

STRESS AND COPING IN THE SOUTH AFRICAN POLICE SERVICE

by

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## FACULTY OF ECONOMIC AND MANAGEMENT SCIENCES

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## COMMENTS

The editorial style as well as the referencing conventions used in this mini-dissertation follow the format prescribed by the Publication Manual (6<sup>th</sup> edition) of the American Psychological Association (APA). This dissertation is presented in the form of a research article.

## Stress and coping in the South African Police Service

### ABSTRACT

Working in the police service can be very demanding on a physical and emotional level. Many police officers often experience stress, trauma and anxiety which even sometimes leads to suicide. In order to deal with the stressors they face, officers have to use various coping methods. This present study aims to analyse the coping strategies used by police officers in the SAPS and whether these coping strategies change over a period of time. The main purpose is to investigate which coping responses are used most by police officers in the SAPS and to determine how the prominence of these coping responses change over a period of time. This study has a longitudinal approach and will add value to the body of research since no longitudinal study has previously been conducted on coping within the SAPS. Three samples, collected at three different points in time, were used in this study. The first sample ( $n = 1277$ ) was collected while the officers were newly enrolled, the second sample ( $n = 463$ ) was taken whilst they were undergoing practical training in the college and the last sample ( $n = 120$ ) was collected when the police officers had spent two years in the field. The Ways of Coping (WoC) questionnaire was used as measuring instrument. The results of this study suggest that police officers predominantly use seeking social support, planful problem solving and positive reappraisal to deal with their daily stress. These responses are mainly seen as adaptive ways of dealing with stress. The coping responses used least includes escape avoidance, accepting responsibility and confrontive coping. There are clear indications that the way in which police officers use coping responses change over time spent in the SAPS. Over time, police officers accepted significantly less responsibility, and made less use of confrontive coping. Police officers also relied more on planful problem solving, positive reappraisal and escape avoidance. On a practical level it is suggested to conduct interventions in all units, divisions and on all levels to reinforce and refresh positive coping strategies in order to enhance the emotional well-being throughout the SAPS.

*Key words: Police stress, police coping, transformation, changes in coping, Ways of Coping adaptive coping, maladaptive coping.*

## INTRODUCTION

Serving in the police force is seen as one of the most stressful professions in the world (Anshel, 2000). The nature of police work is inherently demanding and frequently includes incidences of danger (Ireland, Malouff, & Byrne, 2007) and police officers are often exposed to multiple distressing occurrences throughout their years of service (Young, Koortzen, & Oosthuizen, 2012). These experiences are commonly experienced as terrifying and can have a major impact on physical and psychological wellbeing (Anderson, Litzemberger, & Plecas, 2002; Visser, Meiring, Lynch, & Reinhard, 2011). In addition, disturbing experiences have an adverse effect on self-assurance, authority as well as the perception of invulnerability, which might make it harder for police officers to cope in the streets (Young et al., 2012). According to Haisch and Meyers (2004) individuals are at risk of developing post-traumatic stress disorder when they experience traumatic events that are beyond normal. This places the police force at high risk, since abnormal stressful events occur frequently in the policing environment (Hart, Wearing, & Headey, 1995; Kirmeyer & Dougherty, 1988).

The South African police context is unique in many ways and places additional pressure on police officers, specifically due to the apartheid history of South Africa. The transformation in 1994 not only caused drastic changes in the country but also in the police service (Newham, 2000). These changes resulted in some units being closed (Newham, 2000) and valuable skills and expertise have been lost (“SAPS: A brutal police”, 2013). The lack of skill appears to be inevitable when viewed in light of the fact that both of the previous police commissioners has been suspended on account of corruption and misconduct (Gibson, 2013) and the current police commissioner, Riah Phiyega, is now also facing allegations of being unfit for office (Nicolson, 2015).

The increasing crime, violence and protests in South Africa add to the burden carried by police officers. Since 2010 there has been a 96% escalation in social protests in the country (South African Institute of Race Relations, 2015) and South Africa has been described as the “protest capital of the world” (Bianco, 2013, p. 1). The anxiety levels of officers are evident in recent incidences like the shootings at the Marikana mine where police officers fired at protesting mine workers and killed 34 miners while 78 were injured during August 2012 (“Nearly 300”, 2012). Officers also have to face the fear of being attacked or murdered.



There have already been 60 police officers killed in 2015 (Hartleb, 2015) and 1501 attacked during the financial year of 2014/2015, which is 329 more than the previous year (“About 1500 police officers”, 2015).

When looking at past incidences that police officers were involved in in South Africa, it is found that in 2007, there were 2.2 million serious crimes reported to the SAPS (Helfrich, 2007). From the year 2005 up to the year 2006, there was a 76% increase in the number of criminal incidents. There were further 585 officers murdered during 2001 to 2006 (Naido, 2006; SAPS, 2006). The escalation in crimes during that period added to the strain and anxiety experienced by the police force (Naido, 2006; “Stress taking”, 2006) as they had to tend to additional crime scenes and had to work many hours overtime (Breytenbach, 2009). Officers also had to cope with additional pressure since the number of individuals who were killed by police officers doubled in the period from 2006 to 2011, which seriously impacted officers’ morale (“Police under pressure”, 2011).

In order to manage troubling situations, people use coping methods to deal with their circumstances and emotions (Folkman, 2011b). It has been noted that police officers do not always cope effectively with their physically and emotionally demanding work (Haisch & Meyers, 2004; Sundaram & Kumaran, 2012; Waters & Ussery, 2007). Although there are quite a few pro-active psychological programs in the SAPS designed to help police officers cope with the stressors they experience, these programs seem to be ineffective in assisting individuals in dealing with stress on an emotional level (Watson, Jorgensen, Meiring, & Hill, 2012, 2012). In order to manage the demands they face, police officers commonly develop drinking problems, or use substances like dagga, amphetamine, opiates, hallucinogens and even cocaine (SAPS, 2011; “Traumatized cops turning to the bottle, says study”, 2011). Studies investigating police work have also found that many police officers have suicidal thoughts (Pienaar, Rothmann, & van de Vijver, 2007) as a result of their work, which is a great concern in the South African Police Service (SAPS) (de Wet, 2004; Rothmann & Van Rensburg, 2002; Storm & Rothmann, 2003). Sa Joe (2003) reported that the extensive job stress, which includes being constantly exposed to criminal activities and violence, is one of the main reasons for suicide. In 1996, the SAPS had one of the highest suicide rates in the world; ten times higher than the suicide rate in the United States (“South Africa: Police force”, 1996).

## **Coping defined**

Coping is a process of responding to stress in a way that minimizes the effects of the stressor (Hardy, Carson, & Thomas, 1998). Coping can be seen as synonymous with efforts to exercise control (Folkman, 2011a). Prominent work on coping has been conducted by Lazarus and Folkman (1984, p. 141) who defined coping as: “constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person”.

Lazarus and Folkman (1984) explained that coping as a process has three features. Firstly, it involves the actual thoughts or behaviours of the individual. This is contrary to the trait-approach, which explains what the person would normally or typically do. Secondly, coping is examined within the specific context in which it occurs. Coping thoughts are directed towards specific conditions. Lastly, coping serves to adjust the coping thoughts and deeds as the stressful occurrence develops.

The current literature suggest that coping with stress is a process that unfolds over time (Folkman, 2011b). During the course of coping, an individual appraise the situation to determine whether it will have an influence on his well-being and what the extent of the influence will be (Folkman, Lazarus, Gruen, & DeLongis, 1986). This implies that individuals may change their appraisals depending on how stressful a situation is based on the assessment of available coping resources (Folkman, 2011b). Two kinds of cognitive appraisal can be distinguished, namely primary appraisal and secondary appraisal. During primary appraisal, the individual assesses whether the person has anything at risk during the encounter. During secondary appraisal an individual can alter their appraisals based on the factors of the situation (Folkman et al., 1986).

## **Coping is context specific**

Whether a coping strategy results in positive outcomes is dependent on the constraints and demands of the context as well as the skill with which it is applied (Folkman & Lazarus, 1986; Lazarus, 1993). The specific context of a situation largely determines whether the coping strategy used is adaptive or maladaptive. Research indicates that police officers use specific coping mechanisms for different purposes (Gumani, Fourie, & Terre Blanche, 2013). It has also been observed that in some situations different coping responses can be used in collaboration (Hart et al., 1995) and various coping responses are used simultaneously in certain situations (Cronqvist, Klang, & Björvell, 1997; Gumani et al., 2013). Folkman (2011b) argued that the process approach to coping makes it difficult to conceptualise and assess a person's overall coping style, because it requires a contextual analysis of the stressful encounter. Folkman further warned that there are reasons to be cautious of stage formulations of coping when they imply an unchanging sequence.

### **Adaptive coping in the police environment**

Various studies have investigated police coping and these studies have found that certain coping strategies do assist police officers in coping with the stressors they experience. Positive outcomes can be gained from problem-focused strategies as well as from emotion-focused strategies. Problem-focused coping strategies were shown in multiple studies to yield positive outcomes (Gumani et al., 2013; LeBlanc, Regehr, Jelley, & Barath, 2008; Naudé, 2003; Rothmann, Jorgensen, & Hill, 2011), specifically in relation to reduced suicide ideation (de Wet, 2004; Van der Merwe, Rothmann, & Pienaar, 2004) and the promotion of overall well-being (Hart et al., 1995). In other studies, 'task strategies' and 'involvement' forecasted mental well-being (Kirkcaldy, Cooper, & Brown, 1995) and were proven to be effective in dealing with stressful encounters (LeBlanc et al., 2008). It was further found that active coping styles were positively related to feelings of professional efficacy (Wiese, Rothmann, & Storm, 2003) and inhibited feelings of suicide ideation (Van der Merwe et al., 2004). Violanti (1993, 1992) and (Moller, 2008) studied the coping responses used by police recruits and found that planful problem-solving, which is a form of problem-focused coping, led to desirable outcomes. Confrontation can in some instances be seen as a problem-focused coping style and Aaron (2000) found that when officers confronted their stressor this predicted healthier outcomes. Leisure coping in the form of relaxation, companionship,

outdoor leisure and cultural activities aided in the well-being and psychological health of police officers (Iwasaki, Mannell, Smale, & Butcher, 2002).

Some of the emotion-focused coping responses also proved to relieve the stress of police officers. Support from supervisors reduced the levels of stress (Morash et al., 2008) and seeking social support buffered the effects of stress on police officers (de Jager, 2002; Patterson, 2003; Violanti, 1993). The use of emotional support reduced the levels of exhaustion in police officers in the SAPS (Nortje, 2003), predicted work engagement (Rothmann et al., 2011) and also moderated the effect of stress on professional efficacy (Klopper, 2003). Turning to religion and seeking social support as coping styles also had a buffering effect on suicide ideation (Pienaar et al., 2007; Van der Merwe et al., 2004) and can be seen to relieve stress (He, Zhao, & Archbold, 2002). According to Folkman and Moskowitz (2000), positive reappraisal is seen as an adaptive coping response although it can be maladaptive in certain situations.

### **Maladaptive coping in the police environment**

It is evident that police officers also use dysfunctional coping mechanism as they commonly abuse substances like alcohol in an attempt to self-medicate. These dysfunctional coping habits are often associated with poor performance, emotional distress, domestic violence, and ultimately suicide (Haisch & Meyers, 2004; Sundaram & Kumaran, 2012; Waters & Ussery, 2007). As expected it has been proven that these maladaptive strategies are not effective in lightening the burden of stress of police officers and even add to the stress experienced by police officers (Haisch & Meyers, 2004).

The emotion-focused coping classification identified by (Lazarus & Folkman, 1984) is often seen as a maladaptive coping response. In general, coping methods such as distancing and confrontive coping are associated with less adaptive coping as they can result in individuals becoming even more distressed (Lazarus, 1993). Hart et al. (1995) found that the use of emotion-coping strategies caused greater police hassles and in effect led to greater levels of psychological stress. In the police literature two of coping mechanisms, namely distancing and avoidance, have particularly strong maladaptive potential (Violanti, 1993).

In relation to the maladaptive outcome of avoidance, Burke (1998) found that officers who relied strongly on escapist coping had greater psychosomatic symptoms and work-family conflict. Violanti (1993) found that within the police academy escape-avoidance can potentially lead to conflict and is least effective in relieving stress (Violanti, 1992). It was further confirmed that officers who used avoidance coping had high levels of cynicism and exhaustion combined with lower feelings of accomplishment and professional efficacy (Klopper, 2003; Myendeki, 2008; Nortje, 2003; Wiese et al., 2003) and more experiences of distress (Aaron, 2000) and PTSD (LeBlanc et al., 2008; Ménard & Arter, 2013). It was further found that avoidant coping can lead to the cultivation of suicide ideation (Pienaar et al., 2007) and burnout (Naudé, 2003). Moller (2008) found that escape avoidance correlated strongly with various psychological forms of distress such as anxiety, paranoia and depression.

As noted earlier, the effectiveness of certain coping strategies is highly dependent on the situation (Folkman & Lazarus, 1986; Lazarus, 1993). In the policing literature it was found that some strategies were adaptive in one situation but maladaptive in other situations. For example, ‘task strategies’ (which are similar to problem-focused coping strategies) were unexpectedly found to be unsuitable to adequately address stress on a management level (Kirkcaldy et al., 1995) and it was also found that problem-focused strategies can be counterproductive if individuals hastily make decisions (Baker & Berenbaum, 2007). Other coping strategies like confrontive coping, accepting responsibility (Violanti, 1993) and distancing have also proven to be both adaptive and maladaptive in different situations (Violanti, 1992). Violanti argued that distancing as a coping style allowed the police recruits to distance themselves on an emotional and psychological level, although they could not escape physically. The study conducted by Myendeki (2008) also found that avoidance can act as a buffer to burnout. These studies emphasise the importance of considering the environment in which the stressor and coping occur.

### **Prominence of Coping Styles amongst Police Officers**

An individual applies a specific coping response partly because of his knowledge of coping options, and partly due to his beliefs about the usefulness of those options (Louw & Viviers, 2010). Folkman (2011b) highlighted previous research that suggests that people vary in the

duration and ordering of coping methods across different stressful encounters. In the following section the international literature concerning coping methods and the general trends of police coping is discussed.

### **Coping strategies used most**

In the SAPS it was found that problem-focused coping (Pienaar & Rothmann, 2003a), and specifically confrontive coping, was mostly used to deal with stress and trauma (Cronqvist et al., 1997; Gumani et al., 2013). Sundaram and Kumaran (2012) also found that active coping, a form of problem-focused coping, was used most amongst the police constables. It was also established that accepting responsibility and planful problem solving were predominantly used by officers (Moller, 2008; Richter, Lauritz, du Preez, Cassimjee, & Ghazinour, 2013; Violanti, 1993). Self-control was also found to be a strategy frequently used by police officers (Moller, 2008; Soraya, 2013; Violanti, 1993). It was lastly found that police officers in Singapore were more inclined to use adaptive coping strategies consisting of positive reinterpretation, growth and acceptance, as well as instrumental social support and planning (Bishop et al., 2001).

Amongst the emotion-focused coping strategies, situational tolerance, sense of responsibility, reappraisal and seeking social support were used most as coping mechanism by Swedish and South African police officers (Gumani et al., 2013; Moller, 2008; Richter et al., 2013). Various studies have also indicated that many officers make use of avoidance coping strategies (Myendeki, 2008; Violanti, 1993), especially when the situation is unique (de Wet, 2004).

### **Coping strategies used least**

The coping strategies that were found in the literature to be used least include the maladaptive strategies of behavioural and mental disengagement, denial, avoidance strategies including focusing on emotions, venting of emotions and escape avoidance and distancing (Bishop et al., 2001; Gumani et al., 2013; Richter et al., 2013). Larsson, Kempe and Starrin, (1988) found that emotion-focused strategies like escape avoidance, seeking social support, self-blame and tension reduction were virtually never used in nerve racking situations. The adaptive coping strategy, accepting responsibility (Gumani et al., 2013; Moller, 2008; Richter

et al., 2013; Soraya, 2013) and confrontive coping (Moller, 2008) were also found to be used least by police officers.

### **Changes in coping strategies**

There is evidence that the manner in which individuals perceive and deal with stressful encounters change over time. Changes in the manner in which people cope are often theorised as occurring in stages. It has been found that some coping tactics are more consistent over a period of time than others. In general seeking social support seems to be inconsistent and more prone to change over a period of time while the coping strategy of positive reappraisal is moderately consistent (Lazarus, 1993).

Very little research has been conducted on the changing coping methods of police officers. The limited body of research that does exist has established a few preliminary findings. Laguna et al. (2009) established that police officers with more experience have significantly greater hysterical reactions when dealing with stressful occasions than inexperienced officers. Laguna et al. argued that this could be because new officers may feel bold, brave and well-equipped to deal with a situation; while more experienced officers might be conscious of their limitations and the difficulties of the situation. Laguna et al. further argued that traumatic memories may be aroused when experienced police officers are exposed to repeated traumatic and stressful events and therefore these officers will tend to react less calmly. Waters and Ussery (2007) found that a police officer's level of resilience decreases with the length of service.

In a study performed in the SAPS, it was found that over a period of six months self-controlling coping decreased and accepting responsibility coping increased in police officers (Soraya, 2013). Soraya compared the studies conducted by Lennings (1997) and Pienaar and Rothmann (2003) and argued that the coping strategies of police officers changed from emotion-focused strategies observed in the study conducted by Lennings to more problem-focused coping displayed in the study conducted by Pienaar and Rothmann. Pienaar and Rothmann argued that the reason for the change to more problem-focused strategies might be that emotions are not typically acceptable in the police environment. Larsson et al. (1988) found that older police officers appraise situations differently to younger police officers.

They argued that older police officers have more experience and have the ability to distance themselves from the situation. Similarly, Moller (2008) found that older police officers made more use of planful problem solving, distancing and escape avoidance.

## **RESEARCH QUESTIONS**

Based on the literature reviewed above, this study is guided by four research questions. The objective is to answer the following specific questions by the end of the study.

- What coping responses are mostly used by police officers when experiencing stress?
- What coping responses are least used by police officers when experiencing stress?
- Do police officers predominantly use adaptive or maladaptive strategies to cope with stress?
- How do coping responses change over time?

## **METHOD**

### **Research design**

The study has a longitudinal design. This design gives the researcher the opportunity to monitor the development of the group over a period of time (Maree, 2010). Additionally individual differences can be analysed to determine how the constructs change over time (Begt & Curran, 1997). The quantitative data was collected by means of survey research, which holds the benefit that a large sample group can be assessed at little cost and the findings can be generalised to a larger population if the sample is representative (Mouton, 2001). The decision was taken to use a longitudinal approach in the investigation of coping as this approach allowed for the investigation of the process approach to coping and individuals could therefore be analysed in different stressful situations (de Wet, 2004; Lazarus, 1993; Morash & Jeong, 2011).

### **Participants**

The sample for this study is derived from the sample used in a study performed by the University of Pretoria, South Africa and the University of Umeå, Sweden and the data was collected on three separate occasions. Secondary data was used in order to extend previous



research performed on the sample. The first part of the sample was collected in 2006 and consisted of 1280 police recruits (774 men and 503 women) who were all enrolled as police trainees. They all formed part of a population of 28 000 police candidates who were selected nationally out of 70 000 applicants (Du Preez, Cassimjee, Ghazinour, Lauritz, & Richter, 2009). The second part of the sample was collected in 2007 when the same recruits were undergoing practical training in the police college and consisted of 463 police trainees. The last sample was collected between 2008 and 2010 and consisted of 120 police officers. This data was collected once the police officers had spent two years in the field at various police stations in South Africa.

**Table 1: Characteristics of the participants during Time 3 (n = 120)**

<b>Item</b>	<b>Category</b>	<b>Frequency</b>	<b>Percentage</b>
Gender	Male	50	42%
	Female	71	59%
Race	Black	117	97.5%
	White & Indian	3	2.5%
Reading frequency	most of the time	0	0%
	some of the time	12	10%
	seldom	8	7%
	never	99	83%
Qualification	lower than gr 12	4	3%
	Gr12	83	69%
	Gr 12 with exemption	8	7%
	1-2 years diploma	14	12%
	3 years diploma	9	8%
	Post graduate degree or higher	2	2%
Language	English	1	1%
	Afrikaans	1	1%
	Xhosa	8	7%
	Zulu	9	8%
	Sesotho	4	3%
	Setswana	27	23%
	Swati	1	1%
	Tsonga	21	18%
	Venda	25	21%
	Ndebele	1	1%
	Sepedi	22	18%
<b>Total</b>		<b>120</b>	<b>100%</b>

Table 1 indicates the demographics of the sample group during the time they were working in the field (Time 3). It should be noted that the racial distribution of this sample is predominantly black (97.2%) and only a small number of individuals are white and Indian. This distribution is mainly due to Affirmative Action policies that require that the SAPS must reflect the country's racial demographics. The largest language representation is Setswana with 23%, followed by Venda (21%) and Sepedi and Tsonga (18%) while the lowest representations are Afrikaans, English, Ndebele and Swati (1%). There are slightly more females than males in the sample. Most of the participants have a qualification of grade 12 without exemption and most of the participants stated that they never read.

### **Measuring instruments**

Only one instrument (The Ways of Coping questionnaire) of the six instruments administered in the primary study was analysed in this study. This instrument will be briefly discussed below.

The Ways of Coping (WoC) questionnaire is primarily a broad way of determining how an individual will cope with difficult situations (Skinner, Edge, Altman, & Sherwood, 2003). This instrument assesses the thoughts and actions of individuals that assist them in coping with their everyday life. The questionnaire contains 66 items which are answered on a 4-point Likert scale ranging from 1 (does not apply and/or not used) to 4 (used a great deal) (Folkman & Lazarus, 1988). It consists of eight coping scales, namely confrontive coping ( $\alpha = 0.70$ ), distancing ( $\alpha = 0.61$ ), self-controlling ( $\alpha = 0.70$ ), seeking social support ( $\alpha = 0.76$ ), accepting responsibility ( $\alpha = 0.66$ ), escape-avoidance ( $\alpha = 0.72$ ), planful problem-solving ( $\alpha = 0.68$ ) and positive reappraisal ( $\alpha = 0.79$ ) (Folkman & Lazarus, 1988; Hays, All, Mannahan, Cuaderes, & Wallace, 2006). The internal consistencies of this instrument are higher than most other measures of coping processes. The Ways of Coping questionnaire is further seen as a valid measure of coping since all of the constructs relate to ways of dealing with difficult situations. Further evidence of the validity is that the results of this instrument correlate with the theory that, firstly, coping methods consist of emotion-focused and problem-focused styles and that, secondly, coping is a process that evolves over time (Folkman & Lazarus, 1988).

## **Procedure**

This study was based on a study performed by the University of Pretoria and the University of Umeå, Sweden which was concerned with psychological health among police trainees in South Africa and Sweden. The data was collected from the same sample at three points in time. The participants were sampled by means of convenience sampling and the data was collected with surveys that the participants completed voluntarily. The first set of data was collected in July 2006 when newly enrolled students at the Police College in Pretoria were assessed by means of a test battery. A second data collection followed at the end of their theoretical training in December 2006 and a third data collection was performed in 2009 after these officers had worked in the field. Informed consent was obtained from all the participants. The study has also received ethical clearance from the Research Ethics Committee of the University of Pretoria and has been approved by the Office of Strategic Research, SAPS.

## **Data preparation**

Before any analyses were conducted, the data sheet was investigated in order to check for typos and outliers. It was firstly inspected to determine whether all the responses were in the range of the scale, by examining the minimum and maximum values. Responses that fell beyond the range of the scale were deleted. Missing values were further inspected and an arbitrary criterion of 10% was set and respondents who left 10% or more of the items incomplete were removed entirely from the data set. Responses that were randomly left open were excluded pairwise. This option only excludes the items that were missing while it uses the respondent's remaining data (Pallant, 2007). The skewness and kurtosis of the data was lastly analysed to identify variables that proved to be unsuitable for factor analysis. Based on the indicators of skewness  $> 2$  and kurtosis  $> 4$ , two items (Item 60: "I prayed", and Item 33: "Tried to make myself feel better by eating, drinking, smoking, using drugs or medication etc.") were entirely removed since they proved to be extremely skewed across all three periods. See Appendix A for a detailed distribution of the responses on the Ways of Coping inventory over the three periods.

## Statistical analysis

SPSS version 23 (IBM SPSS Inc., 2014) was used to analyse the data. Firstly, exploratory factor analysis was performed in order to confirm the stability of factor structures of the eight coping responses over the three time periods as determined by Folkman and Lazarus (1988). The aim of the factor analysis was to determine the factor structure that stayed constant over the three time periods in order to compare the coping responses over time (Bijleveld & Kamp, 1998). Firstly, the Kaiser-Guttman rule of thumb and the scree plots were inspected and only factors with values of 1 or larger were retained (Hays et al., 2006). Maximum Likelihood was used as estimator and the data was rotated by means of Promax rotations. The pattern matrices were analysed to check for salient factor loadings of items on dimensions.

The second step was to determine which of the coping styles were used most and which methods were used least during the three time periods. The mean values of the coping styles were analysed for each time period independently. The averages of the mean values over the three time periods were used to determine the prominence of each coping style. Coping responses with the highest mean values were seen as preferred above other coping responses, while low mean values were an indication that the coping response was less preferred.

The third step in the analysis involved determining whether the coping responses changed over time. Two statistical procedures were used to answer this question. Firstly, the Friedman test, a non-parametric one-way repeated measure of variance was conducted to determine whether there are differences in the coping responses over the three time periods (Pallant, 2007). The results were interpreted by analysing the test statistics, degrees of freedom and the significance on a 95% confidence interval. Secondly, a post-hoc test, the Wilcoxon signed-rank test, was administered to indicate when the significant differences occurred. The coping constructs in the first time period (Time 1), which is seen as the baseline, were compared to the constructs of the second time period (Time 2) in order to determine whether there was an immediate effect of change on the construct. Thereafter the coping constructs of the first time period (Time 1) were compared with the constructs in the third time period (Time 3). If the change in coping occurred between the second and third time period, it implies that the change had a long term effect on the coping method. When interpreting the results, a Z score of  $Z > 1.96$  and a significance level of  $p < 0.025$  were used to indicate whether a significant

change occurred. Since two time periods were compared (Time 1 vs Time 2 and Time 1 vs Time 3), a Bonferroni correction was applied and in effect a significance level of 0.025 were used (Field, 2009). Effect sizes were used to indicate the practical significance of the findings and the extent to which the findings are worthy of attention (Preacher & Kelley, 2011). An effect size of 0.1 is seen as a small effect, 0.3 as a medium effect and 0.5 as a large effect (Cohen, 2013).

## RESULTS

The results section gives an outline of the analyses conducted by means of SPSS Version 23 (IBM SPSS Inc., 2014) and is reported in accordance with the various statistical techniques used.

The aim of the factor analysis was to determine the factor structure that remained constant over the three time periods. Construct validity is an important yet insufficient prerequisite for looking at factor means over time. (Bijleveld & Kamp, 1998) The KMO and the Bartlett's Test of Sphericity were used to determine whether the data was suitable for factor analysis. The values of the KMO ( $> 0.5$ ) and Bartlett's Test of Sphericity were significant ( $p < 0.05$ ), indicating that the data was acceptable for factor analysis (Tabachnick & Fidell, 2001). Exploratory factor analysis was performed with Maximum Likelihood as estimation and Promax as rotation method.

The factors were analysed qualitatively in order to determine the interpretability of the items and to confirm that the items in the factors share common theoretical characteristics. Following the first round of exploratory factor analysis some of the factor structures did not remain constant over the three time periods. Seven of the items had low loadings on the latent factors and caused the factor structures to be inconsistent over the three periods. As it was necessary to have similar factor structures across time in order to compare the time periods these items were subsequently removed in order to obtain consistent factor structures over time. Table 2 contains the items that were removed during the factor analysis.

**Table 2 : Items removed during factor analysis**

Factors	Items	Responses
Confrontive coping	Item 17	I expressed anger to the person(s) who caused the problem.
	Item 34	Took a big chance or did something very risky.
Seeking social support	Item 31	Talked to someone who could do something concrete about the problem.
Escape avoidance	Item 58	Wished that the situation would go away or somehow be over with.
	Item 16	Slept more than usual.

After the problematic items were removed, all the factors resulted in unidimensional constructs. Two of the factors, namely distancing and self-controlling, did not yield constant factor structures over the three time periods even though various combination of items were removed. These two factors were excluded for the remainder of the study.

**Table 3: Factor matrices of the Ways of Coping constructs**

	Time 1		Time 2		Time 3	
	Item	Factor 1	Item	Factor 1	Item	Factor 1
Accepting responsibility	E25-I apologized or did something to make up.	<b>0.74</b>	E25-I apologized or did something to make up.	<b>0.72</b>	E25-I apologized or did something to make up.	<b>0.61</b>
	E51I made a promise to myself that things would be different next time.	<b>0.46</b>	E51I made a promise to myself that things would be different next time.	<b>0.48</b>	E51I made a promise to myself that things would be different next time.	<b>0.43</b>
	E29-Realized I brought the problem on myself.	<b>0.32</b>	E29-Realized I brought the problem on myself.	<b>0.44</b>	E29-Realized I brought the problem on myself.	<b>0.36</b>
	E9-Criticized or lectured myself.		E9-Criticized or lectured myself.	<b>0.37</b>	E9-Criticized or lectured myself.	<b>0.35</b>
	Extraction Method: Maximum Likelihood. a. 1 factors extracted. 5 iterations required.		Extraction Method: Maximum Likelihood. a. 1 factors extracted. 5 iterations required.		Extraction Method: Maximum Likelihood. a. 1 factors extracted. 5 iterations required.	
Confrontive coping	E6-I did something which I didn't think would work, but at least I was doing something.	<b>0.52</b>	E7-Tried to get the person responsible to change his or her mind.	<b>0.65</b>	E7-Tried to get the person responsible to change his or her mind.	<b>0.61</b>
	E7-Tried to get the person responsible to change his or her mind.	<b>0.51</b>	E6-I did something which I didn't think would work, but at least I was doing something.	<b>0.47</b>	E46Stood my ground and fought for what I wanted.	<b>0.48</b>
	E28-I let my feelings out somehow.	<b>0.45</b>	E46Stood my ground and fought for what I wanted.	<b>0.39</b>	E6-I did something which I didn't think would work, but at least I was doing something.	<b>0.48</b>
	E46Stood my ground and fought for what I wanted.		E28-I let my feelings out somehow.		E28-I let my feelings out somehow.	<b>0.34</b>
	Extraction Method: Maximum Likelihood. a. 1 factors extracted. 3 iterations required.		Extraction Method: Maximum Likelihood. a. 1 factors extracted. 4 iterations required.		Extraction Method: Maximum Likelihood. a. 1 factors extracted. 4 iterations required.	
Planful problem-solving	E26-I made a plan of action and followed it.	<b>0.68</b>	E52Came up with a couple of different solutions to the problem.	<b>0.69</b>	E52Came up with a couple of different solutions to the problem.	<b>0.76</b>
	E52Came up with a couple of different solutions to the problem.	<b>0.65</b>	E49I knew what had to be done, so I doubled my efforts to make things work.	<b>0.63</b>	E26-I made a plan of action and followed it.	<b>0.72</b>
	E39 Changed something so things would turn out all right.	<b>0.57</b>	E26-I made a plan of action and followed it.	<b>0.58</b>	E1-Just concentrated on what I had to do next – the next step.	<b>0.71</b>
	E49I knew what had to be done, so I doubled my efforts to make things work.	<b>0.53</b>	E39 Changed something so things would turn out all right.	<b>0.48</b>	E49I knew what had to be done, so I doubled my efforts to make things work.	<b>0.59</b>
	E1-Just concentrated on what I had to do next – the next step.	<b>0.51</b>	E48Drew on my past experiences; I was in a similar situation before.	<b>0.38</b>	E39 Changed something so things would turn out all right.	<b>0.52</b>
	E48Drew on my past experiences; I was in a similar situation before.	<b>0.37</b>	E1-Just concentrated on what I had to do next – the next step.	<b>0.35</b>	E48Drew on my past experiences; I was in a similar situation before.	<b>0.32</b>
	Extraction Method: Maximum Likelihood. a. 1 factors extracted. 3 iterations required.		Extraction Method: Maximum Likelihood. a. 1 factors extracted. 3 iterations required.		Extraction Method: Maximum Likelihood. a. 1 factors extracted. 4 iterations required.	

	Item	Factor 1	Item	Factor 1	Item	Factor 1
Escape Avoidance	E40 Avoided being with people in general.	<b>0.56</b>	E40 Avoided being with people in general.	<b>0.61</b>	E50Refused to believe that it had happened.	<b>0.75</b>
	E50Refused to believe that it had happened.	<b>0.53</b>	E50Refused to believe that it had happened.	<b>0.6</b>	E47Took it out on other people.	<b>0.54</b>
	E47Took it out on other people.	<b>0.43</b>	E47Took it out on other people.	<b>0.44</b>	E16-Slept more than usual.	<b>0.47</b>
	E16-Slept more than usual.	<b>0.38</b>	E16-Slept more than usual.	<b>0.38</b>	E40 Avoided being with people in general.	<b>0.44</b>
	E11-Hoped a miracle would happen.	<b>0.33</b>	E11-Hoped a miracle would happen.	<b>0.32</b>	E11-Hoped a miracle would happen.	<b>0.31</b>
	Extraction Method: Maximum Likelihood. a. 1 factors extracted. 3 iterations required.			Extraction Method: Maximum Likelihood. a. 1 factors extracted. 4 iterations required.		Extraction Method: Maximum Likelihood. a. 1 factors extracted. 4 iterations required.
Positive reappraisal	E23-Changed or grew as a person in a good way.	<b>0.61</b>	E36Found new faith.	<b>0.63</b>	E20-I was inspired to do something creative.	<b>0.81</b>
	E38Rediscovered what is important in life.	<b>0.61</b>	E23-Changed or grew as a person in a good way.	<b>0.62</b>	E23-Changed or grew as a person in a good way.	<b>0.71</b>
	E36Found new faith.	<b>0.6</b>	E38Rediscovered what is important in life.	<b>0.62</b>	E38Rediscovered what is important in life.	<b>0.61</b>
	E20-I was inspired to do something creative.	<b>0.6</b>	E30-I came out of the experience better than when I went in.	<b>0.55</b>	E36Found new faith.	<b>0.48</b>
	E30-I came out of the experience better than when I went in.	<b>0.5</b>	E20-I was inspired to do something creative.	<b>0.52</b>	E30-I came out of the experience better than when I went in.	<b>0.46</b>
	E56I changed something about myself.	<b>0.38</b>	E56I changed something about myself.	<b>0.46</b>	E56I changed something about myself.	<b>0.38</b>
Extraction Method: Maximum Likelihood. a. 1 factors extracted. 3 iterations required.			Extraction Method: Maximum Likelihood. a. 1 factors extracted. 3 iterations required.		Extraction Method: Maximum Likelihood. a. 1 factors extracted. 4 iterations required.	
Seeking social support	E45Talked to someone about how I was feeling.	<b>0.71</b>	E45Talked to someone about how I was feeling.	<b>0.71</b>	E42I asked a relative or friend I respected for advice.	<b>0.66</b>
	E42I asked a relative or friend I respected for advice.	<b>0.67</b>	E42I asked a relative or friend I respected for advice.	<b>0.6</b>	E22-I got professional help.	<b>0.59</b>
	E18-Accepted sympathy and understanding from someone.	<b>0.55</b>	E18-Accepted sympathy and understanding from someone.	<b>0.58</b>	E45Talked to someone about how I was feeling.	<b>0.57</b>
	E8-Talked to someone to find out more about the situation.	<b>0.54</b>	E8-Talked to someone to find out more about the situation.	<b>0.52</b>	E8-Talked to someone to find out more about the situation.	<b>0.49</b>
	E22-I got professional help.	<b>0.42</b>	E22-I got professional help.	<b>0.44</b>	E18-Accepted sympathy and understanding from someone.	<b>0.44</b>
	Extraction Method: Principal Axis Factoring. a. 1 factors extracted. 7 iterations required.			Extraction Method: Principal Axis Factoring. a. 1 factors extracted. 8 iterations required.		Extraction Method: Principal Axis Factoring. a. 1 factors extracted. 7 iterations required.



The next step was to determine which of the coping responses are used most and least. Table 4 indicates the coping responses in order of popularity. When looking at the average use of the coping style, the results indicate that the responses used most frequently were seeking social support, planful problem solving and positive reappraisal, while the coping styles used least were escape avoidance, followed by accepting responsibility and confrontive coping.

**Table 4: Usage of coping methods from most to least**

Coping response	T1	T2	T3	Average
Seeking social support	3.23	3.24	2.99	3.15
Planful problem solving	3.16	3.15	2.97	3.09
Positive reappraisal	3.16	3.15	2.97	3.09
Confrontive coping	2.85	2.79	2.57	2.74
Accepting responsibility	2.64	2.58	2.29	2.50
Escape avoidance	2.05	2.08	2.23	2.12

In order to investigate the manner in which the coping responses change over time, the Friedman test followed by the Wilcoxon signed ranks post hoc test were conducted. The outcomes of these tests are displayed in Table 5 and 6.

**Table 5: Friedman tests statistics**

Coping response	Chi-Square	Df	Asymp. Sig.
Accepting responsibility	13.102	2	0.001***
Confrontive coping	12.053	2	0.002***
Planful problem solving	7.679	2	0.022***
Positive reappraisal	6.055	2	0.048***
Escape avoidance	4.195	2	0.123
Seeking social support	1.903	2	0.386

\*\*\*  $p < 0.05$  statistically significant

**Table 6: Test statistics from the Wilcoxon signed ranks**

	Time 1 - Time 2			Time1 – Time 3		
	Z	p-value	r	Z	p-value	r
Accepting responsibility	-1.785	0.074	-0.04	-2.948	.003***	-0.08
Confrontive coping	-2.478	0.013***	-0.06	-3.323	.001***	-0.09
Planful problem solving	-1.081	0.28	-0.03	-2.197	.028	-0.06
Positive reappraisal	-1.797	0.072	-0.04	-2.53	.011***	-0.07
Seeking social support	-0.399	0.69	-0.01	-2.099	0.036	-0.06
Escape avoidance	-0.12	0.904	0	-1.769	0.077	-0.05

\*\*\*  $p < 0.025$  statistically significant

Based on the results of the Friedman test (Table 5) it is evident that the coping preferences of the police officers did in fact change as the years passed. Firstly, the Friedman test was administered to determine whether a significant change occurred over time. This was followed by the Wilcoxon post hoc test to establish when the change occurred. The Friedman test indicated significant differences in four of the coping styles over time.

The results of the Friedman test (Table 5) indicate that there is a significant difference in accepting responsibility as a coping mechanism ( $\chi^2 = 13.1, p < .05$ ), as the results indicate that they accepted less responsibility. From the Wilcoxon analysis (Table 6) it can be observed that there was a significant decline in accepting responsibility during the six months they were enrolled at the police college ( $Z = -1.785, p = 0.074$ ). There was also a further decline in accepting responsibility during the time the participants were working in the field ( $Z = -2.948, p = 0.003$ ).

When looking at confrontive coping, the Friedman test (Table 5) indicates that there was a significant difference in the use of confrontive coping from the time they started at the police college to the time they had been working in the field for two years ( $\chi^2 = 12.05, p < .05$ ). The Wilcoxon signed ranks test (Table 6) confirmed the results and indicated that police officers used less confrontive coping during the time spent in the police college ( $Z = 2.948, p = 0.013$ ) and there was an even larger decline in the use of this method during the time they were working in the field ( $Z = -3.323, p = 0.01$ ).

Lastly, there was a significant difference in the usage of positive reappraisal over the three time periods ( $\chi^2 = 6.06, p < 0.5$ ). The Wilcoxon results indicated that there was a significant decline in the use of positive reappraisal during the theoretical training of the officers ( $Z = -1.797, p = 0.027$ ) as well as during the period they spent working actively in the field ( $Z = -2.53, p = 0.11$ ).

Although the Friedman test (Table 5) indicated that there was a statistically significant difference in the use of planful problem solving ( $\chi^2 = p < 0.5$ ), the Wilcoxon signed ranks test (Table 6) indicated that, with the Bonferroni correction applied, the difference was not significant. The Wilcoxon test indicated that there were non-significant increases in the use of planful problem solving during the first time period, but the use of planful problem solving

declined when the officers were fully functional in the field ( $Z = -2.197, p = 0.028$ ). It is further interesting to note that, although not statistically significant, seeking social support first increased while the officers were enrolled in the training academy and thereafter sharply decreased when the officers entered the field. It was lastly found that the use of escape avoidance gradually increased non-significantly over the years.

The practical significance of the findings is measured by using Cohen's  $d$ . Based on Cohen's guidelines (Cohen, 2013), the results obtained indicated that the results for accepting responsibility ( $r = -0.08$ ), confrontive coping ( $r = -0.09$ ), planful problem-solving ( $r = -0.06$ ) and positive reappraisal ( $r = -0.07$ ) had very small effects. This indicates that the practical significance of the changes over a time period is very small.

## DISCUSSION

The overall purpose of this study was to investigate the coping responses of police officers and to determine how these responses change over a period of time spent in the police services. The first two research questions investigated the coping response used most and least by police officers. The third research question focused on exploring whether the coping responses were adaptive or maladaptive and the final research question focused on the changing nature of the coping responses.

The first research objective was to investigate which of the coping responses were most frequently used by police officers when they experience tension. The findings indicate that seeking social support, planful problem solving and positive reappraisal were used most often. The predominant use of seeking social support confirms previous research, as Gumani et al. (2013) and Richter et al. (2013) found that this is a coping style frequently used by police officers. Previous studies have also found that police officers frequently use planful problem solving (Moller, 2008; Richter et al., 2013; Violanti, 1993) and positive reappraisal (Bishop et al., 2001; Richter et al., 2013; Violanti, 1993) as coping responses. Violanti suggested that the use of positive reappraisal amongst police officers, specifically in the training academy, might be due to their newly acquired abilities to solve problems and that they additionally might perceive that they have matured in the way they handle difficult situations. The predominant use of planful problem solving followed by positive reappraisal

confirms the findings of Moller (2008), who conducted a study using South African police officers.

The second aim of the study was to investigate the coping responses that are used less frequently by police officers when experiencing stress. The results indicate that the methods used least by officers in this study were escape avoidance, followed by accepting responsibility and confrontive coping. The low use of avoidance is supported by the studies conducted by Larsson et al. (1988), Moller (2008), Richter et al. (2013) and Bishop et al. (2001). The studies by Richter et al. and Bishop et al. specifically found that avoiding mechanisms such as focusing on and venting of emotions were infrequently used. This might be due to the weight of responsibility involved in the nature of a police officer's job and a feeling that it is not possible to avoid the reality. Conversely, previous studies have found that police officers frequently use avoidance coping during times of stress (de Wet, 2004; Myendeki, 2008; Violanti, 1993).

The low use of accepting responsibility found in this study confirms previous research findings that have also reported that accepting responsibility is a response infrequently used by police officers (Richter et al., 2013; Violanti, 1993). In contrast, Gumani et al. (2013) found that a sense of responsibility, which refers to a sense of duty and accountability towards others, was commonly found among the officers in their study. The relative low use of confrontive coping is in contrast with previous research as Cronqvist et al. (1997) and Gumani et al. (2013) found that confrontive coping was a coping method frequently used by police officers

The third objective was to determine whether the strategies used by officers are mainly adaptive or maladaptive. As noted the coping responses predominantly used in this study are seeking social support, planful problem solving and positive reappraisal. Seeking social support is seen as a positive way of dealing with stressful situations. In the literature, it has been found that seeking social support alleviates stress, buffers against suicide ideation and predicted work engagement (de Jager, 2002; He et al., 2002; Klopper, 2003; Morash et al., 2008; Nortje, 2003; Patterson, 2003; Pienaar et al., 2007; Rothmann et al., 2011; Van der Merwe et al., 2004; Violanti, 1993). In the literature, planful problem solving and positive reappraisal are mostly seen as positive ways of dealing with difficult situations (Folkman et al., 1986). Positive reappraisal allows an individual to alter negative emotions to become less

negative (Lazarus, 1993; Violanti, 1993) while planful problem solving specifically significantly reduced stress amongst officers (Wiese et al., 2003). It can therefore be argued that the overall coping responses that police officers predominantly used in this study can be seen to be adaptive.

The final purpose of this study was to investigate how the coping responses change over time. From the results of this study, it is evident that some of the coping strategies that police officers use do in fact change over the time spent in police service. In some of the responses an immediate effect occurs as the response changes over a short period of time. In other instances the effect of the change in preferential coping style can only be seen over a longer period of time. The results firstly indicate that there was a long term effect on accepting responsibility as a coping style. The police officers accepted significantly less responsibility during the time they were working fulltime in the field. This might be because officers are more senior by the time they enter the field and can more easily avoid responsibility, while younger officers still need to prove themselves and cannot escape responsibility as easily. This is in contrast to the findings of Soraya (2013), which indicated that police officers accept more responsibility during the time spent in the training college.

There was secondly an immediate and a long term effect in the confrontive coping used by police officers over the three time periods. This can be seen in the significant decline in confrontive coping during the time in the training college and the greater decline when the police officers were working in the field. In the third place, the extent to which police officers used planful problem solving as a coping method also decreased over the years. There was a longitudinal effect on planful problem solving as can be seen in the significant decline while the officers were working in the field. This is the only construct that showed a significant difference in the short term as well as in the long term. This might be because being exposed to the nature of police work wears officers down and makes them feel less motivated to confront their problems as it is much easier to ignore these problems by escaping reality. This can also be seen in the increase in avoidance.

There was a longitudinal effect on positive reappraisal as there was a significant decline in the use of positive reappraisal as a coping method during the last time period. It can be argued that police officers adapt after they have spent a few years in the police service and

eventually do not seek to view things in a positive light during times of stress. The researcher is of the opinion that this adaption in terms of viewing things less optimistically as time passes can have a significant effect on police officers' emotions and psychological well-being.

Although not significant, there was a change in the three other coping methods over time. There was firstly an increase in seeking social support during the time police officers were enrolled in the training academy but seeking social support declined as soon as they entered the field. That implies that the officers made more use of social support while they were in the training academy than before they entered the academy and that their use of social support then declined again while working in the field. This might be due to the fact that whilst in the training academy they are all centralised and surrounded by support, whereas they might feel isolated in the field.

There was lastly a non-significant increase in the use of escape avoidance when the officers joined the training academy and an even greater increase when they were working in the field. From the results it is evident that police officers attempt to escape their reality in order to deal with the anxieties they experience. Violanti (1992) argued that the police environment includes strict control and the use of avoidance may therefore increase within the police academy. In contrast with this finding, Pienaar and Rothmann (2003) and Moller (2008) found that senior police officers made less use of escape avoidance in comparison to younger police officers. This finding implies that the extent to which police officers rely on avoidance decreases with time. Pienaar and Rothmann argued that this difference might be due to the different types of jobs senior superintendents perform as opposed to the jobs performed by sergeants and that senior officers cannot as easily avoid their responsibilities. It is thus not clear what effect time has on the use of avoidance by police officers.

The practical significance of the changing nature of the coping styles indicates a small effect according to Cohen's *d* (Cohen, 2013). This is mainly due to the small sample used during the third period.

It is thus evident from the study that time spent in the police service does influence the way in which police officers cope with stressful situations and police officers adapt the way in which

they confront difficult situations as time passes. It is clear that as the time spent in the SAPS increases, officers accept less responsibility, confront their problems to a lesser degree, and view their situations as less positive. They also rely more on planful problem-solving, escape avoidance and seeking social support. This might be because senior officers can more easily get away with not taking responsibility and they have become cynical over the years and thus view things in a less positive way. Although this study found that police officers change the way they deal with difficult situations as the years pass, another study found that the age of the police officers was not correlated to the type of coping method utilised (Ortega, Brenner, & Leather, 2007). The fact that this study has a longitudinal design offered the benefit that the change in the preferences of coping styles of officers could be monitored over time (Bijleveld & Kamp, 1998). With the use of a single sample this would not have been possible.

## **LIMITATIONS**

A drawback of longitudinal designs is that the sample size decreases after every sampling. The third sample of this study was relatively small in comparison to the first two samples. The sample was further homogenous to an extent in terms of the demographics. Another limitation of this study might be that the instrument used is a retrospective measure and would not give as accurate data as a measure of momentary account. Further, the data obtained in this study relies on self-report and it might not be entirely accurately since it depends on individuals' memories. The participants also might have opted to show themselves in a better light while answering the questionnaire. Social desirability is particularly relevant to police officers because they are in the public's eye and constantly exposed to criticisms (Larsson et al., 1988).

## **RECOMMENDATIONS**

### **Recommendations for future research**

It is clear that coping responses can have different outcomes in different situations and it is therefore recommended that further research be conducted concerning the effects that the

various coping responses have on the well-being of police officers. Further studies can also include factors of personality as personality does influence coping. Research in this regard will aid in the selection process of the SAPS as it will highlight aspects of personality that will assist with better coping capabilities. It is suggested that a larger sample be used throughout in order to improve the statistical significance of the findings.

### **Recommendations for the sectors**

It is clear that police officers use adaptive coping responses as well as maladaptive coping responses to deal with their day-to-day strains. It is important to understand that the context in which coping occurs is very important and that some methods might be beneficial in one situation, while they may be harmful in another. It is recommended that new police recruits receive even more preparation and training in terms of emotional intelligence and the effectiveness of various coping strategies in different situations. Police officers need to be assisted in developing an array of strategies that are effective in different situations. It is lastly recommended that officers receive workshops on effective coping methods on a regular basis as they continually need assistance in handling difficulties and their preferences in dealing with stress are likely to change as the years pass.

Specifically in the policing context, the situational factors cannot be adjusted in many instances. There is therefore little room for the use of problem-focused coping strategies in many of the situations. Although the literature indicates that emotion-focused coping responses are in some cases maladaptive, in many instances these responses are the only methods available for officers to deal with the situation. There should thus be a strong focus on how emotion-focused strategies can be effectively used during times when little can be done to change the circumstances.

It is further recommended that new police recruits receive more intensive preparation and training in terms of emotional intelligence and the effectiveness of various coping strategies in different situations. As the study indicates, police officers initially make use of certain coping strategies, but as the years pass, they stop utilising some of the effective methods. It is accordingly suggested to reinforce and refresh the positive coping strategies of officers, by



implementing coping interventions in all units, divisions and across all organisational levels. This will ensure that positive coping styles are strengthened throughout the SAPS. These coping interventions can be implemented by means of supervisory training, coaching and mentoring on effective coping styles, workshops on problem solving and decision making skills in stressful encounters. It is suggested that developmental centres are introduced to reinforce and encourage officers in taking responsibility for their emotional well-being. Group sessions that would strengthen their social support structures can further be considered. The content of the interventions should highlight the different coping responses available and the benefits of each response in various situations. It is lastly suggested that the intervention include the use of religious principles and accentuate the importance of relaxation and leisure as ways of coping.

When officers are continuously reminded of adaptive ways of dealing with stress, it will change their thoughts and emotions and eventually their behaviour. When these interventions are implemented, the officers' ability to cope with stressful encounters will be enhanced. It will further promote their operational readiness to quickly react to situations during contextual task demands. Ultimately, it might reduce or prevent burnout, exhaustion and suicides, thereby improving the officers' overall well-being and sustainability in the strenuous circumstances of active police work.

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## APPENDIX A

### Descriptive statistics of the Ways of Coping inventory

	Items	N	Min	Max	Mean	Std. Dev	Skewness	Kurtosis
T1	E1-Just concentrated on what I had to do next – the next step.	1280	1	4	3.34	.906	-1.108	.044
T2	E1-Just concentrated on what I had to do next – the next step.	463	1	4	3.32	.911	-1.043	-.129
T3	E1-Just concentrated on what I had to do next – the next step.	120	1	4	3.09	1.090	-.753	-.882
T1	E2-I tried to analyze the problem in order to understand it better.	1280	1	4	3.50	.763	-1.496	1.596
T2	E2-I tried to analyze the problem in order to understand it better.	463	1	4	3.52	.767	-1.567	1.766
T3	E2-I tried to analyze the problem in order to understand it better.	120	1	4	3.34	.910	-1.320	.856
T1	E3-Turned to work or substitute activity to take my mind off things.	1280	1	4	2.68	1.094	-.286	-1.221
T2	E3-Turned to work or substitute activity to take my mind off things.	463	1	4	2.65	1.076	-.278	-1.178
T3	E3-Turned to work or substitute activity to take my mind off things.	120	1	4	2.44	1.157	-.005	-1.457
T1	E4-I felt that time would make a difference – the only thing to do was to wait.	1280	1	4	2.78	1.134	-.372	-1.277
T2	E4-I felt that time would make a difference – the only thing to do was to wait.	463	1	4	2.56	1.120	-.137	-1.346
T3	E4-I felt that time would make a difference – the only thing to do was to wait.	120	1	4	2.50	1.158	-.016	-1.449
T1	E5-Bargained or compromised to get something positive from the situation.	1280	1	4	3.12	.982	-.827	-.437
T2	E5-Bargained or compromised to get something positive from the situation.	463	1	4	3.01	.997	-.632	-.730
T3	E5-Bargained or compromised to get something positive from the situation.	120	1	4	2.74	1.096	-.373	-1.163
T1	E6-I did something which I didn't think would work, but at least I was doing something.	1280	1	4	2.65	1.091	-.257	-1.228

T2	E6-I did something which I didn't think would work, but at least I was doing something.	463	1	4	2.57	1.099	-.144	-1.292
T3	E6-I did something which I didn't think would work, but at least I was doing something.	120	1	4	2.14	1.077	.437	-1.116
T1	E7-Tried to get the person responsible to change his or her mind.	1280	1	4	2.98	1.018	-.591	-.840
T2	E7-Tried to get the person responsible to change his or her mind.	463	1	4	2.83	1.036	-.393	-1.036
T3	E7-Tried to get the person responsible to change his or her mind.	120	1	4	2.69	1.070	-.110	-1.277
T1	E8-Talked to someone to find out more about the situation.	1280	1	4	3.36	.886	-1.266	.630
T2	E8-Talked to someone to find out more about the situation.	463	1	4	3.33	.864	-1.143	.432
T3	E8-Talked to someone to find out more about the situation.	120	1	4	3.08	.993	-.772	-.518
T1	E9-Criticized or lectured myself.	1280	1	4	2.22	1.167	.313	-1.408
T2	E9-Criticized or lectured myself.	463	1	4	2.04	1.125	.597	-1.102
T3	E9-Criticized or lectured myself.	120	1	4	1.86	1.085	.899	-.614
T1	E10-Tried not to burn my bridges, but leave things open somewhat.	1280	1	4	2.51	1.101	-.018	-1.319
T2	E10-Tried not to burn my bridges, but leave things open somewhat.	463	1	4	2.49	1.065	.014	-1.230
T3	E10-Tried not to burn my bridges, but leave things open somewhat.	120	1	4	2.10	.999	.548	-.751
T1	E11-Hoped a miracle would happen.	1280	1	4	2.47	1.213	.030	-1.562
T2	E11-Hoped a miracle would happen.	463	1	4	2.48	1.220	.015	-1.576
T3	E11-Hoped a miracle would happen.	120	1	4	2.15	1.187	.425	-1.390
T1	E12-Went along with fate; sometimes I just have bad luck.	1280	1	4	1.85	.964	.811	-.475
T2	E12-Went along with fate; sometimes I just have bad luck.	463	1	4	1.85	.969	.795	-.545
T3	E12-Went along with fate; sometimes I just have bad luck.	120	1	4	1.55	.810	1.380	1.098
T1	E13-Went on as if nothing had happened.	1280	1	4	2.25	1.150	.271	-1.390
T2	E13-Went on as if nothing had happened.	463	1	4	2.25	1.119	.243	-1.348
T3	E13-Went on as if nothing had	120	1	4	1.81	1.041	.969	-.414

	happened.							
T1	E14-I tried to keep my feelings to myself.	1280	1	4	2.27	1.185	.255	-1.468
T2	E14-I tried to keep my feelings to myself.	463	1	4	2.23	1.170	.303	-1.419
T3	E14-I tried to keep my feelings to myself.	120	1	4	1.95	1.035	.724	-.715
T1	E15-Looked for the silver lining, so to speak; tried to look on the bright side of things.	1280	1	4	3.08	1.023	-.776	-.634
T2	E15-Looked for the silver lining, so to speak; tried to look on the bright side of things.	463	1	4	2.93	1.081	-.575	-.992
T3	E15-Looked for the silver lining, so to speak; tried to look on the bright side of things.	120	1	4	2.82	1.155	-.450	-1.265
T1	E16-Slept more than usual.	1280	1	4	1.79	.983	.927	-.378
T2	E16-Slept more than usual.	463	1	4	1.86	1.008	.841	-.530
T3	E16-Slept more than usual.	120	1	4	1.71	.900	.950	-.259
T1	E17-I expressed anger to the person(s) who caused the problem.	1280	1	4	2.16	1.142	.412	-1.291
T2	E17-I expressed anger to the person(s) who caused the problem.	463	1	4	2.12	1.128	.465	-1.224
T3	E17-I expressed anger to the person(s) who caused the problem.	120	1	4	1.90	1.042	.870	-.499
T1	E18-Accepted sympathy and understanding from someone.	1280	1	4	3.12	.990	-.841	-.434
T2	E18-Accepted sympathy and understanding from someone.	463	1	4	3.02	.987	-.682	-.616
T3	E18-Accepted sympathy and understanding from someone.	120	1	4	2.69	1.142	-.205	-1.391
T1	E19-I told myself things that helped me to feel better.	1280	1	4	3.30	.921	-1.131	.210
T2	E19-I told myself things that helped me to feel better.	463	1	4	3.29	.889	-1.084	.260
T3	E19-I told myself things that helped me to feel better.	120	1	4	2.97	1.051	-.575	-.943
T1	E20-I was inspired to do something creative.	1280	1	4	3.28	.917	-1.049	.047
T2	E20-I was inspired to do something creative.	463	1	4	3.20	.929	-.898	-.230
T3	E20-I was inspired to do something creative.	120	1	4	3.10	1.042	-.826	-.604
T1	E21-Tried to forget the whole thing.	1280	1	4	2.57	1.142	-.113	-1.402

T2	E21-Tried to forget the whole thing.	463	1	4	2.54	1.131	-.060	-1.385
T3	E21-Tried to forget the whole thing.	120	1	4	2.15	1.169	.472	-1.286
T1	E22-I got professional help.	1280	1	4	3.06	1.101	-.784	-.812
T2	E22-I got professional help.	463	1	4	3.17	1.036	-.969	-.359
T3	E22-I got professional help.	120	1	4	3.04	1.107	-.702	-.961
T1	E23-Changed or grew as a person in a good way.	1280	1	4	3.33	.917	-1.186	.333
T2	E23-Changed or grew as a person in a good way.	463	1	4	3.22	.889	-.906	-.078
T3	E23-Changed or grew as a person in a good way.	120	1	4	3.10	1.011	-.838	-.468
T1	E24-I waited to see what would happen before doing anything	1280	1	4	2.58	1.151	-.136	-1.416
T2	E24-I waited to see what would happen before doing anything	463	1	4	2.62	1.139	-.161	-1.384
T1	E25-I apologized or did something to make up.	1280	1	4	3.03	1.088	-.700	-.903
T2	E25-I apologized or did something to make up.	463	1	4	3.06	1.035	-.784	-.608
T3	E25-I apologized or did something to make up.	120	1	4	2.83	1.117	-.335	-1.318
T1	E26-I made a plan of action and followed it.	1280	1	4	3.39	.828	-1.203	.590
T2	E26-I made a plan of action and followed it.	463	1	4	3.37	.837	-1.182	.554
T3	E26-I made a plan of action and followed it.	120	1	4	3.19	.949	-.846	-.411
T1	E27-I accepted the next best thing to what I wanted.	1280	1	4	3.26	.911	-1.009	.005
T2	E27-I accepted the next best thing to what I wanted.	463	1	4	3.14	.912	-.746	-.423
T3	E27-I accepted the next best thing to what I wanted.	120	1	4	2.96	1.015	-.581	-.810
T1	E28-I let my feelings out somehow.	1280	1	4	2.56	1.083	-.115	-1.264
T2	E28-I let my feelings out somehow.	463	1	4	2.54	1.039	-.107	-1.154
T3	E28-I let my feelings out somehow.	120	1	4	2.33	1.160	.214	-1.416
T1	E29-Realized I brought the problem on myself.	1280	1	4	1.99	1.063	.645	-.908
T2	E29-Realized I brought the problem on myself.	463	1	4	2.02	1.075	.627	-.943
T3	E29-Realized I brought the problem on myself.	120	1	4	1.56	.913	1.501	1.125

T1	E30-I came out of the experience better than when I went in.	1280	1	4	2.87	1.085	-.474	-1.102
T2	E30-I came out of the experience better than when I went in.	463	1	4	2.80	1.032	-.379	-1.020
T3	E30-I came out of the experience better than when I went in.	120	1	4	2.57	1.106	-.040	-1.333
T1	E31-Talked to someone who could do something concrete about the problem.	1280	1	4	3.21	.965	-.978	-.179
T2	E31-Talked to someone who could do something concrete about the problem.	463	1	4	3.16	.961	-.872	-.332
T3	E31-Talked to someone who could do something concrete about the problem.	120	1	4	3.15	.993	-.803	-.586
T1	E32-Got away from it for a while; tried to rest or take a vacation.	1280	1	4	2.44	1.153	.046	-1.440
T2	E32-Got away from it for a while; tried to rest or take a vacation.	463	1	4	2.41	1.111	.084	-1.341
T3	E32-Got away from it for a while; tried to rest or take a vacation.	120	1	4	2.12	1.094	.438	-1.176
T1	E33-Tried to make myself feel better by eating, drinking, smoking, using drugs or medication, etc.	1280	1	4	1.32	.768	<b>2.460</b>	<b>5.001</b>
T2	E33-Tried to make myself feel better by eating, drinking, smoking, using drugs or medication, etc.	463	1	4	1.48	.948	1.759	1.616
T3	E33-Tried to make myself feel better by eating, drinking, smoking, using drugs or medication, etc.	120	1	4	1.27	.652	<b>2.718</b>	<b>7.220</b>
T1	E34-Took a big chance or did something very risky.	1280	1	4	1.83	1.090	.932	-.614
T2	E34-Took a big chance or did something very risky.	463	1	4	1.79	1.047	.972	-.469
T3	E34-Took a big chance or did something very risky.	120	1	4	2.05	1.202	.648	-1.189
T1	E35-I tried not to act too hastily or follow my first hunch.	1280	1	4	2.17	1.095	.430	-1.152
T2	E35-I tried not to act too hastily or follow my first hunch.	463	1	4	2.15	1.082	.422	-1.143
T3	E35-I tried not to act too hastily or follow my first hunch.	120	1	4	2.24	1.107	.310	-1.259
T1	E36 Found new faith.	1280	1	4	3.17	.989	-.882	-.441
T2	E36 Found new faith.	463	1	4	3.15	.967	-.759	-.624

T3	E36Found new faith.	120	1	4	2.94	1.034	-.452	-1.064
T1	E37Maintained my pride and kept a stiff upper lip.	1280	1	4	2.79	1.103	-.382	-1.203
T2	E37Maintained my pride and kept a stiff upper lip.	463	1	4	2.74	1.139	-.334	-1.307
T3	E37Maintained my pride and kept a stiff upper lip.	120	1	4	2.50	1.151	-.065	-1.433
T1	E38Rediscovered what is important in life.	1280	1	4	3.34	.923	-1.258	.526
T2	E38Rediscovered what is important in life.	463	1	4	3.37	.885	-1.316	.828
T3	E38Rediscovered what is important in life.	120	1	4	3.23	.955	-.942	-.298
T1	E39 Changed something so things would turn out all right.	1280	1	4	3.17	.995	-.959	-.247
T2	E39 Changed something so things would turn out all right.	463	1	4	3.10	1.014	-.847	-.469
T3	E39 Changed something so things would turn out all right.	120	1	4	2.93	1.091	-.618	-.939
T1	E40 Avoided being with people in general.	1280	1	4	1.91	1.050	.756	-.778
T2	E40 Avoided being with people in general.	463	1	4	2.01	1.096	.593	-1.070
T3	E40 Avoided being with people in general.	120	1	4	1.61	.899	1.258	.442
T1	E41Didn't let it get to me; refused to think too much about it.	1280	1	4	2.46	1.125	.075	-1.371
T2	E41Didn't let it get to me; refused to think too much about it.	463	1	4	2.48	1.087	-.018	-1.287
T3	E41Didn't let it get to me; refused to think too much about it.	120	1	4	2.19	1.085	.399	-1.143
T1	E42I asked a relative or friend I respected for advice.	1280	1	4	3.14	1.015	-.893	-.436
T2	E42I asked a relative or friend I respected for advice.	463	1	4	3.10	1.025	-.842	-.511
T3	E42I asked a relative or friend I respected for advice.	120	1	4	2.98	1.074	-.567	-1.048
T1	E43Kept others from knowing how bad things were.	1280	1	4	2.38	1.148	.127	-1.419
T2	E43Kept others from knowing how bad things were.	463	1	4	2.36	1.127	.144	-1.370
T3	E43Kept others from knowing how bad things were.	120	1	4	2.17	1.102	.398	-1.204
T1	E44Made light of the situation; refused to get too serious about	1280	1	4	2.44	1.090	.066	-1.293

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T2	E44Made light of the situation; refused to get too serious about it.	463	1	4	2.50	1.081	-.008	-1.270
T3	E44Made light of the situation; refused to get too serious about it.	120	1	4	2.20	1.074	.307	-1.210
T1	E45Talked to someone about how I was feeling.	1280	1	4	3.29	.934	-1.099	.101
T2	E45Talked to someone about how I was feeling.	463	1	4	3.28	.900	-1.107	.315
T3	E45Talked to someone about how I was feeling.	120	1	4	3.16	1.031	-.828	-.686
T1	E46Stood my ground and fought for what I wanted.	1280	1	4	3.23	.959	-1.002	-.142
T2	E46Stood my ground and fought for what I wanted.	463	1	4	3.22	.944	-.964	-.152
T3	E46Stood my ground and fought for what I wanted.	120	1	4	3.12	1.025	-.845	-.529
T1	E47Took it out on other people.	1280	1	4	2.13	1.173	.458	-1.328
T2	E47Took it out on other people.	463	1	4	2.07	1.127	.542	-1.164
T3	E47Took it out on other people.	120	1	4	1.92	1.166	.816	-.931
T1	E48Drew on my past experiences; I was in a similar situation before.	1280	1	4	2.50	1.104	-.028	-1.326
T2	E48Drew on my past experiences; I was in a similar situation before.	463	1	4	2.55	1.084	-.095	-1.268
T3	E48Drew on my past experiences; I was in a similar situation before.	120	1	4	2.42	1.098	.115	-1.293
T1	E49I knew what had to be done, so I doubled my efforts to make things work.	1280	1	4	3.16	1.004	-.895	-.423
T2	E49I knew what had to be done, so I doubled my efforts to make things work.	463	1	4	3.19	.986	-.932	-.328
T3	E49I knew what had to be done, so I doubled my efforts to make things work.	120	1	4	2.94	1.160	-.603	-1.148
T1	E50Refused to believe that it had happened.	1280	1	4	1.95	1.081	.712	-.881
T2	E50Refused to believe that it had happened.	463	1	4	1.99	1.057	.612	-.965
T3	E50Refused to believe that it had happened.	120	1	4	1.62	.916	1.087	-.276
T1	E51I made a promise to myself that things would be different next time.	1280	1	4	3.32	.937	-1.206	.333



T2	E51I made a promise to myself that things would be different next time.	463	1	4	3.22	.977	-1.009	-.161
T3	E51I made a promise to myself that things would be different next time.	120	1	4	2.92	1.138	-.580	-1.116
T1	E52Came up with a couple of different solutions to the problem.	1280	1	4	3.39	.842	-1.271	.769
T2	E52Came up with a couple of different solutions to the problem.	463	1	4	3.36	.852	-1.193	.546
T3	E52Came up with a couple of different solutions to the problem.	120	1	4	3.29	.952	-1.188	.339
T1	E53Accepted it, since nothing could be done.	1280	1	4	2.86	1.104	-.461	-1.154
T2	E53Accepted it, since nothing could be done.	463	1	4	2.77	1.045	-.373	-1.044
T3	E53Accepted it, since nothing could be done.	120	1	4	2.40	1.223	.106	-1.579
T1	E54I tried to keep my feelings from interfering with other things too much.	1280	1	4	2.84	1.066	-.420	-1.093
T2	E54I tried to keep my feelings from interfering with other things too much.	463	1	4	2.84	1.022	-.416	-.975
T3	E54I tried to keep my feelings from interfering with other things too much.	120	1	4	2.35	1.156	.136	-1.442
T1	E55Wished that I could change what had happened or how I felt.	1280	1	4	2.72	1.116	-.294	-1.280
T2	E55Wished that I could change what had happened or how I felt.	463	1	4	2.69	1.050	-.259	-1.127
T3	E55Wished that I could change what had happened or how I felt.	120	1	4	2.34	1.147	.224	-1.378
T1	E56I changed something about myself.	1280	1	4	2.82	1.148	-.442	-1.259
T2	E56I changed something about myself.	463	1	4	2.64	1.140	-.203	-1.371
T3	E56I changed something about myself.	120	1	4	2.42	1.176	.075	-1.488
T1	E57I daydreamed or imagined a better time or place than the one I was in.	1280	1	4	2.77	1.187	-.378	-1.386
T2	E57I daydreamed or imagined a better time or place than the one I was in.	463	1	4	2.66	1.158	-.249	-1.390
T3	E57I daydreamed or imagined a better time or place than the one I was in.	120	1	4	2.03	1.133	.584	-1.148

T1	E58Wished that the situation would go away or somehow be over with.	1280	1	4	2.78	1.116	-.365	-1.246
T2	E58Wished that the situation would go away or somehow be over with.	463	1	4	2.73	1.067	-.321	-1.136
T3	E58Wished that the situation would go away or somehow be over with.	120	1	4	2.39	1.095	.199	-1.258
T1	E59Had fantasies or wishes about how things might turn out.	1280	1	4	2.82	1.032	-.372	-1.045
T2	E59Had fantasies or wishes about how things might turn out.	463	1	4	2.85	1.017	-.426	-.954
T3	E59Had fantasies or wishes about how things might turn out.	120	1	4	2.58	1.013	-.080	-1.079
T1	<b>E60I prayed.</b>	1280	1	4	<b>3.57</b>	.823	-1.898	2.548
T2	<b>E60I prayed.</b>	463	1	4	<b>3.60</b>	.789	-1.994	3.109
T3	<b>E60I prayed.</b>	120	1	4	<b>3.52</b>	.850	-1.703	1.899
T1	E61I prepared myself for the worst.	1280	1	4	2.90	1.163	-.564	-1.190
T2	E61I prepared myself for the worst.	463	1	4	2.90	1.119	-.553	-1.096
T3	E61I prepared myself for the worst.	120	1	4	2.78	1.213	-.404	-1.425
T1	E62I went over in my mind what I would say or do.	1280	1	4	3.01	.996	-.630	-.744
T2	E62I went over in my mind what I would say or do.	463	1	4	3.01	.964	-.538	-.815
T3	E62I went over in my mind what I would say or do.	120	1	4	2.97	.987	-.502	-.884
T1	E63I thought about how a person I admire would handle this situation and used that as a model.	1280	1	4	3.04	1.003	-.691	-.682
T2	E63I thought about how a person I admire would handle this situation and used that as a model.	463	1	4	3.06	.943	-.778	-.300
T3	E63I thought about how a person I admire would handle this situation and used that as a model.	120	1	4	2.90	1.015	-.561	-.784
T1	E64I tried to see things from the other person's point of view.	1280	1	4	3.13	.954	-.811	-.391
T2	E64I tried to see things from the other person's point of view.	463	1	4	3.04	.948	-.644	-.590
T3	E64I tried to see things from the other person's point of view.	120	1	4	3.10	.935	-.757	-.384
T1	E65I reminded myself how much worse things could be.	1280	1	4	2.89	1.055	-.531	-.955

T2	E65I reminded myself how much worse things could be.	463	1	4	2.85	.988	-.469	-.806
T3	E65I reminded myself how much worse things could be.	120	1	4	2.71	1.034	-.332	-1.022
T1	E66 I jogged or exercised.	1280	1	4	3.41	.940	-1.441	.861
T2	E66 I jogged or exercised.	463	1	4	3.32	.979	-1.246	.308
T3	E66 I jogged or exercised.	120	1	4	2.98	1.082	-.555	-1.091