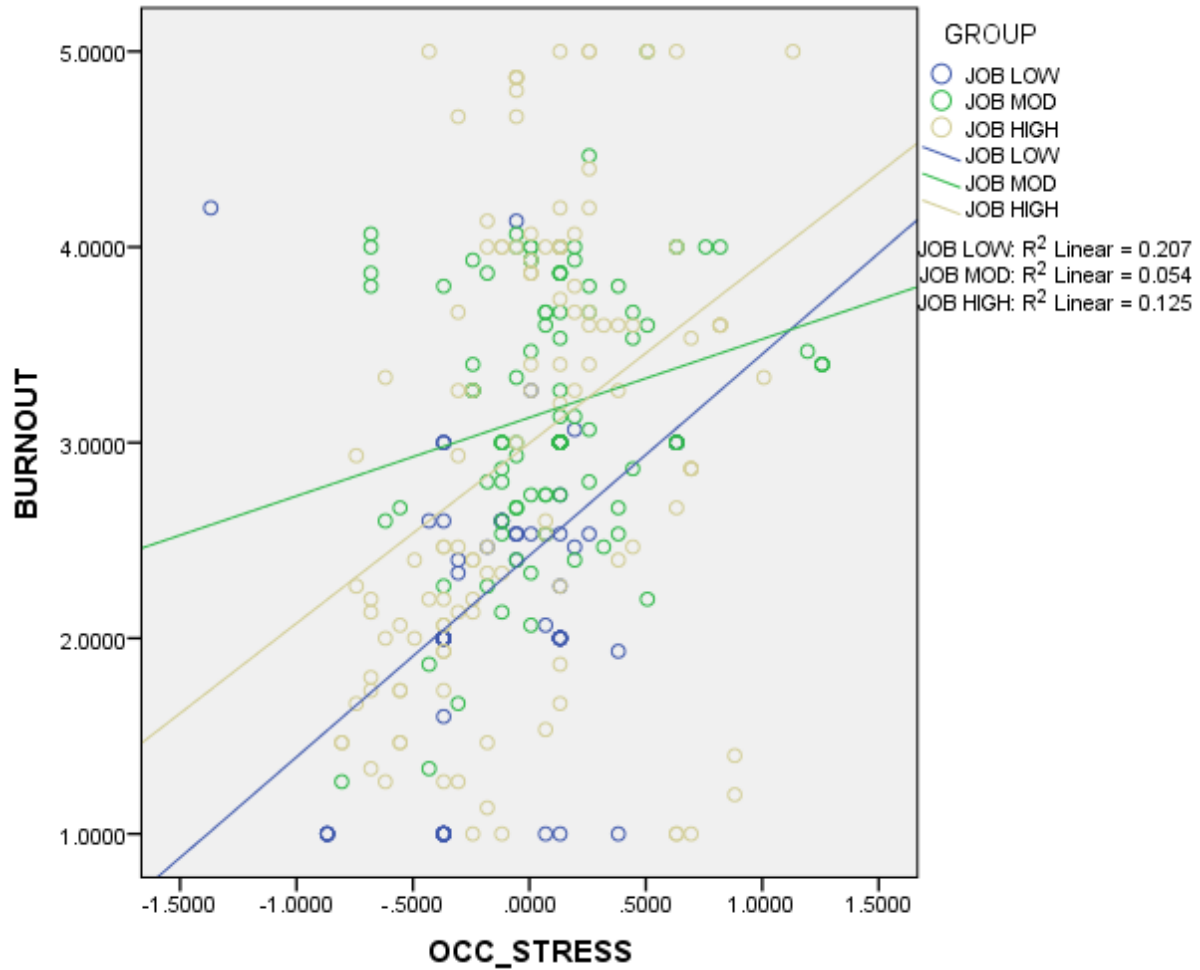
Fig 4.2: Interaction Plot for the Relationship of Occupational Stress and Emotional Burnout at Low, Moderate and High Values of Job Engagement

Plotting interaction effects yielded regression slopes that showed that the prediction of the relationship between emotional burnout and occupational stress from low, moderate and high values of job engagement has no direct relationship. Thus when levels of job engagement increase from low to high the relationship of emotional burnout and occupational stress does not necessarily get stronger or weaker directly, rather it oscillates. This shows that job engagement does not moderate the relationship between emotional burnout and occupational stress. Table 4.8

shows how the correlation of emotional burnout and occupational stress changes at low, moderate and high levels/values of job engagement.

Table 4.8: Job Engagement Moderator Effect on Emotional Burnout and Occupational Stress

Job Engagement Levels	R-Square Linear	Correlation Between Occupational Stress and Emotional Burnout
Low Job Engagement	0.207	r=0.455
Moderate Job Engagement	0.054	r=0.232
High Job Engagement	0.125	r=0.354

A chi-square test was then done to see if there exist any significant differences on the variability explained by the different models as well as the correlations at low, medium and high levels of job engagement models on emotional burnout and occupational stress. Bonferroni corrections of the Mantel-Haenszel Exact Chi-Square tests p values were then used for a post-hoc analysis for the pairwise comparison of the resultant R-square values and correlation coefficients. The results of this analysis are shown in Table 4.8.1.

The overall P value for the R-square comparisons is 0.0035 with 2 degrees of freedom. This is significant and there are three possible pairwise comparisons, so the Bonferroni-adjusted P value needed for significance is 0.0035/3, or 0.001. The overall p value for the correlation coefficient

comparisons is 0.0029 with 2 degrees of freedom. This is significant and there are three possible pairwise comparisons, so the Bonferroni-adjusted *p* value needed for significance is 0.0029/3, or 0.0001. The R-square *P* value for Low vs. medium is less than 0.001, so there exists a significant difference (p=0.0008) on the variability explained by low job engagement levels Vs medium job engagement levels on emotional burnout and occupational stress and the same applies to the correlation effects.

These results significantly support the interaction effect (β_3=-0.014; t=-0.294; p=0.769), thus when levels of job engagement increases from low to high the relationship of emotional burnout and occupational stress doesn't necessarily get stronger or weaker directly rather it oscillates. Hence, there is sufficient evidence at 5% significance level to fail to reject the null hypothesis and conclude that job engagement does not moderate the relationship between occupational stress and emotional burnout.

Table 4.8.1: Chisquare and Post-hoc Pairwise Comparisons for Job Engagement Moderator Effect on Emotional Burnout and Occupational Stress

Job Engagement Levels Comparisons	DF	P-Value R-Square Values	P-Value Correlation Coefficients
Low Vs Medium Vs High	2	0.0035**	0.0029**
Low Vs Medium	1	0.0008**	<0.0001**
Low Vs High	1	0.1330	0.1495

| Medium Vs High | 1 | 0.0486 | 0.0860 |

** Significant difference

Hypothesis 6: The Occupational Stress/Coping Strategies/Job Engagement and Emotional Burnout Relationship

H_0 - Job engagement and use of coping strategies combined do not moderate the relationship between occupational stress and burnout to a greater extent than each of them separately.

H_6 - Job engagement and use of coping strategies combined moderate the relationship between occupational stress and burnout to a greater extent than each of them separately.

To determine if job engagement and use of coping strategies combined moderate the relationship between occupational stress and emotional burnout, occupational stress, coping strategies, job engagement and all the possible interaction effects were modelled as explanatory variables on emotional burnout using multiple regression models. The resulting F-value (F=39.32; df=7; Pr>F=<.0001) shows that the model was highly significant. A total of 41.6% of the variation in emotional burnout is explained by the model. The output is presented in table 4.9

.

Table 4.9: Multiple Regression Model for Occupational Stress, Coping Strategies, Job Engagement and Emotional Burnout

Table 4.9(a): Significance of Model

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	143.184	7	20.455	39.325	.000[b]
	Residual	191.938	369	.520		
	Total	335.122	376			

a. Dependent Variable: BURNOUT

b. Predictors: (Constant), INTERACTION_EFFECT, OCC_COP, JOB_ENGAGE, OCC_STRESS, JOB_COP, COP_STRATEGIES, OCC_JOB

Table 4.9(b): Variation Explained by Explanatory Variables

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.654[a]	.427	.416	.7212192

a. Predictors: (Constant), INTERACTION_EFFECT, OCC_COP, JOB_ENGAGE, OCC_STRESS, JOB_COP, COP_STRATEGIES, OCC_JOB

Table 4.9(c): Parameter Estimates

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.916	.042		69.006	.000
	OCC_STRESS	.683	.116	.281	5.902	.000
	COP_STRATEGIES	.577	.080	.393	7.233	.000
	JOB_ENGAGE	.071	.032	.124	2.239	.026
	OCC_COP	-.823	.173	-.249	-4.761	.000
	OCC_JOB	.205	.075	.153	2.722	.007
	JOB_COP	-.067	.033	-.103	-2.049	.041
	INTERACTION_EFFECT	-.131	.064	-.108	-2.054	.041

a. Dependent Variable: BURNOUT

The model and parameter estimate are statistically significant. The overall F statistic for the model is significant (Pr > F=<.0001). The model fits, with an R^2 of 0.416. The table of parameter estimates indicates that the estimated regression equation is

Emotional Burnout = 2.916 + 0.281*Occupational Stress + 0.393* Coping Strategies + 0.124* Job Engagement - 0.249*(Occupational Stress*Coping Strategies) + 0.153*(Occupational Stress* Job Engagement) - 0.103*(Job Engagement*Coping Strategies) – 0.108*(Occupational Stress* Job Engagement*Coping Strategies)

The parameter estimates show that the interaction effect (β_3=-0.108; t=-2.054; p=0.041) is significant. Thus there is sufficient evidence at 5% significance level to reject the null hypothesis and conclude that job engagement and use of coping strategies combined moderate the relationship between occupational stress and burnout to a greater extent than each of them separately. However this needs to be further tested since the *p* value is close to 0.05.

The interaction plot in Fig 4.3 below supplemented by Table 4.10 below show that as the levels of the combined effect of job engagement and use of coping strategies increases, from low to high, the correlation between occupational stress and emotional burnout becomes weaker. Thus Individuals with combined low values of job engagement and use of coping strategies had a higher correlation between emotional burnout and occupational stress (r=0.460) than those with combined high values of job engagement and use of coping strategies who had a relatively weaker correlation between emotional burnout and occupational stress (r=0.316). Thus, higher levels of combined job engagement and use of coping strategies result in weaker correlations between emotional burnout and occupational stress.
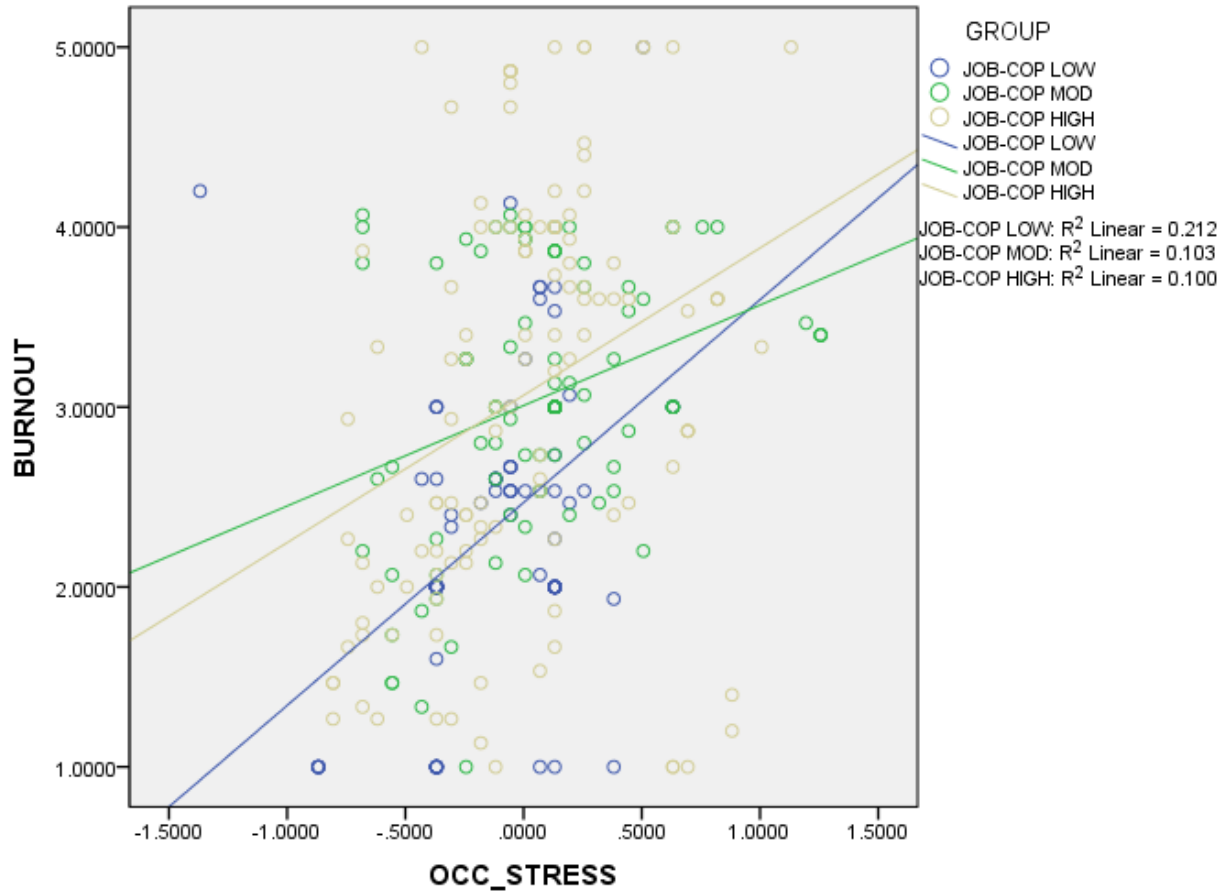
Fig 4.2: Interaction Plot for the Relationship of Occupational Stress and Emotional Burnout at Low, Moderate and High Values of the Combined Effects of Job Engagement and use of Coping Strategies

Table 4.10: Combined Job Engagement and use of Coping Strategies Moderator Effect on Emotional Burnout and Occupational Stress

Combined Moderator Levels	R-Square Linear	Correlation Between Occupational Stress and Emotional Burnout
Low	0.212	r=0.460

Moderate	0.103	r=0.321	
High	0.100	r=0.316	

A chi-square test followed by a pos hoc analysis for pairwise comparisons was then done to see if there exist any significant differences on the variability explained by the different models as well as the correlations at low, medium and high levels of combined job engagement and use of coping strategies models on emotional burnout and occupational stress. Results of this analysis are shown in Table 4.10.1.

Table 4.10.1: Chisquare and Post-hoc Pairwise Comparisons for Combined Job Engagement and use of Coping Strategies Moderator on Emotional Burnout and Occupational Stress

Combined Job Engagement and use of Coping Strategies Moderator Levels Comparisons	DF	P-Value R-Square Values	P-Value Correlation Coefficients
Low Vs Medium Vs High	2	0.0463**	0.0407**
Low Vs Medium	1	0.0544	0.0607
Low Vs High	1	0.0320*	0.0424

| Medium Vs High | 1 | 0.8180 | 0.8800 |

_____

** Significant difference *Significant for single comparisons

The overall *p* value for the R-square comparisons is 0.0463 with 2 degrees of freedom. This is significant (by a tiny bit) and there are three possible pairwise comparisons, so the Bonferroni-adjusted *p* value needed for significance is 0.0463/3, or 0.02. The overall *p* value for the correlation coefficient comparisons is 0.0407 with 2 degrees of freedom. This is significant and there are three possible pairwise comparisons, so the Bonferroni-adjusted *p* value needed for significance is 0.0407/3, or 0.01. However if we are just interested in looking at low Vs. high levels (p=0.320) then there exist significant differences for such pairwise comparisons. This result significantly supports the interaction effect (β_3=-0.108; t=-2.054; p=0.041), thus there exists a significant difference on the variability and correlation effects on low and high combined levels of job engagement and use of coping strategies on emotional burnout and occupational stress. Thus there is sufficient evidence at 5% significance level to reject the null hypothesis and conclude that job engagement and use of coping strategies combined moderate the relationship between occupational stress and burnout to a greater extent than each of them separately.

4.5 CHAPTER SUMMARY

In this chapter, the results of the study were presented. The Cronbach alpha coefficients relating to the main measuring instruments were first presented. These were, for Effort Reward Imbalance = 0.90; Burnout = 0.96; Job Engagement = 0.98; and Coping Strategies = 0.96. The data analyses relating to the formulated hypotheses were then presented. Five hypotheses were

supported by the results. These hypotheses related to the occupational stress/burnout relationship; the job engagement/burnout relationship; the occupational stress/coping strategies/burnout relationship; the job engagement/coping strategies/emotional burnout relationship and the occupational stress/job engagement/coping strategies/burnout relationship. For hypothesis 2, there was a relationship between the use of coping strategies and emotional burnout but this relationship was not in the hypothesised direction, a case of unexpected results. While this chapter presents the research results, the next chapter presents the discussion of the results, and the conclusion relating to the study in its entirety.

5 CHAPTER 5: DISCUSSION AND CONCLUSION

5.1 INTRODUCTION

This final chapter discusses the results in Chapter Four. It discusses the results in relation to the hypotheses as well as previous research findings. The strengths and limitations of the study are taken into consideration. Suggestions for future research are made, and so also are suggestions for future professional and managerial practice. Conclusions for both the chapter and the thesis are then made.

5.2 DISCUSSION OF RESULTS

This section discusses the results in relation to the hypotheses and previous research findings. The overarching purpose of the present study was to examine job engagement and coping strategies as moderators of the relationship between occupational stress and emotional burnout among police officers in the Eastern Cape Province of South Africa.

Hypothesis One: Correlation between occupational stress and emotional burnout

H_0 – Occupational stress is not significantly positively related to emotional burnout.

H_1 – Occupational stress is significantly positively related to emotional burnout.

As shown in Table 4.2, occupational stress is significantly positively related to emotional burnout ($r = 0.39$; $p < 0.001$). The research hypothesis is accepted and the null hypothesis rejected. Different studies that have been conducted reveal that occupational stress that consists

of job demands and lack of resources leads to emotional burnout (Lee & Ashforth, 1996; Leiter, 1993; Peeters & Le Blank, 2001; Schaufeli & Bakker; Taris, Schreurs & Schaufeli, 1999). Sources of occupational stress that lead to emotional burnout may originate within the organisation, although individual characteristics may play a role in an individual's inability to cope with high-stress work environments (Gilligan, 1982). Violanti and Aron (1994) have argued that sources of police stress that are ongoing and long-term will result in emotional burnout, reduced motivation, poor job performance, and eventual dropout from the police profession.

Hypothesis Two: Correlation between job engagement and burnout

H_0 – Job engagement is not significantly negatively related to emotional burnout.

H_2 – Job engagement is significantly negatively related to emotional burnout.

The results in Table 4.3 shows that there is a significant positive correlation between job engagement and emotional burnout (r=0.38; p<.0001), a case of unexpected results. The research hypothesis is rejected and the null hypothesis accepted. Maslach, Schaufeli and Leiter (2001) have argued that, the focus of job engagement, the positive antithesis of emotional burnout, promises to yield new perspectives on intervention to alleviate emotional burnout. According to Rich, Lepine and Crawford (2010), there is strong evidence suggesting that higher levels of job engagement lead to outcomes that organizations value. People who are engaged in their work are more likely to meet the needs of their customers, thereby improving customer loyalty, sales, and profits. People high in work engagement are also less likely to leave the organization, reducing the considerable costs and disruption of turnover. There is also evidence that people who are engaged in their work keep a closer eye on costs and are less stressed, thus less emotional burnout.

Hypothesis Three: Correlation between coping strategies and emotional burnout

H_0 – The use of coping strategies is not significantly negatively related to emotional burnout.

H_3 – The use of coping strategies is significantly negatively related to emotional burnout.

As shown in Table 4.4, the results indicate that there is a significant positive relationship between the use of coping strategies and emotional burnout ($r=0.57249$; $p<.0001$). This relationship is, however, not in the hypothesized direction, a case of unexpected results. We therefore accept the null hypothesis rather than the alternative hypothesis. In a study conducted by Anderson (1999), the effect of engaged coping and disengaged coping on each of the three variables of the burnout syndrome, Emotional Exhaustion (EE), Depersonalisation (DP), and Personal Accomplishment (PA) was studied. First, the multivariate analyses of variance (MANOVA) testing the overall effects of Engaged Coping and Disengaged Coping on all three burnout variables were conducted. Both effects, Engaged and Disengaged Coping, turned out to be significant for Engaged Coping ($F=6.03; p<.001$) and for Disengaged Coping ($F=7.55; p<.001$). Then a univariate analysis of variance (ANOVA) was conducted to explore the relationship of each of the (independent) coping variables, Engaged Coping and Disengaged Coping with each of the (dependent) burnout variables, Emotional Exhaustion, Depersonalisation and Personal Accomplishment. Both Engaged and Disengaged Coping were found to have a significant effect.

Hypothesis Four: Correlation between coping strategies, occupational stress and emotional burnout

H_0 – Coping strategies do not moderate the relationship between occupational stress and emotional burnout.

H_4 – Coping strategies moderate the relationship between occupational stress and emotional burnout.

Table 4.5, reporting the results of regression analysis, shows that coping strategies moderate the relationship between occupational stress and emotional burnout (($\beta_3 = $ -0,173; t = -4.177; p< .0001). The research hypothesis (H_4) is accepted and the null hypothesis is rejected. These findings are in line with previous research findings. According to Bhagat et al. (2001), the level of stress an individual experiences in his or her organisational context, and the extent to which adverse effects such as psychological and other strains occur, depends on how effectively he or she copes with stressful organizational situations. Some other research also supports the contention that the ways people cope with stress and daily living affect their psychological, physical and social well-being (Violanti & Paton, 1999). Differences in how people cope with occupational stress affect the outcomes of that stress. Coping represents the ways that individuals cognitively and behaviourally manage environmental demands in their lives (Lazarus & Folkman, 1984). Pithers (1995) states that ''the extent and strength of an individual's coping resources can mitigate the strain produced by occupational stress'' (p. 390). Chan (1998) examined stress and coping among teachers in Hong Kong. He found that the type of coping strategies teachers used mediated the effects of stress on their emotional well-being. Similar results were obtained in Sweden, where using active coping strategies buffered the effects of teachers' job stress (Brenner et al., 1985), and making positive appraisals of one's work, such as

comparing one's own job favourably to that of others, lessened distress (Needle et al., 1981). Seeking out social and emotional support by turning to others has also been shown to benefit teachers under stress (Greenglass et al., 1995; Burke et al., 1996; Greenglass et al., 1996). In contrast, avoiding one's problems may exacerbate distress (Chan, 1998).

Hypothesis Five: Correlation between occupational stress, job engagement and emotional burnout

H_0 – Job engagement does not moderate the relationship between occupational stress and emotional burnout.

H_5 – Job engagement moderates the relationship between occupational stress and emotional burnout

As shown in Table 4.6, reporting the results of regression analysis, job engagement does not significantly moderate the relationship between occupational stress and emotional burnout ($\beta_3 = -0,014$; t = -0,294 p >0,769). The null hypothesis (H_1) is accepted and the research hypothesis rejected. These findings are not in line with the previous research findings. Regarding the relationship between occupational stress and job engagement, research has shown that even when exposed to high job demands and long working hours, some individuals do not show symptoms of disengagement. Instead, they seem to find pleasure in dealing with these stressors (Schaufeli& Bakker, 2004). However, according to Terry, Nielsen and Perchard (1993), high levels of stress are negatively associated with low levels of job satisfaction – a component of job engagement (which represents the pleasure component of work-related wellbeing). In a study conducted by Schaufeli and Bakker (2004), it was found that while occupational stressors

seemed to contribute to the distress of registered nurses (as indicated by emotional exhaustion and depersonalisation) in terms of engagement and personal accomplishment, the results suggested that no significant relationships exist between occupational stress, on the one hand, and engagement and personal accomplishment on the other. In this regard, Schaufeli and Bakker (2004) stated that personal accomplishment and work engagement form part of an extended engagement factor, while emotional exhaustion and depersonalisation form part of a burnout factor. Moreover, the results of Schaufeli and Bakker's (2004) study showed that burnout (emotional exhaustion) was moderately related to work engagement, while depersonalisation was related to both personal accomplishment and work engagement (a component of job engagement). Therefore, occupational stress could possibly impact on work engagement through its effect on burnout (emotional exhaustion and depersonalisation). However, some other empirical studies have revealed that engagement at work can prevail despite high job demands and long working hours (Schaufeli & Bakker, 2001). There are no previous studies that have dealt with a combination of these variables (occupational stress, job engagement and emotional burnout), in most instances job satisfaction which is a component of job engagement is used.

Hypothesis Six: Correlation between occupational stress, job engagement and coping strategies combined, and emotional burnout

H_0 – Job engagement and use of coping strategies combined do not moderate the relationship between occupational stress and emotional burnout to a greater extent than each of them separately.

H_6 – Job engagement and use of coping strategies combined moderate the relationship between occupational stress and burnout to a greater extent than each of them separately.

As exhibited in Table 4.9, reporting the results of regression analysis, job engagement and use of coping strategies combined moderate the relationship between occupational stress and burnout to a greater extent than each of them separately. ($\beta_{3=}$ -0,108.; t = -2,054; p < 0.041). The research hypothesis (H_5) is accepted and the null hypothesis rejected. Fairbrother and Warn (2003) confirm that occupational stress is negatively related to job satisfaction. Furthermore, it seems that job satisfaction has a protective effect on the relation between occupational stress and disengagement (Ramirez, Graham, Richards, Cull & Gregory, 1996; Visser, Smets, Oort & deHaes, 2003). Visser et al. (2003) confirm that job satisfaction has a protective effect against the negative consequences of occupational stress. They suggest that when stress is high and satisfaction is low, the risk of low energy – a central aspect of low work engagement – increases considerably. Zedeck, Maslach, Mosier and Skitka (1988) conclude that burnout and job dissatisfaction are clearly linked. However, the nature of the link between burnout and job dissatisfaction is a matter of speculation. It is not clear whether burnout causes people to be dissatisfied with their jobs, or whether job dissatisfaction causes burnout. Also, burnout and job dissatisfaction may be caused by another factor, such as poor working conditions. According to Rich, Lepine and Crawford (2010), there is strong evidence suggesting that higher levels of job engagement lead to outcomes that organizations value. People who are engaged in their work are more likely to meet the needs of their customers, thereby improving customer loyalty, sales, and profits. People high in work engagement are also less likely to leave the organization, reducing the considerable costs and disruption of turnover. There is also evidence that people who are engaged in their work keep a closer eye on costs.

5.3   CONCLUSION RELATING TO THE ENTIRE STUDY

The major background to this study is that police work involves mind-pressuring activities emanating from gruesome street violence that is characterised by chasing, stabbing, shooting, car crashes and murder. These activities may lead to stress and ultimately emotional burnout. Previous studies about stress and emotional burnout on police officers are still inconclusive on the major factors that could curb the burnout that is a result occupational stress. It is against this background that this study aimed to assess the moderating role of job engagement and coping strategies between occupational stress and emotional burnout. The researcher therefore hypothesised that job engagement and coping strategies do not significantly influence emotional burnout, and also that job engagement and coping strategies do not moderate the relationship between occupational stress and emotional burnout.

Some theories were employed to help model the main concepts in this study namely; occupational stress, job engagement, coping strategies and emotional burnout. Occupational stress was described in terms of its physiological and psychological effects on the person and can occur when there is a discrepancy between the demands of the environment or workplace and an individual's ability to carry out and complete these demands. Emotional burnout is a psychological term that refers to long-term exhaustion and diminished interest in work. Job engagement was defined as one's enthusiasm and involvement in his or her job to the point of becoming personally identified. Lastly, coping strategies were expressed in terms of the things that one can do to deal with stress and reduce risk of emotional burnout.

A non-experimental exploratory quantitative design was employed in this study. The population of interest were all the members of the South African Police Service in the Eastern Cape Province who totalled to 19109. The study employed the cross-sectional field survey method with a sample of 377 respondents drawn from the SAPS officers within the Eastern Cape Province. Questionnaires were used to gather data from respondents and the Social Sciences statistical package was used in analysis of the findings. A 16-item Effort Reward Imbalance (ERI) questionnaire was used to measure occupational stress. The Maslach Burnout Inventory – General survey (MBI-GS) was used to measure the degree of burnout whilst a seven-point Job Engagement Scale was used to measure job engagement. A 28-item short form of the Coping Orientation to Problems Experienced (COPE) scale was employed to measure participants'

coping strategies. Among other methods, a multiple regression analysis was conducted to determine the relationship between occupational stress and emotional burnout and the job engagement and coping strategies combined.

The results to the study found significant positive correlations between occupational stress and emotional burnout, and between job engagement and emotional burnout. Numerous studies that have been conducted affirm that occupational stress that consists of job demands and lack of resources leads to emotional burnout (Lee & Ashforth, 1996; Leiter, 1993; Peeters & Le Blank, 2001; Schaufeli & Bakker; Taris, Schreurs & Schaufeli, 1999). Significant to this study, job engagement and coping strategies combined were found to moderate the relationship between occupational stress and emotional burnout to a greater extent than each of them tested separately. According to Bhagat *et al*. (2001), the level of stress an individual experiences in his or her organisational context, and the extent to which adverse effects such as psychological and other strains occur, depend on how effectively he or she copes with stressful organizational situations. Some other research also supports the contention that the ways people cope with stress and daily living affect their psychological, physical and social well-being (Violanti& Paton, 1999). Differences in how people cope with occupational stress affect the outcomes of that stress. Coping represents the ways that individuals cognitively and behaviourally manage environmental demands in their lives (Lazarus and Folkman, 1984).

This study made new contribution in South Africa especially that the literature examined showed that most of the research on stress and burnout was carried out in industrialised countries where working conditions may be different from those prevailing in a developing country like South Africa. Furthermore, although the research dealt with occupational stress, burnout, and coping strategies, job engagement is hardly mentioned. This is because job engagement, as used in this study, is a new concept that emerged from the research of Rich, Lepine and Crawford (2010). It thus seems that its moderating effect on the relationship between occupational stress and emotional burnout has hitherto not been investigated in any research, especially not in combination with coping strategies. This study showed that job engagement and the use of

coping strategies combined moderate the relationship between occupational stress and emotional burnout to a greater extent than each of them separately.

The findings to the study have implications for human resource managers and police makers in the South African Police Service and its subsidiaries. Since the study was done on the police members in the Eastern Cape Province, the researcher recommends replicative work for other provinces since differences are bound to be inherent because of place and time. Based on the data collected, the study found significant positive correlations between occupational stress and emotional burnout, and between job engagement and emotional burnout. These findings support previous research which found that regarding the relationship between occupational stress and job engagement, research has shown that even when exposed to high job demands and long working hours, some individuals do not show symptoms of disengagement. Instead, they seem to find pleasure in dealing with these stressors (Schaufeli& Bakker, 2004). However, according to Terry, Nielson and Perchard (1993), high levels of stress are negatively associated with low levels of job satisfaction (which includes job engagement as the opposite of emotional burnout). Fairbrother and Warn (2003) confirm that occupational stress is negatively related to job satisfaction. Furthermore, it seems that job satisfaction has a protective effect on the relation between occupational stress and disengagement (Visser, Smets, Oort & deHaes, 2003). Also with regard to the relationship between occupational stress and burnout, there were some conflicting research results: "Violanti and Aron (1994) have argued on the basis of their research findings, that sources of police stress that are ongoing and long-term will result in burnout, reduced motivation, poor job performance, and eventual dropout from the police profession. There has, on the other hand, been evidence that suggests that burnout does not always develop as a result of stress (Pines, 2000)." Different studies that have been conducted reveal that occupational

189

stress that consists of job demands and lack of resources leads to emotional burnout (Lee & Ashforth, 1996; Leiter, 1993; Peeters & Le Blank, 2001; Schaufeli & Bakker; Taris, Schreurs & Schaufeli, 1999). Sources of occupational stress that lead to emotional burnout may originate within the organisation, although individual characteristics may play a role in an individual's inability to cope with high stress work environments (Gilligan, 1982). Violanti and Aron (1994) have argued that sources of police stress that are ongoing and long-term will result in emotional burnout, reduced motivation, poor job performance, and eventual dropout from the police profession.

The results also indicates that there is a significant positive relationship between the use of coping strategies and emotional burnout (r=0.57249; p=<.0001). From these results, higher levels of coping strategies result in higher levels of emotional burnout. This relationship is, however, not in the hypothesized direction, a case of unexpected results. In a study conducted by Anderson (1999), the effect of engaged coping and disengaged coping on each of the three vaiables of the burnout syndrome, Emotional Exhaustion (EE), Depersonalisation (DP), and Personal Accomplishment (PA) was studied. First, the multivariate analyses (MANOVA) testing the overall effects of Engaged Coping and Disengaged Coping on all three burnout variables were conducted. Both effects, Engaged and Disengaged Coping, turned out to be significant for Engaged Coping (F=6.03;p<.001) and for Disengaged Coping (F=7.55;p<.001). Then a univariate analysis (ANOVA) was conducted to explore the relationship of each of the (independent) coping variables, Engaged Coping and Disengaged Coping with each of the (dependent) burnout variables, Emotional Exhaustion, Depersonalisation and Personal Accomplishment. Both Engaged and Disengaged Coping were found to have a significant effect.

The study also found out that Job engagement and coping strategies combined moderates the relationship between occupational stress and emotional burnout to a greater extent than each of them separately. According to Bhagat *et al.* (2001), the level of stress an individual experiences in his or her organisational context, and the extent to which adverse effects such as psychological and other strains occur, depend on how effectively he or she copes with stressful organizational situations. Some other research also supports the contention that the ways people cope with stress and daily living affect their psychological, physical and social well-being (Violanti& Paton, 1999). Differences in how people cope with occupational stress affect the outcomes of that stress. Coping represents the ways that individuals cognitively and behaviourally manage environmental demands in their lives (Lazarus and Folkman, 1984). Pithers (1995) states that ''the extent and strength of an individual's coping resources can mitigate the strain produced by occupational stress'' (p. 390). Chan (1998) examined stress and coping among teachers in Hong Kong. He found that the type of coping strategies teachers used mediated the effects of stress on their emotional well-being. Similar results were obtained in Sweden, where using active coping strategies buffered the effects of teachers' job stress (Brenner et al., 1985), and making positive appraisals of one's work, such as comparing one's own job favourably to that of others, lessened distress (Needle et al., 1981). Seeking out social and emotional support by turning to others has also been shown to benefit teachers under stress (Greenglass et al., 1995; Burke et al., 1996; Greenglass et al., 1996). In contrast, avoiding one's problems may exacerbate distress (Chan, 1998). According to Rich, Lepine and Crawford (2010), there is strong evidence suggesting that higher levels of job engagement lead to outcomes that organizations value. People who are engaged in their work are more likely to meet the needs of their customers, thereby improving customer loyalty, sales, and profits. People high in work engagement are also less likely to leave

the organization, reducing the considerable costs and disruption of turnover. There is also evidence that people who are engaged in their work keep a closer eye on costs.

The study has made new contribution in South Africa. A thorough examination of the literature review was done and showed that most of the research has noted conflicting results regarding the relationship between occupational stress and burnout. Violanti and Aron (1994) have argued that sources of police stress that are ongoing and long-term will result in burnout, reduced motivation, poor job performance, and eventual dropout from the police profession. There has, on the other hand, been evidence that suggests that burnout does not always develop as a result of stress (Pines, 2000). This study supports Violanti and Aron (1994) that occupational stress is significantly positively related to emotional burnout. The literature reviewed also showed that most of the research was carried out in industrialised countries where working conditions may be different from those prevailing in a developing country like South Africa. Furthermore, although the research dealt with occupational stress, burnout, and coping strategies, job engagement is hardly mentioned. This is because job engagement, as used in this study, is a new concept that emerged from the research of Rich, Lepine and Crawford (2010). It thus seems that its moderating effect on the relationship between occupational stress and emotional burnout has hitherto not been investigated in any research, especially not in combination with coping strategies. This study showed that job engagement and the use of coping strategies combined moderate the relationship between occupational stress and emotional burnout to a greater extent than each of them separately.

5.4   LIMITATIONS OF THE STUDY

Although this study was largely successful, there are some notable limitations. These limitations are briefly discussed below.

The current study used a purely quantitative paradigm. The inclusion of qualitative methodologies could have provided a more in-depth understanding of the relationships among the variables included in the study. For example, this study used Likert-type questionnaires, which limit the participants from expressing their own views in full. A second problem relating to the exclusive use of questionnaires is the likelihood of common method variance which is attributable to the measurement method rather than to the construct the measures represent (Podsakoff, Mackenzie, Lee & Podsakoff, 2003: 879). It creates a false internal consistency, that is, an apparent correlation among variables generated by their common source. Triangulation is often recommended as an important way of counter-acting common method variance. It involves the conscious combination of quantitative and qualitative methodologies as a powerful solution to strengthen a research design where the logic is based on the argument that a single method can never adequately solve the problem of rival causal factors (De Vos 1998). It is the combination of at least two or more theoretical perspectives, methodological approaches, data sources, investigators, or data analysis methods. The intent of using triangulation is to decrease, negate, or counterbalance the deficiency of a single strategy, thereby increasing the ability to interpret the findings (De Vos 1998).

Another shortcoming of the present study is that the data set is quite small (n = 377) due to financial and time constraints. Having a small sample limits the generalisability of the findings. The study was conducted in the Eastern Cape Province of South Africa. It would have been

better if the study had been conducted throughout the country. This would have made the findings more generalizable to the whole country. This is in line with the external validity principle which is the extent to which the results of a study can be generalized to other situations and to other people. According to Latane and Darley (1976) external validity refers to how well data and theories from one setting apply to another.

5.5 RECOMMENDATIONS FOR FUTURE MANAGERIAL PRACTICE

The results of this study have several implications for managerial practice in South Africa, especially with regard to highly stressful occupations such as police work and nursing.

The first implication relates to Hypothesis 1. This hypothesis posits a significant positive relationship between occupational stress and emotional burnout. In previous studies, emotional burnout has, indeed, been found to be positively correlated with undesirable organizational outcomes such as high labour turnover, which is harmful to organisations. Many organisations have discovered that turnover is reduced significantly when issues affecting employees are addressed immediately and professionally. Most companies try to reduce high employee turnover by offering benefits such as paid sick days, paid holidays and flexible schedules. It is clear therefore that managers should, in future, do their best to ameliorate stress among their subordinates in order to avoid emotional burnout and the other undesirable outcomes. Organisational stress can be ameliorated in the following ways:

1. **Write a list.** The list should comprise of all the stressing things and these things should be ranked. This exercise allows an individual to focus on the big issues that would make the most significant difference

2. **Manage your time.** Write a list of all the things you need to do and categorise them into must do's and should do's. If they aren't must do's cross them off the list for another time. Sometimes simply organising your time better is often the best strategy in coping with stress. This can help you avoid leaving things to the last minute creating unnecessary stress. For example can you pack your bag the night before and save time in the morning?

3. **Speak to others.** If an individual is feeling stressed and struggling to cope, there is need to tell someone. Usually people are willing to help and share the workload.

4. **Do some exercise.** This will help give you time to unwind. There is a strong link between those that are physically fit and those that are mentally fit. Exercise will not remove the stress from your life but it will help you organise your thoughts allowing you to deal with the problem more effectively.

5. **Avoid foods high in sugar and caffeine.** The foods that are high in sugar and caffeine often release bursting energy which can cause one to crash. The crashes may cause tiredness, affect one's mood and can cause a worse feeling in the long run. Healthy food stuffs may actually help in reducing stress.

6. **Revisit your goals.** Goals need to be checked for their attainability and reality. An individual needs to change all their goals to be realistic and achievable and not stress over those that cannot be attained.

7. **Avoid drugs and alcohol.** "Many drugs like alcohol may provide you with a short term high, however they are also depressants which can make you feel worse and affect your mood. Drugs are not a long term strategy in coping with stress. If you feel that you may becoming dependant on drugs or alcohol you should seek advice from your local GP".

8. **Stop worrying about things that you cannot change.** Ask yourself, is the problem real or not. If you cannot do anything to change the situation forget about it.

9. **Do something you enjoy.** There is no better way to relax than by doing something you love. Whether it's skydiving, kicking back and watching TV or reading a book doing something you enjoy is a great way to manage your stress.

10. **Learn to say no.** Don't say you will do something if you realistically do not have time to do it. This will only add to your stressful life and allow things to build up. Managers in South African organisations should engage in these ways of ameliorating stress.

Hypothesis 2 of this study has managerial implications though the findings of the study unexpectedly did not support the hypothesis. This hypothesis posits that job engagement is significantly negatively related to emotional burnout. According to Rich, Lepine and Crawford (2010), there is a strong evidence suggesting that higher levels of job engagement lead to outcomes that organisations value. This hypothesis received support from many other previous studies, that people who are engaged in their work are more likely to meet the needs of their customers, thereby improving customer loyalty, sales, and profits. Managers in South African organisations would therefore be well advised to promote job engagement among their subordinates in order to avoid emotional burnout and its adverse effects on organizational

effectiveness. The following are some of the actions that managers can take in an attempt to promote job engagement in their organisations:

➢ Use right employee engagement survey. Any survey data must be specific, relevant, and actionable for any team at any organizational level. Data should also be proven to influence key performance metrics.

➢ Focus on engagement at local and organizational levels. Managers and employees must feel empowered to make a significant difference in their immediate environment. Leaders and management should work with employees to identify barriers to engagement and opportunities to effect positive change.

➢ Select right managers. The best managers understand that their success and that of the organization relies on employees' achievements. Great managers care about their people's success. They seek to understand each person's strengths and provide employees with every opportunity to use their strengths in their role.

➢ Coach managers and hold them accountable for their employees' engagement. Gallup's research has found that managers are primarily responsible for their employee's engagement levels. Companies should coach managers to take an active role in building engagement plans with their employees, hold managers accountable, track their progress, and ensure that they continuously focus on emotionally engaging their employees.

➢ Define engagement goals in realistic, everyday terms. To bring engagement to life, leaders must make engagement goals meaningful to employees' day to day experiences. Describing what success looks like using powerful descriptions and emotive language helps give meaning to goals and builds commitment within a team.

Hypothesis 3 of this study posits a significant negative relationship between the use of coping strategies and emotional burnout. The results of the study, however, did not support this hypothesis. Instead, it found a significant positive relationship between the use of coping strategies and emotional burnout.

While the true nature of the relationship between these variables needs to be clarified in future research, it would seem to make logical sense to advise that managers must coach their subordinates on the use of strategies that can assist them to cope with organisational stress. Such advice would be relevant in the case of Hypothesis 4 as well. This hypothesis supports that coping strategies moderate the relationship between occupational stress and emotional burnout. The findings of this study supported this hypothesis.

The results of the study relating to Hypothesis 6 also have important implications for future managerial practice. With regard to this hypothesis, it was found that job engagement and the use of coping strategies combined, moderate the relationship between occupational stress and emotional burnout to a greater extent than any of them separately. The clear implication here is that both job engagement and coping strategies are necessary to counteract the negative effects of occupational stress on employee effectiveness at work. Managers should therefore do their best to promote both job engagement and the use of coping strategies at all times.

5.6   CONTRIBUTION MADE BY THE STUDY

The study has made a noteworthy contribution to knowledge regarding the interrelationships between the independent variable (occupational stress) and the two moderator variables (job engagement and the use of coping strategies), on the one hand, and the dependant variable (emotional burnout), on the other hand. Most importantly, the study was conducted in the Eastern

Cape Province of South Africa, where there were no indications of any similar study having been previously conducted.

The results of the study supported the hypothesized positive correlation between occupational stress and emotional burnout. These results were also in support of the results of previous studies in other parts of the world.

The results of the study unexpectedly revealed a positive correlation between job engagement and emotional burnout. The hypothesized negative relationship between the two variables was thus not supported. The bulk of previous studies that also indicated a negative correlation between the two variables were also not supported by the results of the present study.

Contrary to the hypothesis and the bulk of previous studies, the present study found a negative relationship between the use of coping strategies and emotional burnout. Further research is necessary with regard to this unexpected result, and the unexpected result with regard to the relationship between job engagement and emotional burnout.

In the same way as several previous studies, and as hypothesized in the present study, the study found that the use of coping strategies does moderate the relationship between occupational stress and emotional burnout.

Contrary to the hypothesis of this study, however, job engagement was found not to significantly moderate the relationship between occupational stress and emotional burnout. No previous study seems to have directly studied the moderator effect of Job engagement on the relationship between occupational stress and emotional burnout. This needs to be further researched in future.

As hypothesized, job engagement and the use of coping strategies jointly moderate the relationship between occupational stress and emotional burnout more than each does separately. It again does not seem that any previous studies have been conducted in this regard. The present study has thus broken new ground in this regard and future related research is necessary.

In summary, then, despite the need for further research with regard to many of the findings of the present study, there are many of its other findings that can already be used by managers to improve the effectiveness of their organisations. This has been discussed in more detail in the section 5.2 above.

5.7   RECOMMENDATIONS FOR FUTURE RESEARCH

The findings of the present study have important implications for future research and practice. In terms of perceived strain, this study is a first step towards the development of a comprehensive perceived strain profile of police officers in South Africa. However, the current study only considered the province of the Eastern Cape and it is recommended that the study be expanded to the other eight provinces in South Africa. The researcher also recommends that future researchers must increase the sample size to avoid limiting the generalisability of the findings and improve external validity (De Vos, 1998). The use of both quantitative and qualitative methodologies may provide a more in-depth understanding of the relationships among the variables included in the study as opposed to the use of quantitative method only. In the case of the relationship between coping strategies and emotional burnout, the relationship was, however, not in the hypothesised direction, a case of unexpected results. Further research is necessary to clarify matters in this regard. The sample size and the extent of the geographic area from which the sample is selected need to expand.

5.8   CHAPTER SUMMARY

This chapter provides a brief discussion of the results in relation to the hypothesis and previous research findings. Strong empirical evidence exists to show that correlations exist between job engagement, coping strategies, occupational stress on the one hand, and emotional burnout on the other. The chapter also provides a brief discussion on the limitations. Recommendations for future managerial practice and future research are also made. In discussing the results in relation to the hypotheses the researcher found that; for hypothesis one, occupational stress is significantly positively related to emotional burnout; for hypothesis two, there is a significant positive correlation between job engagement and emotional burnout; hypothesis three, there is a significant positive relationship between the use of coping strategies and emotional burnout; hypothesis four, coping strategies moderates the relationship between occupational stress and emotional burnout; hypothesis five, job engagement does not moderate the relationship between occupational stress and emotional burnout; for hypothesis six, job engagement and use of coping strategies combined moderate the relationship between occupational stress and emotional burnout to a greater extent than each of them separately.

REFERENCES

Alexander, C. (1999). Police psychological burnout and trauma. (In J. M. Violanti and D. Paton (Eds.), Police trauma: Psychological aftermath of civilian combat. (pp. 54 – 64). Springfield Ill: Charles C. Thomas).

Alexander, D. A., Walker, L. G., Innes, G., & Irving, B. L. (1993). Police stress at work. London: Police Foundation.

Alkus, S. & Padesky, C. (1983). Special problems of police officers: Stress-related issues and interventions. *The Counseling Psychologist*, 11, 55-64

Amirkhan, J. H. (1994). Criterion validity of coping measures. *Journal of Personality Assessment*, 62, 242 – 261.

Anderson, D.G. (2000). Coping strategies and burnout among veteran child protection workers. *Child Abuse and Neglect*, 24, 839-848.

Anshel, M.H. (2000). A conceptual model and implications for coping with stressful events in police work. Criminal Justice and Behavior, 27, 375-400.

Ayres, R. M., & Flanagan, G. S. (1992). *Preventing law enforcement stress: The organization's role.* Washington, DC: U.S. Department of Justice Bureau of Justice Assistance.

Babbie, E. (2004). *The practice of social research*. Cape Town: Oxford University Press.

Bakker, A. B., Demerouti, E., &Schaufeli, W. B. (2002). Validation of the Maslach Burnout Inventory–General Survey: An Internet study. *Anxiety, Stress, and Coping, 15,* 245–260.

Bakker, A. B., Schaufeli, W. B., Sixma, H., Bosveld, W., & Van Dierendonck, D. (2000). Patient demands, lack of reciprocity, and burnout: A five-year longitudinal study among general practitioners *Journal of Organizational Behavior, 21,* 425–441.

Bakker, A., Schaufeli, W.B. & Van Dierendonck, D. (2000). Burnout: Prevalentie, risicogroepenen risicofactoren. In: I.L.D.Houtman, W.B. Schaufeli& T. Taris (Red.),*Psychischevermoeidheid en werk: Cijfers, trends en analyses* (pp. 65-82). Alphen a/dRijn: Samsom.

Bandura, A. (1986). Social foundations of thought and action: A social cognitive theory. Englewood Cliffs, NJ: Prentice- Hall, Inc.

Bass, B. M. (1990). From transactional to transformational leadership: Learning to share the vision. *Organizational Dynamics*, (Winter): 19-31.

Bass, B.M. (1985). Leadership and performance beyond expectations. New York: Free Press

Basson, A. (2005, August 4). Skoksyferswyspolisie is oorbelaai. Beeld.

Bates, R., & Khasawneh, S. (2007). Self-Efficacy and College Students' Perceptions and Use of Online Learning Systems. *Computers in Human Behavior*, 23, 175-191

Bhagat, R.S., Ford, D.L., O'Driscoll, M.P., Frey, L., Babakus, E., &Mahanyele, M. (2001). Do South African managers cope differently from American managers? A cross cultural investigation.*International Journal of Intercultural Relations, 25*, 301–313.

Biggam, F. H., Power, K. G., MacDonald, R. R., Carcary, W.B., &Moodie, E. (1997). Self-perceived occupational distress in a Scottish police force. *Work & Stress*, 11, 118 – 133.

Boumans, N.P., &Landeweerd, J.A. (1996).A Dutch study of the effects of primary nursing on job characteristics and organisational processes. *Journal of advanced nursing*. 24(1): 16-23.

Bowlby J. (1982). Attachment and Loss. 2nd ed. Basic Books: USA

Brenner M., Brown J. & Canter D. (1985). The research interview, Academic Press, London

Brophy, J. E. (1983). Research on the self-fulfilling prophecy and teacher expectations. *Journal of Educational Psychology, 75(5)*, 631–661.

Brown, J. M., & Campbell, E. (1990). Sources of occupational stress in the police. *Work & Stress*, 4, 305 - 318.

Brown, J. M., & Campbell, E. (1994). Stress and policing: Sources and strategies. Chichester, UK: Wiley

Brown, J., Cooper, C., & Kirkcaldy, B. (1996). Occupational stress among senior police officers. *British Journal of Psychology*, 87, 31 - 41.

Burke, R. J. (1997). Toward an understanding of psychological burnout among police officers. *International Journal of Stress Management*, 4, 3 – 27.

Burke, R.J. &Deszca, E. (1986).Correlates of psychological burnout phases among police officers. *Human Relations,* 39, 487-502.

Burke, R.J. (1993). Work-family stress, conflict, coping and burnout in police officers.*StressMedicine*, 9, 171-80.

Callan, V. J. (1993). Individual and organizational strategies for coping with organizational change. *Work & Stress*, 7, 63 – 75.

Caplan, R. D., & Harrison, R. V. (1993). Person-environment fit theory: Some history, recent developments, and future directions. *Journal of Social Issues*, 49, 253-275.

Carver, C.S. (1997). You want to measure coping but your protocol's too long.Consider the Brief COPE*. International Journal of Behavioral Medicine*1997; 4 (1): 92-100.

Caver, C.S., Scheier, M.F. &Weintraub, J.K. (1989).Assessing coping strategies: A theoretical based approach.*Journal of personality and social psychology.*

Chan D. (1998). Functional relations among constructs in the same content domain at different levels of analysis: A typology of composition models. *Journal of Applied Psychology*, 83(2), 234-246

Clark, K. K., Bormann, C. A., Cropanzano, R. A., & James, K. (1995).Validation evidence for three measures of coping.*Journal of Personality Assessment*, 65(3), 434–455.

Cohen, F. (1984)."Coping" In J.D. Matarazzo, S.M. Weiss, J.A. Herd, N.E. Miller & S.M. Weiss (eds.), *Behavioral Health: A Handbook of Health Enhancement and Disease Prevention*. New York: Wiley, 1984.

Coman J. G. & Evans B. J. (1995). Clinical Update on Eating Disorders and Obesity: Implications for Treatment with Hypnosis. *Australian Journal of Clinical and Experimental Hypnosis.* 23(1), 1-13

Coman, J. G., & Berry, J. E. (1991). Stressors Facing Australian Police in 1990s. *Police Studies*, *14*(1/4), 153-65.

Constable, J. F., and Russell, D. W. (1986). The effect of social support and the work environment upon burnout among nurses. *Journal of Human Stress* 12: 20–26.

Cooper, C. L., &Bramwell, R. (1992) Predictive validity of the strain components of the occupational stress indicator. *Stress Medicine*, 8, 57 – 60.

Cooper, C.L., Dewe, P.J. &O'Driscoll, M.P. (2001).*Organisational stress: A review and critique of theory, research and applications.* Sage Publication: CA

Cordes, C. L., & Dougherty, T. W. (1993). A review and integration of resources on job

Crank, J. P., &Caldero, M. (1991). The production of occupation stress in medium-sized police agencies: A survey of line officers in eight municipal departments. *Journal of Criminal Justice*, 19, 339 -349.

Crowe, G., &Stradling, S. G. (1993). Dimensions of perceived stress in a British police force. *Policing and Society*, 3, 137 – 150.

Cullen F. T., Clark G. A., Mathers R. A. & Cullen J. B. (1983). Public Support for Punishing White-collar Crime: Blaming the Victim Revisited? *Journal of Criminal Justice* 11(6): 481-493

Cummings, T.G. (1980). *Systems theory for organisational development*. Chichester: Wiley.

Davenport, T. H., & Prusak, L. (1997). Information ecology: Mastering the information and knowledge environment. Oxford: Oxford University Press

De Vos, A.S. (1998). *Research at grassroots*, Academic: J.L. Van Schaik.

De Vos, A.S., Strydom, H., Fouche, C.B., &Delport, C. S. L. (2005).*Research at grass roots: For the social sciences* and *human service professional* (3rd ed.). Pretoria: Van SchaikPublishers.

DeLongis, A.V., Coyne, J.C., Folkman, S., & Lazarus, R.S. (1982). Relationship of daily hassles, uplifts, and major life events to health status. *Health psychology*, 1, 119 – 136.

Demerouti, E., Bakker, A. B., Nachreiner, F., &Schaufeli, W. B. (2001). The job demands resources model of burnout. *Journal of Applied Psychology, 86,* 499–512.

Desmarais, S. and Alksnis, C. (2005) 'Gender issues', in Barling, J., Kelloway, K., and Frone, M. (Eds.): Handbook of Work Stress, Sage, Thousand Oaks, California, pp.455–487

Desmarais, S., &Alksnis, C. (in press). Gender and work stress. In J. Barling, E. K. Kelloway, & M. Frone (Eds.), *Handbook of work stress*. Newbury Park, CA: Sage.

Dorz, S., Novara, C., Sica, C. &Sanavio, E. (2005).Predicting burnout among HIV/AIDS and oncology health care workers. *Psychology and health,* 18(5), 677-684.

Dunham, J., &Klfehn, K.A. (1990). Transformational leadership and the nurse executive. *Journal of nursing administration,* 20, 28-34.

Duquette, A., Sandhu, B.K., &Beaudet, L. (1994). Factors related to nursing burnout: A review of empirical knowledge. *Issues in Mental Health Nursing*, 15, 337-358.

Edwards, J. R. (1992). A cybernetic theory of stress, coping, and well-being in organizations. *Academy of Management Review*, 17, 238-274.

Edwards, J.R., & Cooper, C.L. (1990). The person-environment fit approach to stress: Recurring problems and some suggested solutions. *Journal of organisational behaviour*, 10, 293-307.

Edwards, M. J., & Holden, R. R. (2003). Coping, meaning in life and suicidal manifestations: Examining gender differences. *Journal of Clinical Psychology*, 59(10), 1133 – 1150.

Ellison, K. W., & Genz, J. (1983). *Stress and the police officer*. Sprongfield, IL: Charles C. Thomas

Endler, N. S., & Parker, J. D. A. (1990b). Multidimensional assessment of coping: A critical evaluation. *Journal of Personality and Social Psychology*, 58, 884 – 854.

Endler, N.S. & Parker, J.D.A. (1992). Interactionism revisited: The continuing crisis in the personality area. *European Journal of Personality,* 6, 177-198.

Etzion D 1984 Moderating Effect of Social Support on the Stress-Burnout Relationship. *Journal of Applied Psychology* 69, 615-622

Evans, B. J., &Coman, G. J. (1993). General versus specific measures of occupational stress: An Australian police survey. *Stress Medicine*, 9, 237 – 249.

Evans, B.J., Coman, G., Stanley, R.O. & Burrows, G.D. (1993). Police officers' coping strategies: An Australian police survey. *Stress Medicine*, 9, 237-246.

Fairbrother, K. & Warn, J. (2003). Workplace dimnsions, stress and job satisfaction.*Journal of Managerial Psychology*, 18(1), 8– 21.

Folkman, S., & Lazarus, R. S. (1985). If it changes it must be a process: Study of emotional and coping during three stages of a college examination. *Journal of Personality and Social Psychology*, 144, 35 – 40.

French, J.R.P., Jr., &Caplan, R.D. (1972). Organisational stress and individual strain. In A.J. Marrow (Ed.), *The failure of success* (pp.30-36). New York:Amacon.

Freudenberger, H. J. (1975). The staff burnout syndrome in alternative solutions. Psychotherapy: Theory, Research and Practice, 12, 73 – 82.

Friedman, I.A. (2000). Burnout in teachers: Shattered dreams of impeccable professional performance. *Psychotherapy in Practice, 56(5),* 595-606.

Friedman, M., &Rosenman, R.H. (1959). Association of specific overt behavior pattern with increase blood cholesterol, blood clotting time, incidence of arcussenilis and clinical coronary artery disease. *Journal of the American Medical Association,* 169, 1286-1296.

Gilligan, C. (1982). In a different voice: Psychological theory and women's development. Cambridge, Massachusetts: Harvard University Press.

Glanz, K., Rimer, B.K. & Lewis, F.M. (2002). Health Behavior and Health Education. Theory, Research and Practice. San Fransisco: Wiley & Sons.

Golembiewski, R.T. & Munzenrider, R.F. (1988). Phases of burnout: Developments in concepts and applications. New York: Preager.

Goodman A 1990. Addiction: definition and implications. *British Journal of Addiction*, 85, 1403-1408

Graen, G. (1969). Instrumentality Theory of Work Motivation: Some Experimental results and Suggested Modifications. *Journal of Applied Psychology Monograph*, 53, 1-25.

Graf, P., & Schacter, D. L. (1985). Implicit and explicit memory for new associations in normal and amnesic subjects. *Journal of Experimental Psychology: Learning, Memory and Cognition,* 11, 501-518.

Gray-Toft, P., & Anderson, J.G. (1981). The nursing stress scale: Development of an instrument. *Journal of behaviour assessment*. 4, (1): 11-23.

Greenglass E, Burke R, Konarski R (1998) Components of burnout, resources, and gender-related differences. *Journal of Applied Social Psychology* 28, 1088–1106

Gregory, R.J. (2004). Psychological testing: History, principles and applications (4th ed.). Boston, MA: Allyn& Bacon.

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, 129-134.

Hair, J. F. Jr. Black, W. C., Babin, B. J. Anderson, R. E. and Tatham, R. L. 2006.*Multivariate data analysis*. 6th ed. New Jersey: Prentice Hall.

Harlow, L. L., Newcomb, M. D., & Bentler, P. M. (1986). Depression, self-derogation, substance use, and suicide ideation: Lack of purpose in life as a mediational factor. *Journal of Clinical Psychology,* 42, 5-21.

Harrison, R. V. (1978). Person-environment fit and job stress. In C. L. Cooper and R. Payne (Eds.), Stress at work (pp. 175-205). New York: Wiley.

Hart, P.M., Wearing, A.J. &Headey, B. (1995). Police stress and well-being: Integrating personality, coping and daily work experiences. *Journal of Occupational and Organizational Psychology,* 68, 133-156.

Hater, J. J., & Bass, B. M. (1988). Superiors' evaluations and subordinates' perceptions of transformational and transactional leadership. Journal of Applied Psychology, 73(4), 695-702.

Herzberg, F. (1974). New perspectives on the will to work. *Management Review*, 63(11), 52-54

Higgins, J.E., &Endler, N. S. (1995). Coping, life stress, and psychological and somatic distress. *European Journal of Personality*, 9, 253 – 270.

Hitchens, J. (2012). Stress, Frustration Wreck Police Force. *The Star Newspaper*, April 10, 2012 (Google Scholar).

Hobfoll, S.E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist*, 44, 513-524.

Hofstede, G. (1991). Culture and organizations—software of the mind. London: McGraw-Hill

House, R.J. (1977). A 1976 theory of charismatic leadership. Carbondale: Southern Illinois University Press.

Howell, J. M., &Avolio, B. J. (1993). Transformational leadership, transactional leadership, locus of control, and support for innovation:Key predictors of consolidated business-unit performance. *Journal of Applied Psychology, 78,* 891–902.

Hurrel, J.J. (1995). Police work, occupational stress and individual coping. *Journal of Organizational Behavior,* 16, 27-28.

Ingledew, D.K., Hardy, L. & Cooper, C.L. (1993). Coping strategies and health behaviours: Dimensionality and Relationships, Bangor: University of Wales.

Jackson, S. E., Schwab, R. L., & Schuler, R. S. (1986). Toward an understanding of the burnout phenomenon. *Journal of Applied Psychology*, 71, 630 – 640.

Janssen P P M, Schaufeli W B and Houkes I. 1999. Work-related and individual determinants of the three burnout dimensions. *Work & Stress* 1, 74-86

Janssen, P.P.M., De Jonge, J., & Bakker, A.B. (1999). Specific determinants of intrinsic work motivation, burnout and turnover intentions: A study among nurses. *Journal of advanced nursing*, 29, 1360-1369.

Kahn, R.L., Wolpe, D.M., Quinn, R.P., Snoek, J.D., &Roenthal, R.A. (1964). Organisational stress: Studies in role conflict and ambiguity. New York:wiley.

Karasek, R.A., & Theorell, T. (1990). Healthy work: Stress, productivity, and the reconstruction of working life. New York:Basic Books.

Kaufmann, G. M., &Beehr, T. A. (1989). Occupational stressors, individual strains and social supports among police officers. *Human Relations*, 42(2), 185 – 197.

Kerlinger, F. N., & Lee, H. B. (2000). Foundations of behavioral research (4th ed.). Holt, NY: HarcourtCollege Publishers.

Kessler, R. C., Sonnega, A., Bromet, E., Hughes, M., & Nelson, C. B. (1995). Posttraumatic disorder in the national comorbidity survey. *Archives of General Psychiatry*, 52, 1084 – 1060.

Kirk-brown A 1999 A profile of current external EAP practice in Australia. Unpublished report, Griffith University, Brishane Australia

Kirkcaldy, B., Cooper, C.L., &Ruffalo, P. (1995). Work stress and health in a sample of U.S. police. *Psychological Reports*, 76, 700-702.

Kirmeyer, S., & Dougherty, T. (1988). Workload, tension, and coping: Moderating effecte of supervisor support, *Personnel psychology*, Spring, 125-139.

Kobasa, S.C. (1979). Stressful life events, personality, and health: An inquiry into hardiness. *Journal of personality and social psychology*, 37, 1-11.

Koeske, G., & Kirk, S. (1995). The effect of characteristics of human service workers on subsequent morale and turnover. Administration in Social Work, 19, 15 – 31.

Koortzen, P. (1996). Die dimensionaliteit van polisie-stressore. ActaCriminologica, 9 (2), 55-63.

Kop, N. & Euwema, M. C. (2001). Occupational stress and the use of force by Dutch police officers. *Criminal Justice and Behavior*, 28, 631-652.

Kop, N., Euwema, M. & Schaufeli, W. (1999). Burnout, job stress and violent behavior among Dutch police. Work and Stress, 13, 326-340.

Kowalski, K.C. & Crocker, P.R.E. (2001).Development and validation of the Coping Function Questionnaire for adolescents in sport.*Journal of Sport and Exercise Psychology,* 23, 136 155.

Kozlowski, S.W.J., & Doherty, M.L. (1989). Integration of climate and leadership: Examination of a neglected issue. *Journal of applied psychology*, 74, 546-553.

Kroes, H. W. (1985). Society's Victim, The Policeman: An Analysis of Job Stress in Policing. Illinios: Charles C. Thomas. http://dx.doi.org/10.1080/02678379950019789

Kruger, G. (1996, January 30). SAPD-stres: 'n Kultuur teen sielkundekwel: Geestesgesondheidmoetprioriteitwees. Beeld, p. 11.

Latane, B & Darley, J.M. (1970). *The unresponsive bystander: Why doesn't he help*? Englewood Clifffs. NJ, Prentice Hall.

Lawler E. E. & Porter L. W. 1967. Antecedent attitudes of effective managerial performance. *Organisational Behaviour and Human Performance,* 2

Lawler E. E. (1971) Pay and organizational effectiveness: A psychological perspective. New York: Wiley

Lazarus, R.S. & Cohen, J.B. (1977). "Environmental Stress". In I. Altman and J.F. Wohlwill (eds.), *Human Behavior and Environment.* (Vol 2) New York: Plenum.

Lazarus, R.S. (1966) *Personality and adjustment*, 1963, Englewood Cliffs, N.J: Prentice-Hall.

Lazarus, R.S., &Folkman, S. (1984). Coping and adaptation.In W.D. Gentry (Ed.), *Handbook of behavioral medicine* (pp. 282– 325). New York: Guilford.

Lee, R. T., &Ashforth, B. E. (1996). A meta-analytical examination of the correlates of the three dimensions of job burnout. *Journal of Applied Psychology*, 81, 123 – 133.

Leiter, M. P. (1990). The impact of family and organizational resources on the development of burnout: A longitudinal study. Human Relations, 43, 1067 – 1083.

Leiter, M. P. 1993. Burnout as a developmental process: Consideration of models. InW. B. Schaufeli, C. Maslach,&T. Marek (Eds.), *Professional burnout: Recent developments in theory and research*.Washington, DC: Taylor& Francis.

Leiter, M. P., &Maslach, C. (1988).The impact of interpersonal environment of burnout and organizational commitment.*Journal of Organizational Behaviour, 9,* 297–308.

Leiter, M. P., &Schaufeli, W. B. (1996). Consistency of the burnout construct across occupations. *Anxiety, Stress and Coping, 9,* 229–243.

Livneh, H., Antonak, R.F. & Gerhardt, J. (2000).*Multidimensional investigation of the structure of coping among people with amputations.*Psychosomatics, 41, 235- 244.

Lott, L. D. (1995, November). Deadly secrets: Violence in the police family. *FBI Law Enforcement Bulletin*, 64, 12 – 16.

Louw, G.J. (2007). The dynamics of individual vigour and burnout in the police service. Unpublished doctorate PhD Thesis. Pretoria: University of South Africa.

Mark, G.M. & Smith, A.P. (2008). *Stress models: a review and suggested new direction*. Occupational Health Psychology, European Perspective On Research, Education and Practice, Vol 3. Nottingham: Nottingham University Press.

Martin, C. A., McKean, H. E., &Veltkamp, L. J. (1986). Post-traumatic stress disorder in police working with victims: A pilot study.*Journal of Police Science and Administration, 14,* 98 – 101.

Martocchio, J. J., &O.Leary, A. M. (1989). Sex differences in occupational stress: A meta-analytic view. *Journal of Applied Psychology*, 74, 495 – 501.

Maslach, C. (1983, April). *New dbeclon s in burnout research*. Invited address at the meetingof the Western Psychological Association, San Francisco.

Maslach, C., & Jackson, S. (1981). The measurement of experienced burnout. *Journal of OccupationalBehavior*, 2, 99 – 103.

Maslach, C., &Leiter, MP. P. (1997). The truth about burnout: How organizations cause personal stress and what to do about it. San Francisco: Jossey-Bass.

Maslach, C., &Schaufeli, W. B. (1993).Historical and conceptual development of burnout. In W. B. Schaufeli, C. Maslach& T. Marek (Eds.), *Professional burnout: Recent developments in theory and research* (pp. 1–16). Washington, DC: Taylor & Francis.

Maslach, C., Jackson, S. E., &Leiter, M. (1996).*Maslach Burnout Inventory. Manual* (3rd ed.). Palo Alto, CA: Consulting Psychologists Press.

Maslach, C., Schaufeli, W. B., &Leiter, M. P. (2001).Job burnout. *Annual Review of Psychology, 52*,397–422.

Maslow, A. (1971). The farther reaches of human nature. New York: The Viking Press

Maynard, P., Maynard, N., Mccubin, H. I., & Shao, D. (1980). Family life and the police profession: Coping patterns wives employ in managing job stress and the family environment. *Family Relations*, 29, 495 – 501.

McCafferty, F. L. (1992). Stress and suicide in police officers: Paradigm of occupational stress. Southern Medical Journal, 85, 233 – 243.

McCormick, J., & Powell, B. (1988). Management for the 1990s. *Newsweek,*47-48

McCreedy K. R. (1974). Theory and methods of police patrol. Albany, N.Y. Delmar

McGrath, J.E. (1970). A conceptual formulation for research on stress. In J.E. McGrath (Ed.), *Social and psychological factors in stress* (pp.10-21). New York: Holt, Rinehart & Winston.

Menaghan, E.G. (1983). Individual coping efforts: Moderators of the relationship between life stress and mental health outcomes. In H.B. Kaplan (Ed.), *Psychosocial stress: Trends in theory and research* (pp157-191). New York: Academic Press.

Meyer, W., Moore, C. &Viljoen, H. (1989).*Personality theories: From Freud to Frankl*. Johannesburg: Lexicon.

Misumi, R.J. (1985*). Leadership in Japanese organisations*. New York: Haper& Row.

Morash, M., Haarr, R. & Kwak, D. H. (2006). Multilevel influences on police stress. Journal of Contemporary Criminal Justice, 22(1), 26.

Morris, F., Naughton, G.A., Gibbs, J.L., Carlson, J. and Wark, J.G. (1997). Prospective ten-month exercise inter-vention in premenarchial girls: positive epects on bone and lean mass. Journal of Bone and Mineral Research, 12, 1453-1462.

Mostert, K., &Joubert, A.F. (2005). Job stress, burnout and coping in the South African police service. *South African Journal of economic and management sciences,* 8(1), 39-53.

Mostert, K., &Rothmann, S. (2006). Work-related well-being in the South African Police Service.*Journal of Criminal Justice, 34*, 479–491.

Mouton, J. & Marais, H.C. (1992).*Basic concepts: Methodology of the behavioural sciences.* Pretoria: HSRC.

Muntaner, C., Tien, A., Eaton, W.W. & Garrison, R. (1991).Occupational characteristics and the occurrence of psychotic disorders. *Social Psychiatry and Psychiatric Epidemiology*, 26, 273-280.

Needle R H, Griffin T & Svendsen R (1981). OCCUPATIONAL ST RESS Coping and Health Problems of Teachers *Journal of School Health* 51(3), 175–181.

Nel, J. & Burgers, T. (1996). The South African Police Service: „Symptom bearer" of the new South Africa? Track Two, 17 – 20.

Newcomb M. D. & Bentler P. M. (1986). Cocaine use among adolescents: Longitudinal associations with social context, psychopathology, and use of other substance. *Addictive Behaviours,* 11, 263-273

Numerof, R. E. (1983). Managing stress: A guide for health professionals. Rockville, Md.: Aspen Systems Corporation

O. Flanagan Jr. (1992). Consciousness Reconsidered. MIT Press

O'Leary K. D. (1999) Developmental and affective issues in assessing and treating partner aggression. *Clinical Psychology: Science & Practice*. 6, 400–414.

O'Driscoll, M. P., &Beehr, T. A. (1994). Supervisor behaviours, role stressorsand uncertainty as predictors of personal outcomes for subordinates.*Journal of Organizational Behaviour*, 15, 141−155.

Omdahl B L & O'Donnell C. (1999) Emotional contagion, emphatic concern and communicative responsiveness as variables affecting nurses' stress and occupational commitment. *Journal of Advanced Nursing* 29(6), 1351-1359

Ortega, F.B., Ruiz, J.R., Loit, H.M.,&Veidebaum, T. (2007). Body fat is associated with blood pressure in school-aged girls with low cardiorespiratory fitness: the European Youth Heart Study. *Journal of Hypertension 25*:27-34.

Parker, J. D. A., &Endler N. S. (1996). Coping and defense: A historical overview, In M Zeidner& N. S. Endler (Eds.), Handbook of coping (pp. 3 – 23). New York: Wiley.

Paton, D. &Violanti, J. M. (1999). Trauma stress in policing: Issues for future consideration. In J. M. Violanti& D. Paton (Eds.), Police trauma: Psychological aftermath of civilian combat (pp. 293 – 297). Springfield, IL: Charles, C. Thomas.

Patterson, B. L. (1992). Job experience and perceived job stress among police correctional, and probation/patrol officers. Criminal Justice and Behavior, 19, 260 – 285.

Patterson, G. T. (2001). The relationship between demographic variables and exposure to traumatic incidents among police officers. *The Australasian Journal of Disaster and Trauma Studies*, 2, 1 – 9.

Patterson, G.T. (1999). Coping effectiveness and occupational stress in police officers. In Violanti, J.M. & Paton, D. (Eds).*Police trauma: Psychological aftermath of civilian combat. .* Springfield, IL: C.C. Thomas.

Peeters, M. C. W., & Le Blanc, P. M. (2001). Towards a match between job demands and sources of social support: A study among oncology care providers. *European Journal of Work and Organizational Psychology*, 10, 53 – 72.

Perlman, B. & Hartman, E. (1982). Burnout: Summary and future research. *Human Relations, 35,* 283-305.

Pervin, L.D. (1989). *Goal concepts in personality and social psychology*. Hillsdale, NJ: Erlbaum

Philip, A. A. (2004). Coping as a moderator variable in the relationship between occupational stressors and burnout amongst psychologists. Unpublished honours thesis: University of the Free State.

Phillips, D.M. (1996). Anticipating the future: The role of consumption visions in consumer behaviour, in advances in consumer research, ed, Kim Corfman and John Lynch, 23, Provo, UT: Association for consumer research, 70-75.

Pienaar, J. &Rothmann, S. (2003).Job stress in the South African Police Services. Paper presented at the 15th Conference of the South African Institute for Management Scientists, Potchefstroom.

Pienaar, J., &Rothmann, S. (2006). Occupational stress in the South African Police Service. *South African Journal of Industrial Psychology*, 32(3), 72 – 78.

Pikhart, H., Bobak, M., Siegrist, J.,Gostautas, A., Skodova, Z., & Marmot, M. (1996). Psychological work characteristics and self-rated health in four post-communist countries. *Journal of epidemiology and community health, 55*: 624-630.

Pines, A.M. (2000).Nurses burnout: an existential psychodynamic perspective. *Journal of psychological nursing,* 38(2), 1-9.

Pitchers, R.T. & Fogarty, G.J. (1995). Occupational stress among vocational teachers. British journal of educational psychology, 65, 3-14.

Powell, K. (1993). Burnout: What happens when stress gets out of control and how to regain your sanity. London: Harpers Collins.

Primm A. B. & Gomez, M. B. (2005). The Impact of Mental Health on Chronic Disease. The State of Black America 2005: Prescriptions for Change, National Urban League

Rabkin, J.G., &Struening, E.L. (1976). Life events, stress, and illness. *Science*, 194,1013-1020

Ramırez A, Graham J, Richards M, & Gregary W (1996) Mental health of hospital consultants: the effects of stress and satisfaction at work. *Lancet* 347, 724–728

Ramirez J. M. (2003). Hormones and aggression in childhood and adolescence. *Aggression and Violent Behavior.* 8, 621-644

Raudenbush S. W. (1984). Magnitude of teacher expectancy effects on pupil IQ as a function of the credibility of expectancy induction: A synthesis of findings from 18 experiments. *Journal of Educational Psychology* 76, 85-97.

Rosenthal R, Jacobson L. (1968). Pygmalion in the classroom: Teacher expectation and student intellectual development. New York: Holt, Rinehart & Winston

Rich, B.L., Lepine, J.A. & Crawford, R.E. (2010). Job engagement: Antecedents and effects on job performance. *Academy of management journal,* 53, 3, 617-635.

Richmond, R. L., Wodak, A., Kehoe, L., & Heather, N. (1998). How healthy are the police? A survey of lifestyle factors. *Addiction*, 93(11), 1729 – 1737.

Roberts, D.R. & Davenport, T.O. (2002). Job engagement: Why it's important and how to improve it. *Employment Relations Today*, 29 (3), 21-29.

Rothmann, S. & Strijdom, G. (2002).Suicide ideation in the South African Police Service in the North West Province. *South African Journal of Industrial Psychology*, 28 (1).44–48.

Rothmann, S. & Van Rensburg, P. (2002). Psychological strengths, coping and suicide ideation in the South African Police Services in the North West Province.*South African Journal of Industrial Psychology,* 28 (3), 39-49.

Rothmann, S., Steyn, L.J. & Mostert, K. (2005). Job stress, sense of coherence and work wellness in an electricity supply organisation. *South African Journal of Business Management*, 36(1), 1–9.

Rotter, J.B. (1966). Generalised expectancies for internal versus external control of reinforcement. *Psychological monographs*, 80, (1, whole No. 609).

Rowney, J.I.A., &Cahoon, A.R. (1988). A preliminary investigation of burnout dimensions in intact work groups, paper, International congress of psychology, Sydney, Australia.

Savery, L. K., Soutar, G. N., & Weaver, R. (1993). Stress and the police officer: Some West Australian evidence. *The Police Journal*, 66, 277 – 290.

Schaufeli, W. B., &Enzmann, D. (1998).The burnout companion to study and practice: A critical analysis. Washington, DC: Taylor & Francis Shirom, A. (1989). Burnout in organizations.In C. L. Cooper & I. T. Robertson (Eds.), *International Review of Industrial and Organizational Psychology* (pp. 25– 48).Chichester: Wiley.

Schaufeli, W. B., &Greenglass, E. R. (2001). Introduction to special issue on burnout and health. *Psychology & Health*, 16, 501 – 510.

Schaufeli, W., Salanova, M., Gonzalez-Roma, V & Bakker, A.B. (2002). The measurement of engagement and burnout: A two sample confirmatory factor analytical approach. *Journal of Happiness studies,* 3, (2002), 71-92.

Schaufeli, W.B. & Baker, A.B. (2004). Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behaviour,* 25, 1-23,

Schaufeli, W.B., Leiter, M.P., Maslach, C. & Jackson, S.E. (1996).MBI-General Survey. In C. Maslach, S.E. Jackson & M.P. Leiter (Eds.), Maslach Burnout Inventory Manual (3rd ed.). Palo Alto, CA: Consulting Psychologists Press.

Schaufeli, W.B., Martínez, I., Marques Pinto, A. Salanova, M.& Bakker, A.B. (2002). Burnout and engagement in university students: A cross national study. *Journal of Cross- Cultural Psychology*, 33, 464-481.

Schmieder R. A & Smith C. S. (1996) moderating effects of social support in shift working nurses. *Work and Stress (Impact Factor: 3)*, 10(2):128-140

Seltzer, V. C. (1989). The psychosocial worlds of the adolescent: Public and private.New York: John Wiley & Sons

Selye, H. (1974). Stress without distress. Philadelphia: Lipponcott

Shaughnessy, J.J., &Zechmeister, E.B. (1997). A practical introduction to research methods in psychology. 3[rd]ed. New York McGraw-Hill.

Shimazu, A., De Jonge, J., & Irimajiri, H. (2003). Lagged effects of active coping within the demand-control model: A three-wave panel study among Japanese employees. *International Journal of Behavioral Medicine*

Slate, R.N., Johnson, W.W. & Wells, T.L. (2000). Probation officer stress: Is there an organizational solution? Federal Probation, 64, 56–59.

Smari, J., &Valtysdottir, H. (1997). Dispositional coping, psychological distress and disease-control in diabetes. *Personality and Individual Differences*, 22, 151 – 156.

Spielberger, C. D., Peters, R. A., & Frain, F. (1981). Curiosity and anxiety. In H. G. Voss, & H. Keller (Eds.), Curiosity research: basic concepts and results. Weinheim, Federal Republic of Germany: Beltz

Spielberger, C. D., Vagg, P. R., &Wasala, C.F. (2003). Occupational stress: Job pressures and lack of support. In J. C. Quick & L. E. Tetrick (Eds.), Handbook of occupational health psychology (pp. 185 – 200). Washington, DC: American Psychological Association.

Staples, D. S., Hulland, J. S., & Higgins, C. A. (1998). A self-efficacy theory explanation for the management of remote workers in virtual organizations. *Journal of Computer-Mediated Communication*, 3 (4)

Stephens, C., & Long, N. (2000).Communication with police supervisors and peers as a buffer to work-related traumatic stress.*Journal of Organizational Behavior*, *21*, 407-424.

Stillion, J. M., & McDowell, E. E. (1996). *Suicide across the life span*. Washington, DC:

Strumpfer, D. J. W. (2003). Resilience and burnout: A stitch that could save nine. *South African Journal of Psychology,* 33(2), 69 - 79.

Strydom, H. (2002). Ethical aspects of research in the social sciences and human service professions. (In: De Vos, AS; Strydom, H; Fouché, CB & Delport, CSL eds. 2005: Research at grass roots: For the social sciences and human service professions; 3rd edition. Pretoria: Van Schaik, pp 62-76).

Suls, J., & Fletcher, B. (1985). The relative efficacy of avoidant and non-avoidance coping strategies: A meta-analysis. *Health Psychology*, 4, 249 – 288.

Symonds, M. (1970). Emotional hazards of police work. *American Journal of Psychoanalysis, 30*, 155–160.

Taris, T. W., Schreurs, P. J. G., &Schaufeli, W. B. (1999). Construct validity of the MaslachBurnout Inventory – General Survey: A two-sample examination of its factor structure and correlates. *Work & Stress*, 13, 223 – 237.

Terre Blanche, M.T., & Durrheim, K. (1999). Research in Practice: Applied Methods for the Social Sciences. Cape Town: University of Cape Town Press.

Terry, D.J. & Callan, V.J. (1997). Employee adjustment to large scale organizational change. *Australian Psychologist*, 32, 203–210.

Terry, D.J., Nielsen, M., &Perchard, L. (1993). Effects of work stress on psychological well being and job satisfaction: The stress-buffering role of social support. *Australian Journal of Psychology*, 45(3), 168–175.

Thomas K. (2009). The four intrinsic rewards that drive employee engagement. *Ivey Business Journal*

Van der Walt, J. (2002, March). Burnout: The socially acknowledged form of social distancing: A group analytical explorative study among psychologists in the South African Police Service. Paper presented at the 1st South Africa Burnout Conference, Potchefstroom.

Van der Wateren, E. (1997). *Die dinamiek van waardes, coping style en psigologiesegesondheidby 'n groepjeugdiges*[The dynamics of values, coping styles and psychological strengths   in a group of youths]. Unpublished master's thesis, PU for CHE, Potchefstroom, South   Africa.

Violanti J. M. (1983). Stress patterns in police work: A longitudinal study. *Journal of Police Science and Administration*, 11, 211 – 216.

Violanti J.M. (1992). Coping strategies among police recruits in a high-stress training environment. *The Journal of Social Psychology*, 132, 717-729.

Violanti, J. M. & Aron, F. (1993). Ranking police stressors. Psychological Reports, 75, 824–826

Violanti, J. M. & Aron, F. (1994).Ranking police stressors. *Psychological Reports*, 75, 824-826.

Violanti, J. M., & Aron, F. (1995). Police stressors: Variations in perception among police personnel. *Journal of Criminal Justice*, 23, 287 – 294.

Violanti, J. M., Marshall, J. R., & Howe, B. (1985). Stress, coping and alcohol use: The police connection. *Journal of Police Science and Administration*, 2, 106 – 110.

Violanti, J.M. & Paton, D. (1999).*Police trauma: Psychological aftermath of civilian combat.*Springfield, IL: C.C. Thomas.

Visser, M.R.M., Smets, E.M.A., Oort, F.J. &deHaes, C.J.M. (2003).Stress, satisfaction and burnout among Dutch medical specialists.*Canadian Medical Association Journal*, 168, 271 276.

Vrana, S., &Lauterbrach, D. (1994). Prevalence of traumatic events and posttraumatic psychological symptoms in a non-clinical sample of college students. *Journal of Traumatic Stress*, 7, 298 – 302.

Vroom, V. H. (1964). Work and motivation. San Francisco, CA: Jossey-Bass

Wahba, M. A., & Bridwell, L. G. (1976) Maslow reconsidered: a review of research on the need hierarchy theory. *Organizational Behaviour and Human Performance* 15, 212-240.

Waldman, D.A.; B.M. Bass & F.J. Yammarino 1990. "Adding to Contingent-Reward Behavior: The Augmenting Effect of Charismatic Leadership". *Group & Organization Management*, 15:381.

Walker, S. (1985). *Racial minority and female employment in policing*: The implications of glacial change. Crime and Delinquency, 31, 555 - 572

Warr, P. (2002). The study of well-being, behaviour and attitudes.In P. Warr (Ed.).*Psychology at work*. London: Penguin Books, pp. 1–25.

Wexler, J. G., & Logan, D. D. (1983). Sources of stress among women police officers. *Journal of Police Science and Administration,* 11, 46 – 53.

Wiener, N. (1948). *Cybernetics, or control and communication in animal and the machine*. Cambridge: MIT Press

Wilson, T. D. (1981). On user studies and information needs. *Journal of Documentation*, 37(1), 3-15.

Wissing, M.P., & Du Toit. M. M. (1994). Relations of NEO PI-R dimensions (NEO-FFI) to sense of coherence (SOC) and other measures of psychological well-being. Paper. 23rd 1nternational Congress of Applied Psychology, Madrid, Spain, 17"' - 22* July

Worden, R. E. (1990). A badge and a baccalaureate: Policies, hypotheses, and further Evidence. *Justice Quarterly*, 3, 565-92.

Zedeck, S., Maslach, C., Mosier, K., & Skitka, L. (1988). Affective response to work and quality of family life: Employee and spouse perspectives. *Journal of Social Behavior and Personality*, 3, 135-157.

Zeidner, M., &Saklofske, D. (1996). Adaptive and maladaptive coping. In M. Zeidner& N. S. Endler (Eds.), Handbook of coping (pp. 505 – 531). New York: Wiley.

APPENDIX A: QUESTIONNAIRE

RESEARCH QUESTIONNAIRE

University of Fort Hare
Together in Excellence

FACULTY OF MANAGEMENT & COMMERCE

DEPARTMENT OF INDUSTRIAL PSYCHOLOGY

TO THE PROSPECTIVE RESPONDENT

My name is MtutuzeliDywili. I am a Doctor of Commerce degree student in the Department of Industrial Psychology at the University of Fort Hare conducting research as a prerequisite for the completion of the degree. I am interested to know how you feel about your job. The research is solely for academic purposes and all information obtained will be kept confidential. You are hereby requested, but not compelled to respond to the questions on the attached questionnaire. Please answer all questions. Your name is not required and there is no right or wrong answer.

Your participation is highly appreciated.

Thank you.

MTUTUZELI DYWILI; Cell number: 079 571 1965; Email address: mdywili@ufh.ac.za

Section A

Provide your demographic and occupational details below (*Mark with an **X** in the appropriate box or provide the detail required*).

1. Gender

Male		Female	

2. Please enter your age ………………..

3. Marital status

Single		Married		Separated		Divorced		Widowed	

Other (specify)……………………………

4. Level of study   …………………………

5. Number of Children ……………………...

6. Which position in your work organisation do you occupy?

………………………………………

SECTION B

We would like to know whether or not the following statements apply to you in relation to your present job, and if so, to what extent this distresses you. Circle the appropriate number to the right of each statement. Use the following key to the numbers:

Key

1.   Does not apply.

2.   Applies but does not distress me.

3.   Applies and distresses me somewhat.

4.   Applies and distresses me.

5.   Applies and distresses me very much.

I have constant time pressure due to a heavy

work load.   1   2   3   4   5

I have many interruptions and disturbances

in my job.   1   2   3   4   5

I have a lot of responsibilities in my job.   1   2   3   4   5

I am often pressured to work overtime.   1   2   3   4   5

Over the past few years, my job has

become more and more demanding.   1   2   3   4   5

I receive the respect I deserve from my

superiors.   1   2   3   4   5

I receive the respect I deserve from my

colleagues.   1   2   3   4   5

I experience adequate support in difficult

situations. 1 2 3 4 5

I am treated unfairly at work. 1 2 3 4 5

Considering all my efforts and achievements,

I receive the respect and prestige I deserve at

work. 1 2 3 4 5

My job promotion prospects are poor. 1 2 3 4 5

My current occupational position adequately

reflects my education and training. 1 2 3 4 5

Considering all my efforts and achievements, 1 2 3 4 5

my work prospects are adequate.

Considering all my efforts and achievements,

my salary/income is adequate. 1 2 3 4 5

I have experienced or I expect to experience

an undesirable change in my work situation. 1 2 3 4 5

My job security is poor. 1 2 3 4 5

SECTION C

For each of the questions below, mark with an X in the block that best describes how you feel.

Question	Not at all	Rarely	Sometimes	Often	Very often
Do you feel run down and drained of physical and emotional energy?					
Do you find that you are prone to negative thinking about your job?					
Do you find that you are harder and less sympathetic with people than perhaps they deserve?					
Do you find yourself getting easily irritated by small problems, or by your co-workers and team?					
Do you feel misunderstood or unappreciated by your co-workers?					
Do you feel that you have no-one to talk to?					
Do you feel that you are achieving less than you should?					
Do you feel under an unpleasant level of pressure to succeed?					
Do you feel that you are not getting what you want out of your job?					

Do you feel that you are in the wrong organisation or the wrong profession?					
Are you becoming frustrated with parts of your job?					
Do you feel that organisational politics or bureaucracy frustrate your ability to do a good job?					
Do you feel that there is more work to do than you practically have the ability to do?					
Do you feel that you do not have time to do many of the things that are important to doing a good quality job?					
Do you find that you do not have time to plan as much as you would like to?					

SECTION D

For each of the statements below, mark with an X in the block that best describes how you feel.

Statements	Never	Almost never	Rarely	Someti mes	Often	Very often	Always
I work with intensity on my job.							
I exert my full effort to my job.							
I devote a lot of energy to my job.							
I try my hardest to perform well on my job.							
I strive as hard as I can to complete my job.							
I exert a lot of energy on my job.							
I am enthusiastic in my job.							
I feel energetic at my job.							
I am interested in my job.							
I am proud of my job.							
I feel positive about my job.							
I am excited about my job.							
At work, my mind is focused on my job.							
At work, I pay a lot of attention to my job.							

At work, I focus a great deal of attention on my job.							
At work, I am absorbed by my job.							
At work, I concentrate on my job.							
At work, I devote a lot of attention to my job.							

SECTION E

For each of the statements below, mark with an X in the block that best describes the action you have taken when faced with a stressful situation.

Statements	Not at all	Rarely	Sometimes	Always
I've been concentrating my efforts on doing something about the situation I'm in.				
I've been taking action to try to make the situation better.				
I've been trying to come up with a strategy about what to do.				
I've been thinking hard about what steps to take.				
I've been trying to see it in a different light, to make it seem more positive.				
I've been looking for something good in what is happening.				

I've been accepting the reality of the fact that it has happened.				
I've been learning to live with it.				
I've been making jokes about it.				
I've been making fun of the situation.				
I've been trying to find solace in my religion or spiritual beliefs.				
I've been praying or mediating.				
I've been getting emotional support from others.				
I've been getting comfort and understanding from someone.				
I've been trying to get advice or help from other people about what to do.				
I've been getting help and advice from other people.				
I've been turning to work or other activities to take my mind off things.				
I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping.				
I've been saying to myself "this isn't real".				
I've been refusing to believe that it has happened.				
I've been saying things to let my unpleasant feelings escape.				

I've been expressing my negative feelings.				
I've been using alcohol or other drugs to make myself better.				
I've been using alcohol or other drugs to help me get through it.				
I've been giving up trying to deal with it.				
I've been giving up the attempt to cope.				
I've been criticising myself.				
I've been blaming myself for things that happened.				

Thank you for your precious time

APPENDIX B: CONSENT FORM

I acknowledge my voluntary participation in the above-mentioned research project, conducted by the department of Industrial Psychology at the University of Fort Hare.

I further allow the department of Industrial Psychology to utilize the results of my assessment for research purposes, on condition, that the confidentiality thereof is maintained.

Signed on this day----------------------------of-----------------------------2011

Signature

APPENDIX C: PROVINCIAL COMMISSIONER SAPS (EC)

RE: APPLICATION TO CONDUCT RESEARCH

I hereby apply for permission to conduct postgraduate research in your organisation/institution. I am currently involved in Doctor of commerce studies in Industrial and Organisational Psychology through the management and commerce Department- Fort Hare University. The proposed research topic is: Job engagement and coping strategies as moderators of the relationship between occupational stress and emotional burnout among police officers in the Eastern Cape, South Africa. The researcher will involve 200 police officers.

Police work is known to be associated with a high level of occupational stress, and such occupational stress is said to be associated with a high level of emotional burnout (Anshel, 2000). In light of the critical importance of a physically and psychologically healthy police force in any community, it is imperative that ways be found through which such occupational stress and emotional burnout among police officers can be ameliorated so that they do not lead to adverse consequences such as poor work performance and a high rate of labour turnover.

It is hoped that this research study will shed additional light on the diverse issues relevant to police work and occupational stress and emotional burnout. The finding of this research will be made available to participants as well as the management team. From the finding, recommendations will be made to aid in the development of strategies to lessen and/or prevent occupational stress as well as emotional burnout. I would like to assure you that the entire research process and its procedures will be handled in accordance with scientific principles, particularly regarding the ethical management of research participants and strict confidentiality and anonymity of data and biographical details surrounding the research.

Thank you

Sincerely

MtutuzeliDywili Cell: 0795711965

APPENDIX D: STATISTICAL DATA

Table 4: Biographical Data – Frequencies, Percentages and Chi-Square test for equal proportions

VARIABLE	LEVELS	df	f	%	Chi-square	p-value
GENDER	MALE	1	204	54.11	2.5491	0.1104
	FEMALE		173	45.89		
AGE	20 - 30 YEARS	3	100	26.53		<.0001**
					111.1167	
	30 - 40 YEARS		158	41.91		
	40 - 50 YEARS		104	27.59		
	>50 YEARS		15	3.98		
MARITAL STATUS	SINGLE	4	190	50.53	283.9202	<.0001**
	MARRIED		105	27.93		
	DIVORCED		28	7.45		
	WIDOW		39	10.37		
	OTHER		14	3.72		
QUALIFICATION	PRIMARY SCH	3	41	10.88	218.3846	<.0001**
	HIGH SCHOOL		216	57.29		
	TERTIARY		77	20.42		
	OTHER		43	11.41		

Variable	Category	df	Count	Percent	Chi-Square	p-value
CHILDREN	0 CHILDREN	4	35	9.28	783.1459	<.0001**
	1 – 3 CHILDREN		291	77.19		
	4 – 6 CHILDREN		38	10.08		
	7 – 9 CHILDREN		11	2.92		
	>9 CHILDREN		2	0.53		
POSITION	W/OFFICER	6	33	8.75	702.0955	<.0001**
	CONSTABLE		233	61.80		
	SERGEANT		15	3.98		
	CAPTAIN		22	5.84		
	COLONEL		13	3.45		
	ASSISTANT DIRECTOR		31	8.22		
	DIRECTOR		30	7.96		

Variables with a significant difference in proportions are marked with **

Table 4: Pearson's correlations between each of the measures and demographic features

VARIABLE	ERI	MBI-GS	UWES	C OPE
GENDER	-0.03313	0.05578	0.05326	0.06688
	0.5213	0.2800	0.3024	0.1951
AGE	-0.02485	-0.07997	0.02364	-0.04143

	0.6305	0.1211	0.6473	0.4224
MARITAL STATUS	0.02033	0.05058	-0.02292	-0.02319
	0.6944	0.3280	0.6578	0.6540
QUALIFICATION	0.05762	0.12154	0.10792	0.09257
	0.2644	0.0182*	0.0362*	0.0726
CHILDREN	0.03553	0.08341	-0.02384	0.07266
	0.4916	0.1059	0.6446	0.1591
POSITION	0.02736	-0.08395	-0.24279	-0.14686
	0.5964	0.1037	<.0001*	0.0043*

Items marked with (*) are significantly correlated

Table 5: Occupational stress and emotional burnout

Pearson Correlation Coefficients, N = 377 Prob > |r| under H0: Rho=0		
	OCCUPATIONAL_STRESS	EMOTIONAL_BURNOUT
OCCUPATIONAL_STRESS	1.00000	0.38733 <.0001
EMOTIONAL_BURNOUT	0.38733 <.0001	1.00000

Table 6: The use of coping strategies and emotional burnout

Pearson Correlation Coefficients, N = 377 Prob > |r| under H0: Rho=0	EMOTIONAL_BUR NOUT	COPING_STRATE GIES
EMOTIONAL_BURN OUT	1.00000	0.57249 <.0001
COPING_STRATEGI ES	0.57249 <.0001	1.00000

Table 7: Generalised linear model for occupational stress and emotional burnout

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	50.2762796	50.276279 6	66.19	<.000 1
Error	375	284.846054 6	0.7595895		
Corrected Total	376	335.122334 2			

R-Square	CoeffVar	Root MSE	EMOTIONAL_BURNOUT Mean
0.150024	30.80942	0.871544	2.828824

Parameter	Estimate	Standard Error	t Value	Pr > |t|
Intercept	0.1293604494	0.33482925	0.39	0.6995
OCCUPATIONAL_STRESS	0.9411145784	0.11567790	8.14	<.0001

Table 8: Generalised linear model for job engagement, occupational stress and emotional burnout.

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	86.5080501	43.2540251	65.07	<.0001
Error	374	248.6142841	0.6647441		
Corrected Total	376	335.1223342			

R-Square	CoeffVar	Root MSE	EMOTIONAL_BURNOUT Mean
0.258139	28.82181	0.815318	2.828824

Parameter	Estimate	Standard Error	t Value	Pr > |t|
Intercept	0.4787116683	0.31678262	1.51	0.1316
OCCUPATIONAL_STRESS	0.4926031256	0.12410178	3.97	<.0001
OCCUPATIO*JOB_ENGAGE	0.0685889185	0.00929044	7.38	<.0001

Table 9: Generalised linear model for coping strategies, occupational stress and emotional burnout

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	114.4090758	57.2045379	96.93	<.0001
Error	374	220.7132584	0.5901424		
Corrected Total	376	335.1223342			

R-Square	CoeffVar	Root MSE	EMOTIONAL_BURNOUT Mean
0.341395	27.15642	0.768207	2.828824

Parameter	Estimate	Standard Error	t Value	Pr > |t|
Intercept	1.259224237	0.31440158	4.01	<.0001
OCCUPATIONAL_STRESS	-0.135816472	0.14514979	-0.94	0.3500
OCCUPATIO*COPING_STR	0.243222537	0.02333147	10.42	<.0001

Table 10: Combined effects of job engagement and use of coping strategies on occupational stress and emotional burnout.

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	98.1781775	49.0890888	77.48	<.0001
Error	374	236.9441567	0.6335405		
Corrected Total	376	335.1223342			

R-Square	CoeffVar	Root MSE	EMOTIONAL_BURNOUT Mean
0.292962	28.13723	0.795953	2.828824

Parameter	Estimate	Standard Error	t Value	Pr > |t|
Intercept	0.8014935758	0.31540691	2.54	0.0115
OCCUPATIONAL_STRESS	0.4271023863	0.12105863	3.53	0.0005
OCCUPA*JOB_EN*COPING	0.0199799656	0.00229776	8.70	<.0001