

**COPING WITH WORK RELATED STRESS AND PSYCHOSOCIAL FUNCTIONING:  
THE CASE OF POLICE OFFICERS IN THE LOCAL CRIMINAL RECORD CENTRE  
(LCRC).**

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**2015**

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## DECLARATION

I, Lucy Mmamodia Francinah Mangoegape, hereby declare that this article, submitted in partial fulfillment of the requirements for the degree of Master in Social Sciences (Clinical Psychology) at the North West University (Mafikeng Campus), is my own independent work and has not formerly been submitted by me to another university or faculty.

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L.M.F Mangoegape

May2015

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- Prof Esterhuyze for helping me with the statistical analysis
- My beloved husband and daughter for being so understanding and supportive.

## PREFACE

### **Article format**

For the purpose of this mini-dissertation, which is part of the requirements for the award of the Masters of Arts (Social Sciences) degree in clinical psychology, the article format, as described by General Regulation A.7.5.1.b of the North-West University, was chosen.

### **Selected Journal**

The target journal to which the current manuscript would be submitted is the South African Journal of Community Psychology. For the purpose of examination, tables are included in the text.

### **Letter of Consent**

The letter of consent from the co-authors in which they grant permission that the manuscript, "*Coping with work related stress in the psychosocial functioning: The case of police officers in the Local Criminal Record Centre (LCRC).*" be submitted for the purposes of mini-dissertation, may be attached.

### **Page Numbering**

In the mini-dissertation, page numbering will be from the first page to the last. For the purpose of submitting the manuscript to the above mentioned journal, the manuscript will be numbered according to the requirements of the South African Journal of Community Psychology. In other words, the numbering will start on the title page of the manuscript.

**LETTER OF CONSENT**

I, the undersigned, hereby give consent that Mmamodia Mangoegape may submit the manuscript entitled, "COPING WITH WORK RELATED STRESS AND PSYCHOSOCIAL FUNCTIONING: THE CASE OF POLICE OFFICERS IN THE LOCAL CRIMINAL RECORD CENTRE (LCRC)", for the purpose of meeting the required standards of the partial fulfillment of the degree of Masters of Social Science in Clinical Psychology of the North-West University.

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Prof E. S. Idemudia

Supervisor

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Ms N. A. Matamela

Co-Supervisor

## SUMMARY

**Coping with work related stress in the psychosocial functioning: the case of police officers in the Local Criminal Record Centre (LCRC)**

**Keywords: Coping, stress, psychological functioning, police officers, Gauteng Province, South Africa**

Police work is acknowledged as hazardous and highly stressful throughout the globe. Police officers are often expected to work under difficult circumstances and also in dangerous environments, for an example, the current xenophobic attacks in South Africa constitute a dangerous environment for an individual to work in thus resulting in stress. From the period 1994 to 2004, serious criminal offenses increased by more than 30%. Currently, South Africa is rated as the country with the highest incidence of rape and the second highest incidence of murder in the world. The dramatic increase in the rate of crime meant that new demands were being placed on the South African Police Service and all this leads to the development of stress for the police officers. The particular coping strategies that police officers draw on to deal with stress may have implications for the development of PTSD, burnout and suicidal ideations. One of the imperative occupational hazards of police work is frequent publicity to traumatic incidents and the resulting risk of developing symptoms of posttraumatic stress disorder (PTSD). Previous studies discovered that coping strategies may play a significant role in an individual's level of psychological functioning and for the purpose of this study coping has been divided into two main areas: problem-focused coping and emotion-focused coping. Although many cope within

these working conditions, a number of police officers often struggle to deal with the demands of the job and the job stress, often leading to problems in their psychological functioning. SAPS then came up with a solution of implementing sub-divisions so that the work load can be minimised. Because the SAPS is divided into different sub-divisions including the Child Protection Unit (CPU), tactical response team (TRT), the dog unit, detective unit, public order police service (POPS), and most of the previous studies conducted, the focus has been among the general police populations: this study will be conducted among police officers who work in the Local Criminal Record Centre (LCRC) officers. This is a unit in the South African Police Services (SAPS) which deals with the forensic investigations of crime scenes. At times the LCRC officer is expected to give testimonies in court which may also be traumatic and precipitate anxiety as well as fear for their lives. It is clear that these officers work in an environment that can be stressful to their psychological functioning hence the undertaking of this study.

The Socio-Ecological Model was used as the theoretical framework; this model explains the dynamic interrelations of various personal and social factors. An individual exists within layers of social relationships: the family, friendship network (micro-system), the relationship that an individual has with the people in the micro-system ( meso-system) organisations, neighbourhood (exo-system) and culture and society (macro-system). The theoretical perspectives used to explain and express the focus of this study were: (1)Lazarus and Folkman transactional model of stress and coping, (2)The social cognitive learning approach and (3)Vulnerability hypothesis. This study as a result was aimed at exploring work related stress and psychological functioning of the police officers in the local criminal record centre LCRC. The research was conducted with police officers from Johannesburg LCRC and Krugersdorp LCRC in the Gauteng Province,

South Africa. The researcher used purposive stratified sampling technique to select the participants based on using the police officers in the specific unit (LCRC). The subsequent questionnaires were used to assemble data on the variables included in the study: (1) The Police Stress Inventory, (2) The General Health Questionnaire (GHQ-28), (3) The Coping Orientations to Problems Experienced Questionnaire and (4) A biographical questionnaire, data was then analysed using the SPSS computer programme in this study and the findings were discussed in depth supported by previous studies.

The main outcome of the study is that, there is a relationship between work related stress and psychological functioning of the police officers in the LCRC unit. Furthermore, the results revealed that coping has a moderating effect on work related stress and the psychological functioning of the LCRC members. The participants have shown that emotion-focused coping is the type of coping that is mainly used by officers in the LCRC units in the Gauteng Province.

## AUTHOR'S GUIDELINES

### **Journal of Community Psychology**

The Journal of Community Psychology is a peer-reviewed journal devoted to research, evaluation, assessment and intervention. Although review articles that deal with human behaviour in community settings are occasionally accepted, the journal's primary emphasis is on empirical work that is based on or informs studies to understand community factors that influence, positively or negatively, human development, interaction and functioning. Articles of interest include description and evaluation of service programmes and projects, studies of youth, parenting and family development, methodological studies for the identification and systematic alterations of risks, and protective factors for emotional and behavioural disorders and for positive development. The journal also publishes the results of projects that inform processes relevant to the design of community-based intervention including strategies for gaining entry, engaging a community in participatory action research, and creating sustainable interventions that remains after project development and empirical work are completed.

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**MANUSCRIPT FOR EXAMINATION**

**Coping with work related stress in the psychosocial functioning: The case of police officers in the Local Criminal Record Centre (LCRC)**

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## ABSTRACT

The link between work-related stress and psychological functioning amongst police officers is well established within related research. However, it would appear that this relationship is not linear and that coping may determine the nature of this relationship. The current study aims to explore the manner in which coping succeeds in moderating the relationship between work-related stress and psychological functioning amongst a sample of 163 police officers (94 males and 70 females) from the South African Police Service's Local Criminal Record Centres in the Gauteng Province. In addition, this study aims to investigate which coping moderate the differences in terms of gender, age and years of experience in the average scores of work related stress and psychological functioning of police officers.

A cross-sectional design was employed in this study. Participants completed the Police Stress Inventory (PSI), the General Health Questionnaire (GHQ-28) as well as the Coping Orientations to the Problems Experienced Questionnaire (COPE). Hierarchical regression analyses were conducted to investigate the moderating role of coping in the relationship between work related stress and psychological functioning.

Results of this study indicate significant correlations (1% level of significance) between psychological functioning  $r(165) = -.056, p < .ns$  and two of the coping subscales (emotion-focused  $r(165) = -.262, p < .001$  and problem-focused coping  $r(165) = -.224, p < .001$ ). Emotion-focused coping as well as problem-focused coping moderated the relationship between work-related stress and psychological functioning. Furthermore, no significant differences (at least on the 5% level of significance) in the average scores of work related stress and psychological functioning were obtained for gender or length of service.

Based on these results, it is suggested that psychological functioning be explored with additional variables, such as self-efficacy, personality factors, locus of control with a unique focus on the amalgamation of risk and protective factors as determinants of psychological functioning.

**Keywords:** Coping, stress, psychological functioning, police office, Gauteng Province, South Africa

## 1. INTRODUCTION AND BACKGROUND TO THE STUDY

Globally, police work is recognized as highly stressful and unsafe (Alexander, 1999; Anshel, 2000; Paton & Violanti, 1999). Police work often demands of officers to work under difficult circumstances and in dangerous environments. Literature suggests a link between the amount of work stress and the psychological functioning of police officers (Pienaar & Rothmann, 2006). The South African Police Service (SAPS) has undergone dramatic changes since the emergence of the new democracy in 1994. Placing the newly recognized SAPS to function effectively in the post-democratic South Africa required essential changes to the manner in which the apartheid police force operated. Closely attached to this was the need to guarantee race and gender parity at all levels of the organization (Samara, 2011). Furthermore, the transition of the South African society from an authoritarian to a more democratic system has seen a dramatic rise in the rate of crime. From the period 1994 to 2004, serious criminal offenses increased by more than 30% (SAIRR SA Survey, 2009/2010). Currently, South Africa is rated as the country with the highest incidence of rape and the second highest incidence of murder in the world (Snyman, 2008). The dramatic increase in the rate of crime meant that new demands started to develop in the South African Police Service, which required a re-think and changes in terms of policy and strategy (Robins, 2010).

Van der Westhuizen (2000) further stated that, the transition from a police force with an emphasis on authoritarian decision-making to a police service with an emphasis on community policing and participatory decision-making could be seen as one of the most important challenges the organisation had to face. Today, police work often include witnessing a fellow officer killed in the line of duty, accidentally murdering someone in the line of duty, finding bodies from

motor vehicle accidents, witnessing domestic or community violence, and responding to cases involving child battery (Gulle, Tredoux, & Foster, 1998). Changes in the job profile of police officers in the SAPS contribute to the high stress levels that police officers experience (SAIRR SA Survey, 2009/2010).

Different studies (De Bruin, 2008; Madu, Vawda, Williams & Wyatt, 2013; Meyer, Pienaar & Rothmann, 2003) have been conducted focusing on the impact of stress on the work performance of police officers within the South African context, however, a dearth of information exists regarding police officers working within the Local Criminal Record Centre (LCRC). The LCRC is a unit in the SAPS, which deals specifically with the forensic investigations of crime scenes. The responsibility of the unit entails photographing and video graphing of crime scenes, collection of physical evidence and to present evidence in court (N Sinyanya, personal communication. 25 March 2013). Due to high job demands and shortage of personnel, officers within these units are often expected to work abnormal hours. This brings a lot of strain on the officers, with most of their time spent at work and family time being compromised. Researchers concur that when job demands are too high to cope with, more likely stress reactions will occur (Pienaar & Rothmann, 2005).

It is clear that when job demands are too high and the police officers are experiencing stress reactions, they cannot attain their job satisfaction. They are working under pressure and they fail to do their work to their satisfaction, they do things for the sake of things being done. In agreement, Pienaar and Rothmann (2006) stated that police officers struggle to fulfil conflicting demands from the public and within their own organizations. Once they go through this they feel

that their job satisfaction is not met. These are the kinds of job stressors that police officers experience on their line of duty. The Police Stress Inventory (PSI) is the scale that was used to measure participants' job stress, job demand and job satisfaction. The literature suggests that stress is a historical problem in SAPS (Pienaar & Rothman, 2010), therefore requiring investigation into this dimension.

However, the link between work-related stress and psychological functioning does not appear linear, as the number of variables, including coping, have been found to have a significant impact in this relationship (Frymier, Sparks, & Wenzel, 2009). Coping can be defined as “constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of a person” (Lazarus & Folkman, 1984, p.141). These cognitive and behavioural efforts are directed at mastering, tolerating, reducing and/or minimising environmental and internal demands and conflicts that strain an individual's resources (Botha & du Plessis, 2012; Schafer, 2000). Lazarus and Folkman (1984) have proposed that the way individuals appraise situations they are faced with largely determines the level of stress they experience. Coping, however, is not just related to the demands of the situation, but is also determined by the extent of the resources available to a person (Botha & du Plessis, 2012; Compton, 2005; Frydenburg, 1997).

The particular coping strategies that police officers draw on to deal with stress may have implications for the development of Post Traumatic Stress Disorder (PTSD), burnout and suicidal ideations (Ballenger *et al.*, 2011., Klopper, 2003. &Pienaar & Rothman, 2010).One of the imperative occupational hazards of police work is frequent exposure to traumatic incidents and

the resulting risk of developing symptoms PTSD. A strong body of empirical evidence demonstrates that rates of alcohol use disorders are significantly higher in individuals with PTSD, compared with trauma-exposed individuals without PTSD, and non-exposed community samples, raising concerns about PTSD-related alcohol co-morbidity in police officers.

Burnout is a self-perpetuating process not only because it impedes the attainment of professional goals, but also because it depletes coping resources (Mnyandeki, 2008). According to Violanti, Marshall and Howe(1985) as cited in Klopper (2003), police officers are characteristically "symptomatic drinkers", who draw on alcohol for the relief of psychological strain. Failure to cope with stress has been attributed to the display of suicide behaviour amongst police officers (Pienaar & Rothman, 2010). A study on suicide ideation was conducted in the North West Province, which showed that 10.58 % of the uniformed police members of the 287 participants showed significant levels of suicide ideation(scoring above the 97th percentile by ASIQ) (Rothmann & van Rensburg, 2002). The national study by Pienaar (2002) indicated an 8.64 % of 2396 SAPS participants surveyed had significant levels of suicide ideation. In the Eastern Cape Province it was found that 4.96% of the 307 participants showed significant levels of suicide ideation (Meyer, Rothmann and Pienaar, 2003). The latest national study found that 8.30 % of 1781 SAPS participants surveyed had significant level of suicide ideation (Pienaar & Rothmann, 2005).

For the purpose of this study, coping has been divided into two primary modes (areas), namely: problem-focused coping (using strategies frankly designed to alter or change the stressor) and emotion-focused coping (the ruling of one's own emotional responses to manage stressful situations) (Compton, 2005). Other coping strategies that are infrequently used and

which are coupled with less adaptive outcomes are collectively termed dysfunctional coping strategies and have been acknowledged by Carver, Scheier and Weintraub (1989).

Research (Kim & Kim, 2008; Horwitz, Hill & King, 2011) shows that coping strategies may play a significant role in an individual's level of psychological functioning. Police officers within the SAPS often have to deal with the stress surrounding job, fulfil their job demands and attain job satisfaction, while on the other hand, being confronted with issues such as violence (Schlebusch, 2004), high levels of family conflict (Madu & Matla, 2004), and the experience of racism and social prejudice (De Bruin, 2008). Although many cope within these working conditions, a number of police officers often struggle to deal with the demands of the job and the job stress, often leading to problems in their psychological functioning.

Because the SAPS is divided into different subdivisions including the Child Protection Unit (CPU), tactical response team (TRT), the dog unit, detective unit, public order police service (POPS), and most of the previous studies conducted, the focus have been among the general police populations, this study is conducted among police officers who work in the Local Criminal Record Centre (LCRC).

It seems there is a need to give a brief discussion of the LCRC for clarity on their role with the SAPS. This is a unit in the South African Police Services (SAPS) which deals with the forensic investigations of crime scenes. This unit is divided into two sub-units: the photograph unit and the fingerprint unit.

In the photograph unit, the LCRC officer deals with crime scenes that include deceased bodies, arson, inquest and many more. They attend the crime scenes and collect all necessary exhibits on the scene (example: bullets, blood, sperms or semen etc), take pictures of the scene as a whole, starting from the picture of the house outside up until the specific place where the deceased body is. They then take pictures of the deceased body in the position they found it and all the other pictures that are necessary. They even video record the whole incidence to gather as much information as possible. After each and every scene they document all the information and prepare a presentation for court. All the exhibits collected are sent to Pretoria at the SAPS forensic lab for further investigation (N Sinyanya, personal communication. 25 March 2013).

In the fingerprint unit, the LCRC officer deals with cases that need fingerprinting lifting. They work mostly in cases such as robbery, car theft, hi-jacking and many more. The LCRC officer is expected to go to the scene to collect fingerprints of the people that committed the crime, document all the information and send it to Pretoria forensic lab so that they can identify the people that were involved in the crime scene. At times the LCRC officer may give testimonies in court which may also be traumatic and precipitate anxiety as well as fear for their lives. Through this brief description, it is clear that these officers work in an environment that can be traumatic and stressful to their physical and psychological functioning hence the undertaking of this study (N Sinyanya, personal communication. 25 March 2013).

### **1.1 Research problem**

Studies on work stress, coping as well as mental health have been done in South Africa and found that work stress does impact in the psychological functioning of police officers

(Pienaar & Rothman, 2010). In South Africa, Madu and Poodhun (2006) conducted a study among police officers and their focus was on stress and substance abuse. There were a sizeable number of police members who were stressed and are coping ineffectively. The stress was affecting them mentally and physically. It was also affecting their interpersonal relationships. Generally, it seems that police members did not have effective coping skills and did not spend recreational time constructively. Some members of the police smoked some took drugs and drank alcohol (Madu & Poodhun, 2006). Rothmann and Pienaar (2010) did a study in the Eastern Cape and North West Provinces of South Africa. The study was assessing suicidal ideations within the police officers and found high level of stress as compared to the general population. A study on police suicide conducted indicated that South African Police Service (SAPS) officers were 11 times more likely to commit suicide than the general South African population (Rothman & Pienaar, 2010). The Eastern Cape seems to be one of the risk areas. The high number of police suicides in this province correlates with the large police population in the Province. This is also one of the Provinces with the highest levels of recorded crime (Pienaar, 2002), but there is a scarcity of studies investigating their psychological functioning. This current study hopes to fill, this gap by conducting a study which will look into their stress, psychological functioning and coping strategies.

According to News 24, National Police Commissioner, Riah Phiyega, says 70-100 police officers commit suicide every year. The dilemma is that statistics dating back to 2009 show a steady increase every year. The Police Ministry convened a summit on suicide prevention last week. The South African minister of police, Minister Nathi Mthethwa said as part of the intervention, the South African Police Service has one of the most extended and advanced trauma

management systems compared to other departments, policing agencies, nationally and internationally. Speaking on SABC's Morning Live show, Phiyega said the police's job is demanding as they are exposed to very traumatic circumstances in their day-to-day work, but they have to build up capacity and skills. She says they have to strategically and deliberately intervene in insuring that members that are exposed to trauma have a structured programme which gives them help through the employee, health and well-ness programmes (Morning Live, 2013). Although this is common knowledge, much has not been done in conducting empirical studies and confirming the severity of the stressors.

Currently in South Africa, there are a few published studies, De Bruin, 2008; Madu, Vawda, Williams & Wyatt, (2013); Meyer, Pienaar & Rothmann (2003), these studies took into consideration the psychological functioning of the police officers and with this in mind, it has been found in the literature that there are two published studies in the North West Province, one in Gauteng Province, one in Limpopo Province and one in the Eastern Province. From the literature it appears that these studies have been conducted with police officers who are not in a specialized task force. So far, there has never been a published research done within the police officers in the LCRC. It appears that there is a need to conduct a study among this specialized task force and the LCRC as these police officers seem to be working under insensitive environment, and could be prone to trauma and other psychological problems.

## **1.2 Aim and Objectives**

### **1.2.1 Aim**

The aim of this study is to investigate work-related stress and the psychological functioning of police officers in the LCRC with coping strategies as moderating factor. This aim is achieved by fulfilling the following objectives.

### **1.2.2 Objectives**

The specific objectives of the study are:

1. To investigate the relationship between work-related stress and psychological well-being among police officers within the LCRC Unit of the SAPS.
2. To investigate whether coping will moderate the relationship between work-related stress and psychological functioning; and
3. To determine if there a significant difference between work related stress and/or psychological functioning for males and females, different age groups and years of experience in the LCRC Unit.

## **1.3 Research Hypotheses**

With regard to the objective of the study, the following research hypotheses are formulated:

1. There will be a significant relationship between work-related stress and psychological functioning
2. Coping will moderate the relationship between work-related stress and psychological functioning and

3. There will be significant differences between males and females, various age groups and years of service in relation to work-related stress and the psychological functioning of police officers.

#### **1.4 THE RELEVANCE OF THE STUDY**

Police psychological health is usually ignored, misunderstood, misrepresented and under-researched among police (Pienaar & Rothmann, 2008). Due to the scarce literature on the psychological health of the police officers (LCRC) in South Africa, this study will add on the literature available. The results of this study will aid in understanding the coping strategy that the police officers utilize in order to minimize their stress level. In summary, this study aims to raise awareness into the psychological functioning of the police officers and thus enlightening policy makers and relevant stakeholders on this process. Identifying effective coping strategies and reducing work related stress could contribute to the development of effective intervention strategies to SAPS at large and LCRC units in particular. Little is known about which group of officers experiences what kind of stress and psychological dysfunction more than the other. This study will provide SAPS with a clear indication of what the wellness team has to implement for the betterment of the police officers in LCRC.

## **2. THEORETICAL FRAMEWORK AND PERSPECTIVES**

Different perspectives to explain the variables of this study were also included. The Socio-Ecological model was utilized as a study framework to conceptualize the variables of this study.

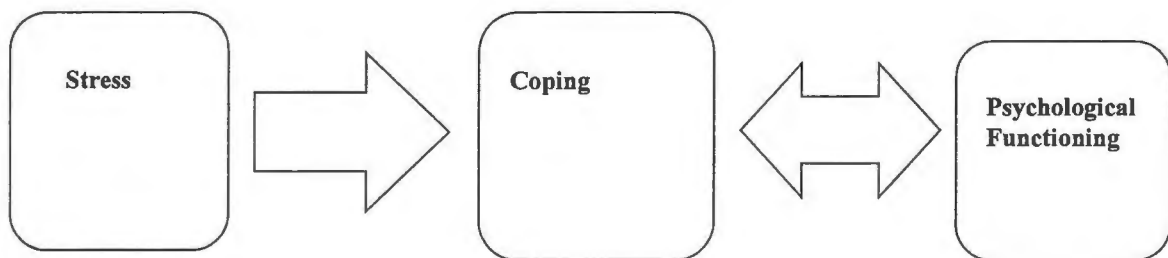
### **2.1 Theoretical framework**

#### **2.1.1 The Socio-Ecological Model**

This model explains the dynamic interrelations of various personal and social factors. Given the fact that psychological functioning is being studied as an outcome of job stress, it fits

to use the Socio- Ecological Theory model. Urie Bronfenbrenner noted that, “the environment in which development takes place in terms of a nested systems fitting into each other (Duncan, Bowman, Naidoo, Pillay & Roos (2007 ,p.77)”. An individual exists within layers of social relationships: the family, friendship network (micro-system), the relationship that an individual has with the people in the micro-system (meso-system) organisations, neighbourhood (exo-system) and culture and society (macro-system). Each layer has an impact on the other layers in an interdependent way. An individual thus lives in a constantly changing context influenced by the changing relationships between individual level context and the macro context within which these micro contexts develop.

This study focuses only on one system, the micro system that is focused on the individual and how he/she is functioning. The idea is to see how stress and psychological functioning has an impact on the daily functioning of individual. The figure below illustrates how coping moderates the relationship between stress and psychological functioning.



## 2.2. Theoretical perspective

There are three perspectives that are used to support the theoretical framework of this study. These perspectives are utilized to bring in a clear theoretical explanation of the variables of this

study. These perspectives are: Lazarus and Folkman transactional model of stress and coping, the social cognitive learning approach and vulnerability hypothesis.

### **2.2.1. Lazarus and Folkman transactional model of stress and coping**

This model was developed in 1984 by Lazarus and Folkman. There is a puzzle division in the scientific literature concerned with stress, coping and literature.

According to Lazarus and Folkman (1984), occupational stress takes place when job demands exceed the person's adaptive resources. Therefore 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 are too high to cope with, stress reactions are likely to occur (Pienaar & Rothmann, 2005). The literature suggest that job demand is part one of the stressors that police officers are faced with and if SAPS does not do anything about that problem to bring about equilibrium, the stress reactions will keep on occurring.

Coping, as implied by the phrase "stress and coping theory", is the third major construct in this theoretical approach. As defined by Lazarus and Folkman (1984: 141), coping consists of constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised by exceeding the resources of the person (Contrada & Baum, 2011).

This theory actually means that one cannot cope if there is nothing to cope with, in this instance the police officer experiences stress and it affects their psychological functioning; police officers need to cope with that situation. It is stated that coping consists of constantly changing cognitive and behavioural efforts. Clearly, if a person's psychological functioning is disturbed by certain stressors in life, their cognition and behaviour change.

### **2.2.2. The social cognitive learning approach**

This approach was developed by Julian Rotter, Albert Bandura and Walter Mischel in 1977. The social cognitive learning theorists emphasize the functioning and dynamics of the personality and do not regard personality as consisting of a set of parts or as having some kind of a fixed structure. Their basic position is, simply, that behaviour is a result of an interaction between the person and the situation (Meyer, Moore & Viljoen, 2008).

This theory basically agrees with the stress and coping theory in a sense that behaviour is a result of an interaction between the person and the situation (example: a police officer facing a stressful event at work, how the police officer deals with that event will say much about his/her psychological functioning), the situation can be a stressful one thus this theory covers the psychological functioning of police officers. One can either fight or flight as mentioned under the stress theory, which would explain the psychological functioning of that particular individual.

### **2.2.3. Vulnerability hypothesis**

According to Uhl and Korborna (2003), vulnerability hypothesis is a psycho-social theory which holds the view that emotional impact of undesirable life events differ from individual to individual due to socio-demographic variables. In this study, age and gender and duration of service are the demographic variables to be explored. This theory gives the explanation of whether police officers in the LCRC in different age groups are differently vulnerable to the experience of stress. An explanation of whether males or females are differently vulnerable is also given in the theory. Most studies conducted found that women are more vulnerable than men

(William, Ciarocchi & Deane, 2010). There are not many studies in age but this theory also explains that police officers in different age groups are vulnerable to stress. In simple terms, the theory holds the view that gender and age hold the marker for vulnerability to stress of the police officers in the LCRC.

### **3. BRIEF LITERATURE REVIEW**

Studies on work stress, coping as well as mental health have been done in South Africa and found that work stress does impact in the psychological functioning of police officers (Madu & Poodhun, 2006; Pienaar & Rothmann, 2010; Mnyandeki, 2010). Madu and Poodhun (2006) conducted a study among police officers and their focus was on stress and substance abuse. There are a substantial number of police members who are stressed and are coping ineffectively. The stress is affecting them mentally and physically. It is also affecting their interpersonal relationships. In general, it seems that police members do not have effective coping skills and do not spend leisure time constructively. Some members of the police officers drink alcohol, some take drugs and smoke excessively and they do this as a method of self medication (Madu & Poodhun, 2006).

In a study conducted amongst police officers in the Eastern Cape and North West Provinces, Rothmann and Pienaar (2010) found higher levels of stress as compared to the general population. Furthermore, officers were 11 times more likely to commit suicide than the general South African population (Pienaar, 2002; Rossouw, 1997). The Eastern Cape seems to be one of the risk areas. The high number of police suicides in this province correlates with the large police population in the Province (Pienaar, 2002). Pienaar (2002) further stated that, this is also one of the Provinces with the highest levels of recorded crime. The literature reviewed suggests that the

relationship between work related stress and psychological functioning amongst police officers is well established within stress-related studies (Anshel, Brinthead & Umscheid, 2012). However, it would appear that this relationship is not linear and that coping may determine the nature of the interaction between work-related stress and psychological functioning. A study that was conducted in the past by Mnyandeki (2008) discovered that: the job demands that the police officers experience result in high levels of stress that lead to burnout. The relationship between stress and burnout is moderated by coping.

#### **4. METHODOLOGY**

##### **4.1 Research design**

A quantitative approach was used. Quantitative approach is a systematic empirical investigation of observable phenomena (Maree, 2010). The objective of quantitative approach is to develop and employ hypotheses pertaining to phenomena. In this study, it was used to verify which of the stated hypotheses were true.

A cross-sectional design was used. Cross-sectional studies involve data collected at a defined time (Maree, 2010). They are often used to assess the prevalence of acute or chronic conditions, or to answer questions about the causes of disease or the results of medical intervention. The dependent variable is psychological functioning and the independent variable is work-related stress and the moderating variable is coping factors.

#### **4.2 Participants and data gathering**

One hundred and sixty five (165) participants from two police stations representative of the police stations with LCRC departments in the Gauteng Province were selected by means of a purposive stratified sampling technique. This method of sampling is used for special situations where the sampling is done with a specific purpose in mind (Maree, 2010). Information regarding marital status, rank, age and years in service were gathered from respondents and are indicated in Table 1.

#### **4.3 Measuring instruments**

The following questionnaires were used to collect data on the variables included in the study:

The *Police Stress Inventory (PSI)* (Pienaar and Rothmann, 2003b) is a scale that measures participants' job stress. Each of the 44 items of the questionnaire describes a job-related stressor event and assesses both the perceived severity and frequency of occurrence of that event. Participants rate each of the 44 items regarding the intensity of stress on a nine-point Lickert scale. According to Pienaar and Rothmann (2006), a number of research studies have been published regarding stressors specific to the policing environment which were used in the construction of the PSI. The PSI focused on familiar work situations that are often a consequence in psychological strain. Pienaar (2002) subjected the PSI to a principal components factor analysis with a varimax rotation. Three internally consistent factors were extorted, namely, Job Demands (17 items), Lack of Resources (14 items), and Police-specific Demands (8 items). Pienaar (2002) reported alpha coefficients of 0.92, 0.92 and 0.89 for the three respective scales.

The *General Health Questionnaire (GHQ-28)* (Goldberg & Hillier, 1979) is a 28-item self-reporting instrument designed for the detection and assessment of individuals with an increased

likelihood of psychiatric disorders. However, the scale is often used as a measure of psychological well-being and also to measure psychological aspects of the quality of life (Sterling, 2010). The GHQ-28 incorporates four subscales, namely: somatic symptoms (item 1-7), anxiety and insomnia (item 8-14), social dysfunction (item 15-21), and severe depression (item 22-28). Reliability coefficients ranging from 0.78 to 0.95 have been reported in various studies (Sterling, 2011).

The *Coping Orientations to Problems Experienced Questionnaire* (COPE) (Carver et al., 1989) measures participants' coping strategies. The scale consists of 53 individual items that make up 14 subscales. Items are completed on a four-point Likert scale, ranging from 1 ("I usually do not do this at all") to 4 ("I usually do this quite a lot"). The subscales are grouped together into three broad categories, namely problem-focused coping strategies, emotion-focused coping strategies, and dysfunctional coping strategies. The problem-focused coping category includes subscales such as active coping, planning, suppression of competing activities, restraint coping and seeking social support for instrumental reasons. The emotion-focused coping category consists of subscales such as seeking social support for emotional reasons, positive reinterpretation and growth, acceptance, turning to religion and focus on and venting of emotions. The dysfunctional subscales are denial, behavioural disengagement, mental disengagement, and alcohol-drug disengagement (Carver et al., 1989).

For the purpose of this article only the combined scales were used. The scores on the individual subscales are calculated by adding the scores of the four items per subscale except for the Alcohol and Drug Disengagement scale, which consists of only one item. High scores

indicate that the individual frequently uses the proposed strategy, whereas low scores indicate a less frequent use of the coping strategy. Carver et al. (1989) reported alpha coefficients of between 0.45 and 0.90 for the subscales. In a South African study of white, black and coloured adolescents, Du Plessis (2011) reported alpha coefficients ranging from 0.42 – 0.77. Similarly, Wissing (1996) reported alpha coefficients of between 0.39 and 0.90 for a student population. The small number of items per subscale probably contributed to the low reported alpha coefficients. For this reason it was decided to combine the subscales as the combination of the subscales into three subscales can improve internal consistency.

#### **4.4 Procedures**

The research committee of the Faculty of Human and Social Sciences at the University of North West provided ethical clearance for the research. Permission was obtained from the head of the LCRC in the Gauteng Province to involve police officers in this study. All participants notified about the informed consent were given an opportunity to sign the consent letter and were guaranteed anonymity, confidentiality and were also informed about the voluntary nature of their participation.

Data was collected over a period of three months due to the unavailability of the participants. Data was collected on Tuesday mornings at work, after the weekly meetings. Questionnaires took 30 minutes to complete and were done in groups of 20 at a time. The researcher administered all the questionnaires. An opportunity was also provided to debrief the police officers after the administration of the questionnaires in order to address any emotional responses or answer any questions that resulted from their involvement in the research process.

#### 4.5 Data Analysis

To investigate the first and second hypotheses, a hierarchical regression analysis was performed with work-related stress as the independent and psychological functioning as the dependent variable. To investigate the possible role of coping in the relationship between work related stress and psychological functioning, the regression analyses are performed in two steps. Pearson product moment correlations were carried out as these results are reported in the next section.

In the first step, work-related stress (one subscale at a time), as the independent variable, is added to the regression equation to determine its unique contribution to the psychological functioning (dependent variable) of police officers, as the dependent variable. During step two of the analysis, work-related stress is kept while the product of the independent variable (work-related stress) and the moderator (coping) are added to the prediction of the independent variable. In order to prevent multicollinearity, deviation scores are used. According to Baron and Kenny (1986), a variable serves as a moderator variable when such a variable can change the direction and/or strength of the relationship between the dependent and independent variable.

To investigate the third research hypothesis, a factorial MANOVA (Howell, 2012) was performed. This technique was used because more than one dependent and more than one independent variable are used in the statistical model for the comparison of averages. In order to provide judgement about the statistical significance of results obtained in the analysis, practical significance of the results is also be investigated by means of effect sizes (Steyn, 1999). Effect

sizes ( $f$ ) are determined for the MANOVA results by using the following guidelines:  $0.1$  = small,  $0.25$  = medium and  $0.4$  = big effect.

All analysis is done using the SPSS computer programme (SPSS Institute, 2014). Both the 1% and 5% levels of significance are used as acceptable levels of significance

#### **4.6 Ethical consideration**

Verbal consents were obtained from all the participants and they were given time to sign their consent letters. All information obtained from the participants was treated with confidentiality; therefore the participant's names were not required when responding to the questionnaire. The researcher made sure that the participants were protected from psychological harm by the research process by providing them with a counsellor that they could go to in case of stress or emotional distress. Participants were informed of all the aspects of the research. Participants were not forced nor bribed to participate in the study. The participants were informed that they have the right to withdraw their participation in the study if need arose.

## 5. RESULTS

**Table 1: Frequency distribution of the sample in terms of gender, marital status and rank**

Biographical variables	N	%
<b>Gender:</b>		
Male	94	57.3
Female	70	42.7
<b>Marital status:</b>		
Married	87	53.1
Single	61	37.2
Divorced	13	7.9
Widowed	3	1.8
<b>Rank:</b>		
Constable	89	54.3
Warrant Officer	49	29.9
Sergeant	10	6.1
Lieutenant	6	3.7
Captain	8	4.9
General	1	0.6
Lieutenant General	1	0.6
Age:	$\bar{X}=35.78; sd=7.85$	
Years in service:	$\bar{X}=9.70; sd=7.15$	

From Table 1 it can be observed that the greater part of the sample was male (57.3%) and married (53.1%). Most of the participants were from the rank of constable (54.3%). The average age of the sample was 36 years with an average of 10 years working experience.

A *biographical questionnaire* was used to gather demographic information pertaining to the age, gender, race and duration of service of the participants.

The internal consistency of all the scales and subscales of the current sample were calculated and are reported in Table 2.

**Table 2: Cronbach alpha-coefficients of the PSI, GHQ and COPE Scales**

Scales of measuring instruments	$\alpha$ -coefficient
<b>PSI:</b>	
Job	0.773
Lack of resources	0.730
Specific demands	0.712
<b>GHQ</b>	
Total score	0.718
<b>Cope:</b>	
Emotional	0.741
Dysfunctional	0.701
Problem focused	0.732

It is evident from Table 2 that the alpha coefficients for the Police Stress Inventory (PSI), the General health Questionnaire (GHQ) as well as the COPE scale exhibit acceptable levels of internal consistency ( $\geq 0.70$  for non-cognitive measures) (Nunnally & Bernstein, 1994). The data were thus considered to be sufficiently reliable for further analysis.

The intercorrelations between the three independent variables (work related stress subscales), the dependent variables (psychological functioning) and the moderator variables (three coping subscales) were calculated by means of Pearson product moment correlation and the results are presented in Table 3.

Table 3: *Pearson product-moment intercorrelations between the independent, dependent and moderator variables*

Variable	JS	LRS	SDS	EC	DC	PC
Psychological functioning (PF)	-0.056	-0.080	-0.043	-0.262**	0.129	-0.224**
Job stress (JS)	-	0.703**	0.594**	0.117	-0.003	0.055
Lack of resources stress (LRS)		-	0.514**	0.340**	-0.049	0.257**
Specific demands stress (SDS)			-	-0.029	0.167*	-0.092
Emotion-focused coping (EC)				-	-0.055	0.734**
Dysfunctional coping (DC)					-	-0.122
Problem focused coping (PC)						-

\*\*  $p \leq 0.01$

\*  $p \leq 0.05$

It is apparent from Table 3 that a significant negative correlation (1% level of significance) exists between psychological functioning and two of the coping subscales (emotional and problem-focused coping). Psychological functioning with job stress  $r(165) = -.056$ ,  $p < .ns$ ; lack of resource stress  $r(165) = -.080$ ,  $p < .ns$ ; specific demands stress  $r(165) = -.043$ ,  $p < .ns$ , emotion focused coping  $r(165) = -.262$ ,  $p < .001$ ; personal competencer  $r(165) = -.262$ ,  $p < .001$ , dysfunctional coping  $r(165) = -.129$ ,  $p < .ns$ , problem-focused coping  $r(165) = -.224$ ,  $p < .001$ . All of these correlations had a medium effect size and the results are thus of moderate practical significance.

### Results of the hierarchical regression analyses

Hierarchical regression analyses were performed to investigate the possible moderator effect of coping in the relationship work related stress and psychological functioning. Since three separate scales of coping were tested, one scale at a time was entered into the equation.

### Emotion-focused coping in the relationship between work-related stress and psychological functioning

The possible moderator effect of emotion-focused coping in the relationship between the three work related stress subscales (job stress; lack of resources stress and specific demands

stress) and psychological functioning was investigated and the results of the moderated hierarchical regression analysis are depicted in Table 4.

**Table 4:** *Hierarchical regression analysis with work related stress as the independent variable, psychological functioning as dependent variable and emotion-focused coping as moderator*

Model	<i>R</i>	<i>R</i> <sup>2</sup>	Adjusted <i>R</i> <sup>2</sup>	Change statistics				
				<i>R</i> <sup>2</sup> change	<i>F</i> change	df1	df2	Sig. <i>F</i> Change
1	0.056 <sup>a</sup>	0.003	0.003	0.003	0.512	1	163	0.475
2	0.214 <sup>b</sup>	0.046	0.034	0.042	7.211 <sup>**</sup>	1	162	0.008
3	0.080 <sup>a</sup>	0.006	0.000	0.006	1.049	1	163	0.307
4	0.213 <sup>b</sup>	0.046	0.034	0.039	6.647 <sup>*</sup>	1	162	0.011
5	0.043	0.002	0.004	0.002	0.307	1	163	0.580
6	0.289 <sup>b</sup>	0.084	0.072	0.082	14.437 <sup>**</sup>	1	162	0.000

1 Job stress (JS)

2 JS; JSxEC

\*\*  $p \leq 0.01$

\*  $p \leq 0.05$

3. Lack of resources (LRS)

4. LRS; LRSxEC

5. Specific demands (SDS)

6. SDS; SDSxEC

The results reported in Table 4 indicate that emotion-focused coping acts as a moderator in the relationship between all three of the work related stress variables (job stress, lack of resources stress and specific demands stress) and psychological functioning. The moderator effect of emotion-focused coping is significant on the 1% level of significance for the relationship between job stress and psychological functioning as well as for specific demands stress and

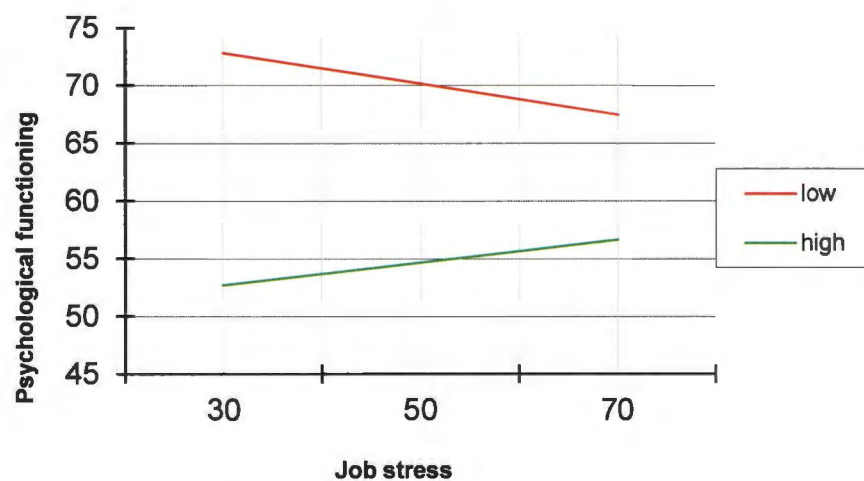
psychological functioning, while significant on the 5% level of significance for the relationship between lack of resources stress and psychological functioning.

The results indicate that for *job stress* ( $\Delta R^2 = 0.042$ ;  $F_{(1;162)} = 7.211$ ;  $p = 0.008$ ), with the addition of the product between the two variables, a significant percentage of the variance in psychological functioning (4.2% more variance) are explained. Subsequently, it can be deduced that emotion-focused coping does moderate the relationship between job stress and psychological functioning of police officers. A significant additional percentage of the variance in psychological functioning (3.9% more variance) are explained for *lack of resources stress* ( $\Delta R^2 = 0.039$ ;  $F_{(1;162)} = 6.647$ ;  $p = 0.011$ ) with the addition of the product between the two variables. Subsequently, it can be deduced that emotion-focused coping does moderate the relationship between lack of resources stress and psychological functioning of police officers. Furthermore, a significant variance in psychological (8.2% more variance) is explained for *specific demands stress* ( $\Delta R^2 = 0.082$ ;  $F_{(1;162)} = 14.437$ ;  $p = 0.000$ ) with the addition of the product between the two variables. With this result it can be deduced that emotion-focused coping moderate the relationship between specific demands stress and the psychological functioning of police officers.

The nature of these moderator effects was investigated by calculating the regression coefficients for the regression equation between work related stress (job stress, lack of resources stress and specific demands stress) and psychological functioning for the police officers who obtained a high and low score on the moderating variable (emotion-focused coping). For this purpose two separate regression lines were calculated – one for those who scored high on

emotion-focused coping (on or higher than the 75<sup>th</sup> percentile, N=42; a score of 59 or higher) and one for police officers that scored low on emotion-focused coping (on or lower than the 25<sup>th</sup> percentile, N=40; a score of 47 or lower). These regression lines are illustrated in Figure 1 for job stress, Figure 2 for lack of resources and Figure 3 for specific demands stress.

**Figure 1: Regression lines of high and low scores on the emotion-focused coping subscale with job stress as independent variable and psychological functioning as dependent variable amongst a group of police officers**



The results from Figure 1 indicate that when low levels of job stress occur, police officers with low emotion-focused coping will be inclined to experience higher levels of psychological functioning compared with those that display high levels of emotion-focused coping. However, it is apparent that with an increase in job stress, officers who scored low on emotion-focused coping display a decline in psychological functioning, while others with high levels of emotion-focused coping, experience an increase in psychological functioning. This result is illustrated in the values of the slopes of the different regression lines. For those with low emotion-focused coping the slope of the regression line is negative (-0.132), while for those with high emotion-

focused coping the slope is positive (0.098). It would thus appear as if police officers with high levels of emotion-focused coping are more successful in handling an increase in job stress than those with low levels of emotion-focused coping.

The regression lines for the two groups for the relationship between lack of resources stress and psychological functioning are indicated in Figure 2.

**Figure 2: Regression lines of high and low scores on the emotion-focused coping subscale with lack of resources stress as independent and psychological functioning as dependent variable amongst a group of police officers**

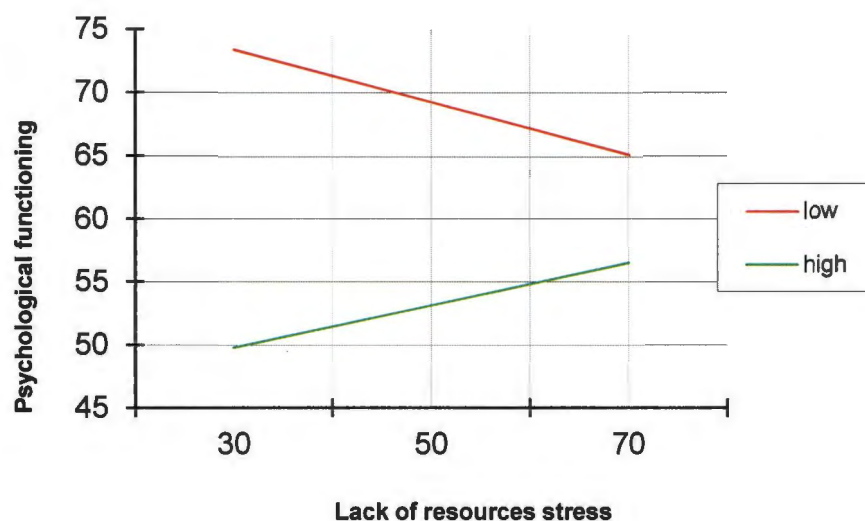


Figure 2 indicate that when lack of resources stress occurs, police officers with low emotion focused coping will be inclined to experience higher levels of psychological functioning compared with those that display high levels of emotion-focused coping. However, it is apparent that with an increase in lack of resources, stress officers who scored low on emotion-focused coping display a decline in psychological functioning, while others with high levels of emotion-

focused coping experience an increase in psychological functioning. This result is illustrated in the values of the slopes of the different regression lines. For those with low emotion-focused coping the slope of the regression line is negative (-0.206), while for those with high emotion-focused coping the slope is positive (0.167). It would thus appear as if police officers with high levels of emotion-focused coping are more successful in handling an increase in lack of resources stress than those with low levels of emotion-focused coping.

The regression lines for the two groups for the relationship between specific demands stress and psychological functioning are indicated in Figure 3.

**Figure 3: Regression lines of high and low scores on the emotion-focused coping subscale with specific demands stress as independent and psychological functioning as dependent variable amongst a group of police officers**

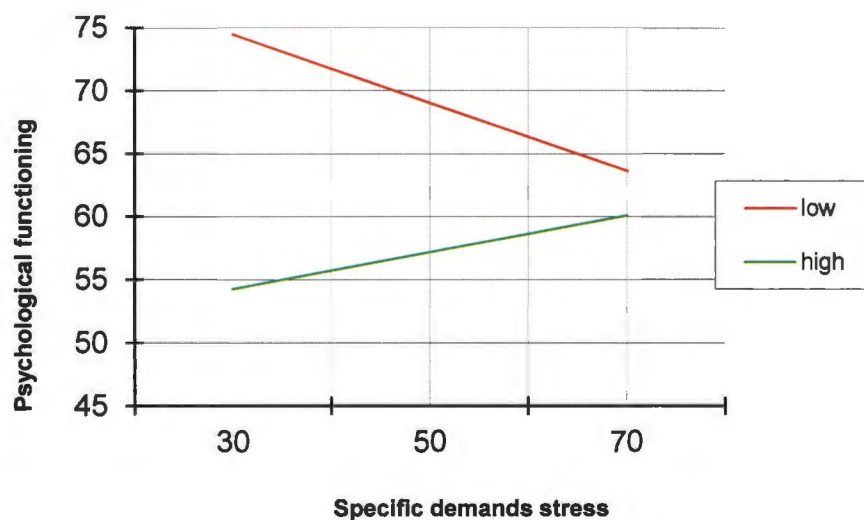


Figure 3 indicates that when low specific demands stress occur, police officers with low emotion-focused coping will be inclined to experience higher levels of psychological functioning compared with those that display high levels of emotion-focused coping. However, it is apparent that with an increase in specific demand stress officers who scored low on emotion-focused coping display a decline in psychological functioning, while others with high levels of emotion-focused coping experience an increase in psychological functioning. This result is illustrated in the values of the slopes of the different regression lines. For those with low emotion-focused coping the slope of the regression line is negative (-0.270), while for those with high emotion-focused coping the slope is positive (0.145). It would thus appear as if police officers with high levels of emotion-focused coping are more successful to handle an increase in specific demands stress than those with low levels of emotion-focused coping.

#### **Dysfunctional coping in the relationship between work related stress and psychological functioning**

The possible moderator effects of dysfunctional coping on the relationship between the three work related stress scales (job stress, lack of resources stress and specific demands stress) and psychological functioning were investigated by means of a moderated hierarchical regression analysis and the results are indicated in Table 5.

Table 5: *Hierarchical regression analysis with work related stress as the independent variable, psychological functioning as dependent variable and dysfunctional coping as moderator*

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Change statistics				
				R <sup>2</sup> change	F change	df1	df2	Sig. F Change
1	0.056	0.003	0.003	0.003	0.512	1	163	0.475
2	0.109	0.012	0.000	0.009	1.451	1	162	0.230
3	0.080	0.006	0.000	0.006	1.049	1	163	0.307
4	0.153	0.023	0.011	0.017	2.802	1	162	0.096
5	0.043	0.002	0.004	0.002	0.307	1	163	0.580
6	0.110	0.012	0.000	0.010	1.667	1	162	0.199

1 Job stress (JS)  
2 JS; JsxDC  
3. Lack of resources (LRS)  
4. LRS; LRSxDC  
5. Specific demands (SDS)  
6. SDS; SDSxDC

\*\* p <= 0.01  
\* p <= 0.05

The results in Table 5 indicate that dysfunctional coping could not succeed in moderating the relationships between all three the work related stress variables (job stress, lack of resources stress and specific demands stress) and psychological functioning.

#### **Problem focused coping in the relationship between work related stress and psychological functioning**

The possible moderator effects of problem focused coping on the relationship between the three work related stress scales (job stress, lack of resources stress and specific demands stress) and psychological functioning were investigated by means of a moderated hierarchical regression analysis and the results are indicated in Table 6.

Table 6: Hierarchical regression analysis with work related stress as the independent variable, psychological functioning as dependent variable and problem-focused coping as the moderator

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Change statistics				
				R <sup>2</sup> change	F change	df1	df2	Sig. F Change
1	0.056	0.003	0.003	0.003	0.512	1	163	0.475
2	0.161	0.026	0.014	0.023	3.807	1	162	0.053
3	0.080	0.006	0.000	0.006	1.049	1	163	0.307
4	0.138	0.019	0.007	0.013	2.105	1	162	0.149
5	0.043	0.002	0.004	0.002	0.307	1	163	0.580
6	0.198	0.039	0.027	0.037	6.291*	1	162	0.013

1 Job stress (JS)

2 JS; JSxDC

\*\* p ≤ 0.01

\* p ≤ 0.05

3. Lack of resources (LRS)

4. LRS; LRSxDC

5. Specific demands (SDS)

6. SDS; SDSxDC

According to the results reported in Table 6, problem focused coping moderates the relationship between specific demands stress and psychological functioning. The moderator effect is significant on the 5% level of statistical significance ( $p = 0,013$ ). The results indicate ( $\Delta R^2 = 0.037$ ;  $F_{(1;162)} = 6.291$ ;  $p = 0.013$ ) that with the addition of the product between the two variables, a significant percentage of the variance in psychological functioning (4.2% more variance) are explained. Subsequently, it can be deduced that emotion-focused coping does moderate the relationship between job stress and psychological functioning of police officers. A significant additional percentage of the variance in psychological functioning (3.7% more variance) is explained with the addition of the product between the two variables. Subsequently, it can be

deduced that problem focused coping does moderate the relationship between specific demands stress and psychological functioning of police officers.

The nature of these moderator effects was investigated by calculating the regression coefficients for the regression equation between work related stress (job stress, lack of resources stress and specific demands stress) and psychological functioning for the police officers who obtained a high and low score on the moderating variable (problem focused coping). For this purpose two separate regression lines were calculated – one for those who scored high on emotion-focused coping (on or higher than the 75<sup>th</sup> percentile, N=48; a score of 56 or higher) and one for police officers that scored low on emotion-focused coping (on or lower than the 25<sup>th</sup> percentile, N=45; a score of 47 or lower). These regression lines are illustrated in Figure 4.

**Figure4: Regression line of high and low scores on the problem-focused subscale with specific demands stress as independent and psychological functioning as dependent variable amongst a group of police officers**

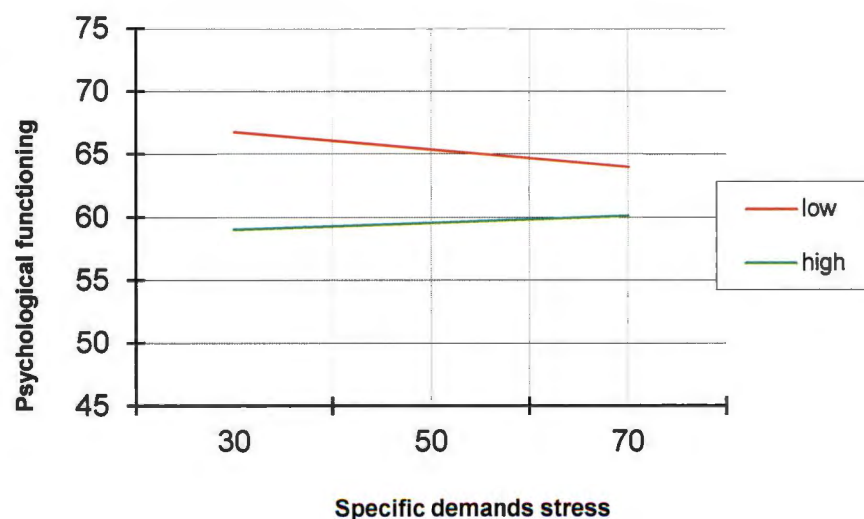


Figure 4 indicates that when low levels of specific demands stress occur, no significant differences occur in the level of psychological functioning between the high and low level of problem focused groups. However, it is apparent that with an increase in specific demand stress officers who scored low on problem focused coping display a decline in psychological functioning, while others with high levels of problem focused coping experience an increase in psychological functioning. This result is illustrated in the values of the slopes of the different regression lines. For those with low problem focused coping the slope of the regression line is negative (-0.068), while for those with high problem focused coping the slope is positive (0.026). It would thus appear as if police officers with high levels of problem-focused coping are more successful to handle an increase in specific demands stress than those with low levels of emotion-focused coping.

#### **Differences in the average scores for gender, age and length in the service**

In order to achieve the secondary goal of the study, the average scores for gender, age and length of service were compared with work related stress and psychological functioning. Because age and length of service were both measured on a continued scale, it had to be divided in groups in order to use it in an analysis of variance as independent variables. It is usually the case that age and length of service correlate highly with one another. The older a person is the longer their years of service will be. This relationship was investigated by calculating the correlation coefficient between age and years of service for the group of police officers. A coefficient of 0.817 ( $p = 0.000$ ) was measured which indicates a high relation between age and length of service within this specific group ( $N=165$ ). It was determined not to be necessary to include both the variables (age and length of service) in the analysis. Subsequently, only gender and length of service were included in the analysis. Lengths of service were divided into two

groups namely, those with  $\leq 9$  years of service (group 1) and those with  $\geq 10$  years of service (group 2).

The results of the Multi Analysis of variance (MANOVA) appear in Table 7. The square rooted partial Etta-coefficients, which is indicative of the effect sizes appear in the last column.

Table7: *F-values for the MANOVA for the test of main effects regarding work related stress and psychological functioning of police officers*

Independent variable	F-value+	$\sqrt{V}$	P	Squared partial Eta
Gender	0.688	4; 157	0.601	0.017
Years in service	0.876	4; 157	0.479	0.022

\*\* p  $\leq$  0.01

\* p  $\leq$  0.05

+ Hotelling-test

The results in Table 7 suggest that not one of the independent variables (gender or length of service) obtained significant differences (at least on the 5% level of significance) for work related stress or psychological functioning. Subsequently, the results will not be discussed further.

## 6. DISCUSSION

The primary aim of this study is to determine whether a relationship exists between work-related stress and psychological functioning amongst police officers (LCRC), and what role coping strategies play in this relationship.

### **6.1. Relationship between psychological functioning, work stress, and coping strategies**

Hypothesis one (1) stated that there would be significant relationships between the independent variables and dependent variables. Findings of this study did reveal a negative relationship between the three independent variables (work-related stress subscales), the dependent variables (psychological functioning) and the moderator variables (three coping subscales). There is a scarcity of literature that mentions the relationship of the above mentioned variables within the police officers in LCRC, never the less, studies conducted earlier by Meyer, Pienaar and Rothmann (2003) found that passive coping shows a practically significant correlation with job demands. Furthermore, Cummings and Pargament (2013) revealed that coping takes on a religious character in stressful situations when a sacred goal (communication with God) is at stake. For an example, when an employee fears losing a job, he or she might combat anxiety about job security by reflecting on comforting verses from a religious text. In most cases, the people that use religious coping find relief in their hearts and end up fully functioning from a psychological point of view. Chodagiri and Reddi (2013) added by stating that coping methods have a significant role in the development of psychological stress that is of a high rate within the police officers thus placing them at a high risk of developing psychiatric disorders. They discovered that individuals that use maladaptive coping strategies like denial or blame were the most vulnerable ones to experience psychological distress. This statement simply agrees that: there is a relationship between work related stress and psychological functioning and coping does moderate this relationship.

The reason why the findings reveal negative relationship is that, there are specific types of coping that moderate the relationships between subscales of work related stress and

psychological functioning. Nevertheless Horwitz, Hill and King (2011) emphasize that coping does play a considerable role in the psychological functioning of individuals whether in decreasing or increasing psychological symptom, therefore coping should not be left out in studies such as this as it can assist in the formulation of intervention methods.

## **6.2. Moderating Effect of Coping on Psychological Functioning and Work-related Stress**

Hypothesis two stated that there will be a moderating effect of coping on work related stress and psychological functioning of the police officers in LCRC. This discussion is explained according to emotion focused coping, dysfunctional coping, and problem focused coping.

### **6.2.1 Moderating Effect of Emotion Focused Coping on Psychological Functioning and Job Stress**

The moderating effect of emotion-focused coping is significant for the relationship between job stress and psychological functioning as well as for specific demands stress and psychological functioning. According to the results, emotion focused coping does moderate the relationship of work stress and psychological functioning. This findings is similar to the study by Lennings (in Swanepoel 2003), which revealed that emotion-focused strategies seemed favoured as coping responses and were most related to good outcomes on the stress measures including drinking, divorce and suicide ideation among police officers, meaning that individuals who use emotion focused coping will have minimal psychological distress when faced with work related problems.

### **6.2.2 Moderating Effect of Emotion Focused Coping on Psychological Functioning and Lack of Resources.**

This study also revealed that emotion focused coping has a moderating effect on lack of resources and psychological functioning, meaning that lack of resources to do their job has also been associated with psychological dysfunctions. In a way, when police officers are having deficiency in work resources that helps them to attain their goals, they use emotion-focused coping to help them have minimal psychological distress. The findings are not similar to those of van Rensburg and Rothmann (2002) as they found that although probably not so effective as a coping strategy, it is a concern that police members used low emotion-focused coping due to the fact that they found it difficult to vent out their emotions. This tendency may be the result of emotional detachment due to the nature of their work and their lack of trust in the organisation (Rothmann, Sieberhagen & Cilliers, 1998). These findings can be attributed to periodic psychological debriefing that police get involved in.

### **6.2.3 Moderating Effect of Emotion Focused Coping on Psychological Functioning and Specific Demands**

Emotion-focused coping moderated the relationship between specific demand stress and psychological functioning of the police officers. In this regard when the police officers have specific demands that are either met or not met, they utilize the emotion-focused type of coping so that they can function psychologically. The findings of this study deviate from those of Pienaar and Rothmann (2003) which found that passive coping was utilized by the police officers

in the Eastern Cape if specific demands were not met therefore causing severe psychological distress.

### **6.3. Differences according to Gender, Age and Years of Service**

The third hypothesis stated that significant differences exist in terms of gender, age and years in service. The results in this regard were not significant therefore the findings could not be discussed. In previous studies conducted by Mostert and Rothmann (2006), the results showed that gender, age and race explained a small percentage of the variance in dedication, exhaustion and cynicisms among police officers. There were no other published studies that explored, age and gender in relation to psychological dysfunctions among police officers.

## **7. CONCLUSION**

In conclusion, the results of this study have revealed that coping moderates the relationship between stress and psychological functioning. Emotion-focused coping is the main moderating factor between stress and psychological functioning within the police officers in the LCRC. Age, gender and years of service did not moderate the relationship between stress and psychological functioning.

## **8. IMPLICATIONS FOR FUTURE RESEARCH**

Further research is needed to develop specific instruments for specific populations to enhance reliability and validity levels. A cross-sectional design was used, and the results might not be predictive of the longitudinal relationship between psychological functioning, work stress and

coping. Future longitudinal studies might render different results in this regard and thus be more relevant to the choice of therapeutic or preventative focus. Furthermore, the use of longitudinal studies might offer new and different insights into the interactions between different variables. The consideration of additional variables as part of a longitudinal study should include concepts such as self-esteem, self-efficacy and hope, hereby allowing further exploration of the impact of these concepts on the psychological functioning of police officers working in the LCRC.

## **9. RECOMMENDATIONS OF THE STUDY**

The rationale of this study was twofold, namely, to increase the awareness of the growing incidence of negative psychological functioning amongst police officers, as well as to explore the contributing role of coping to this phenomenon. The recommendation is that future research will enable professionals to facilitate individual growth and development, and encourage police officers to utilize more effective coping strategies. Because the South African Police Service will continue to experience socio-political changes in the years to come, it is of the utmost importance that the influence of such changes be taken into account when future research is conducted.

## **10. STRENGTHS AND LIMITATIONS OF THE STUDY**

The strength of this study is the inclusion of the LCRC. It is unique to research making it one of the first studies opening avenues for future studies.

Although a number of studies focusing on psychological functioning, work stress and coping amongst police officers in the South African context has been published before, very few combined these variables. However, the results of the current study should be considered against the following limitations.

Given the fact that the sample was drawn from a specific geographical area in South Africa, generalizability of the findings is likely limited. The questionnaires were only recorded in English as it is the most commonly used language in Gauteng Province. The questionnaires were not translated or administered in other African languages. Furthermore, the measuring instruments that were used are not standardized on the local population, such standardization may have yielded more contextualized findings.

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The Director

SAPS

Johannesburg (LCRC)

Dear Sir

Re : Request for inclusion of Police members in a Research study.

Receive warm greetings.

Ms Mangoegape of student no 16719700 is currently undertaking a study titled "Quantitative exploration of Stress, Mental Health and Coping styles of Police officers in the LCRC (Johannesburg).

With this letter we are requesting for permission to include Police officers in the process of the collection of data. This process is voluntary, however will be encouraged so as to gain understanding in this phenomena leading to implementation of effective strategies to combat occurrences of stress.

We are open to any suggestions that you may have regarding this request to ensure smooth running of this process.

Time frames for the collection of data have not yet been established as that will be determined by your agreeing to this process taking place.

With this letter find an attachment of a brief proposal of the study.

Thanking you in advance for your assistance

Regards;

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Ms L Mangoegape  
Research Project Leader

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Mrs Matamela  
Research Supervisor

Dear Participant

Thank you for taking the time to complete and be part of this survey. Your participation in this study is voluntary. The study forms part of my Master's thesis, which deals with questions regarding stress and how people cope with it. The purpose of this survey is to find out how individuals are affected by stress and what the sources of stress are in your work place. It will take approximately a half hour (30 minutes) to complete the whole questionnaire package. Included in this packet are a number of questionnaires namely: Biographical Information, Police Stress Survey, General Health Questionnaire GHQ-28, as well as the COPE questionnaire.

Please rest assured that all information given/disclosed in the questionnaires will strictly be used confidentially i.e. it will not be made known to anyone with the exception of the researcher. No names have been asked for and this is also to ensure the privacy of all participants and make sure that **you remain anonymous**. It is important that you respond as honestly as possible. Please **respond to every question/statement**. It is important to note, that I am interested in your opinion. I would like to know what *you* personally think. I am interested in your honest opinion. **There are no right or wrong answers!!!** Try not to think too long about each statement. Usually your first response is the one you come back to in the end. Your co-operation with this survey is highly appreciated and it will help further the information we have on matters that affect you as an individual.

Kind regards

Lucy Mmamodia Mangoegape  
Student Clinical Psychologist

**BIOGRAPHICAL QUESTIONNAIRE**

Rank : \_\_\_\_\_  
Years in Service : \_\_\_\_\_  
Age ( year/month) : \_\_\_\_\_  
Gender : \_\_\_\_\_  
Marital status : \_\_\_\_\_  
Language : \_\_\_\_\_  
Ethnic group : \_\_\_\_\_  
Religion : \_\_\_\_\_  
Level of education : \_\_\_\_\_  
Dependants : \_\_\_\_\_  
Hobbies & Interests : \_\_\_\_\_  
Today's Date : \_\_\_\_\_

## POLICE STRESS INVENTORY

This survey will determine your perception of important sources of stress in your work. The survey lists 44 job-related items that many employees find stressful. First, you will be times within the last 6 months that you have experienced each event. In making your ratings of the amount of stress for each stressor event, use all your knowledge and experience. Consider the amount of time and energy that you would need to cope with or adjust to the event. Base your ratings on your personal experience as well as what you have seen to be the case for others. Rate the average amount of stress that you feel is associated with each event, rather than the extreme. The first event, ASSIGNMENT OF DISAGREEABLE DUTIES, was rated by persons in a variety of occupations as producing an average amount of stress. This event has been given a rating of "5" and will be used as the standard for evaluating the other events. Compare each event with this standard. Then assign a number "1" to "9" to indicate whether you judge the event to be less or more stressful than being assigned disagreeable duties

-Amount of stress

If the event listed is more stressful to you than the ASSIGNMENT OF DISAGREEABLE DUTIES, cross out the number appropriately larger than "5". For example:

1A Assignment of disagreeable duties

1	2	3	4	5	6	7	<del>8</del>	9
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If the event listed is less stressful to you than the ASSIGNMENT OF DISAGREEABLE DUTIES, cross out the number appropriately smaller than "5". For example:

1A Assignment of disagreeable duties

1	2	<del>3</del>	4	5	6	7	8	9
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## PART B

-Frequency of event

Indicate the approximate number of days during the past 6 months on which you have personally experienced the event. For example, if you have experienced the event listed on 4 days in the past six months, cross out the "4". If you have not experienced the event on any days during the past 6 months, cross out the "0". If you have experienced the event listed on 9 or more days during the past six months, cross out the "9+".

If you make a mistake or change your mind on any item, cross out and circle the correct response. For example:

1A Assignment of disagreeable duties

1	2	<del>3</del>	4	5	<del>6</del>	7	8	9
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**PART A****-Amount of stress**

Instructions: For job-related events judged to produce approximately the same amount of stress as the ASSIGNMENT OF DISAGREEABLE DUTIES, cross out the number "5". For those events that you feel are more stressful than the standard, cross out a proportionally HIGHER than "5". If you feel an event is less stressful than the standard, cross out a number appropriately smaller than "5".

Stressful Job-Related Events	Amount of Stress								
	Low			Moderate			High		
1. Assignment of disagreeable duties	1	2	3	4	5	6	7	8	9
2. Working overtime	1	2	3	4	5	6	7	8	9
3. Lack of opportunity for advancement	1	2	3	4	5	6	7	8	9
4. Assignment of new or unfamiliar duties	1	2	3	4	5	6	7	8	9
5. Fellow workers not doing their job	1	2	3	4	5	6	7	8	9
6. Inadequate support by supervisor	1	2	3	4	5	6	7	8	9
7. Dealing with crisis situations	1	2	3	4	5	6	7	8	9
8. Lack of recognition for good work	1	2	3	4	5	6	7	8	9
9. Performing tasks not in job description	1	2	3	4	5	6	7	8	9
10. Inadequate or poor quality equipment	1	2	3	4	5	6	7	8	9
11. Assignment of increased responsibility	1	2	3	4	5	6	7	8	9
12. Periods of inactivity	1	2	3	4	5	6	7	8	9
13. Difficulty getting along with supervisor	1	2	3	4	5	6	7	8	9
Stressful Job-Related Events	Amounts of Stress								
	Low			High			Moderate		
14. Experiencing negative attitudes toward the organization	1	2	3	4	5	6	7	8	9

15. Insufficient personnel to handle an assignment	1	2	3	4	5	6	7	8	9
16. Making critical on-the-spot decisions	1	1	1	1	1	1	1	1	1
17. Personal insult from customer/consumer/colleague	1	2	3	4	5	6	7	8	9
18. Lack of participation in policy-making decisions	1	2	3	4	5	6	7	8	9
19. Inadequate salary	1	2	3	4	5	6	7	8	9
20. Competition for advancement	1	2	3	4	5	6	7	8	9
21. Poor or inadequate supervision	1	2	3	4	5	6	7	8	9
22. Noisy work area	1	2	3	4	5	6	7	8	9
23. Frequent interruptions	1	2	3	4	5	6	7	8	9
24. Frequent changes from boring to demanding activities	1	2	3	4	5	6	7	8	9
25. Excessive paperwork	1	2	3	4	5	6	7	8	9
26. Meeting deadlines	1	2	3	4	5	6	7	8	9
27. Insufficient personal time (e.g., coffee breaks, lunch)	1	2	3	4	5	6	7	8	9
28. Covering work for another employee	1	2	3	4	5	6	7	8	9
29. Poorly motivated co-workers	1	2	3	4	5	6	7	8	9
30. Conflicts with other departments	1	2	3	4	5	6	7	8	9
31. Shift work	1	2	3	4	5	6	7	8	9
32. Too much supervision	1	2	3	4	5	6	7	8	9
<b>Stressful Job-Related Events</b>	<b>Amounts of Stress</b>								
	<b>Low</b>	<b>High</b>			<b>Moderate</b>				
33. Delivering a death message or bad news to someone	1	2	3	4	5	6	7	8	9

34. Attending to incidences of domestic violence	1	2	3	4	5	6	7	8	9
35. Reorganization and transformation within the organisation	1	2	3	4	5	6	7	8	9
36. Staff shortages	1	2	3	4	5	6	7	8	9
37. Killing someone in the line of duty	1	2	3	4	5	6	7	8	9
38. A fellow officer killed in the line of duty	1	2	3	4	5	6	7	8	9
39. Racial conflict	1	2	3	4	5	6	7	8	9
40. Having to handle a large crowd/mass demonstration	1	2	3	4	5	6	7	8	9
41. A forced arrest or being physically attacked	1	2	3	4	5	6	7	8	9
42. Having to go to court	1	2	3	4	5	6	7	8	9
43. Having to deal with the media	1	2	3	4	5	6	7	8	9
44. Seeing criminals go free (for example because of lack of evidence, court leniency)	1	2	3	4	5	6	7	8	9

Stressful Job-Related Events	Number of Days on Which the Event Occurred During the Past 6 Months									
	0	1	2	3	4	5	6	7	8	9
45. Assignment of disagreeable duties	0	1	2	3	4	5	6	7	8	9
46. Working overtime	0	1	2	3	4	5	6	7	8	9
47. Lack of opportunity for advancement	0	1	2	3	4	5	6	7	8	9
48. Assignment of new or unfamiliar duties	0	1	2	3	4	5	6	7	8	9
49. Fellow workers not doing their job	0	1	2	3	4	5	6	7	8	9
50. Inadequate support by supervisor	0	1	2	3	4	5	6	7	8	9

51. Dealing with crisis situations	0	1	2	3	4	5	6	7	8	9
52. Lack of recognition for good work	0	1	2	3	4	5	6	7	8	9
53. Performing tasks not in job description	0	1	2	3	4	5	6	7	8	9
54. Inadequate or poor quality equipment	0	1	2	3	4	5	6	7	8	9
55. Assignment of increased responsibility	0	1	2	3	4	5	6	7	8	9
56. Periods of inactivity	0	1	2	3	4	5	6	7	8	9
57. Difficulty getting along with supervisor	0	1	2	3	4	5	6	7	8	9
58. Experiencing negative attitude toward the organisation	0	1	2	3	4	5	6	7	8	9
59. Insufficient personnel to handle an assignment	0	1	2	3	4	5	6	7	8	9
60. Making critical on-the-spot decisions	0	1	2	3	4	5	6	7	8	9
<b>Stressful Job-Related Events</b>	<b>Number of Days on Which the Event Occurred During the Past 6 Months</b>									
61. Personal insult from customer/consumer/colleague	0	1	2	3	4	5	6	7	8	9
62. Lack of participation in policy-making decisions	0	1	2	3	4	5	6	7	8	9
63. Inadequate salary	0	1	2	3	4	5	6	7	8	9
64. Competition for advancement	0	1	2	3	4	5	6	7	8	9
65. Poor or inadequate supervision	0	1	2	3	4	5	6	7	8	9
66. Noisy work area	0	1	2	3	4	5	6	7	8	9
67. Frequent interruptions	0	1	2	3	4	5	6	7	8	9
68. Frequent changes from boring to demanding activities	0	1	2	3	4	5	6	7	8	9





## COPE SCALE

We are interested in how people respond when they confront difficult or stressful events in their lives. There are lots of ways to try to deal with stress. This questionnaire asks you to indicate what you generally do and feel when you experience stressful events. Obviously, different events bring out somewhat different responses, but think about what you usually do when you are under a lot of stress.

Then respond to each of the following items by blackening one number on your answer sheet for each, using the response choices listed just below. Please try to respond to each item separately in your mind from each other item. Choose your answers thoughtfully, and make your answers as true FOR YOU as you can. Please answer every item. There are no "right" or "wrong" answers, so choose the most accurate answer for YOU--not what you think "most people" would say or do. Indicate what YOU usually do when YOU experience a stressful event.

1 = I usually don't do this at all  
 2 = I usually do this a little bit  
 3 = I usually do this a medium amount  
 4 = I usually do this a lot

1. I try to grow as a person as a result of the experience.
2. I turn to work or other substitute activities to take my mind off things.
3. I get upset and let my emotions out.
4. I try to get advice from someone about what to do.
5. I concentrate my efforts on doing something about it.
6. I say to myself "this isn't real."
7. I put my trust in God.
8. I laugh about the situation.
9. I admit to myself that I can't deal with it, and quit trying.
10. I restrain myself from doing anything too quickly.
11. I discuss my feelings with someone.
12. I use alcohol or drugs to make myself feel better.
13. I get used to the idea that it happened.
14. I talk to someone to find out more about the situation.
15. I keep myself from getting distracted by other thoughts or activities.
16. I daydream about things other than this.
17. I get upset, and am really aware of it.
18. I seek God's help.
19. I make a plan of action.
20. I make jokes about it.
21. I accept that this has happened and that it can't be changed.
22. I hold off doing anything about it until the situation permits.

23. I try to get emotional support from friends or relatives.
  24. I just give up trying to reach my goal.
  25. I take additional action to try to get rid of the problem.
  26. I try to lose myself for a while by drinking alcohol or taking drugs.
  27. I refuse to believe that it has happened.
  28. I let my feelings out.
  29. I try to see it in a different light, to make it seem more positive.
  30. I talk to someone who could do something concrete about the problem.
- 
31. I sleep more than usual.
  32. I try to come up with a strategy about what to do.
  33. I focus on dealing with this problem, and if necessary let other things slide a little.
  34. I get sympathy and understanding from someone.
  35. I drink alcohol or take drugs, in order to think about it less.
  36. I kid around about it.
  37. I give up the attempt to get what I want.
  38. I look for something good in what is happening.
  39. I think about how I might best handle the problem.
  40. I pretend that it hasn't really happened.
- 
41. I make sure not to make matters worse by acting too soon.
  42. I try hard to prevent other things from interfering with my efforts at dealing with this.
  43. I go to movies or watch TV, to think about it less.
  44. I accept the reality of the fact that it happened.
  45. I ask people who have had similar experiences what they did.
  46. I feel a lot of emotional distress and I find myself expressing those feelings a lot.
  47. I take direct action to get around the problem.
  48. I try to find comfort in my religion.
  49. I force myself to wait for the right time to do something.
  50. I make fun of the situation.
- 
51. I reduce the amount of effort I'm putting into solving the problem.
  52. I talk to someone about how I feel.
  53. I use alcohol or drugs to help me get through it.
  54. I learn to live with it.
  55. I put aside other activities in order to concentrate on this.
  56. I think hard about what steps to take.
  57. I act as though it hasn't even happened.
  58. I do what has to be done, one step at a time.
  59. I learn something from the experience.
  60. I pray more than usual.

### General Health Questionnaire (GHQ28)

We would like to know if you have had any medical complaints and how your health has been in general, over the last few weeks. Please answer ALL the questions by writing the answer which best applies to you in the open space. Remember that we want to know about **PRESENT** and **RECENT** complaints, not those that you have had in the past.

It is important that you try to answer ALL the questions.

1. Better than usual
2. Same as usual
3. Worse than usual
4. Much worse than usual

1. Have you been feeling well and in good health? \_\_\_\_\_
2. Have you been feeling in need of a good energizer? \_\_\_\_\_
3. Have you been feeling run down and out of sorts? \_\_\_\_\_
4. Have you been feeling that you are ill? \_\_\_\_\_
5. Have you been getting pains in your head? \_\_\_\_\_
6. Have you been getting a feeling of tightness or pressure in the head? \_\_\_\_\_
7. Have you been having hot or cold spells? \_\_\_\_\_
8. Have you lost much sleep over worry? \_\_\_\_\_
9. Have you been having difficulty staying asleep once you are in bed? \_\_\_\_\_
10. Have you been feeling constantly under strain? \_\_\_\_\_
11. Have you been feeling edgy and short-tempered? \_\_\_\_\_
12. Have you been getting scared and panicky for no good reason? \_\_\_\_\_
13. Have you been finding everything getting on top of you? \_\_\_\_\_
14. Have you been feeling nervous and strung-up all the time? \_\_\_\_\_
15. Have you been managing to keep yourself busy and occupied \_\_\_\_\_
16. Have you been taking longer to finish things you do? \_\_\_\_\_
17. Have you been feeling that overall, you were doing things well? \_\_\_\_\_
18. Have you been satisfied with the way you carry out a task? \_\_\_\_\_
19. Have you been feeling that you are playing a useful part/role in things? \_\_\_\_\_
20. Have you been feeling capable of making decisions about things? \_\_\_\_\_
21. Have you been able to enjoy your normal day-to-day activities? \_\_\_\_\_
22. Have you been thinking of yourself as a worthless person? \_\_\_\_\_
23. Have you been feeling that life is entirely hopeless? \_\_\_\_\_
24. Have you been feeling that life is not worth living? \_\_\_\_\_
25. Have you thought of the possibility that you might make away with yourself? \_\_\_\_\_
26. Have you been finding that at times you could not do anything because your nerves were so bad? \_\_\_\_\_
27. Have you been finding yourself wishing you were dead and away from it all? \_\_\_\_\_
28. Have you been finding that the idea of taking your own life kept coming into your mind? \_\_\_\_\_