Validation of an adapted version of the Coping Orientations to Problems Experienced Questionnaire (COPE) in the South African Police Service

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REMARKS

The reader is reminded of the following:

- The references as well as the style as prescribed by the *Publication Manual (5th edition)* of the American Psychological Association (APA) were followed in this mini-dissertation. This practice is in line with the policy of the Programme in Industrial Psychology of the North-West University, Potchefstroom Campus to use APA style in all scientific documents as from January 1999.

- The mini-dissertation is submitted in the form of a research article. The editorial style specified by the *South African Journal of Industrial Psychology* (which agrees largely with the APA style) is used, but the APA guidelines were followed in constructing tables.
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SUMMARY

**Topic:** Validation of an adapted version of the Coping Orientations to Problems Experienced Questionnaire (COPE) in the South African Police Service.

**Key terms:** Coping strategies, coping, South African Police Service, stress, coping models, approach coping, avoidance coping, emotional coping, COPE, Post-Traumatic Stress Disorder.

Members of the SAPS come into contact with violent crimes on a daily basis. They also have to deal with changes on an organisational level, as well as large amounts of administrative work. The Coping Orientations to Problems Experienced Questionnaire (COPE) was completed by police members in the North West Province, and eight items focusing on emotion-focused coping were added. The objectives of this study were to assess the construct validity and internal consistency of the COPE in the SAPS, with added scales for emotional processing and emotional expression. Another objective was to conceptualise coping, and specifically coping within the policing context from the literature. Finally, analyses of the differences between the coping strategies of different demographic groups in the SAPS were conducted.

A cross-sectional survey design was used. The study population (N=229) included samples of police personnel from across the North West Province. In addition to the COPE, a biographical questionnaire compiled by the researcher, was administered. The dispositional version of the COPE was used, consisting of 53 items. Eight additional items which measure emotional processing and emotional expression, were also used.

Initial analysis revealed the COPE subscales to be unreliable. Subsequent analysis indicated that two coping mechanisms which reflect emotionality in broad terms were employed by SAPS members. These factors were termed Active Emotional Expression and Emotional Reappraisal, and showed acceptable Cronbach Alpha coefficients. Item bias analysis was conducted, and two items indicated uniform bias, and another two non-uniform bias. Tucker's phi coefficients for Active Emotional Expression and Emotional Reappraisal were all acceptable, indicating
equivalence for both the Afrikaans and “other” languages groups. With regard to the two coping factors, no significant differences were found between the created language categories, or gender. Differences between the coping strategies of police members with different ranks, marital status and salary categories were also not significant.

Recommendations for the organisation and future research are made.
OPSOMMING

Onderwerp: Validering van 'n aangepasde weergawe van die “Coping Orientations to Problems Experienced Questionnaire” (COPE) in die Suid-Afrikaanse Polisiediens.

Sleutelwoorde: Copingstrategiee, coping, Suid-Afrikaanse Polisiediens, stres, copingmodelle, benaderingscoping, vermydingscoping, emosionele coping, COPE, Posttraumatische Stresversteuring.

Lede van die SAPD kry daaglikse met gewelddadige misdade te doen. Op organisasievlak moet hulle ook heelwat veranderinge hanteer en massas administratiewe werk baasraak. Die “Coping Orientations to Problems Experienced Questionnaire” (COPE) is deur polisielede in die Noordwes Provinsie voltooi en agt items wat op emosie-gefocusde coping konsentreer, is bygevoeg. Die doel van hierdie studie was om die konstruksk exiting en interne konsekwenheid van die COPE in die SAPD te bepaal met bykomende skale vir emosionele prosessering en emosionele uitdrukking. 'n Verdere doelwit was om coping, en spesifiek coping binne die polisiekonteks, vanuit die literatuur te konseptualiseer. Laastens is analyses gemaak van die verskille tussen die copingstrategiee wat die onderskeie demografiese groepe in die SAPD gebruik.

'n Dwaarssee opname-ontwerp is gebruik. Die studiepopulasie (N=229) het bestaan uit steekproewe van polisiepersoneel van regoor die Noordwes Provinsie. 'n Biografiese vraelys wat deur die navorser saamgestel is, is saam met die COPE afgeneem. Die disposisieuele weergawe van die COPE, wat uit 53 items bestaan, is gebruik. Agt addisionele items wat emosionele prosessering en emosionele uitdrukking meet, is ook gebruik.

Aanvanklike analyse het getoon dat die subskale van die COPE nie betroubaar is nie. Latere analyse het aangedui dat twee copingmeganismes wat emosionaliteit in bree trekke weerspieël, deur SAPD lede gebruik word. Hierdie faktore is Aktiewe Emosionele Uitdrukking en Emosionele Herwaardering genoem, en het aanvaarbare Cronbach alfakoëffisiëntie getoon.
Itemsydigheidsanalise is gedoen, en twee items het uniforme sydigheid getoon, en twee nie-uniforme sydigheid. Tucker se phi-koeffisiënte vir Aktiewe Emosionele Uitdrukking en Emosionele Herwaardering was aanvaarbaar, wat dui op gelykwaardigheid van die konstrukte vir beide die Afrikaanse en "ander" taalgroep. Met betrekking tot die twee copingfaktore is geen beduidende verskille tussen die twee taalgroep of geslagte gevind nie. Daar is ook geen verskille tussen die copingstrategieë van polisielede met verskillende range, huwelikstatus en salariskategorieë gevind nie.

Aanbevelings vir die organisasie en vir toekomstige navorsing word aan die hand gedoen.
CHAPTER 1

INTRODUCTION

This mini-dissertation focuses on the validation of the Coping Orientations to Problems Experienced Questionnaire (COPE) in the South African Police Service in the North West Province. Differences in terms of demographic factors are also investigated.

In this chapter the problem statement is discussed whereupon the research objectives are set out. Following this, the research method is discussed and the division of chapters is given.

1.1 PROBLEM STATEMENT

The paradigm from which most research and interventions have been conducted within the health and social sciences, has been that of pathology and pathogenesis, i.e. an orientation towards the abnormal with the fundamental question being: "Why do people fall ill?" (Strümpfer, 1990). During the development of the discipline of Psychology, knowledge was gained mainly by answering this question in order to find ways of treating and preventing diseases. The focus of psychology has been on detecting deficits, which Schaufeli, Bakker, Hoogduin, Schaap, and Kladler (2001) labelled "psychologie als een wetenschap van het gebrek" ("psychology is the science of deficit").

During recent years, however, the paradigm has seen a shift of emphasis with the focus on "what can go right" instead of "what can go wrong" (Strümpfer, 2002). This "new" paradigm is that of "positive psychology" (Ryan & Deci, 2000; Seligman & Csikszentmihalyi, 2000). "The field of positive psychology at the subjective level is about valued subjective experiences, well-being, contentment, and satisfaction (in the past), hope and optimism (for the future) and flow and happiness (in the present) (Seligman & Csikszentmihalyi, 2000, p. 5). In South Africa, Wissing and Van Eeden (1997) proposed a new focus area, namely that of psychofortology (study of psychological strengths). The nature and manifestations of psychological well-being as well as ways in which it can be enhanced, are suggested as a new sub-discipline of psychofortology.
(Wissing & Van Eeden, 1997). In 1995, Strümpfer suggested that the concept of salutogenesis had to be extended from a focus on health only to include the study of human strengths, or fortogenesis.

From a salutogenic perspective, it would be counter-productive to concentrate on stress and the adverse effects thereof. However, the level of stress an individual experiences in his or her organisational context, and the extent to which adverse effects such as psychological and other strains occur, depend on how effectively he or she copes with stressful organisational situations (Bhagat et al. 2001). Research supports the contention that the ways people cope with stress and daily living affect their psychological, physical and social well-being (Ben-Zur, 1999; Cohen & Lazarus, 1979; Friedman & Vandenbos, 1992; Violanti & Paton, 1999). Stress is individually defined; one person’s stress can be another’s excitement or energizer. Although stress may activate people (for some it may be immobilising) with possible positive behavioural consequences, the physiological impact on the person should not be disregarded.

The positive psychology movement (Seligman & Csikszentmihalyi, 2000) stresses the importance of studying human strengths and virtues (particularly in clinical contexts). Miller and Harvey (2001) argue that, ironically, human strength is often best exemplified in the wake of negative life events, suffering, and personal losses. They further argue that many individuals who experience a major loss report greater self-worth after realising that they were successfully able to cope under exceedingly difficult circumstances.

Often, a troubled individual will have been able to do some extraordinary deed (whether it is something as simple as maintaining a full-time job) without having a full appreciation and realisation of his or her laudable efforts (Miller, 2003). In other words, the individual might not be able to describe exactly how he/she had been able to cope with the troubles he/she was experiencing. Adults who are coping with a major loss or negative life event can show resilient coping behaviour by being able to live a productive life according to both subjective and objective standards (such as attitudinal and behavioural outcomes). The importance of stressing what the individual has done or is doing right in his or her life, rather than what he or she is
doing wrong, has rich roots in humanistic psychology (Frankl, 1959; Maslow, 1968; Rogers, 1961).

People bring along individual differences in terms of their personality and life experience (i.e. coping strategies) that cause their responses to be more prone to stress. The person’s role in appraising the situation will determine whether the situation is a stressor or not. For instance, if a person thinks or feels that he/she is unable to cope with a large workload, then workload becomes a stressor or something that causes a person to feel stressed.

The above-mentioned affects both the individual police officer and the organisation, resulting in amongst others burnout, suicide attempts, low productivity, low morale, high absenteeism, and medical boarding as a result of Post-Traumatic Stress Disorder (PTSD). In this regard, Pienaar (2002) found that 8.64% of a sample of 2 396 police officials showed serious levels of suicide ideation, while 15% reported stress-related problems. According to Wiese, Rothmann, and Storm (2003), the use of passive coping strategies lead to lower feelings of accomplishment, while active coping strategies lead to higher feelings of professional efficacy in police officers’ work.

The current socio-political problems and the high crime rate in South Africa are powerful environmental factors in the SAPS, demanding unique contributions from the individual police member. The police member has a responsibility towards the community to maintain safety and security and cope with many changes in the workplace, ranging from policing violent crowds to combating an extremely high crime rate (Ortlepp, in Neokazi, 2002). The high crime rate implies that SAPS personnel are under constant pressure to work vigorously towards the decrease thereof. Police members perform their duties under extreme pressure, seeing that they are continuously being exposed to life-threatening and traumatic incidents and situations.

Members working in the SAPS are exposed to all sorts of crime scenes, including violent rapes, murders and child abuse, which can sometimes be extremely traumatic. The implication of this is that members are traumatized and re-traumatized by the scenes, which could possibly result in the development of PTSD. When considering the major organisational changes in the SAPS during the past ten years (i.e. employment equity and internal transformation), and the positive
relation of problem-focused coping with both organisational change (Terry, Callan, & Sartori, 1996) and general work stress (Terry, Tonge, & Callan, 1995), the value of measuring prevailing coping strategies, and differences regarding these, cannot be underestimated. It was recommended by Pienaar and Rothmann (2003) that the COPE be factor-analysed at the item level in future research, especially with regard to cross and intercultural comparisons. It was also strongly recommended that a standardised measure be made generally available, with special emphasis on four factors in coping, namely active, avoidant/passive, social/emotional and religion and/or humour factors. The Seeking Emotional Support factor could be elaborated by making use of the emotion approach coping scales as proposed by Stanton, Kirk, Cameron, and Danoff-Burg (2000).

The problem statement can be summarised as follows: A paradigm shift has taken place in psychology from the paradigm of pathology to that of positive psychology. This shift of emphasis is evident in that many scientists are striving to inspire people to develop a more wholesome focus on the positive aspects of life. There is a greater emphasis on positive measures to reduce stress and to improve coping mechanisms. The context in which members of the SAPS have to function is extremely unhealthy in psychological terms, therefore more effective ways of coping need to be employed and assessed by means of a reliable coping measure. In recent years extensive research has been done on coping and stress in the South African Police Service, but researchers have indicated the need for a reliable coping measure. This study is therefore undertaken in an effort to answer this need.

Research on coping

Literature on stress and stress research is frequently linked to coping strategies and mechanisms. Stress is described by Lazarus (1980) as any event that exceeds the normal adjustment strategies of an individual, determined by the individual’s perception and interpretation of the event. The individual thus engages in an appraisal process by evaluating his/her ability and capability in dealing with a perceived stressor. This is done according to the resources the individual has available and the strain he/she associates with the process. Stress is experienced when the individual’s perceived ability to deal with the strain exceeds the self-evaluated capacity of the

Lazarus (1991) postulated that an individual's processing or appraisal of a stressor takes place on two levels. In the primary appraisal phase, the individual evaluates whether the situation poses a potential or actual threat to his/her well-being. Secondary appraisal involves the individual evaluating his/her perceived ability of coping with the stressor/stressful life event. These appraisal processes can be regarded as interdependent, influencing each other and shaping the nature of any encounter on an individual level (Folkman & Lazarus, 1984). Coping is thus a process by which the individual interacts with his/her environment in order to comprehend what people think and do in a stressful encounter (Holroyd & Lazarus, 1982). Callan (1993) described non-coping as failed efforts to cope, accompanied by various physical and psychosocial disturbances, eventually resulting in higher stress levels. Non-coping results in higher levels of depression and anxiety, which are some of the outcomes often associated with stressful experiences (Carver, Scheier, & Weintraub, 1989).

The most familiar and widespread coping taxonomy is the one proposed by Folkman and Lazarus (1980). Coping refers to the perceptual, cognitive or behavioural responses used to manage, avoid or control situations that could be regarded as difficult or stressful (Folkman & Lazarus, 1984; Moos, 1994; Zeidner & Endler, 1996). Furthermore, coping is described as either problem-focused or emotion-focused. Problem-focused coping strategies aim at actively dealing with the problem. In contrast, emotion-focused coping is directed at dealing with the emotional distress that is evoked by the problem. The third basic strategy that may be used in coping with stress, namely avoidance, was suggested by Endler and Parker (1990). Avoidance can include either person-oriented or task-oriented strategies. Avoidance of a situation actually removes the person from the stressful situation, whereas problem- and emotion-focused coping might help the person manage the stressful situation while he or she remains in it (Kowalski & Crocker, 2001). Kleinke (1991) concluded that coping can be defined as the efforts individuals make to manage perceived harmful or stressful events or situations.
Coping has been differentially conceived in the following ways (Livneh, Antonak, & Gerhardt, 2000): 1) as personality trait and situationally determined response; 2) as a static construct and dynamic process; 3) as a mature, adaptive and flexible strategy as well as a neurotic, maladaptive and rigid reaction; and 4) as an intricate, hierarchically structured, multilevel concept as well as a global, generally dichotomous concept. Coping refers to perceptual, cognitive or behavioural responses that are used to manage, avoid or control situations that could be regarded as difficult (Folkman & Lazarus, 1984; Moos, 1994; Zeidner & Endler, 1996). The term "coping" could be used to refer to strategies or results (Fleishman, 1984). As a strategy, coping refers to the different methods that a person may apply to manage his or her circumstances. Therefore, coping refers to the eventual outcomes of this strategy.

According to Carver et al. (1989), individuals have consistent coping preferences or dispositions that are employed across a wide range of situations. Studies measuring coping dispositions have done so by instructing participants to think about the ways in which they usually deal with stress (Carver et al., 1989). The dispositional version of the Coping Orientation to Problems Experienced (COPE) scale (Carver et al., 1989) is one such inventory. Pienaar and Rothmann (2003) studied the psychometric properties of the COPE in the South African Police Service (SAPS) and extracted four internally consistent factors, namely Approach Coping, Avoidance, Seeking Emotional Support and Turning to Religion. These factors showed structural equivalence for police members of all race groups and no items were biased. However, criticism has been expressed in terms of the operationalisation of the coping construct regarding the confounded nature of some of the traditional coping measures, such as the COPE. In a review conducted by Stanton, Danoff-Burg, Cameron, and Ellis (1994) a diverse array of responses were found under the designation of emotion-focused coping, where some items reflected an approach towards a stressor while others indicated avoidance. Furthermore, Scheier, Weintraub and Carver (1986) reported that some emotion-focused items are inversely related. Aggregation of items in this manner could make the interpretation of the association between emotion-focused coping and dysfunctional outcomes, an aspect which is frequently found in the literature, difficult to explain. Therefore, Naude (2003) recommended that future research should focus on combating the confounding nature of some items of the COPE, especially with regard to the operationalisation of emotion-focused coping.
The SAPS provides the researcher with an unique environment in which to study coping strategies, as police officers have to deal with a variety of organisational and occupational stressors, for example South Africa's extremely high crime rate (Nedcor Project, 1996). While a positive fortigenic perspective as mentioned above probably requires that positive coping strategies should be studied, harsh realities exist that contribute to stress and burnout, especially as experienced in the SAPS.

Research on coping strategies in the SAPS conducted by Rothmann and Van Rensburg (2001), and Rothmann and Strijdom (2002) found that police members achieve the highest scores on Turning to Religion and Planning as coping strategies. One of the concerns raised in these studies was that police members scored low on the venting of emotions. This tendency may be the result of emotional detachment due to the nature of their work and their lack of trust in the organisation (Rothmann, Sieberhagen, & Cilliers, 1998). The result of the above is that police members will most probably refuse to share their emotional reactions to job stressors with others, which may isolate them from social support at work as well as home (Evans & Coman, 1992).

Evans, Coman, Stanley, and Burrows (1993) indicated that police officers tend to use more problem-focused coping strategies (aimed at changing stressful occupational events), and less emotion-focused coping strategies (aimed at regulating their distress). Police officials have to cope with many demands although they often have limited resources and a lack of control. It is therefore crucial to track and address their effectiveness in coping with new demands and stimulating their growth in areas that could possibly impact on individual well-being and organisational efficiency and effectiveness. Although these difficulties relate to police officials experiencing work-related trauma, more stressors seem to occur on an organisational level, which affects the psychological well-being of police officials (Wiese, Rothmann and Storm 2003).

A study conducted by Deisinger, Cassissi, and Whitaker (1996), indicated that so-called normal individuals relied significantly less on avoidance as coping strategy than anxious or eccentric individuals did. Normal individuals engaged in seeking social support and venting more than
eccentric individuals did, but less than anxious subjects. Gender differences were noted, with women more likely to cope by seeking social support and men more likely to cope through hedonistic escapism.

In terms of the present study, it is important to establish a reliable and valid measuring instrument with regard to coping. It is also important to consider cultural diversity in a multicultural setting such as the South African Police Service. The nature and context of a stressor, the range of coping resources available and the emotional reaction of the individual might be affected by aspects of cultural and racial affiliations (Coyne & Gottlieb, 1996; Slavin, Rainer, McCreary, & Gowda, 1991). Van de Vijver and Leung (1997) recommended that issues of measurement equivalence and bias should be computed for measuring instruments in any multicultural setting where groups from different cultural groups are compared in terms of a specific construct.

Coping Orientations to Problems Experienced Questionnaire (COPE)

The COPE was published in 1989, and contains items based on the authors’ theory of behavioural self-regulation, the Lazarus model of stress, and the empirical literature. In addition to five problem-focused coping scales, it contains five scales to assess emotion-focused coping, i.e. seeking of emotional support, positive reinterpretation, acceptance, denial, and turning to religion and three scales to measure “coping responses that arguably are less useful”, i.e. focus on and venting of emotions, behavioural disengagement, mental disengagement (Stanton, Parsa, & Austenfeld, 2002, p. 267). The COPE is used in both dispositional and situational versions (Stanton et al. 2002).

Wide latitude is apparent in the operationalisation of emotion-focused coping. Many studies using the COPE did not use the originally derived subscales, but rather used selected items or subscale composites to indicate emotion-focused coping. In the review conducted by Stanton et al. (2002), a consistent association was found between coping through processing and expressing emotion, and maladjustment. The studies conducted demonstrated an association of emotion-oriented coping with poorer adjustment, such as symptoms of depression and anxiety,
neuroticism, low life satisfaction, and eating disturbance. The reviewers contend that coping through emotional processing and expression is an important area of inquiry for positive psychology (Stanton et al., 2002). They further recommend a distinction, both conceptually and empirically, between emotion-focused strategies that involve active movement towards, versus away from a stressful encounter.

Findings to date demonstrate that, although correlated, emotional processing and expression can have differential relations with adaptive outcomes, suggesting that further investigation of their distinct qualities and consequences require studies utilising these various methods. The emotional approach coping constructs should also be distinguished from other presumably emotion-focused coping strategies, both conceptually and empirically (Stanton et al., 2002).

The validation of a reliable coping measure could further studies in positive psychology. Possible further studies of the ideas of Stanton et al. (2000) regarding coping through emotional processing and expression could shed new light on the dispositional nature of coping in working context, and specifically in the SAPS.

1.2 RESEARCH OBJECTIVES

The research objectives can be divided into a general objective and specific objectives.

1.2.1 General objective

The general objective of this study was to validate an adapted version of the Coping Orientations to Problems Experienced Questionnaire (COPE) in the South African Police Service of the North West Province.

1.2.2 Specific objectives

Based on the foregoing discussion, the specific objectives of this study were:
• To conceptualise coping, and specifically coping within the policing context, from the literature.
• To assess the construct validity and internal consistency of the COPE in the SAPS, with added scales for emotional processing and emotional expression.
• To analyse differences between the coping strategies of different demographic groups in the SAPS.
• To make recommendations regarding coping in the SAPS.

1.3 RESEARCH METHOD

The research method consisted of a literature review and an empirical study.

1.3.1 Empirical study

The empirical study consisted of the research design, study population, measuring battery and statistical analysis. The following databases have been consulted: EBSCO Host, Emerald.

1.3.1.1 Research design

A survey design was used to achieve the research objectives. The specific design is a cross-sectional design (Shaughnessy, & Zechmeister, 1997). Information gathered was used to describe the population at one point in time. This design can also be used to evaluate interrelationships among variables within a population. According to Shaughnessy and Zechmeister (1997), this design is ideally suited to describe and predict functions associated with correlation research.

1.3.1.2 Study population

The study population consisted of a random sample (N=229) of police members. The random sample was selected from police stations in the North West Province of South Africa.
1.3.1.3 Measuring instruments

Two questionnaires will be used in this research, namely the Coping Orientations to Problems Experience Questionnaire (COPE) (Carver et al., 1989) and a biographical questionnaire compiled by the researcher.

The biographical questionnaire is used to gather information about the demographic characteristics of all the participants. Information that will be gathered includes the following: age, gender, years of service, years in current position (to assess advancement), marital status, home language and whether or not the police officials utilised their full entitlement of annual leave and rest days.

The Coping Orientations to the Problems Experienced Questionnaire (COPE) (Carver et al., 1989) was designed to measure both situational and dispositional coping strategies. In the present study, the dispositional version consisting of 53 items will be used, with eight (8) items measuring emotional processing and emotional expression (four items each), as developed by Stanton et al. (2002). Response choices ranged from 1 (I usually don’t do this at all) to 4 (I usually do this a lot). The COPE measures 14 coping strategies. In previous South African research, Pienaar and Rothmann (2003) studied the psychometric properties of the COPE in the South African Police Service (SAPS). This study failed to confirm the hypothesised factor structure and used a process of exploratory factor analysis to extract four internally consistent factors, namely Approach Coping, Avoidance, Seeking Emotional Support and Turning to Religion. These factors showed structural equivalence for police members of all race groups and no items were biased. Test-retest reliability varied from 0.46 to 0.86 and from 0.42 to 0.89 (applied after two weeks).

1.3.1.4 Statistical analysis

The statistical analysis will be carried out with the help of the SPSS program (SPSS, 2003). Initially, reliability will be investigated by analysing alpha-values of the subscales of the COPE. Failure to establish internal consistency will necessitate a shift in focus to an exploratory mode.
Principal components extraction will be used prior to Principal factors extraction to estimate the number of factors, presence of outliers and factorability of the correlation matrices. The criterion for factors is an eigenvalue greater than or equal to one, after varimax rotation. The scree plot will also be employed.

Cronbach alpha coefficients will be used to assess the internal consistency of the measuring instrument (Clark & Watson, 1995). Descriptive statistics (e.g. means, standard deviations, skewness and kurtosis) will be used to analyse the data. T-tests and ANOVA will be used to determine the differences between the coping strategies of police members in different demographic groups. The following formula will be used to determine the practical significance of differences (d) when t-tests are used (Steyn, 1999):

\[
d = \frac{\text{Mean}_A - \text{Mean}_B}{\text{SD}_{\text{max}}}
\]

Where

\(\text{Mean}_A =\) Mean of the first group
\(\text{Mean}_B =\) Mean of the second group
\(\text{SD}_{\text{max}} =\) Highest standard deviation of the two groups

The following formula will be used to determine the practical significance of means of more than two groups (Steyn, 1999):

\[
d = \frac{\text{Means}_A - \text{Means}_B}{\sqrt{\text{MSE}}}
\]

Where

\(\text{Means}_A =\) Mean of the first group
\(\text{Means}_B =\) Mean of the second group
\(\sqrt{\text{MSE}} =\) Root Mean Square Error
A cut-off point of 0.50 (medium effect) (Cohen, 1988) is set for the practical significance of difference between means.

Construct (structural) equivalence will be used to compare the factor structures of the COPE for the different language groups. Exploratory factor analysis and target (Procrustean) rotation will be used to determine construct equivalence (Van de Vijver & Leung, 1997). According to Van de Vijver and Leung (1997), it is not acceptable to conduct factor analyses for different cultural groups to address the similarity of factor-analytical solutions because the spatial orientation of factors in factor analysis is arbitrary. Rather, prior to an evaluation of the agreement of factors in different cultural groups, the matrices of loadings should be rotated with regard to each other (i.e. target rotations should be carried out). The factor loadings of separate groups were rotated to a joint common matrix of factor loadings. After target rotation had been carried out, factorial agreement was estimated using Tucker's coefficient of agreement (Tucker's phi). This coefficient is insensitive to multiplications of the factor loadings, but is sensitive to a constant added to all loadings of a factor. This index does not have a known sampling distribution; hence it is impossible to establish confidence intervals. Values higher than 0.95 are regarded as evidence for factorial similarity, whereas values lower than 0.85 are taken to point to non-negligible incongruities (Van de Vijver & Leung, 1997). This index is sufficiently accurate to examine factorial similarity at a global level. However, if construct equivalence is not acceptable, bias analyses should be carried out to detect inappropriate items.

An extension of Cleary and Hilton's (1968) use of analysis of variance will be applied to identify item bias (Van de Vijver & Leung, 1997). Bias will be examined separately for each item. The item score will act as the dependent variable, while language groups (two levels) and score levels as the independent variables. Score groups will be composed on the basis of the total score on the COPE. Two effects will be tested through analysis of variance, namely the main effect of language group, and the interaction of score level and language group. When both the main effect of language group and the interaction of score level and language group are non-significant, the item will be considered as unbiased.
1.4 DIVISION OF CHAPTERS

The chapters are presented as follows in this mini-dissertation:

Chapter 1: Introduction, problem statement and objectives
Chapter 2: Research article
Chapter 3: Conclusions, limitations and recommendations

1.5 CHAPTER SUMMARY

In this chapter the problem statement and motivation were discussed. Furthermore, the specific objectives of the research were formulated and the method of research was described. This was followed by a discussion of the way in which the statistical analysis was performed. Finally the chapter arrangement was presented.

A research article on the Validation of an adapted version of the Coping Orientations to Problems Experienced in the South African Police Service, North West Province is presented in Chapter 2.
VALIDATION OF AN ADAPTED VERSION OF THE COPING ORIENTATIONS TO PROBLEMS EXPERIENCED QUESTIONNAIRE (COPE) IN THE SOUTH AFRICAN POLICE SERVICE

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ABSTRACT
The objectives of this study were to validate an adapted version of the Coping Orientations to Problems Experienced Questionnaire (COPE) in the South African Police Service in the North West Province, and to investigate item bias and construct equivalence. A cross-sectional survey design was used. The study population (N=229) included samples of police personnel in the North West Province. The results indicated that two emotional coping mechanisms, namely Active Emotional Expression, and Emotional Reappraisal were employed by members. Two items showed uniform bias, and a further two showed non-uniform bias. The constructs appeared equivalent for both the Afrikaans and “other” languages groups. With regard to the two coping factors, no significant differences were found between the created language categories, or gender. Differences between the coping strategies of police members with different ranks, marital status and salary categories were investigated and no significant differences were found.

OPSOMMING
Die doelwitte van hierdie studie was om ’n aangepaste weergawe van die COPE in die SAPD van die Noordwes Provincie te valideer en itemsydigheid te bepaal. ’n Dwarssonesteekproef is gebruik. Die studiepopulasie (N=229) het bestaan uit steekproewe van polisiepersoneel in die Noordwes Provincie. Die resultate het getoon dat twee emosionele copingmechanismes, naamlik Aktiewe Emosionele Uitdrukking en Emosionele Herwaardering deur lede gebruik is. Twee items het uniforme sydigheid getoon en twee ander het nie-uniforme sydigheid getoon. Die konstruksie het gelykwaardig voorgekom vir beide die Afrikaanse en “ander” taalgroep. Met betrekking tot die twee copingfakte is daar geen beduidende verskille tussen die twee taalgroep of geslag gevind nie. Die verskille tussen die copingstrategieë van polisieleding met verschillende range, huwelikstatus en salariskategorieë is ondersoek en geen beduidende verskille is gevind nie.
Some studies have been conducted in the past regarding the coping strategies used in the SAPS (Pienaar & Rothmann, 2003; Rothmann & Van Rensburg, 2001; Rothmann & Strijdom, 2002). The SAPS provides the researcher with an unique environment in which to study coping strategies, as police members have to deal with a variety of organisational and occupational stressors, for example South Africa's extremely high crime rate (Nedcor Project, 1996). While a positive fortigenic perspective probably requires that positive coping strategies should be studied, the harsh realities that contribute to stress and burnout, especially as experienced in the SAPS, should be addressed.

Research on coping strategies in a policing context conducted by Rothmann and Van Rensburg (2001) and Rothmann and Strijdom (2002), found that police members achieve the highest scores on Turning to Religion and Planning as coping strategies. One of the concerns raised in these studies was that police members scored low on the venting of emotions. This tendency may be the result of emotional detachment due to the nature of their work and their lack of trust in the organisation (Rothmann, Sieberhagen, & Cilliers, 1998). The result of the above is that police members will most probably refuse to share their emotional reactions to job stressors with others, which may isolate them from social support both at work and at home (Evans & Coman, 1992). According to Wiese, Rothmann, and Storm (2003), the use of passive coping strategies leads to lower feelings of accomplishment, while active coping strategies lead to higher feelings of professional efficacy in police officers' work.

Powerful environmental factors in South Africa, such as the current socio-political problems and the high crime rate, demand unique contributions from the SAPS member. The police member has a responsibility towards the community to maintain safety and security and cope with many changes in the workplace, ranging from policing violent crowds to the combating of an extremely high crime rate (Ortlepp, in Ncokazi, 2002). The high crime rate implies that SAPS personnel are under constant pressure to work vigorously towards the decrease thereof. Police members perform their duties under extreme pressure, seeing that they are continuously being exposed to a variety of life-threatening and traumatic incidents and situations.
The alarming suicide rate in recent years in the SAPS has indicated that more effective ways of coping need to be employed by its members. The *Potchefstroom Herald* (Cloete, 2005a) reported that five suicides took place in the SAPS in the North West Province since April 2005, which brings the rate to an average of one suicide per month. The need for a valid instrument that could measure coping strategies in the SAPS became even more evident on 24 August 2005 when a senior police officer from the North West Provincial headquarters committed suicide in his office. According to a popular newspaper, the reason stated for the suicide had been that of work pressure (De Beer, 2005). Police members not only have to cope with attending crime scenes of a violent nature, but also with an increase in work pressure. The police officer who committed suicide had been employed as a labour relations officer. Mr Chris Hattingh, provincial leader of the Democratic Alliance, aired his concern about this matter by saying “die indruk dat daar steeds 'n gekoördineerde veldtog teen polisielede gevoer word, deur dissiplinêre optrede en onbillike werksladings op lede te plaas, word deur voorvalle soos hierdie (die selfmoord), verskeie skorskings en bedankings versterk” (Cloete, 2005a). It is thus of the utmost importance that the coping strategies applied by police members be measured accurately in ultimately curbing the alarming rate of suicide in the SAPS. Mr Hattingh further commented that within a single day, seven police officers were admitted to a hospital in Potchefstroom for stress-related treatment.

An article published in the *Pretoria News* (Otto, 2002a), indicated that police members struggle to cope with stress in their workplace because of “years and years” of extreme stress. According to Otto (2002b), a police officer had to leave the SAPS because of “an injury obtained while on duty” (the classification given to Post-Traumatic Stress Disorder, PTSD), and that she is a walking example of why men and women in the police service go on stress leave. The things she has experienced have left her with the worst case of Post-Traumatic Stress Disorder her psychiatrist at Vista Clinic had yet seen in a police officer.

Another indication that police officers might be experiencing problems to cope in their working environment, can be found in the *Eastern Province Herald*, dated 24 February 2005 (Van Staaden, 2005). According to this article, a policeman – the third member in a period of one month - went “berserk” and fired his weapon in a police station after being forced to return to
work. In another case a SAPS member turned a gun on his seniors after being refused overtime pay and a transfer to a region closer to his family home (Zuzile, 2004).

According to Die Burger (Brits, 2004), police members do not receive enough support in coping with trauma, depression and stress, and this situation led a police member to take his colleagues hostage in a community service centre in the Western Cape Province in 2002. During 1995 SAPS officers were eleven times more likely to take their own lives than members of the general population (Sun Correspondent, 2002). Factors linked to Post-Traumatic Stress Disorder such as depression, hopelessness, substance abuse, moodiness and aggression are often cited as causes of police suicide.

Difficulties of police officers in coping with the work environment and organisational factors (allegedly caused by a station commissioner) were cited as the main reasons why 100 police officers and administration workers took “stress leave” during 2003 in the Eastern Cape (Feni, 2003). A former detective claimed that his working environment was made “unbearable”, which led to him being embarrassed and slandered (Waldner, 2001). Police officers still have to cope with trauma and stress even though they apply for medical boarding due to Post-Traumatic Stress Disorder (Venter, 2003).

According to the South African Police Union in the Independent on Saturday (Mthembu, 2003) police suicides continue unabated despite the mass recruitment of psychologists into the SAPS during 2002. Police officers have a perception that they have a responsibility to protect the public, therefore, by not telling other people about their problems, they achieve a sense of being in control. During 2002, seven police suicides took place in the Eastern Cape, while about 157 members were “boarded” for stress (Unknown, 2003a). Police members cite stress and fatigue as the main reasons for thousands of them leaving the service en masse (Secpe, 2001).

In the Daily Dispatch (Sa Joe, 2003), it was indicated that job stress is a major contributing factor to police suicides. Constant exposure to criminal activity and violence is one of the contributing factors that lead to police officers committing suicide (Sa Joe, 2003). According to this article, internal factors, such as constant exposure to criminal activity and violence, may lead
to feelings of severe negativity towards life. Having to deal with unresolved grievances for long periods of time as well as disciplinary hearings could result in stress (Sa Joe, 2003).

An article published in the *Daily News* (Hosken, 2002), indicated that "red tape" and the murder of colleagues are proving to be too stressful for members of the SAPS. While some battle to cope with the excessive amount of filing, thousands of policemen and women are succumbing to the violence that they are forced to deal with every day.

Members working in the SAPS come into contact with a variety of crime scenes (e.g. violent rapes, murders, child abuse), which can sometimes be extremely traumatic. The implication of this is that members are traumatized and re-traumatized by the scenes, which could possibly result in the development of Post-Traumatic Stress Disorder (PTSD). The *Volksblad* (Du Toit, 2002) stated that approximately one quarter of police members exhibited symptoms of PTSD. When considering the major organisational changes in the SAPS during the past ten years (i.e. employment equity, internal transformation and a change from a police “force” to a police “service”, with greater emphasis on community policing), and the positive relation of problem-focused coping with both organisational change (Terry, Callan, & Sartori, 1996) and general work stress (Terry, Tonge, & Callan, 1995), the value of measuring prevailing coping strategies and differences regarding these cannot be underestimated. It was recommended by Pienaar and Rothmann (2003) that the COPE be factor-analysed at the item level in subsequent research, especially with regard to cross- and intercultural comparisons. It was also strongly recommended that a standardised measure be made generally available, with special emphasis on four factors in coping, namely active, avoidant/passive, social/emotional and religion and/or humour factors.

Evans, Coman, Stanley, and Burrows (1993) indicated that police officers tend to use more problem-focused coping strategies (aimed at changing stressful occupational events), and less emotion-focused coping strategies (aimed at regulating their distress). Police officers have to cope with many demands although they often have limited resources and a lack of control. It is therefore crucial to track and address their effectiveness in coping with new demands and stimulating their growth in areas that could possibly impact on individual well-being and organisational efficiency and effectiveness. Although these difficulties relate to police officers
experiencing work-related trauma, more stressors seem to occur on an organisational level, which affects the psychological well-being of police officers (Wiese, Rothmann & Storm, 2003).

In the SABC 3 programme, Special Assignment, (Pauw & Burgess, 2001) the producers stated that a “cowboys don’t cry” belief system is common among SAPS officers. Police members believe that expressing their emotions regarding traumatic experiences in their work is counter-productive. They typically use overt macho defences and do not talk about their experiences in their work environment. They suppress any thoughts regarding trauma and traumatic experiences, instead of coping by reflecting on the trauma and processing it on an emotional level (Pauw & Burgess, 2001). Wilson and Gielissen (2004) found that the need for counselling is often perceived as a personal weakness or may be considered as a threat to one’s career.

The same “cowboys don’t cry” coping mechanism was described by Captain Retha Watson in the Pretoria News (Unknown, 2002, 4). “Cowboys don’t cry and it is easier to deny that something is eating away at you than to face the stigma of seeking help”. Trauma Intervention Management was scheduled for implementation in January 2002. Part of this Intervention Management plan was to teach students in the SAPS college initial debriefing to help a buddy and to recognise their own trauma symptoms. Suicide prevention was also addressed in this programme. The coping mechanisms of emotional expression and emotional processing are encouraged by using a Formal Debriefing model, which comprises 7 phases. These phases are the introduction phase, facts phase, thoughts phase, emotional ventilation phase, stress reaction, stress management and closing phases. According to Karlsson and Christianson (2003), more than half of police officers questioned reported that it helped them to talk about a traumatic event with their colleagues.

Experts in the field of debriefing and counselling recommended the integration of stress ameliorating efforts in a comprehensive programme consisting of four successive stages, namely preparation, monitoring, debriefing and counselling. Such programmes should take place before, during and after deployment in areas affected by both man-made and natural disasters (Wilson & Gielissen, 2004). The Formal Debriefing stage of the Trauma Intervention Management plan in the SAPS forms part of coping by emotional expression and emotional coping, as Formal
Debriefing is a conversation in a controlled environment allowing the ventilation of the thoughts and feelings of SAPS members who have been exposed to a traumatic event (Mitchell & Dyregow, 1993).

From a salutogenic perspective, it would be counter-productive to concentrate on stress and the adverse effects thereof. However, the level of stress an individual experiences in his or her organisational context, and the extent to which adverse effects such as psychological and other strains occur, depend on how effectively the individual copes with stressful organisational situations (Bhagat et al., 2001). Research supports the contention that the ways people cope with stress and daily living affect their psychological, physical and social well-being (Ben-Zur, 1999; Cohen & Lazarus, 1979; Friedman & Vandenbos, 1992; Violanti & Paton, 1999). Stress is individually defined; one person's stress can be another's excitement or energizer. Although stress may activate people (for some it may be immobilising) with possible positive behavioural consequences, the physiological impact on the person should not be disregarded.

Literature on stress and stress-research is frequently linked to coping strategies and mechanisms. Stress is described by Lazarus (1980) as any event that exceeds the normal adjustment strategies of an individual, determined by the individual's perception and interpretation of the event. The individual thus engages in an appraisal process by evaluating his/her ability and capability in dealing with a perceived stressor. This is done according to the resources the individual has available and the strain he/she associates with the process. Stress is experienced when the individual's perceived ability to deal with the strain exceeds his/her self-evaluated capacity to deal with a stressor (Cranwell-Ward, 1990; Handy, 1988, 1991; Lazarus, 1991; Meyerson, 1994).

Coping has been differentially conceived in the following ways (Livneh, Antonak, & Gerhardt, 2000): 1) as personality trait and situationally determined response; 2) as a static construct and dynamic process; 3) as a mature, adaptive and flexible strategy as well as a neurotic, maladaptive and rigid reaction; and 4) as an intricate, hierarchically structured, multilevel concept as well as a global, generally dichotomous concept. The term "coping" could be used to refer to strategies or results (Fleishman, 1984). As a strategy, coping refers to the different methods that a person may apply to manage his/her circumstances. Therefore, coping refers to the eventual outcomes of this
Coping strategies are intended to resolve discrepancies between the environmental inputs and the desired state, in which coping is conceptualised as attempts to reduce or omit the adverse effects of stress on well-being (Grumpy et al., 2004). These researchers indicated that the psychometric properties of many existing coping scales reported in the literature are less than adequate. O’Driscoll and Cooper (1994) suggest that conceptual problems are a key reason for the absence of progress in the understanding of coping processes.

According to Carver, Scheier, and Weintraub (1989), individuals have consistent coping preferences or dispositions that are employed across a wide range of situations. Studies measuring coping dispositions have done so by instructing participants to think about the ways in which they usually deal with stress (Carver et al., 1989). The dispositional version of the Coping Orientation to Problems Experienced (COPE) scale (Carver et al., 1989) is one such inventory. However, criticism has been expressed in terms of the operationalisation of the coping construct regarding the confounded nature of some of the traditional coping measures, such as the COPE. In a review conducted by Stanton, Danoff-Burg, Cameron, and Ellis (1994) a diverse array of responses were found under the designation of emotion-focused coping, where some items reflected an approach towards a stressor while others indicated avoidance. Furthermore, Scheier, Weintraub and Carver (1986) reported that some emotion-focused items are inversely related. Aggregation of items in this manner could make the interpretation of the association between emotion-focused coping and dysfunctional outcomes, an aspect which is frequently found in the literature, difficult to explain. Therefore, Naude (2003) recommended that future research should focus on combating the confounding nature of some items of the COPE, especially with regard to the operationalisation of emotion-focused coping.

From the foregoing discussion it is evident that SAPS members are under enormous pressure to cope with their work, which includes traumatic incidents as well as extreme stress because of organisational factors. It is of the utmost importance that a reliable and valid coping measure be employed to determine coping mechanisms, and address problems accordingly. It is also important to consider cultural diversity in a multicultural setting such as the South African Police Service. The nature and context of a stressor, the range of coping resources available and the emotional reaction of the individual might be affected by aspects of cultural and racial
affiliations (Coyne & Gottlieb, 1996; Slavin, Rainer, McCreary, & Gowda, 1991). Van de Vijver and Leung (1997) recommended that issues of measurement equivalence and bias should be computed for measuring instruments in any multicultural setting where individuals from different cultural groups are compared in terms of a specific construct.

According to Rothmann (2000), tracking and addressing employees’ effectiveness in coping with new demands and stimulating their growth in areas that could possibly impact on individual well-being and organisational efficiency and effectiveness, are crucial.

An effective and efficient police service is essential for the creation of circumstances conducive to economic development in South Africa. The most significant feature of South Africa’s transition from a racially divided, apartheid government to a democracy has been the peaceful nature of the transformation in the form of negotiation as opposed to revolution. However, one of the dominant features of the transformation over the past few years has been, and remains, crime and violence (Lim, Thompson, & See, 2000). Therefore, research into coping measures is required to ensure that the stress and suicide rate in the SAPS decreases, thereby working towards the development of a truly efficient and effective service.

Coping Orientations to Problems Experienced Questionnaire (COPE)

The COPE was published in 1989, and contains items based on the authors’ theory of behavioural self-regulation, the Lazarus model of stress (Folkman & Lazarus, 1980, 1984), and empirical literature. In addition to five problem-focused coping scales, it contains five scales to assess emotion-focused coping (i.e. seeking of emotional support, positive reinterpretation, acceptance, denial, and turning to religion), and three scales to measure “coping responses that arguably are less useful” (Carver et al., 1989, p. 267) (i.e. focus on and venting of emotions, behavioural disengagement, mental disengagement). The COPE is used in both dispositional and situational versions (Stanton, Parsa, & Austenfeld, 2002), but the present study addresses it as a dispositional construct.
Wide latitude is apparent in the operationalisation of emotion-focused coping. Many studies using the COPE did not use the originally derived subscales, but rather used selected items or subscale composites to indicate emotion-focused coping. In the review conducted by Stanton et al. (2002), a consistent association was found between coping through processing and expressing emotion and maladjustment. The studies conducted demonstrated an association of emotion-oriented coping with poorer adjustment, such as symptoms of depression and anxiety, neuroticism, low life satisfaction, and eating disturbances. In their review, the writers contend that coping through emotional processing and expression is an important area of inquiry for positive psychology (Stanton et al., 2002). The authors recommend distinguishing, both conceptually and empirically, between emotion-focused strategies that involve active movement toward, versus away from, a stressful encounter.

Findings to date demonstrate that, although correlated, emotional processing and expression can have differential relations with adaptive outcomes, suggesting that further investigation of their distinct qualities and consequences require studies utilising these various methods. The emotional approach coping constructs should also be distinguished from other presumably emotion-focused coping strategies, both conceptually and empirically (Stanton et al., 2002).

Pienaar and Rothmann (2003) studied the psychometric properties of the COPE in the South African Police Service (SAPS) and extracted four internally consistent factors, namely Approach Coping, Avoidance, Seeking Emotional Support and Turning to Religion. These factors showed structural equivalence for police members of all race groups and no items were biased. In terms of the present study, it is important to establish reliable and valid methods of measurement with regard to coping. It is also important to consider cultural diversity in a multicultural setting such as the South African Police Service.

The validation of a reliable coping measure could further studies in positive psychology. According to Edwards and Baglioni (1999), research in recent years has generated the need for valid and reliable measures of coping. The authors believe that the conceptualisation of coping is at a relatively mature stage, thereby calling for a conceptual approach to the measurement of coping. Possible further studies of the ideas of Stanton et al. (2000) regarding coping through
emotional processing and expression could shed new light on the dispositional nature of coping in working context, and specifically in the SAPS. The objective of this study was therefore to study the psychometric properties of an adapted version of the COPE questionnaire.

METHOD

Research design

A survey design was used to achieve the research objectives. The specific design was a cross-sectional design (Shaughnessy, & Zechmeister, 1997), by which information collected was used to describe the population at a particular point in time. This design can also be used to evaluate interrelationships among variables within a population. According to Shaughnessy and Zechmeister (1997), this design is also ideal to describe and predict functions associated with correlation research.

Participants

The study population consisted of a random sample (N=229) of police members, selected from police stations in the North West Province. The characteristics of the participants are shown in Table 1.
Table 1

Characteristics of the Participants (N = 229)

<table>
<thead>
<tr>
<th>Item</th>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marital status</td>
<td>Single/widow/widower</td>
<td>29.40</td>
</tr>
<tr>
<td></td>
<td>Married</td>
<td>61.60</td>
</tr>
<tr>
<td></td>
<td>Divorced</td>
<td>5.20</td>
</tr>
<tr>
<td></td>
<td>Separated</td>
<td>1.30</td>
</tr>
<tr>
<td></td>
<td>Remarried (Once)</td>
<td>0.90</td>
</tr>
<tr>
<td></td>
<td>Remarried (Twice)</td>
<td>1.30</td>
</tr>
<tr>
<td>Home language</td>
<td>Afrikaans</td>
<td>57.60</td>
</tr>
<tr>
<td></td>
<td>Sepedi</td>
<td>0.90</td>
</tr>
<tr>
<td></td>
<td>Venda</td>
<td>0.40</td>
</tr>
<tr>
<td></td>
<td>Xhosa</td>
<td>0.40</td>
</tr>
<tr>
<td></td>
<td>English</td>
<td>1.70</td>
</tr>
<tr>
<td></td>
<td>Sesotho</td>
<td>3.90</td>
</tr>
<tr>
<td></td>
<td>Setswana</td>
<td>32.80</td>
</tr>
<tr>
<td></td>
<td>Zulu</td>
<td>0.90</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>1.30</td>
</tr>
<tr>
<td>Rank</td>
<td>Constable</td>
<td>1.30</td>
</tr>
<tr>
<td></td>
<td>Sergeant</td>
<td>5.70</td>
</tr>
<tr>
<td></td>
<td>Inspector</td>
<td>39.30</td>
</tr>
<tr>
<td></td>
<td>Captain</td>
<td>8.30</td>
</tr>
<tr>
<td></td>
<td>Superintendent</td>
<td>3.10</td>
</tr>
<tr>
<td></td>
<td>Senior Superintendent</td>
<td>0.40</td>
</tr>
<tr>
<td></td>
<td>Public Service Act Personnel</td>
<td>41.90</td>
</tr>
<tr>
<td>Salary level</td>
<td>Level 3</td>
<td>19.20</td>
</tr>
<tr>
<td></td>
<td>Level 4</td>
<td>15.70</td>
</tr>
<tr>
<td></td>
<td>Level 5</td>
<td>4.40</td>
</tr>
<tr>
<td></td>
<td>Level 6</td>
<td>8.70</td>
</tr>
<tr>
<td></td>
<td>Level 7</td>
<td>24.50</td>
</tr>
<tr>
<td></td>
<td>Level 8</td>
<td>9.60</td>
</tr>
<tr>
<td></td>
<td>Level 9</td>
<td>14.00</td>
</tr>
<tr>
<td></td>
<td>Level 10</td>
<td>3.10</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>0.50</td>
</tr>
<tr>
<td></td>
<td></td>
<td>45.40</td>
</tr>
</tbody>
</table>

*Where percentages do not equal 100, it is due to missing values

The sample of police personnel consisted mainly of Inspectors (39.30\%) and Public Service Act personnel (41.90\%). Of the participants 124 were males and 104 were females. Most participants were at salary level 7, indicating that they earn between R100 000 and R110 000 per year. On average, participants have been in their current rank for 4,81 years (SD=3.10). Various language
groups were included in the study, with the largest representation from the Afrikaans (N=132) and Tswana (N=75) language groups. Married participants accounted for 61.60% of the study population.

Measuring instruments

Two questionnaires were used in this research, namely the Coping Orientations to Problems Experience Questionnaire (COPE) (Carver et al., 1989) and a biographical questionnaire, compiled by the researcher.

The Coping Orientations to the Problems Experienced Questionnaire (COPE) (Carver et al., 1989) was designed to measure both situational and dispositional coping strategies. In the present study, the dispositional version consisting of 53 items was used, with eight (8) items added. Response choices ranged from 1 (I usually don’t do this at all) to 4 (I usually do this a lot). The COPE measures 14 coping strategies. Eight items, measuring emotional processing and emotional expression (four items each), as developed by Stanton et al. (2002), were added. In previous South African research, Pienaar and Rothmann (2003) subjected the COPE to a principal components factor analysis with a varimax rotation. Pienaar and Rothmann (2003) extracted four internally consistent factors, namely Approach Coping, Avoidance, Seeking Emotional Support and Turning to Religion. All these factors showed acceptable alpha values (α>0.70) (Nunnally, & Bernstein, 1994), indicating the internal consistency of the factors. Test-retest reliability varied from 0.46 to 0.86 and from 0.42 to 0.89 (applied after two weeks) (Pienaar & Rothmann, 2003).

The biographical questionnaire was used to gather information about the demographic characteristics of all the participants. Information that was gathered included the following: age, gender, years of service, years in current position (to assess advancement), marital status, home language and whether or not the police officers utilise their full entitlement of annual leave and rest days.
Procedure

The COPE questionnaire was adapted by adding eight (8) items developed by Stanton et al. (2002) that measure emotional processing and emotional expression (four items each). Literature searches were done. Four field workers were used to administer the questionnaires.

Randomly selected police stations were informed during January 2004 of the fieldwork, which took place during December 2004. Randomly selected members of the SAPS who were on duty during that day were included in the study. The data was entered into a computer program and checked for errors. Finally the data set was prepared for statistical analysis.

Data analysis

The statistical analysis was carried out with the help of the SPSS program (SPSS, 2003). Initially, reliability of the subscales of the COPE was investigated by looking at the alpha values. Failure to establish internal consistency shifted the focus of the analysis to an exploratory mode. To evaluate the construct validity of the COPE, principal factors extraction with varimax rotation was used on the 61 items of the COPE. Principal components extraction was used prior to principal factors extraction to estimate the number of factors, presence of outliers and factorability of the correlation matrices. The criterion for factors was an eigenvalue greater than or equal to one, after varimax rotation. The scree plot was also employed.

Cronbach alpha coefficients were used to assess the internal consistency of the measuring instrument (Clark & Watson, 1995). Descriptive statistics (e.g. means, standard deviations, skewness and kurtosis) were used to analyse the data. T-tests and ANOVA were used to determine the differences between the coping strategies of police members in different demographic groups. The following formula was used to determine the practical significance of differences (df) when t-tests were used (Steyn, 1999):

29
\[ d = \frac{\text{Means}_A - \text{Means}_B}{\text{SD}_{\text{max}}} \]

Where

\( \text{Mean}_A \) = Mean of the first group

\( \text{Mean}_B \) = Mean of the second group

\( \text{SD}_{\text{max}} \) = Highest standard deviation of the two groups

The following formula was used to determine the practical significance of means of more than two groups (Steyn, 1999):

\[ d = \frac{\text{Means}_A - \text{Means}_B}{\sqrt{\text{MSE}}} \]

Where

\( \text{Mean}_A \) = Mean of the first group

\( \text{Mean}_B \) = Mean of the second group

\( \sqrt{\text{MSE}} \) = Root Mean Square Error

A cut-off point of 0.50 (medium effect) (Cohen, 1988) was set for the practical significance of difference between means.

Construct (structural) equivalence was used to compare the factor structures of the COPE for two language groups. The Afrikaans group, representing the bulk of the sample \((N=132)\) was compared to an “other” languages group, represented by all other language groups in the study \((N=97)\). Exploratory factor analysis and target (Procrustean) rotation were used to determine construct equivalence (Van de Vijver & Leung, 1997). According to Van de Vijver and Leung (1997), it is not acceptable to conduct factor analyses for different cultural groups to address the similarity of factor-analytical solutions, because the spatial orientation of factors in factor analysis is arbitrary. Rather, prior to an evaluation of the agreement of factors in different cultural groups, the matrices of loadings should be rotated with regard to each other (i.e. target
rotations should be carried out). The factor loadings of separate groups were rotated to a joint common matrix of factor loadings. After target rotation had been carried out, factorial agreement was estimated using Tucker's coefficient of agreement (Tucker's phi). This coefficient is insensitive to multiplications of the factor loadings, but is sensitive to a constant added to all loadings of a factor. This index does not have a known sampling distribution; hence it is impossible to establish confidence intervals. Values higher than 0.95 are regarded as evidence for factorial similarity, whereas values lower than 0.85 are taken to point to non-negligible incongruities (Van de Vijver & Leung, 1997). This index is sufficiently accurate to examine factorial similarity at a global level. However, if construct equivalence is not acceptable, bias analyses should be carried out to detect inappropriate items.

An extension of Cleary and Hilton's (1968) use of analysis of variance was applied to identify item bias (Van de Vijver & Leung, 1997). Bias was examined separately for each item. The item score was the dependent variable, while language groups (two levels) and score levels on factors were the independent variables. Score groups were composed on the basis of the total score on the COPE. Two effects were tested through analysis of variance, namely the main effect of language group, and the interaction of score level and language group. When both the main effect of language group and the interaction of score level and language group were non-significant, the item was considered unbiased.

RESULTS

Firstly, reliability of the proposed sub-scales of the COPE was evaluated by inspecting the alpha values. Results of the analysis are given in Table 2.
Table 2

Descriptive Statistics and Alpha Coefficients of the COPE

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Mean</th>
<th>SD</th>
<th>Skewness</th>
<th>Kurtosis</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seeking social support for emotional reasons</td>
<td>2.78</td>
<td>0.75</td>
<td>-0.25</td>
<td>-0.42</td>
<td>0.67</td>
</tr>
<tr>
<td>Emotional expression</td>
<td>2.70</td>
<td>0.63</td>
<td>-0.00</td>
<td>-0.05</td>
<td>0.53</td>
</tr>
<tr>
<td>Planning</td>
<td>3.10</td>
<td>0.58</td>
<td>-0.43</td>
<td>-0.06</td>
<td>0.51</td>
</tr>
<tr>
<td>Turning to religion</td>
<td>3.20</td>
<td>0.56</td>
<td>-0.88</td>
<td>0.91</td>
<td>0.48</td>
</tr>
<tr>
<td>Mental disengagement</td>
<td>2.56</td>
<td>0.62</td>
<td>0.30</td>
<td>-0.20</td>
<td>0.49</td>
</tr>
<tr>
<td>Behavioural disengagement</td>
<td>2.20</td>
<td>0.54</td>
<td>0.12</td>
<td>-0.20</td>
<td>0.26</td>
</tr>
<tr>
<td>Positive reinterpretation and growth</td>
<td>2.58</td>
<td>0.62</td>
<td>0.17</td>
<td>-0.25</td>
<td>0.58</td>
</tr>
<tr>
<td>Restrained coping</td>
<td>2.95</td>
<td>0.65</td>
<td>-0.33</td>
<td>-0.23</td>
<td>0.67</td>
</tr>
<tr>
<td>Emotional processing</td>
<td>2.61</td>
<td>0.64</td>
<td>-0.11</td>
<td>-0.43</td>
<td>0.50</td>
</tr>
<tr>
<td>Suppression of competing activities</td>
<td>2.74</td>
<td>0.63</td>
<td>-0.25</td>
<td>-0.06</td>
<td>0.56</td>
</tr>
<tr>
<td>Active coping</td>
<td>2.98</td>
<td>0.65</td>
<td>-0.24</td>
<td>-0.15</td>
<td>0.60</td>
</tr>
<tr>
<td>Acceptance</td>
<td>2.80</td>
<td>0.64</td>
<td>-0.25</td>
<td>-0.19</td>
<td>0.59</td>
</tr>
<tr>
<td>Focus on and venting of emotions</td>
<td>2.24</td>
<td>0.70</td>
<td>0.30</td>
<td>-0.58</td>
<td>0.60</td>
</tr>
<tr>
<td>Seeking social support for instrumental reasons</td>
<td>2.69</td>
<td>0.72</td>
<td>-0.11</td>
<td>-0.53</td>
<td>0.72</td>
</tr>
<tr>
<td>Denial</td>
<td>2.60</td>
<td>0.63</td>
<td>0.11</td>
<td>-0.49</td>
<td>0.56</td>
</tr>
</tbody>
</table>

Table 2 shows that although no subscales showed an abnormal distribution, as indicated by skewness and kurtosis, the Cronbach alpha coefficients of the scales can be considered as unacceptable, compared to the guideline of $\alpha > 0.70$ (Nunnally & Bernstein, 1994).

Turning to an exploratory mode, principal factors extraction with varimax rotation was performed on the 61 items of the COPE. Principal components extraction was used prior to principal factors extraction to estimate the number of factors, presence of outliers and factorability of the correlation matrices. Oblimin rotation indicated the factors to be only weakly related, and was it was followed by a varimax rotation. The criterion for factors was an eigenvalue greater than or equal to one, after varimax rotation. The scree plot was also employed. Extraction of two factors was indicated, accounting for 33.97% of the variance. Table 3 gives the results of the factor analysis.
Table 3
Principal Components Factor Analysis with Varimax Rotation of the COPE \((N = 229)\)

<table>
<thead>
<tr>
<th>Item number</th>
<th>Item wording</th>
<th>(F_1)</th>
<th>(F_2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>I try to get advice from someone about what to do.</td>
<td>0.81</td>
<td>0.00</td>
</tr>
<tr>
<td>57</td>
<td>I discuss my feelings with someone.</td>
<td>0.81</td>
<td>0.00</td>
</tr>
<tr>
<td>47</td>
<td>I talk to someone to find out more about the situation.</td>
<td>0.76</td>
<td>0.00</td>
</tr>
<tr>
<td>39</td>
<td>I talk to someone who could do something concrete about the problem.</td>
<td>0.74</td>
<td>0.00</td>
</tr>
<tr>
<td>60</td>
<td>I feel free to express my emotions.</td>
<td>0.71</td>
<td>0.00</td>
</tr>
<tr>
<td>10</td>
<td>I talk to someone about how I feel.</td>
<td>0.67</td>
<td>0.00</td>
</tr>
<tr>
<td>42</td>
<td>I take time to express my emotions.</td>
<td>0.67</td>
<td>0.00</td>
</tr>
<tr>
<td>18</td>
<td>I try to get emotional support from friends or relatives.</td>
<td>0.67</td>
<td>0.00</td>
</tr>
<tr>
<td>32</td>
<td>I get sympathy and understanding from someone.</td>
<td>0.62</td>
<td>0.00</td>
</tr>
<tr>
<td>2</td>
<td>I ask people who have had similar experiences what they did.</td>
<td>0.60</td>
<td>0.00</td>
</tr>
<tr>
<td>16</td>
<td>I let my feelings out.</td>
<td>0.60</td>
<td>0.00</td>
</tr>
<tr>
<td>35</td>
<td>I let my feelings come out freely.</td>
<td>0.60</td>
<td>0.00</td>
</tr>
<tr>
<td>49</td>
<td>I allow myself to express my emotions.</td>
<td>0.58</td>
<td>0.00</td>
</tr>
<tr>
<td>37</td>
<td>I take direct action to get around the problem.</td>
<td>0.46</td>
<td>0.00</td>
</tr>
<tr>
<td>17</td>
<td>I realize that my feelings are valid and important.</td>
<td>0.45</td>
<td>0.00</td>
</tr>
<tr>
<td>46</td>
<td>I feel a lot of emotional distress and I find myself expressing those feelings a lot.</td>
<td>0.41</td>
<td>0.00</td>
</tr>
<tr>
<td>34</td>
<td>I focus on dealing with the problem, and if necessary let other things slide a little.</td>
<td>0.00</td>
<td>0.72</td>
</tr>
<tr>
<td>20</td>
<td>I learn something from the experience.</td>
<td>0.00</td>
<td>0.71</td>
</tr>
<tr>
<td>31</td>
<td>I look for something good in what is happening.</td>
<td>0.00</td>
<td>0.67</td>
</tr>
<tr>
<td>27</td>
<td>I do what has to be done, one step at a time.</td>
<td>0.00</td>
<td>0.63</td>
</tr>
<tr>
<td>53</td>
<td>I keep myself from getting distracted by other thoughts or activities.</td>
<td>0.00</td>
<td>0.65</td>
</tr>
<tr>
<td>56</td>
<td>I accept the reality of the fact that it happened.</td>
<td>0.00</td>
<td>0.65</td>
</tr>
<tr>
<td>5</td>
<td>I force myself to wait for the right time to do something.</td>
<td>0.00</td>
<td>0.63</td>
</tr>
<tr>
<td>6</td>
<td>I put aside other activities in order to concentrate on this.</td>
<td>0.00</td>
<td>0.60</td>
</tr>
<tr>
<td>29</td>
<td>I turn to work or other substitute activities to take my mind off things.</td>
<td>0.00</td>
<td>0.56</td>
</tr>
<tr>
<td>51</td>
<td>I hold off doing anything about it until the situation permits.</td>
<td>0.00</td>
<td>0.52</td>
</tr>
<tr>
<td>43</td>
<td>I try to find comfort in my religion.</td>
<td>0.00</td>
<td>0.53</td>
</tr>
<tr>
<td>4</td>
<td>I try to grow as a person as a result of the experience.</td>
<td>0.00</td>
<td>0.51</td>
</tr>
<tr>
<td>48</td>
<td>I act as though it hasn’t even happened.</td>
<td>0.00</td>
<td>0.50</td>
</tr>
<tr>
<td>33</td>
<td>I pretend that it hasn’t really happened.</td>
<td>0.00</td>
<td>0.49</td>
</tr>
<tr>
<td>7</td>
<td>I take additional action to try to get rid of the problem.</td>
<td>0.00</td>
<td>0.48</td>
</tr>
<tr>
<td>21</td>
<td>I make sure not to make matters worse by acting too soon.</td>
<td>0.00</td>
<td>0.48</td>
</tr>
<tr>
<td>38</td>
<td>I accept that this hasn’t happened and that it can’t be changed.</td>
<td>0.00</td>
<td>0.46</td>
</tr>
<tr>
<td>3</td>
<td>I take time to figure out what I’m really feeling.</td>
<td>0.00</td>
<td>0.44</td>
</tr>
<tr>
<td>11</td>
<td>I think about how I might best handle the problem.</td>
<td>0.00</td>
<td>0.44</td>
</tr>
<tr>
<td>8</td>
<td>I get used to the idea that it happened.</td>
<td>0.00</td>
<td>0.42</td>
</tr>
<tr>
<td>41</td>
<td>I go to movies or watch TV, or think about it.</td>
<td>0.00</td>
<td>0.42</td>
</tr>
</tbody>
</table>

\(F_1\): Active emotional expression

\(F_2\): Emotional reappraisal
Table 2 shows that 38 items made up the two extracted factors (item-loadings greater than or equal to 0.40), while 23 items failed to load. The first factor loaded 16 items, and deals mainly with an active effort on police officers' part to cope with distress, and loaded many items dealing with emotional expression and active efforts aimed at managing the emotional reaction to stressors. Accordingly, the first factor was labelled Active emotional expression. The second factor loaded 22 items, and deals with police officers' reappraisal of their own emotional reaction. Although both factors loaded items related to taking direct action to solve the problem, the first factor was clearly dominated by an active orientation, while the second was dominated by a passive, resigned orientation. Items that failed to load in the factor analysis describe coping by denying that a problem exists, seeking comfort in religion, avoiding the problem by sleeping, using alcohol or drugs and giving up. Coping by making a plan of action, restraining oneself from doing anything too quickly, and not putting any effort into dealing with the problem, also describe items that failed to load.

The descriptive statistics and alpha coefficients for the two extracted coping factors are given in Table 4.

Table 4

Descriptive Statistics and Alpha Coefficients of the extracted COPE-Factors

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>Skewness</th>
<th>Kurtosis</th>
<th>a</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active emotional expression</td>
<td>39.79</td>
<td>10.15</td>
<td>-0.24</td>
<td>-0.55</td>
<td>0.91</td>
</tr>
<tr>
<td>Emotional reappraisal</td>
<td>59.18</td>
<td>11.44</td>
<td>-0.06</td>
<td>-0.04</td>
<td>0.92</td>
</tr>
</tbody>
</table>

Table 4 shows that neither of the extracted factors show high skewness and/or kurtosis, and the Cronbach alpha coefficients of the scales can be considered as acceptable, compared to the guideline of $\alpha > 0.70$ (Nunnally & Bernstein, 1994). Emotional reappraisal showed a higher mean than Active emotional expression.
Given that two acceptable coping factors were identified by means of factor analysis, the item bias and structural equivalence of constructs were investigated. The item bias analysis for items that loaded in the factor analysis reported in Table 3, is given in Table 5 below.
### Item bias analysis of COPE Items

<table>
<thead>
<tr>
<th>Item</th>
<th>Tot SS</th>
<th>$D_{g}$</th>
<th>SS $g$</th>
<th>$F_g$</th>
<th>$E_{gs}$ square</th>
<th>$D_{s}$</th>
<th>SS $i$</th>
<th>$F_i$</th>
<th>$E_{is}$ square</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Active emotional expression</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COPE 44</td>
<td>351.84</td>
<td>1</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>37</td>
<td>0.40</td>
<td>0.82</td>
<td>0.34</td>
</tr>
<tr>
<td>COPE 50</td>
<td>146.23</td>
<td>1</td>
<td>0.00</td>
<td>0.01</td>
<td>0.00</td>
<td>37</td>
<td>1.02</td>
<td>1.47</td>
<td>0.45</td>
</tr>
<tr>
<td>COPE 20</td>
<td>165.60</td>
<td>1</td>
<td>0.47</td>
<td>0.85</td>
<td>0.01</td>
<td>37</td>
<td>0.30</td>
<td>0.55</td>
<td>0.23</td>
</tr>
<tr>
<td>COPE 34</td>
<td>182.77</td>
<td>1</td>
<td>0.36</td>
<td>0.85</td>
<td>0.01</td>
<td>37</td>
<td>0.44</td>
<td>1.03</td>
<td>0.36</td>
</tr>
<tr>
<td>COPE 27</td>
<td>143.09</td>
<td>1</td>
<td>0.26</td>
<td>0.76</td>
<td>0.39</td>
<td>37</td>
<td>0.26</td>
<td>0.76</td>
<td>0.29</td>
</tr>
<tr>
<td>COPE 53</td>
<td>172.70</td>
<td>1</td>
<td>0.28</td>
<td>0.57</td>
<td>0.01</td>
<td>37</td>
<td>1.96</td>
<td>1.10</td>
<td>0.38</td>
</tr>
<tr>
<td>COPE 56</td>
<td>204.99</td>
<td>1</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>38</td>
<td>0.31</td>
<td>0.02</td>
<td>0.04*</td>
</tr>
<tr>
<td>COPE 5</td>
<td>185.98</td>
<td>1</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>37</td>
<td>0.63</td>
<td>1.05</td>
<td>0.37</td>
</tr>
<tr>
<td>COPE 6</td>
<td>186.59</td>
<td>1</td>
<td>0.19</td>
<td>0.34</td>
<td>0.01</td>
<td>37</td>
<td>0.56</td>
<td>0.99</td>
<td>0.35</td>
</tr>
<tr>
<td>COPE 29</td>
<td>172.90</td>
<td>1</td>
<td>0.00</td>
<td>0.01</td>
<td>0.00</td>
<td>37</td>
<td>0.61</td>
<td>1.15</td>
<td>0.39</td>
</tr>
<tr>
<td>COPE 51</td>
<td>167.06</td>
<td>1</td>
<td>0.66</td>
<td>1.38</td>
<td>0.02</td>
<td>37</td>
<td>0.47</td>
<td>0.99</td>
<td>0.53</td>
</tr>
<tr>
<td>COPE 43</td>
<td>151.71</td>
<td>1</td>
<td>0.07</td>
<td>0.14</td>
<td>0.00</td>
<td>37</td>
<td>0.62</td>
<td>1.24</td>
<td>0.41</td>
</tr>
<tr>
<td>COPE 4</td>
<td>143.09</td>
<td>1</td>
<td>0.06</td>
<td>0.18</td>
<td>0.00</td>
<td>37</td>
<td>0.36</td>
<td>1.09</td>
<td>0.38</td>
</tr>
<tr>
<td>COPE 48</td>
<td>205.54</td>
<td>1</td>
<td>0.06</td>
<td>0.10</td>
<td>0.00</td>
<td>37</td>
<td>20.13</td>
<td>0.96</td>
<td>0.35</td>
</tr>
<tr>
<td>COPE 33</td>
<td>206.90</td>
<td>1</td>
<td>0.95</td>
<td>1.38</td>
<td>0.02</td>
<td>37</td>
<td>0.59</td>
<td>0.86</td>
<td>0.32</td>
</tr>
<tr>
<td>COPE 7</td>
<td>151.92</td>
<td>1</td>
<td>0.54</td>
<td>1.10</td>
<td>0.02</td>
<td>37</td>
<td>0.33</td>
<td>0.66</td>
<td>0.27</td>
</tr>
<tr>
<td>COPE 21</td>
<td>190.85</td>
<td>1</td>
<td>0.06</td>
<td>0.12</td>
<td>0.00</td>
<td>37</td>
<td>0.55</td>
<td>1.24</td>
<td>0.41</td>
</tr>
<tr>
<td>COPE 38</td>
<td>182.90</td>
<td>1</td>
<td>0.03</td>
<td>0.02</td>
<td>0.00</td>
<td>37</td>
<td>0.61</td>
<td>1.10</td>
<td>0.38</td>
</tr>
<tr>
<td>COPE 1</td>
<td>192.32</td>
<td>1</td>
<td>0.00</td>
<td>0.01</td>
<td>0.00</td>
<td>37</td>
<td>0.71</td>
<td>1.15</td>
<td>0.39</td>
</tr>
<tr>
<td>COPE 11</td>
<td>141.22</td>
<td>1</td>
<td>0.35</td>
<td>0.73</td>
<td>0.01</td>
<td>37</td>
<td>0.36</td>
<td>0.76</td>
<td>0.30</td>
</tr>
<tr>
<td>COPE 8</td>
<td>195.96</td>
<td>1</td>
<td>0.02</td>
<td>0.03</td>
<td>0.00</td>
<td>37</td>
<td>0.49</td>
<td>0.68</td>
<td>0.27</td>
</tr>
<tr>
<td>COPE 41</td>
<td>171.37</td>
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<td>COPE 60</td>
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<td>15</td>
<td>1.14</td>
<td>1.55</td>
<td>0.45</td>
</tr>
</tbody>
</table>

*Uniform and non-uniform biased items
Table 5 shows that significant eta square values exist for Item 56 and Item 60 regarding uniform bias, and significant eta square values exist for Item 18 and Item 57 regarding non-uniform bias. Therefore, it seems that the means of the language groups for the different score levels differ from zero in a systematic way.

The construct equivalence of the two extracted factors was analysed by looking at Tucker’s coefficient of agreement. Results are presented in Table 6.

Table 6
Construct Equivalence of the COPE Dimensions for the two Language Groups

<table>
<thead>
<tr>
<th>Group</th>
<th>Percentage of sample</th>
<th>Tucker’s phi – Active emotional expression</th>
<th>Tucker’s phi – Emotional reappraisal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afrikaans</td>
<td>57.60</td>
<td>0.97</td>
<td>0.97</td>
</tr>
<tr>
<td>Other languages</td>
<td>42.30</td>
<td>0.97</td>
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</tr>
</tbody>
</table>

Inspection of Table 6 reveals that the Tucker’s phi coefficients for Active emotional expression and Emotional reappraisal for the two language groups were all acceptable (>0.90). The constructs therefore appear equivalent for both the Afrikaans and “other” languages groups.

Finally, differences between subgroups in the sample were investigated. T-tests indicated that with regard to the two coping factors, no significant differences were found between the created language categories or gender. ANOVA was used to determine the differences between the coping strategies of police members with different ranks, marital status and salary categories. Again, no significant differences were found between groups.
DISCUSSION

The present study examined the psychometric properties of the COPE, an instrument constructed to measure the coping strategies of individuals. The objectives were to determine the construct validity and internal consistency of the COPE and to test its construct equivalence and item bias for different race groups in a sample of police officers. Analyses were also undertaken to determine whether there were any differences between demographic subgroups of the sample.

Initially, by examining the alpha values, the reliability of the hypothesised subscales of the COPE was examined. Only one subscale (Seeking Social Support for Instrumental Reasons) was found to have an acceptable alpha value. Failure to establish reliability caused the focus of the analysis to shift to an exploratory mode. To evaluate the construct validity of the COPE, principal factors extraction with varimax rotation was performed on the data. Two factors were extracted and labelled 1) Active emotional expression, and 2) Emotional reappraisal. Active emotional expression, as a coping strategy for police officers, deals with talking to other people about similar experiences, or talking about the feelings generated by the experiences. Police officers also appreciated the worth of their feelings, and expressed these. Officers further took an active approach by mobilising emotional support from friends or relatives by asking for advice and sympathy. All the items that loaded on this first factor gave a clear impression that an active way was used to express emotions regarding a problem. Deisinger, Casisi, and Whitaker (1996) found that so-called “normal” individuals tended to seek social support and vent their feelings more frequently than “eccentric” subjects, but less frequently than anxious subjects. It was also found that women had a greater preference for seeking social support, as well as for focusing on and venting their emotions. According to Bower (2002), efforts to get fire fighters, disaster survivors, and others to talk about traumatic events immediately after such experiences, with an emphasis on venting emotions, have mushroomed in the past few years, despite the absence of evidence that this actually aids recovery from highly upsetting events. Many people may be better off distancing themselves from the experience immediately afterward, instead of re-exposing themselves, especially if they do so only once, rather than repeatedly, and therefore have no time to become habituated and desensitized. The invitation to express and vent emotions may also inhibit natural recovery by creating unnecessary fears and causing catastrophic
misinterpretation of any symptoms that appear later on (Unknown, 2003b). According to Coghlan (2003), it was found that it is not necessarily “good to talk”, i.e. expressing emotions. Talking through a traumatic event might itself add to the trauma for some survivors. On the other hand, Robinson and Mitchell (1993) found that emotional expression after a traumatic event contributed to reduced stress levels of subjects. According to Anshel (2000), emotion-focused coping allows a police officer to maintain attentional focus, and move on to the next task. Active emotional expression might benefit police officers, on condition that it is “controlled” through a series of trauma recovery interventions, for example emotional debriefing.

In previous coping research within the SAPS, Pienaar and Rothmann (2003) extracted a factor they termed Seeking Emotional Support as a coping mechanism. This factor is related to the affective dimension of human beings (emotions) and emotional mechanisms employed in dealing with stressful situations. Active emotional expression, as indicated by the items which loaded on the first factor, can be seen as a part of emotional support seeking behaviour. Coping through an emotional approach has been suggested to carry adaptive potential, and expressing can confer psychological and physical health advantages (Stanton et al., 2000; Stanton et al., 2002). This factor indicated an active way of approaching a problem situation and actively expressing emotions regarding the problem. The factors of emotional support (Pienaar & Rothmann, 2003) and active emotional expression (as indicated by current findings), seem to indicate the need of police officers for some form of emotional expression and/or psychological debriefing regarding the experiences they are subjected to in the course of their work. Research conducted by Salovey and Mayer (1990) indicated that the ability to appraise and express emotions accurately forms part of emotional intelligence. Emotionally intelligent individuals can respond more appropriately to their own feelings because of the accuracy with which they perceive these feelings. The question that can therefore be posed is that if police officers express their emotions, do they act in an emotionally intelligent way? Also, if expressed, does it aid or hinder the maintenance of mental health? Further research in this regard is thus required. Police officers are exposed to traumatic scenes and incidents on a daily basis, for example the high crime rate in South Africa and the death toll on the country’s roads. Emotional expression is encouraged in the SAPS by using a Formal Debriefing model. According to Karlsson and Christianson (2003), police officers reported that it helped them to talk about a traumatic event with their colleagues.
The Formal Debriefing Model currently utilised in the SAPS is based on a model devised by Robinson and Mitchell (1993), which encourages the ventilation of thoughts and feelings of traumatised personnel in order to make a traumatic incident more manageable, thereby enabling the officer to return home without unusual stress. Results from the present study suggest that emotional expression may be an important coping strategy for police officers. Future research needs to investigate the effectiveness of emotional expression as a means to alleviate psychological stress.

A more positive interpretation of active emotional expression as coping factor implies that police officers are beneficially influenced by the Trauma Intervention Management plan which was implemented in January 2002. The coping mechanism of Active emotional expression is encouraged by using a Formal Debriefing model, which, as previously stated, is aimed at the ventilation of thoughts and feelings in order to make a traumatic incident more manageable. The members are reassured that they are survivors, and not victims or patients, but healthy individuals with normal emotions and reactions to abnormal situations (Robinson & Mitchell, 1993). Previous researchers indicated that formal debriefing should form part of a holistic approach, as currently employed by the SAPS (Dewe, 1994; Gilmore, 2004; Van Emmerik, Kamphuis, Hulsbosch, Emmelkamp, 2002).

On the negative side, active emotional expression might manifest in coping strategies such as alcohol abuse and corruption, if opportunities for healthy debriefing are not present or actively utilised. The recent spate of suicides in the SAPS could also be seen as a method of active emotional expression, although expressed in very negative terms. The culture of “Cowboys don’t cry” which is found in the SAPS further strengthens negative ways of active emotional expression. Police officers who do not have healthy and socially acceptable outlets for their emotional distress, may express their emotions in negative ways, such as alcohol abuse, dysfunctional work and home attitudes, and ultimately suicide. Research conducted by Burke (1998), concluded that police officers who made use of active coping made less use of escapist coping and they experienced less work-family conflict, fewer psychosomatic symptoms, and greater job satisfaction. When linked to the present study, passive coping mechanisms as indicated by emotional reappraisal might well cause police officers to become cynical and
encourage the development of suicidal ideation. It might also encourage them to use escapist coping and in turn experience more work-family conflict, more psychosomatic symptomatology, and less job satisfaction. Further research into this hypothesis is necessary in order to verify it.

Research conducted by Stanton et al. (2000), however, indicated that in reappraisal of a stressor, one may come to a satisfying attribution regarding the stressor, reduce the perceived threat, or find benefit in one’s experience, which in turn may promote positive adjustment. If police officers use emotional reappraisal (as indicated in the present study), it might well be a constructive way of coping with a stressor, and not necessarily negative or detrimental. Again, future research needs to verify this hypothesis by investigating the effectiveness of emotional reappraisal in maintaining mental health.

Emotional reappraisal as a coping strategy for police officers, deals with a more passive approach to a problem situation by thinking about the problem and trying to extract something positive from what has happened. Also, forcing oneself to wait for the right time to do something was used as a method of emotional reappraisal. This factor is also described by activities such as putting aside other activities in order to concentrate on the problem, and trying to get used to the idea that an event has taken place. Taking action, one-step at a time, turning to work or substitute activities, or simply pretending that the event did not really take place, are indicated as methods used to cope with the existing problem. The latter behaviours suggest an avoidant approach, and it seems evident that emotional reappraisal implies a more passive orientation towards coping with problems. Previous research has indicated that positive reappraisal is a way of managing stress emotions. Coping by positive emotional reappraisal (constructive coping) has been shown to lead to the individuals experiencing higher levels of personal accomplishment (Basson, 2002). The fact that this coping strategy is described as passive implies that it has negative effects. There is some danger that police members experiencing high levels of strain might use their available energy to reappraise their emotions. This energy might rather be used to take action by doing something about a situation. A person could get so caught up in his or her attempts to reappraise their emotions, that they don’t have the energy to take action to address the problem.
There is a definite distinction between the two factors in the method of coping that is employed, namely active and passive. Some of the items which loaded on the second factor (Emotional reappraisal) indicated a more passive approach to a problem situation, with a strong emotional component. Booysen (2002) indicated that utilising social support as an emotional coping mechanism is found among police officers, but that passive coping mechanisms could be used to predict suicide ideation. Wiese, Rothmann, and Storm (2003) found that the use of active coping strategies (emotional support) led to a decrease in police officers’ levels of exhaustion, while passive coping was related to cynicism. In combination, the indication is clearly that passive coping strategies seem more strongly related to negative health outcomes. Future research could study the relationship between emotional reappraisal as coping strategy and outcomes such as health, job satisfaction and work engagement.

Item bias refers to measurement artefacts at item level. In the case of item bias, a distinction can be made between uniform and non-uniform bias. Uniform bias refers to influences of bias on scores that are more or less the same for all score levels. Non-uniform bias refers to influences that are not identical for all score levels (Van de Vijver & Leung, 1997). Uniform bias is indicated when individuals from one cultural group have higher scores on an item than individuals from another cultural group, even when they have the same total test score (Van de Vijver & Leung, 1997). The wording of the items that showed uniform bias was: “I accept the reality of the fact that it happened” (Item 56), and “I feel free to express my emotions” (Item 60). South Africa has 11 different official languages, and is also known as the Rainbow Nation – an indicator of the diversity that is present in the country. It should thus be obvious that the cultural diversity has had an impact on many aspects of South African citizens’ lives. Language barriers are an important problem for cross-cultural research in general (Olmedo, 1979). If cultural influences are not taken into account, then invalid conclusions regarding the constructs under study could be made with serious implications for culturally diverse settings such as in South Africa. Acceptance of circumstances and emotional expression might be argued to both describe individual activity strongly regulated by cultural scripts.

Non-uniform bias is indicated when an item discriminates better in one group than in the other (Van de Vijver & Leung, 1997). The following items showed non-uniform bias: “I try to get
emotional support from friends or relatives" (Item 18), and "I discuss my feelings with someone" (Item 57). A possible explanation for the items that showed non-uniform bias is the language differences within the study population, as well as the cultural differences. Black subjects might be more open and willing to share their problems with friends or family, while white subjects might not be comfortable with doing so. Pienaar and Rothmann (2003) found that blacks scored higher on Avoidance coping than both whites and Coloureds, while blacks measured higher on Seeking of Emotional Support. These findings showed that black members of the SAPS are more inclined to seek emotional support, and have a more avoidant strategy in coping with strains.

With regard to Seeking Emotional Support, it is possible that differences could be attributed to the “ubuntu” principle found in the African cultural groupings, according to which group members rely on their group membership and not on individual self-reliance, which is often found in a Western philosophy (Mbigi & Maree, 1995). Both biased items seem to relate to social support seeking behaviour.

Since many potential research participants in South Africa are not fluent in English, the apparent language barrier can hamper assessment pertaining to many important issues such as psychological functioning. Compared to intercultural studies, cross-cultural research is open to more validity threats (Van de Vijver & Leung, 1997). The role that language played as barrier in the present study can also not be discounted. Since two language groups were compared, the implication is that there might be a slight difference in the meaning of words for participants from divergent cultures, and that this might have led to the bias on the items as indicated.

In general, bias will lower the level of equivalence of a test. Uniform or non-uniform bias is harmless for construct equivalence, because numeric score comparisons across cultures are not permitted. Uniform bias will not threaten measurement unit equivalence. Non-uniform bias will destroy equivalence to a considerable extent, because the measurement units in the two groups are no longer the same. When several items show this kind of bias, cross-cultural score comparisons are likely to produce incorrect results (Van de Vijver & Leung, 1997). Since only two items showed non-uniform bias in the present study, it cannot be concluded that cross-cultural score comparisons for these items will produce incorrect results.
Tucker's phi coefficients for Active emotional expression and Emotional reappraisal for the two language groups were all acceptable (>0.90), indicating that the two constructs are equivalent for the two language groups. This implies that the COPE measures the two extracted factors consistently across language groups in the present study within the confounds of the biased items.

Finally, differences between subgroups in the sample were investigated. T-tests indicated that with regard to the two coping factors, no significant differences were found between the created language categories, or gender. Demographic factors such as race and gender have been emphasised as influential in coping strategies, and demographic factors have been shown to interact with age (Folkman, Lazarus, Pimley, & Novacek, 1987) and gender (Folkman & Lazarus, 1980) to affect coping responses in individuals. Pienaar and Rothmann (2003) found that black members of the SAPS are more inclined to seek emotional support, and have a more avoidant coping strategy. No differences could be found regarding the two language groups that were created for the current analysis, perhaps indicating the homogeneity of the phenomenon across groups. Similarly, gender had no effect in terms of differences on coping scales, although previous research has indicated women to show more Social/Emotional-focused coping (Kallasmaa & Tartu, 2000). Further confirmation of gender differences in coping strategies are also found in research conducted by Hudek-Knezevic, Kardum, and Vukmirovic (1999), as well as findings by Stanton et al. (2000). However, the sample size of the present study is a limitation in this regard, and more fine-grained analysis with larger study populations is a recommendation for future research.

ANOVA's were used to determine the differences between the coping strategies of police members with different ranks, marital status and salary categories. Again, no significant differences were found between groups. Research conducted by Burke (1998) could be helpful with regard to marital status, as it was found that police officers who made use of active coping mechanisms experienced less work-family conflict. It is suggested that this be verified in future research. Research conducted by Naude (2003) indicated that coping strategies differed between groups of Medical Specialists and Management, as well as Support Services groups in terms of Seeking Social Support. It can be argued that the different groups might be on different salary
levels - in the present study however, no significant differences were found between groups on different salary levels.

RECOMMENDATIONS

- Police members should be encouraged to make effective use of the Trauma Management Intervention Programme in the SAPS, and the program should be marketed effectively.
- Members should be empowered by stress management interventions to enable them to deal better with the demands currently found in the SAPS.
- Emotional reappraisal can be positively implemented so that police officials get some positive results from a negative situation.
- A more fine-grained analysis with a larger study population is a recommendation for future research, especially concerning coping mechanisms for different races and genders, item bias and construct equivalence.
- Further research should be conducted regarding the effects of the Trauma Management Programme in the SAPS.
- It is suggested that further research be conducted concerning the relation between police officers’ passive coping mechanisms and emotional intelligence.
- It is suggested that further research be conducted to investigate the link between passive coping mechanisms and suicide ideation in the SAPS.
- Future research needs to focus on the effectiveness of emotional expression as a means to alleviate psychological stress.
- Future research needs to investigate the effectiveness of emotional reappraisal in maintaining mental health.
- Finally, further research needs to be conducted regarding the item bias found in this study.
REFERENCES


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CHAPTER 3

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

This chapter encompasses conclusions regarding the literature review and results of the empirical study. The limitations of the research are discussed, followed by recommendations for the participating organisation and further research.

3.1 CONCLUSIONS

The environment in which SAPS members work is characterised by violent crimes, including rape, murders and child abuse. This environment can thus be extremely traumatic. Members of the SAPS come into constant contact with situations and crimes such as these, which makes the development of Post-Traumatic Stress Disorder a reality. Members are always at risk of being traumatized and re-traumatized by these scenes.

Since 1994, the SAPS has been characterised by major organisational changes, i.e. employment equity and internal transformation. The traditional role of the SAPS has changed from crime fighting to that of community policing (Pelser, Schnetler, & Louw, 2002), but the reality is that police officers are still faced with high crime levels on a daily basis.

The SAPS is also characterised by a unique culture of coping, reflected in a “Cowboys don’t cry” climate (Pauw & Burgess, 2001). According to this television programme, SAPS members typically employ overt macho defences instead of talking about their traumatic experiences. Hosken (2002), speculated that bureaucratic “red tape” plays a major role in the difficulties that SAPS members currently have to face. Furthermore, members are confronted with fellow police members being murdered on a daily basis. As indicated earlier, thousands of police officers have to deal with violence and an excessive amount of administrative work and filing daily.

A positive relation was found between problem-focused coping, organisational change and general work stress (Terry et al., 1995). These authors state that measuring the current coping
strategies and researching the differences between these coping strategies is of great significance. Pienaar and Rothmann (2003) recommended that the Coping Orientations to Problems Experienced Questionnaire (COPE) be factor-analysed at the item level, especially with regard to cross- and intercultural comparisons.

Conclusions are reached in terms of the specific objectives set out for this study. The first objective was to conceptualise coping, and specifically coping within the policing context, from the literature.

The unique SAPS culture has a major impact on both the individual police officer and the organisation, often with very negative consequences. These consequences include burnout, suicide attempts, low productivity, low morale, high absenteeism, and medical boarding as a result of Post-Traumatic Stress Disorder (PTSD). Police officers' daily coping techniques are also characterised by extreme negativity. Pienaar (2002) found that 8.64% of a sample of 2396 police officers showed serious levels of suicide ideation, while 15% reported stress-related problems. Wiese, Rothmann, and Storm (2003) found that the use of passive coping strategies lead to lower feelings of accomplishment, while active coping strategies lead to higher feelings of professional efficacy in police officers' work.

Neokazi (2002) indicated that only a relatively small percentage of police members exposed to traumatic incidents seemingly turn up for trauma debriefing sessions. This is confirmed by the author's finding that 22.88% of SAPS members reported that they were unwilling to attend trauma debriefing. Du Plooy (2005) found that SAPS members cope through excessive alcohol abuse, and that there are high incidences of social problems among police members. Research conducted by Burke (1998) found that police officers reporting more work stressors made greater use of escapist coping, reported more work-family conflict and more psychosomatic symptoms. Richmond, Wodak, Kehoe, and Heather (1998) found a high prevalence of excessive alcohol consumption among police officers.

Research conducted by Evans et al. (1993) found that the coping strategies employed by police officers are more of a problem-focused nature (aimed at changing stressful occupational events),
than emotion-focused (aimed at regulating their distress). Limited resources and a lack of control are cited as some of the demands that police officers have to cope with. Wiese et al. (2003) found that these difficulties relate to police officers experiencing work-related trauma, but that more stressors seem to arise out of conflict on an organisational level. This affects the psychological well-being of police officers. In a study conducted by Pienaar and Rothmann (2003), it was confirmed that coping dimensions among police officers could be classified as problem-focused, emotion-focused, reappraisal and avoidance.

A further objective of this study was to assess the construct validity and internal consistency of the COPE in the SAPS, with added scales for emotional processing and emotional expression.

The construct validity of the COPE with eight (8) items measuring emotional processing and emotional expression (four items each), as developed by Stanton et al. (2002), was evaluated. Only one of the proposed subscales showed acceptable reliability (as indicated by Cronbach alpha coefficients), and the process of validation took place through exploratory analysis. Extraction of two factors was indicated after Varimax rotation. These factors were labelled Active emotional expression and Emotional reappraisal and they also showed acceptable reliability and normal distribution. However, 23 items were lost due to non-loading or double-loadings.

In the study conducted by Pienaar and Rothmann (2003), the results indicated a coping factor aimed at seeking emotional support, which is related to coping with the emotional reactions evoked by a stressful situation. Coping through emotional approach has been suggested to carry adaptive potential (Stanton et al., 2000; Stanton et al., 2002). Pienaar and Rothmann (2003) suggested that individuals usually approach their emotional reactions rather than avoid it. Research on emotional approach coping suggests that coping through active processing and expression can confer psychological and physical advantages. Based on the results of the current study, active emotional expression is hypothesised to be a positive, active, problem-solving coping approach.
By making use of active emotional expression, police officers cope by asking other people who have had similar experiences what they did to resolve the problem. They also talk to someone about their feelings regarding a situation. Further ways of active emotional expression are letting their feelings out, as well as realising the worth of their feelings. A further way of actively approaching their emotions takes place when police officers try to get emotional support from friends or relatives. They also ask advice and seek sympathy, and take direct action to deal with the problem. Active emotional expression deals with an active effort on police officers’ part to cope with difficult or traumatic situations, venting their emotions and actions aimed at managing emotions in reaction to stressors.

Active emotional expression, as indicated in the current study, can be seen as a part of emotional support seeking behaviour as suggested by Pienaar and Rothmann (2003). This factor seemingly indicates the actions police officers take to actively express their emotions. It can also be seen as a way of psychological debriefing with regard to the experiences they are subjected to in the course of their work. The question remains whether police officers express their emotions in an emotionally intelligent manner, as suggested by Salovey and Mayer (1990). It can also be suggested that the way in which police officers use active emotional expression is abetted by the Trauma Debriefing Model, which is currently utilised by Employee Assistance Services in the SAPS.

It is possible that police officers are beneficially influenced by the Trauma Intervention Management Programme in the SAPS, according to which emotional expression is encouraged in a safe and controlled environment. Wiese et al. (2003) have found that employing active coping strategies (emotional support) led to a decrease in police officers’ levels of exhaustion, while passive coping was related to cynicism. It can thus be suggested that police officers may become more vulnerable to occupational strain if they make use of passive coping strategies.

On the other hand, police officers cope by excessive alcohol abuse (Du Plooy, 2005). Corruption might also be a negative way of active emotional expression, as recently indicated in the popular media. Another negative way of active emotional expression can be indicated by suicide. In recent months the suicide rate in the SAPS has escalated, as reported in the popular media. As
stated earlier, SAPS members make use of overt macho defence mechanisms and don’t talk about the trauma they experience.

Emotional reappraisal was identified as the other coping mechanism utilised by police officers. Items that loaded on this factor suggest a more passive orientation. Police officers employ this passive, resigned orientation to reappraise their own emotional reactions. This entails that they think about a problem and try to get some positive effects from it. Police officers try and force themselves to wait for the right time to act in a problematic situation, or put aside other activities. By doing so, they concentrate energy on the problem at hand. Getting used to the idea that something bad or negative has happened, or accepting it, is also included. Officers also keep themselves busy with work or other activities in order to take their mind off things. Going on with one’s life as if nothing has happened, is clearly an avoidant coping style. This coping strategy might imply negative outcomes for the individual, as it can be argued that he/she does not actively deal with a situation, but rather puts off dealing with the situation. It should be clear that a lot of energy can be invested in such a way of coping, while this energy could have been better employed in actively dealing with a problem. What is concerning however, is that passive coping mechanisms have been indicated as predictive of suicide ideation (Booysen, 2002).

Some items failed to load in the factor analysis. These items describe denial that a problem/problematic situation exists, making use of religious activities, sleeping more, abusing alcohol or medication, and merely giving up. Other items that failed to load in the factor analysis include making a plan to address the problem, putting off any kind of action and not putting any effort in managing a problem efficiently.

Lastly, it was necessary to investigate the item bias and structural equivalence of the two constructs. Item bias (both uniform and non-uniform bias) was indicated in four of the items on the questionnaire. The constructs, however, appeared equivalent for both the Afrikaans and other, combined language groups. Since this study was conducted among different cultures and different language groups, more validity threats existed, as suggested by Van de Vijver and Leung (1997). The conclusion was drawn that, because two language groups were compared, there might be a slight difference in participants’ interpretation of items, resulting in bias. The
fact that neither English nor Afrikaans was the mother tongue of some of the subjects can explain the cause of the item bias. Only two items showed non-uniform bias in the current study, and it cannot be concluded that cross-cultural score comparisons for these items will produce incorrect results.

The differences between the coping strategies of different demographic groups in the SAPS were investigated. However, with regard to the two coping factors, no significant differences were found between the created language categories, or gender. The differences between the coping strategies of police members with different ranks, marital status and salary categories were determined, and no significant differences were found between these groups either. This could perhaps indicate the homogeneity of the phenomenon across groups. The fact that the sample was relatively small is however a limiting aspect, and should be taken into consideration in this regard.

Concerning marital status, it was found in research conducted by Burke (1998) that police officers who made use of active coping mechanisms experienced less work-family conflict. However, with regard to marital status, no differences were found in coping preference.

3.2 LIMITATIONS

A major limitation of this research is the reliance on cross-sectional, perceptual measures. It is also not possible to determine the causality of relationships by using a cross-sectional design.

The sample size was relatively small, giving rise to concerns about the generalisation of the results to the rest of the population of SAPS officers. According to Kerlinger and Lee (2000), the largest possible sample should always be used. The smaller the sample, the greater the chance of error. Of the 229 participants, the majority were from the Afrikaans- and Setswana-speaking groups (57,60% Afrikaans and 32,80% Setswana, constituting 90,40% of the total sample), highlighting once again the problem of using English measuring instruments.
3.3 RECOMMENDATIONS

3.3.1 Recommendations for the organisation

The current use of the Trauma Management Intervention Programme in the SAPS could be extended to involve all police members. Members should thus be encouraged to make effective use of the programme to ensure that they use efficient, positive coping mechanisms. The current use of the Trauma Management Intervention Programme in the SAPS should be widely marketed so that all police members have the opportunity to participate. This will enable them to actively express their emotions and learn to employ effective emotional coping mechanisms, which could have a psychologically debriefing function.

Besides actual Trauma Debriefing, members should be empowered by stress management interventions to enable them to deal better with the demands currently found in the SAPS. Although the SAPS is a large, state-based organisation, SAPS management should investigate ways in streamlining the bureaucratic processes.

Emotional reappraisal can be positively implemented so that police officials get some positive results from a negative situation. Merely thinking about the problem and trying to get something positive from what has happened, is not enough. Concentrating on the problem at hand can be employed to achieve this goal. Trauma Debriefing and specific Trauma Management Interventions can be helpful in this regard. By focusing on the problem in the debriefing session this goal can be achieved. Police officials will be encouraged to listen to other police officials’ inputs regarding positive coping mechanisms and positive outcomes in negative situations. It is however crucial that police officials should not only focus on negative effects in traumatic situations, but also on positive outcomes.
3.3.2 Recommendations for future research

A more fine-grained analysis with a larger study population is a recommendation for future research, especially concerning coping mechanisms for different races and genders, item bias and construct equivalence.

Further research should be conducted regarding the effects of the Trauma Management Programme in the SAPS. One aspect that should for instance be addressed is whether debriefing sessions after specific traumatic incidents are truly effective. Other trauma management interventions, for example Post-Traumatic Stress Management workshops, suicide awareness and prevention workshops can also be investigated. Both these interventions should be proactive and the focus should be on the prevention of PTSD and suicide in the SAPS.

It is suggested that further research be conducted concerning the relation between police officers’ passive coping mechanisms and emotional intelligence. Investigation into the emotional intelligence of police officials can also be conducted. A further aspect to be investigated is whether or not there is a positive relation - or any relation at all - between the level of emotional intelligence and positive coping mechanisms.

It is suggested that further research be conducted to investigate the link between passive coping mechanisms and suicide ideation in the SAPS. Investigation into the development and stimulation of active, positive coping mechanisms and the possible prevention of suicide in the SAPS can be conducted.

Future research needs to focus on the effectiveness of emotional expression as a means to alleviate psychological stress. Whether or not active emotional expression is positive or detrimental in the alleviation of psychological distress, is a possible field of investigation.

Future research needs to investigate the effectiveness of emotional reappraisal in maintaining mental health. Whether or not emotional reappraisal is positive or detrimental in maintaining mental health, is a suggested field of investigation.
Finally, further research needs to be conducted regarding the item bias found in this study. A possibility might be the translation of the Coping Orientation to Problems Experienced Questionnaire into other South African languages such as Setswana and Afrikaans.
REFERENCES


Du Plooy, M. (2005). 'n Evaluasie van die Substansafhanklikheidsprogram van die Suid-Afrikaanse Polisiediens. [An evaluation of the Substance Dependency Programme of the


