Coping skills and suicide ideation in South African Police Service members in KwaZulu-Natal.

By

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DECLARATION REGARDING PLAGIARISM

I declare that this thesis, entitled "Coping skills and suicide ideation in South African Police Service members in KwaZulu-Natal" is my own work and I have correctly cited all contributing authors and sources. This thesis has not been previously published anywhere (including internet based sources) and has not been submitted to any university. I have not allowed anyone to copy my work.

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ABSTRACT

With global studies presenting a rise in suicidal ideation and literature relating to coping strategies among police officers, the present study examined the relationship between suicidal ideation and coping strategies in a sample of 125 police officers in KwaZulu-Natal. Such research may be useful for police officers, their caregivers and professionals within the South African Police Services in order to enable them to recognise and understand how members of the police cope. This is essential for recognising police officers at risk of developing suicidal thoughts through the identification of their potentially predictive behaviours. The study sample (N=125) completed three questionnaires: COPE questionnaire, ASIQ and the biographical questionnaire. The findings showed that 6.4% of police officers in this study had high levels of suicidal ideation. A discriminant analysis indicated the following pattern of coping strategies among police officers in this study: religious coping, positive reinterpretation, planning, the use of instrumental social support and active coping. A linear discriminant function further indicated that police officers who scored low on suicidal ideation were most likely to use active coping strategies whereas those with high suicidal ideation tended to use emotional support. Furthermore, results indicated a significant relationship between gender and suicidal ideation. Female police officers obtained a higher mean score on suicidal ideation compared to male counterparts. The demographic variable of marital status did not correlate with suicidal ideation. Using alcohol as a coping strategy correlated positively with suicidal ideation. A negative correlation was found between suicidal ideation and problem-focused coping strategies. Suicidal ideation also correlated negatively with emotion-focused coping strategies. A correlation analysis between suicidal ideation and maladaptive coping showed a negative correlation.

Key words: suicide, suicidal ideation, coping strategies, demographic variables: gender and marital status.

TABLE OF CONTENTS

Content	Page No
Acknowledgement	i
Declaration	ii
Abstract	iii
CHAPTER 1	4
1.1. Overview	4
1.2. Research statement	5
1.3. Definition of concept	6
CHAPTER 2: LITERATURE REVIEW	8
2.1 Suicide and suicidal behaviour: International context	8
2.2 Suicide and suicidal behaviour: South African context	12
2.3 Suicidal behaviour in policing	19
2.4 Suicidal ideation among SAPS officers	23
2.5 Suicidal ideation and demographic variables among SAPS officers	24
2.6 Explanations of suicide and suicidal ideation models in policing	28
2.7 Literature on coping	31
2.8 Coping from a theoretical perspective	33
2.9 Coping strategies	34
2.10 Coping strategies and suicidal ideation among police officers	36
2.11 Summary of literature review	38
CHAPTER 3: METHODOLOGY	40
3.1 Introduction	40

3.2 Research aims 40

3.3 Research questions 40

3.4 Research hypotheses 41

3.5 Research design 41

3.6 Sample 41

3.7 Procedure 42

3.8 Measuring instruments 43

3.9 Data analysis 46

3.10 Ethical considerations 47

3.11 Validity, reliability and rigour 49

CHAPTER 4: RESULTS 50

CHAPTER 5: DISCUSSION 61

CHAPTER 6: Conclusions 67

6.1 Implications of the study 67

6.2 Limitations of the study 67

6.3 Challenges 68

6.4 Recommendations for future research 69

6.5 Conclusion 70

REFERENCES 71

APPENDICES 80

Appendix 1 80

Appendix 2 82

Appendix 3 85

Appendix 4 86

Appendix 5 90

Appendix 6 91
Appendix 7 92
Appendix 8 93

LIST OF FIGURES

Figure 1: Sample distribution by race 50
Figure 2: Gender distribution 50

LIST OF TABLES

Table 1: Sample distribution by race and gender 42
Table 2: Number of children 51
Table 3: Gender and age of participants: Cross tabulations 51
Table 4: Gender and marital status: Cross-tabulation 52
Table 5: How long have you been a member of the SAPS: Cross-tabulation 52
Table 6: Suicidal ideation frequency 53
Table 7: Coping patterns 54
Table 8: Linear discriminant function for police members with low and high suicidal ideation 55
Table 9: Suicidal ideation and problem-focused coping strategy 56
Table 10: Suicidal ideation and emotion-focused coping strategies 57
Table 11: Suicidal ideation and maladaptive coping strategies 57
Table 12: Suicidal ideation and religious coping strategy 58
Table 13: Suicidal ideation and substance abuse 58
Table 14: Gender and suicidal ideation 59
Table 15: Group Statistics for gender and suicidal ideation 59
Table 16: Suicidal ideation and marital status 60

CHAPTER 1

INTRODUCTION

1.1. Overview

Suicide has, over the years, become a substantial topic of research interest. Numerous studies have shown that suicide is one of the leading causes of death nationwide and remains a significant public health problem (Barnes, 2011; Bishopp & Boots, 2014; Burrows & Schlebusch, 2008; Pienaar, 2002; Rothmann & Pienaar, 2006; Stuart, 2008; Violanti, 2007). The 2002 World Report on Violence and Health (WHO, 2002) showed that about 1 million people worldwide died of suicide in the year 2000, signifying one death per 40 seconds. In addition to those who die due to suicide, literature indicates that there are many more individuals with high suicidal thoughts, as well as others who engage in non-fatal suicidal behaviour (Mgaya, Kazaura, Outwater & Kinabo, 2007). With the overall reported high rates of suicide worldwide, the rate of suicide among police officers is reportedly endemic. Several studies have associated policing with the risk of suicidal ideation (du Preez, Cassimjee, Lauritz, Ghazinour & Richter, 2011; Hem, Berg, Ekeberg, 2001; Larned, 2010; Swanepoel & Pienaar, 2004; Violanti, 2004).

In their study of South African police trainees, du Preez et al. (2011) pointed out that one particular reason for high rates of suicidal ideation among police officers is that they are frequently exposed to violent and stressful circumstances which often occur without warning. These situations can impact negatively on police officers, especially if there is a lack of effective coping skills. The impact of maladaptive coping skills on police officials appears to have been long studied, and has remained an area of interest for many researchers (Pienaar & Rothmann, 2003, 2006; Rothmann & Van Rensburg, 2002). Previous studies on police samples, specifically those relating to mental health problems, have established that police members are at a high risk for psychological distress which may lead to increased suicidal thoughts and maladaptive coping skills (du Preez et al., 2011; Swanepoel & Pienaar, 2004). Although there have been many strategies implemented to alleviate the high rates of suicide and suicidal ideation among members of the police, the effectiveness of these strategies have been hampered by continued condemnation and stigmatising of suicide for cultural and religious reasons, as well as within the policing subculture itself. The issue of suicide is still regarded as a secretive act encircled by taboo and is often misclassified, misunderstood and unrecognised (du Preez et al., 2011).

As such, research examining the prevalence of suicidal ideation among police officers, particularly among high risk individuals, has shown conflicting results (Stuart, 2008; Violanti, 2010). Silverman, Berman, Sanddal, O'Carroll and Joiner (2007) also reported that there is still confusion as to what exactly constitutes suicidal ideation and suicidal behaviour. Although studies have looked into the relationship between stressful work environments and mental health with a focus on suicidal ideation and coping skill in police samples, less attention has been given to the exact nature of the relationship between suicidal ideation and coping skills among police officers. Consequently, investigations into this relationship remain multifaceted. One avenue of reasoning, for example, includes the stressful work exposure involved in police-work which may affect police officers on multiple personal levels (Rothmann & Pienaar, 2006; Stuart, 2008; Violanti, 2004). Du Preez et al. (2011) added that there is still insufficient funding within the mental health sector for research that focuses specifically on the prevalence and predictors of post-traumatic stress disorder which is amongst the frequent determents of suicidal ideation among police officers. Despite the intense concern about identifying predictors and effects of police suicidal ideation, certainty in this area remains problematic due to inconsistent research findings.

1.2 Research statement

Suicide and suicidal ideation in policing have been extensively researched. On the other hand, much of this work aimed to find whether or not police officers are at higher risk for suicidal ideation than the overall public (Hem et al., 2001). While this line of inquiry remains important, there is a need for an understanding of the nature of the relationship between coping strategies and suicidal ideation among members of the police. Only one study that aimed to determine the relationship between coping, stress and burnout has been done with KwaZulu-Natal SAPS members. The current study forms part of longitudinal research in the area of suicidal ideation and coping within the South African context. Information obtained in this study is intended to generate a thorough understanding of suicidal ideation and suicidal behaviour among police officers in KZN and hopefully further open new ways of designing intervention programmes aimed at improving the work conditions and coping skills for police officers. This rationalises research focusing specifically on the South African police officers.

In light of this, this thesis examined the relationship between suicidal ideation and coping strategies among police officers in KwaZulu-Natal. The present study begins by providing a definition of major concepts in the study. Having introduced the main concepts in the study, a

detailed review of literature on the topic of suicide and suicidal ideation internationally and within the South African context will be discussed in chapter 2. Furthermore, suicide and suicidal ideation within policing in general and within the South African Police Service will be discussed in chapter 2. Chapter 3 will discuss methodological matters applicable to this study. Chapter 4 will provide results obtained in this study. Chapter 5 will provide a detailed integration of the results and literature. Chapter 6 will discuss challenges, limitations and recommendations for future research.

1.3 Definition of concepts

Historically, there has been an inconsistency regarding the usage of the terms suicide and suicidal ideation in the field of suiciodology. Previous literature in the area of suicide shows that multiple terms have been used by scholars (e.g., suicidal intent, parasuicide, suicidal behaviour, and suicidal ideation). Silverman, Berman, Sanddal, O'Carroll and Joiner (2007) stated that measures of suicide and non-fatal suicidal behaviour remain hindered by lack of standard nomenclature and clear operational definitions. Canetto (2008) reported that one of the critical issues involved in examining suicide behavioural trends across cultural groups concern the manner in which suicidal behaviour is determined and defined. This comes from the idea that cultures vary in terms of what they consider to be a suicidal act. Barnes (2011) further acknowledged that the varying definitions have made the task of linking data across nations difficult, especially because of the differences in the definitions of non-fatal or fatal suicide behaviour. Chae and Boyle (2013) also argued that the meanings of these terms differ considerably; therefore using the terms interchangeably can create confusion. For instance, the concept of suicide on its own does not refer to a single action, but to broad and varied behaviours (Chae & Boyle, 2013).

The term suicide and other relevant clinical terms defined in this study are by no means exhaustive. For study purposes, the relevant terms are defined as follows:

1.3.1 Suicidal ideation: the construct of suicidal ideation has been defined by Pienaar, Rothmann and Van De Vijver (2007, p. 246) "as the domain of thoughts and ideas about death, suicide, and serious self-injurious behaviour. It includes thoughts related to the planning, conduct, and outcome of suicidal behaviour, particularly as the last relates to thoughts about the response of others."

1.3.2 Suicidality: all suicide related thoughts and behaviours which also include suicide attempts, thoughts about suicide or communications (Bridge, Goldstein & Brent, 2006).

1.3.3 Suicidal behaviour: refers to a wide range of acts that are self-destructive or self-damaging acts in which people participate (Madu & Matla, 2003). Bridge, Goldstein and Brent (2006) add that suicidal behaviour should be viewed as covering a wide range of actions that are, in many cases, poorly conceived and unclearly defined. They argue further that it is important to define suicidal behaviour as an action through which a person harms himself or herself, to whatever degree of lethality; equally important is the recognition of any genuine reasons for indulging in such behaviour. This broad definition conceptualizes suicidal behaviour along a continuum: starting with self-destructive thoughts which extend to threats, lethal or fatal actions and finally suicide.

1.3.4 Non-fatal suicidal behaviour (NFSB): "An act with non-fatal outcome, in which an individual deliberately initiates a non-habitual behaviour that, without intervention from others, will cause self-harm, or deliberately ingests a substance in excess of the prescribed or generally recognized therapeutic dosage, and which is aimed at realising changes which the subject desired via the actual or expected physical consequences" (WHO/EURO 1986 in Barnes, 2011, p.18). The concept of non-fatal suicidal behaviour is commonly known as suicide attempt. In this study, actions that do not lead to death are labeled "non-fatal suicidal behaviour". These acts are often called "deliberate self-harm", "parasuicide", and/or "attempted suicide".

1.3.5 Fatal suicidal behaviour (FSB): fatal suicidal behaviour is when the suicidal behaviour results in death (Barnes, 2011).

1.3.5 Coping: refers to an individuals' behavioural and cognitive abilities to deal with a stressful or difficult situation. The effectiveness of the coping effort is said to depend on the type of stress and/or conflict, the particular individual, and the circumstances (Ranta, 2009).

CHAPTER 2

LITERATURE REVIEW

This chapter will provide an overview of the literature used to inform this study. This chapter will further offer a detailed exposition of the relationship between suicidal ideation and coping strategies which will also serve as the theoretical foundation of the study.

2.1 Suicide and suicidal behaviour: international context

2.1.1 Overview of suicidal ideation in the international context

Internationally, high rates of suicidal ideation remain a worrying issue. "Suicide ideation may be characterised as ranging from relatively mild, general thoughts and wishes that one were dead to serious ideation about specific plans and means of taking one's life" (Pienaar & Rothmann, 2005, p. 59). Botega et al. (2005) reported 17.1% life prevalence rates for suicidal ideation among women which was associated with risk factors such as psychological distress and mental health problems. They further recorded that the 17.1% prevalence rates for suicidal ideation, along with the 2.7% prevalence rates for non-fatal suicidal behaviour (suicide attempt), were parallel to those found in studies done in USA, Europe and Australia, wherein prevalence rates for suicide attempts ranged between 3% and 5% with suicidal ideation ranging between 10 and 28%. It was also found that women, young adults and those who live alone had higher lifetime incidence rates for suicidal ideation. This was independent of parental and marital status.

Despite the reported high rates of suicidal ideation, literature shows that although interventions aimed at reducing rates of suicidal attempts have been successful, the same interventions have not been effective in reducing rates of suicidal ideation (Burrows & Schlebusch, 2008). Nock et al. (2008) pointed out that interventions become effective when significance is placed on reducing the likelihood of transitioning from suicidal ideation to suicidal attempt, rather than in diminishing ideation altogether. Considering this approach can assist in strengthening literature and theories around the casual process, while on the other hand developing more interventions that are effective in reducing thoughts about suicide.

Nock et al. (2008) further contended that most studies studying suicidal ideation and non-fatal suicides have shown both outcomes to result from similar risk factors, but have failed to show a specific factor. This means that no studies have tested specific factors that predict transitions

from thoughts about suicide to non-fatal suicide. Therefore, implementing an approach in this area could be helpful as it has been beneficial in other areas, especially studies on alcohol and drug related problems (Nock et al., 2008).

Recently, Dou, Tang, Lu, Jiang and Wang (2014) studied risk factors related to suicidal ideation among 271 ischaemic patients suffering from cerebro-vascular disease in China. They reported that residents of rural areas in China have 3-5 times higher rates of suicide than those in urban areas. Their results showed that twenty-nine patients (10.7%) had high levels of suicidal ideation. Suicidal ideation was also found to be more frequent among patients living in rural areas, presenting with maladaptive coping strategies and pre- or post-stroke depression. Patients who had no confidence in treatment of their disease also showed high levels of suicidal ideation (Dou et al., 2014). It is of concern that lack of confidence in treatment of the disease was among the risk factors associated with suicidal ideation. Monitoring and intervention programmes should be highly prioritised in these patients.

2.1.2 Non-fatal and fatal suicidal behaviour in the international context

While suicide is considered to be the leading cause of death in many industrialised countries (Burrows & Schlebusch, 2008; Bertolote, 2001), non-fatal suicidal behaviour is also considered to be a worrisome public issue (Nock et al., 2008). A study by Kuo, Gallo and Tien (2001) examined the incidence and factors associated with non-fatal suicidal behaviours. Overall, the frequency of suicidal ideation was estimated at 419.9 per 100 000 individuals while the incidence estimation of suicide attempts was at 148.8 per 100 000 individuals. Results further indicated that young persons who were previously married and within the lowest socioeconomic prestige were at high risk for engaging in non-fatal suicidal behaviour. Individuals reporting high levels of suicidal ideation also reported that they had previously attempted suicide. Suicidal ideation was identified as the most important and common precursor to suicidal attempts (Kuo et al., 2001).

In their study entitled "Completed suicide after a suicide attempt: A 37-year follow-up study", Suominen et al. (2004) found non-fatal suicidal behaviour to be the strongest predictor of fatal suicidal behaviour (p. 562). They also found that about 10 - 15% of individuals with histories of non-fatal suicidal behaviour were prone to commit suicide. They further reported that although the risk of suicide declined over time following a non-fatal suicidal act, it is still unclear how long the risk of suicide persists. It was found that two-thirds of the suicides (62%) happened 15 years after non-fatal suicidal behaviour. They also found a significantly higher

rate of fatal suicidal behaviour in men than women (Suominen et al., 2004). Although currently there exists no reliable data about the real magnitude of non-fatal suicidal behaviour since no national records exist, Bertolote and Fleischmann (2005) report that the frequency of non-fatal suicidal behaviour is up to 10 - 40 times higher than fatal suicidal behaviour.

Kaess et al. (2011) also reported that the increased rates of suicide correlate with rates of non-fatal suicide behaviour. In concurrence with Suominen et al. (2004), they further added that non-fatal suicidal behaviour is among the strongest predictor of fatal suicidal behaviour, as well as continued incidents of suicidal behaviour. They also reported that in many Western countries it is more common for females to engage in non-fatal suicidal acts than males. This gender disparity is reportedly known to be more distinctive amongst the younger population; non-fatal suicidal behaviour is 3-9 times more common in female adolescents while fatal suicidal behaviour is 2-4 times more common in male adolescents (Kaess et al., 2011).

2.1.3 Overview of suicide in the international context

Numerous studies have reported that suicide is among the leading national health problems and is rated among the top three causes of death globally (Anshel, 2000; Bishopp & Boots, 2014; Brown, 2011; Violanti, 2010; Zhang & Lester, 2008). These studies have further reported an increased rate of more than 5% over time. An estimated global rate of 14.5 per 100,000 suicides in the year 2000 has been reported (Mgaya et al., 2007; Burrows & Schlebusch, 2008).

Bertolote and Fleischmann (2005) reported that the highest rates of suicide were found in Eastern Europe, especially in population groups with similar sociocultural and historic characteristics. They also reported that the rate of suicide in China is problematic and female suicide rates are consistently higher than males' suicide rates. Given their population size, suicide rates in China are reported to range from 22 to 30 per 100,000. China alone has been estimated to account for 30% of suicides globally. The suicide rate in India, which has a population size similar to that of China, is reportedly high. However, it has been argued that because suicide is illegal in India, under-reporting of suicides remains a significant research and public health problem (Bertolote & Fleischmann, 2005).

Botega, Barros, de Oliveira, Dalgalarrondo and Marín-León (2005) examined the prevalence rate of suicidal behaviour, which included thoughts about suicide, and plans and attempts in the Campinas City. The results indicated a lifetime prevalence rate of 17.1% for suicidal ideation with 4.8% prevalence rate for suicidal plans and 2.8% for suicide attempts. According

to Bridge et al. (2006) the likelihood of suicidal behaviour recurring is high and may be a precursor of suicide completion.

According to Nordentoft (2007) although research on suicide and suicidal ideation has been done, the existing theories have not adequately explained the mechanisms underlying the causes of low or high suicide rates. Additionally, the aforementioned suicide statistics do not even begin to approach a comprehensive picture of the social, emotional and economic impact that a suicide can have on the victim's friends and family. Therefore, prevention efforts remain essential in attempts to reduce suicidal behaviour (thoughts, plans and suicide attempts and suicide) worldwide.

Nock et al. (2008, p.133) conducted a "Systematic review of studies on the epidemiology of suicide published from 1997 to 2007". Significant variability in cross-nationality concerning the incidence of suicidal behaviour was found. Despite this cross-national variability, there was also significant consistency in relation to transition probabilities, key risk factors and the onset age of suicidal behaviour. Results pertaining to cross-national suicide rates further indicated that the highest suicidal rates were found in Eastern Europe, and the lowest in South and Central America. While this was the case the United States, Western Europe and Asia were in the middle. Regardless of the wide mutability of rates, there was a steadily higher rate among males than females. The male to female ratio of dying of suicide was 3:1 to 5:1. These variances in male to female ratios have been attributed to men's aggressiveness, and greater intention to die than women (Nock et al., 2008).

Following from Nock et al.'s (2008) results, Canetto (2008) emphasised significant variation in terms of gender paradox across cultures. For instance, suicidal behaviour in the United States is considered to be a masculine behaviour as it is mostly prevalent in "White" older men. Women who committed suicide were considered to be acting like men and deviant. On the other hand, in China, suicide is perceived as a powerless act and it is often young women who commit it. In both China and American societies, men who commit suicide are viewed as effeminate and weak. Canetto (2008) further reported that this cultural variability "also points to the pitfalls of theorising about clinical phenomena as if they were culture-free, and calls for culturally grounded theory, research, and practice" (p. 259). Her study on women and suicidal behaviour found that in countries such as the United States, non-fatal suicidal behaviour was common and regarded as suitable for females while suicide was considered to be more

acceptable for men. Women who killed themselves were considered abnormal and their suicidal act was perceived as symptomatic of unusual male pursuits (Canetto, 2008).

Bertolote, Fleischmann, De Leo and Wasserman (2009) predicted that by the year 2020, suicide rates will increase to 2.4%. Schlebusch (2012) also reported that about 1 million people including individuals from all age groups die from suicide each year. This included annual overall rate of "14 to 16 per 100 000 suicides of the population (most recently 18 per 100 000 for males and 11 per 100 000 for females)" (Schlebusch, 2012, p. 180). By the year 2020, it is estimated that these figures will have increased to 1.53 million people per annum. It is argued these estimated figures propose that each suicide death occurs probably in every 40 seconds while one suicide attempt probably occurs in every 1 to 3 seconds. What is more disturbing about these figures is that it has been estimated that by 2020, one death will occur every 20 seconds with non-fatal suicide (suicide attempt) occurring every 1 to 2 seconds (Bertolote cited in Schlebusch, 2012). This constituted an approximate 60% increase over the past five decades, with rates of suicide rising by 49% in males and 33% among females, while presently representing almost a 1.8% international disease burden. Schlebusch (2012) argued that figures like these are clear indications that, on average, more deaths result from suicide per annum world-wide than from other injurious factors, such as war or natural death.

2.2 Suicide and suicidal behaviour in the South African context

2.2.1 Suicidal ideation within the South African context

Although it is still challenging to obtain exact national data and trends in suicidal ideation, research shows that the rates of suicidal ideation in South Africa are similar to international trends (Barnes, 2011; Schlebusch, 2012). On the other hand, Hicks (2005) stated that "these statistics are really nothing more than body counts that tell us very little about why these people chose to end their lives" (p. 33). Taking into account the political and socio-economic history of South Africa, more research focusing on the underlying causes of suicidal ideation among South Africans by ethnic group is required.

Joe, Stein, Seedat, Herman and Williams (2008a) studied non-fatal suicidal behaviour in South Africa using National Representative data obtained from the South African Stress and Health Study (SASH) for the year 2002 and 2003. Joe et al. (2008a) labeled those with suicidal thoughts as 'ideators'. The data obtained from SASH indicated that the first year following the onset of suicidal ideation was the highest risk period for suicide ideators to progress to suicide

planning and to non-fatal suicide. However, this rapid transition seems to be incomparable as no any other study has been conducted in South Africa to examine population surveys further. Nonetheless, results in their study indicated that individuals classified as lifetime suicide ideators often have conditional plans to commit suicide while others end up attempting suicide. The likelihood of lifetime suicide ideators making a plan was 41.7%. On the other hand, the conditional likelihoods of ideators making an attempt were 31.7% with a plan and 11.2% with no plan. About 60.5% of those who have attempted suicide reported that they had plans and ideas prior to their first attempt. An analysis of ethnicity also revealed significant variances in the conditional probabilities among ideators who have made an attempt without a plan. Results indicated that the likelihood of Africans engaging in unplanned suicidal attempts was low (Joe et al., 2008a).

Joe et al. (2008a) reported high rates of non-fatal suicidal behaviour among Coloureds, and a high probability of Coloureds making unplanned suicide attempts. They proposed an explanation for suicidal ideation trends among the Coloured population. It was suggested that patterns of suicidal behaviour in the Coloured population group may be a representation of the population's stress in adjusting to South Africa's major socio-economic and political transformations: it was suggested that Coloureds did better economically and socially under the apartheid era than they do now (Joe et al., 2008a). No contemporary research has contradicted this suggestion.

Correspondingly, Joe et al. (2008b) conducted another study examining the incidence and correlates of non-fatal suicidal behaviour in the South African population using the same data from SASH. Similar to the results in their previous study, the results in this study indicated an estimated lifetime prevalence of 9.1% for suicidal ideation, 3.8% for suicide plans, and 2.9% for attempts among South Africans. According to Joe et al. (2008b) the 9.1% estimated prevalence of suicidal ideation is similar to estimates in previous other studies using South African clinical samples. Stated for the first time, however, are significant ethnic variances among South Africans in the lifetime incidence of suicidal ideation, planning and attempts. Explanations for the considerably higher risk of non-fatal suicide and suicidal attempts in the Coloureds ethnic group remain uncertain.

Pillay, Bundhoo and Bhowon's (2010) study of Mauritian and South African adolescent girls with depression-related difficulties provides some insight into possible underlying causes of suicidal behavior among teenage girls. They found that 26.3% of Mauritian girls and 21.5% of

South African girls aged between 14 to 17 years from low socioeconomic communities had high suicidal ideation while 14.6% and 16.7% had already attempted suicide. The results further indicated that 54.0% and 32% of the Mauritian and South African girls experienced difficulties in coping with depression-related symptoms. Furthermore, of the girls, South African (20.4%) and Mauritians (44.4%) reported not knowing a place they could go to seek professional help when feeling distressed. It is of concern that teenage girls do not know where to go for help when experiencing depression related symptoms, especially considering that research has shown that more women are prone to suicidal ideation (Canetto, 2008). These findings show that there is a need to increase mental health services and awareness programmes, and make them more easily accessible.

2.2.2 Non-fatal suicidal behaviour in the South African context

In conjunction with international reports on suicidal behaviour in adult subjects, non-fatal suicide behaviour has been studied in the South African context. Wassenaar, van der Veen and Pillay (1998) reported although there is increasing research regarding aspects of non-fatal suicide behaviour in South Africa but many studies lack comprehensive epidemiological representation. In their study which focused on suicidal behaviour among South African Indians, Wassenaar et al. (1998) reported high rates of suicidal behaviour among young Indian women. It was stated that suicidal behaviour within this cultural group could be explained by problems in sociocultural transition. It was further argued that the "transitional tensions between traditional Indian culture and Westernisation have an impact on traditional gendered power relations and generate conflicts that have intrapsychic and interpersonal consequences for women and for men" (Wassenaar et al., p. 82). All these had an impact on the emotional and marital functioning as well as on the quality of life. South African Indian women were reported to employ different methods of suicide. For example, the use of firearms was found mostly among White males and females. Indian females used methods such as self-poisoning and hanging while males used hanging as the main method for committing suicide. The age group that was perceived to be at highest risk was between 15-24 years. According to Wassenaar et al. (1998) this calls for thorough research and suicide intervention efforts.

In their study on non-fatal suicidal behaviour with 82 patients, Pillay, Wassenaar and Kramers (2001) found that most suicidal behaviour occurred on weekends. It was also found that a significant number of adolescents used medication to facilitate their suicidal behaviour while most adults employed more violent methods. Furthermore, the results indicated that non-fatal

suicidal behaviour in adults was associated mainly with economic stressors and employment problems. According to Pillay et al. (2001) the results showed comparable psychosocial and demographic correlates of non-fatal suicidal behaviour in Africans when comparing them with other cultural groups in South Africa.

Pillay et al. (2004) indicated that although it is difficult to estimate the exact rates of suicidal behaviour in South Africa, the rates of non-fatal suicide behavior across South African cultural groups are comparable to the global averages. Schlebusch (2005) stressed that such comparisons should be made cautiously, particularly because of their cross-national and/or cross-cultural dimensions.

In another hospital-based study, Moosa, Jeenah, Pillay and Vorster (2005) conducted a study on non-fatal suicidal behaviour at Johannesburg Hospital in Gauteng, South Africa. The study aimed to describe characteristics of non-fatal suicidal behaviour in a sample of 43 patients, and to determine factors related to the recurrence of this behaviour. About 63% of the patients overused their medication while 33% reported ingestion of household poisons. Precipitants of suicidal behaviour involved relationship difficulties (70%), illness (12%), financial problems (9%), and depressed mood (9%). Factors relating to non-fatal suicidal recurrence included belonging to the 18 to 30-year age group (76%), being female (90%) and having children (90%). Past psychiatric history (50%) also served as a significant factor associated with the repetition of the behaviour (Moosa et al., 2005).

The proportion of South Africans who engage in suicidal activities is reportedly high. Joe et al.'s (2008b) study is a useful frame within which to consider this issue. The expected prevalence rate of suicidal ideation for South Africans was reportedly 9.1% with suicide planning at 3.8% and 2.9% for suicide attempts. Results further indicated noticeable gender variances, with females scoring twice the percentage at 3.8% of attempts against 1.8% for males. The reported rate of non-fatal suicidal behaviour also varied significantly by race with Coloureds reporting 7.1% levels of non-fatal suicidal behaviour. This percentage was about 3 times higher than any other ethnic groups (counting Whites and Blacks, who reported the same percentage, 2.4%). The 2.9% prevalence rate reported by Joe et al.'s (2008) study is lower than the prevalence rate of 3% - 5% reported by Nock et al. (2008) in Europe.

The estimated lifetime prevalence of 2.9% for non-fatal suicidal behaviour among South Africans reported by Joe et al. (2008) study appears to be lower than that reported in United

Stated samples which ranged between 4.1 to 4.6% reported by Joe, Baser, Breeden, Neighbors and Jackson (2006), and Kessler, Berglund, Borges, Nock and Wang (2005).

The onset of non-fatal suicidal behaviour was found to be prevalent among females between the ages of 18-34 with low levels of education. Although this is the case, Nock et al. (2008) further pointed out that the likelihood of suicide attempts occurring before starting a formal job are lower. Nock et al.'s (2008) study reports that "there is a significant difference across age of ideation onset in the risk for an unplanned attempt with younger rather than older South Africans being more likely to engage in such behaviour" (p. 5). Having a suicide plan correlated with higher provisional odds of suicide attempts among those having thoughts about suicide, although the risk appears to be highest in the first 5 years following the onset of planning. Although the prevalence of non-fatal suicidal behaviour (suicide attempt) appears to decrease with age (Nock et al., 2008), at present it is still unclear how much change occurs between early and later adulthood. Also, currently, there has been no study that has questioned this age of onset of planning, thoughts about suicide and suicide attempts to check its reliability; many studies ignore this element, focusing instead on the relationship between age and thoughts about suicide.

2.2.3 Fatal suicidal behaviour in the South African context

South Africa faces a major problem regarding the exact statistics for fatal suicidal behavior. The current reported rates of fatal suicidal behaviour among young South African people are a cause for great concern. While research (Schlebusch et al., 2003; Schlebusch, 2005) has shown that young South African people are at high risk of engaging in non-fatal suicide behavior, the same age group appears to be at risk of engaging in fatal suicidal acts. Bradshaw, Masiteng and Nannan (2000) reported that in South Africa the 10-19 year old age bracket, more females commit suicide than males (12% and 7%, respectively).

Schlebusch (2005) reported that 9.5% of non-natural deaths among young people were suicide related. He also reported that this percentage is almost as high as the rate of suicide in non-natural deaths for adults which is around 11%. In the year 2007, the 11% suicide rate resembled the 10.32% average of suicide rates among all non-natural deaths shown in the NIMSS report (Schlebusch, 2012), which also indicated that adult suicide rates increased by 16.24% in the age group of 25-29 years old, followed by 15.84% in the 30-34 year age group and lastly, 15.38% of non-natural deaths for the 20-24 year age group (Schlebusch, 2012). The rates were

higher in the 15-19 age groups than within the 10-14 age groups. This age group is similar to the one reported in other studies (e.g., Schlebusch, 2005).

With fatal suicidal behavior being a major concern in younger age groups, Shilubane, Bos, Ruiter, van den Borne and Reddy (2015) studied suicide among high school pupils in Limpopo, South Africa. They also assessed teachers' knowledge about suicidal warning signs in students. They found that teachers did not have knowledge of the precursors of suicidal behaviours among students. They also reported that they lacked information and skills on how to help and support students who engage in suicidal behaviours. It was also found that members of the community often blamed teachers for fatal suicidal behaviour among learners (Shilubane et al., 2015).

Research has shown that patterns of fatal suicidal behaviour are not only a worrisome issue in youth but also in all South African ethnic groups even though South African research in this area has often been conflicting (Rontiris, 2014; Schlebusch, 2005). For instance, some studies have reported the highest fatal suicidal rates among the White population group followed by Asians and then Africans (Burrows & Laflamme, 2006; Burrows, Vaez & Laflamme, 2007; Rontiris, 2014). In contrast, Stark et al. (2010) studied 469 cases of suicide in Bloemfontein between the years 2003 and 2007. Results showed that 72.1% of the victims were African, followed by Whites, (26%), the Coloured group amounted to 1.1% and 0.6% were Indian.

2.2.3 Overview of suicide in South Africa

"Patterns of suicide in South Africa appear to resemble those in most other countries that have published epidemiological suicide data" (Wassenaar, Pillay, Descoins,Goltman & Naidoo, 2000 cited in Pillay et al., 2004, p. 350). Matzopoulos, Norman and Bradshaw (2004) reported overall suicide rates of 24.5 per 100 000 for males and 6.9 per 100 000 for South Africans females. South Africa as a democratic developing country has a unique history. The rates of suicide continue to be a worrying issue and are also linked to apartheid struggles. Burrows and Laflamme (2006) stated that South Africa provides a considerable and valuable study environment for assessing the social and political impact on mental health.

Norman, Matzopoulos, Groenewald and Bradshaw (2007) state that "constitutional racial segregation and exploitation has given way to a non-racial democracy" (p. 695). This has been accomplished through a long, drawn-out liberation struggle which was characterized by radical and political violence under state oppression. Although most of the political conflict has

changed, Norman et al. (2007) argued that there still remain high levels of death and interpersonal violence, driven by wide socioeconomic disparities in South Africa. Owing to the absence of longitudinal figures, they pointed out that it is difficult to report on the incidence of interpersonal violence in this particular period. Given the impact of political and social changes, many deaths occurring in South Africa are reported to be as a result of suicidal behaviour. Results in their study showed that 46% of the estimated 59 935 deaths in the year 2000 were homicides. Road traffic and injuries that were self-inflicted accounted for 26.7%. In terms of gender, homicide was found to be the major cause of fatal injuries among males. Injuries caused by road traffic ranked second. In young children, incidence of suicide among males at 26.3 per 100 000 were higher than global average rates (Norman et al., 2007).

In their study on "Intimate femicide–suicide in South Africa", Matthews et al.'s (2008) results indicate that about 19.4% of intimate femicide perpetrators committed suicide within the very same week of murdering their partners — a finding which increased in likelihood if the perpetrator was white. Given these findings, Matthews et al. (2008) concluded that "South Africa has a rate of intimate femicide–suicide that exceeds reported rates for other countries" (p. 552). Burrows and Schlebusch (2008) conclude their study by stating that "in South Africa, any suicide prevention efforts need to take cognisance of the numerous stresses that a country in transition presents to its citizens" (p. 207).

Roberts, Wassenaar, Canetto and Pillay (2010) studied the topic of homicide-suicide in the Durban area, KwaZulu-Natal, South Africa for the years 2000 to 2001. An event was considered homicide-suicide on the condition that a person attempts to kill or succeeds in killing someone and then becomes involved in a suicidal act that is either non-fatal or fatal within a period of one week after the homicide incident (p. 1). They found 0.89 per 100 000 frequency of homicide-suicide, which was greater than the international average rate. About 87% of victims and 91% of offenders were Black African. Most perpetrators were males (95%). Firearms were reportedly used in many suicide cases (87%) and homicide cases (80%). The incidence of homicide-suicide in South Africa was reportedly similar to those in other countries and mostly involved men killing their female intimates. According to Roberts et al. (2010) this signifies the need to challenge social norms that permit men to act violently against women.

Following from the reports on homicide-suicides, a recent study by Naidoo and Schlebusch (2014) found a 6.68% increase in the total number of deaths between 2006 and 2007. The rate of suicide in Durban was reportedly 14.53 per 100 000 population in 2006 which increased to

15.53 per 100 000 population in 2007. These statistics were obtained from the 2001 national census records. In 2006, the rate of suicide amongst males was reportedly higher than female rates (ratio 3.2:1). In the year 2007 the ratio was found to be higher at 3.6:1. In both years, the highest rate of suicide was, in descending order, reported amongst Black, Indian, White and Coloured populations. Majority of people who engaged in fatal suicidal acts were unemployed — at 43.4% in 2006. The number decreased slightly in 2007 to 38.5%. In terms of marital status, married individuals who committed suicide accounted for 23.4% in 2006 and 22.0% in 2007.

Schlebusch (2012, p. 436) stated that "between 10 and 40 times more people engage in non-fatal suicidal behaviours (attempts)". He further reported that the prevalence rate of male suicide has been consistent with an estimated ratio of 3.6:1. However, rural parts of China are reportedly exceptions to this where there are higher suicide rates amongst females than amongst males. In his 2012 study on suicide prevention in South Africa, Schlebusch reported that South African rates of suicide vary from 11.5 per 100 000 to 25 per 100 000 population. These rates were reported to depend highly on the employed research methods and sampling procedures. He further stated that on average 9.5 % unnatural deaths in the young age group were due to suicide. Again, although the burden of suicidal behaviour remains misinterpreted and misunderstood due to lack of reliable data, Schlebusch (2012) stated suicide prevention efforts in South Africa necessitate a "multi-sectoral approach that involves both health care and non-health care sectors and action at various levels utilising a framework based on a set of guiding principles and a range of strategies with specific objectives as a national priority within an interdisciplinary context" (p. 436).

2.3 Suicidal behaviour in policing

2.3.1 Overview of Suicide Literature in Policing: Research and Controversies

Over the years, research on the topic of suicide among police members has shown that police officers are at increased risk of engaging in suicidal acts. The work exposure involved in policing has been regarded as distressing, putting most police officers at a higher risk of suicidal ideation (De Bruin, 2008; Pienaar & Rothmann, 2005; Swanepoel & Pienaar, 2004; Violanti, 2004). Despite the greater risk of suicidal behaviour among police officials, research indicates that there are still limited methods to help identify officers who are at risk of suicide (Violanti, Mnatsakanova, & Andrew, 2013). Again, with the existing methods employed to study suicide

behaviour among police officers, the problem further lies with the hesitancy of police officers to divulge any sensitive personal information fearing that it might compromise their job (Violanti et al., 2013).

Existing literature on police suicide has over the years presented many controversies regarding the exact relationship between suicide and police work. For example, Violanti (2007) attests that there are many unanswered questions about the validity and accuracy of the rates of police suicide. In discussing the controversies involved in police suicide literature, Violanti (2007) reports that the fact that policing is a predominantly male-dominated occupation might be connected to suicide in policing. Statistics show that most male police officials engage in fatal-suicidal acts than females. Again, previous research has shown that this is also the same for most general populations.

2.3.2 Suicide in policing in Western Countries

Suicide rates among police officers have been studied and compared with suicide rates of the general population. However, Hem et al. (2001) challenged the idea of comparing suicide rates amongst police officers to the general population by pointing out that the comparison is problematic, as general population rates comprise various subgroups. For instance, subgroups such as the unemployed and the mentally ill often have higher suicide rates than those found within police samples. Hem et al.'s (2001) cautions seem to have been ignored by some later studies (Marzuk, Nock, Leon, Portera & Tardiff, 2002; Pienaar & Rothmann, 2005; Violanti, 2004) as these studies continued to compare police samples with the general population. Looking at suicide among police officers in western countries, the review starts with studies dated as far back as 2001. For example, a review undertaken by Hem et al. (2001) identified and studied 41 original published studies of suicide among police officials. The results indicated that high rates of suicide among police members were found by some studies, while in others a low or average rate of suicide was found.

Marzuk et al. (2002) investigated rates of suicide among police officers in New York City (NYC). Reports about police officers who died from the year 1977 until 1996 were reviewed and specific rates of suicide among police officers and the residents of New York City were determined. The rate of police suicide accounted for 14.9 per 100 000 people years. The rate of suicide of residents was 18.3 per 100 000 population. The incidence of suicide in male police officers was similar to NYC male residents. Although the number of female police officers was small, they had a higher suicide risk compared to female city residents. Based on

these findings, Marzuk et al. (2002) argue that police suicide rates in NYC appear to be lower than or even equal to suicide rates among the general NYC population.

Violanti (2004) studied predictors of suicidal ideation among police officers. He compared the New York general population with police officers and results indicated that police officers had higher rates of suicide than the general population. Interestingly, while the general population rate remained the same, police suicide rates were unstable.

Currently, there seem to be no studies that have reported differently, and substantiated the reasons for comparing police samples with the general population. In addition, no theories have emerged to explain the mechanisms underlying causes of low or high suicide rates within the police sector (Nordentoft, 2007).

2.3.3 Suicide among South African police officers

International and national literatures suggest that suicide behaviour in policing is as prevalent in South Africa as it is in most Western countries. Studies have further suggested that the type of work exposure involved in policing puts most police officials at risk for suicidal behaviour when compared with the general population (De Bruin, 2008; du Preez et al., 2011; Larned, 2010; Pienaar & Rothmann, 2005; Swanepoel & Pienaar, 2004; Rothmann & Van Rensburg, 2001). Contemporary research in South Africa also indicates that the subject of suicide in policing has been under-researched and remains a difficult topic for discussion in many police departments, as well as by families of police officers who have died because of fatal suicidal acts (du Preez et al., 2011; Violanti, 2008).

Although studies report that many incidents of police suicide remain unreported, the reported rates of suicide among the South African Police officers differ considerably according to each province. The provincial reports from 1998 to 1999 indicated that most police officers who committed suicide were in the KwaZulu-Natal, Eastern Cape and Gauteng provinces. However, the statistics decreased slightly, especially in the Northern Cape and Gauteng provinces, while the rates remained constant in the North West province. The remaining six provinces showed an increased rate of suicide among police officers; Mpumalanga and Eastern Cape emerged as the leading provinces in police suicide (Masuku, 2000).

Botega et al. (2005) reported that suicide rates in many countries are associated with unsupportive communities and this indicates the need for an effective protective social network. De Bruin (2008) reports that many incidents of police suicide remain unreported due

to the stigma associated with acts of suicide, and especially among police officers. The problem seems to also lie with the idea that police officers are perceived as strong persons capable of enforcing the law and alleviating suicide problems in communities. It then becomes problematic when law enforcers also engage in suicidal behaviours (De Bruin, 2008).

Speaking at the SAPS Suicide Prevention Summit in Pretoria, 2013, the Minister of Police reported that police officers have high job demands, and in some cases officers may internalise the emotions of the community (such as sadness, frustration and anger). According to the Minister, the challenge goes further than dealing with the emotions. When police officials are not on duty, they form part of the same communities they were patrolling. Debatably, this has the potential to raise levels of tension and stress, especially as cases may exist where police officers receive threats and insults from the communities they serve and are part of (Sanews.gov.za, 2015).

The Minister further gave figures of police officials who died from the year 2009 till June 2013. Although the exact percentages are unknown, these data remain significant as they show how serious suicide cases are among SAPS members. Data showed that in 2009, the SAPS lost about 73 officers due to suicide; the figure increased to 97 in 2010. The figures dropped in 2011 and 85 cases of police suicides were reported (percentages, which would enable better tracking of trends, were not available). Although there was a decline in 2011, the figures increased in 2012, during which year about 98 police officials died of suicide. From the 1st of January to June 30, 2013, the figure was 34, less than half of previous annual figures cited. The minister also reported that fatal suicidal acts were predominantly due to mental illness, but no information was given on how this was determined. The analysis also indicated that most such suicides involved service firearms (Sanews.gov.za, 2015). Based on these reports, further studies of aspects of suicidal behaviour and processes associated with suicide among SAPS members seem necessary.

2.4 Suicidal ideation among South African police officers

Suicidal ideation has been studied in various South African provinces. Rossouw (2000) identified the Free State and other provinces such as Northern Cape, Eastern Cape and North West to be amongst the primary provinces requiring serious attention concerning suicidal behaviour among police officers. A national study conducted by Pienaar (2002) showed that 8.64% of 2396 South African police officers experienced substantial levels of suicidal ideation.

Meyer et al. (2003) conducted a study in Eastern Cape which examined the relationship between stress and coping as well as suicidal ideation among police officers. Results indicated that 4.96% of uniformed members had high levels of suicidal ideation. This percentage is higher than the 1.4% reported in a later study by De Bruin (2008). Police members with a history of non-fatal suicidal behaviour scored higher on suicidal ideation compared to those who had not attempted suicide (Meyer et al., 2003).

Evidence of high suicidal ideation in SAPS members is also found in a study by Pienaar and Rothmann (2005). The results of their study indicate that, when compared to the other six provinces, the Limpopo, Gauteng and Free State provinces have higher frequencies of suicidal ideation. The incidence of suicidal ideation among police members in the Free State province was reportedly 4.51%; Gauteng = 1.05%; and Limpopo = 0.84%. More police officers in Free State were found to have high suicidal thoughts than in Gauteng and Limpopo.

Swanepoel and Pienaar (2004) studied coping strategies, stress levels and suicidal ideation in a sample of approximately 266 members of the SAPS in the Gauteng province. Results in their study indicated that a high percentage of police members obtained ASIQ scores higher than the national 8.64% found in a study by Pienaar (2002). The discriminant analysis resulted in a satisfactory categorization of police officers measuring high and low on suicidal ideation. Results showed that 9.02% of the police officers had statistically significantly high levels of suicidal ideation. It was reported that police officers who contemplate suicide were most likely to be less worried about issues affecting the community and crime prevention. Furthermore, the following variables (according to the significant order) were found to be the best predictors of suicidal thoughts among police members in Gauteng: "history suicide attempt, having been previously charged in terms of the disciplinary code, use of passive coping strategies, use of seeking emotional support coping strategy, suffering from a medical condition and Gender" (Swanepoel & Pienaar, 2004, p. 28).

In 2008, De Bruin conducted a study with police officers in the Eastern Cape to assess levels of suicidal ideation and examined demographic factors associated with the risk of suicide among a sample of 111 police officers in the Nelson Mandela Metropole. The results in her study indicate that about 1.4% of police members had significant levels of suicidal ideation, obtaining a high score above 31 on the Adult Suicide Ideation Questionnaire (ASIQ). The results also indicated no statistically significant variance in terms of gender, age, years in

service and marital status. On the other hand, police officers who had previously engaged in non-fatal suicidal behaviour reported significantly high scores on the ASIQ (De Bruin, 2008).

According to the statistics discussed above, it seems like it has become standard practice to report suicidal ideation rates among police officers; however, there is often little else reported alongside this which creates a gulf in comprehensive understanding of suicide and suicidal ideation. There still remain a number of questions to be answered. For example, what are the differences between police officers with high suicidal thoughts and those who complete suicide (fatal suicidal behaviour)? There is a need to gain a profound understanding of why members of the SAPS decide to end their lives. Some of the studies that have followed the topic of suicide and suicidal ideation in policing, especially in the South African context, are outdated (Meyer et al., 2003; Pienaar, 2002; Pienaar & Rothmann, 2005). Therefore, the current study hopes to provide up to date information on police suicidal behaviour and strategies employed to cope with their emotionally demanding work environment.

2.5 Suicidal ideation and demographic variables among South African police officers

Over the years, a significant amount of research has been dedicated to understanding the various processes (social, biological or mental) and components underlying suicidal behaviour in police samples. McAuliffe (2002) states that suicidal ideation becomes a risk factor for completed suicide and non-fatal suicidal behaviour when it is co-morbid with other risk factors such as lack of social support, negative cognitions and a sense of hopelessness. Arguably, it therefore appears inaccurate to view suicidal ideation as a single construct and associate it with other constructs such as coping. For example, several studies exploring the relationship between sociodemographic factors and the risk of suicidal ideation found consistent and significant associations between socio-economic variables and suicidal ideation in police samples using both clinical and cross-sectional surveys (Mokgobu, 2010; Nock et al., 2008; Rothmann & Strijdom, 2002; Schmidke, Fricke & Lester, 1999; Violanti, 2004). Larned (2010) maintains that the high rates of suicidal ideation among police officers, which are higher than the rates of the general population, could be a clear indication that certain factors are explicitly related to police work which increase police officers' risk of suicidal thoughts and engaging in suicidal behaviour. According to Larned (2010), these factors are less likely to affect the general population.

Basically, this means that certain sociodemographic factors such as alcohol, gender, marital status and level of education as well as mental health problems (stress, depression, post-

traumatic stress, burnout), when combined with maladaptive coping mechanisms, serve as the best predictors of suicidal ideation. Thus, suicidal ideation in the absence of socioeconomic risk factors, such as those mentioned above, appears to have no significant relationship with maladaptive coping skills. Exploration of these risk factors may also help to determine other underlying psychopathologies in police officers as amongst those that do have psychopathologies, most go unnoticed and this often contributes to suicidal behaviour (Larned, 2010). Schlebusch (2012) added that a thorough understanding of this is critical in identifying and making sense of the risk factors and underlying causes of suicidal behaviour which will consequently provide a better way of dealing with suicidal behaviour (suicidal ideation, plan and attempt).

2.5.1 Gender and suicidal ideation among South African police members

Literature on police, gender and suicidal ideation indicates that men are more at risk of committing suicide while women are more at risk of engaging suicidal thoughts; this is in keeping with general population trends (Canetto, 2008; Meehan & Broom, 2007; Swanepoel & Pienaar, 2004). The risk of suicidal ideation appears to bear significant associations with gender and age, putting women aged 18-34 at specific risk (Gross & Graham-Bermann, 2006; Nock et al., 2008). However, it has been argued that age, gender and suicidal ideation risks are difficult to apply to a police group as it is male-dominated, and thus makes it even more pressing to investigate suicide and suicidal ideation in police members.

He, Zhao and Ren (2005) also indicated that gender is an important consideration when addressing issues relating to suicide, suicidal ideation and coping strategies among police officers. Their study showed that women were most likely to present with suicidal ideation and engage in suicidal behaviour, while men who engaged in suicidal behaviour were most likely to complete suicide. This is also true for international data on general populations (Gross & Graham-Bermann, 2006).

In contrast to most international and national reports (Gross & Graham-Bermann, 2006; He et al., 2005; Violanti et al., 2008), Pienaar and Rothmann (2005) reported 1.14% of suicidal ideation in male police officers even though exact rates for female officers were not provided. Despite the unreported rates for female officers, the male rates were reportedly higher than female rates and 12 times more than the 'expected' frequency which was also unreported. Pienaar and Rothmann (2005) found no significant differences in terms of age, marital status and years in service of the SAPS. Meehan and Broom (2007) reported that the majority of

people who contacted suicide toll-free crisis lines were female South Africans in the 16-18 age group living in Gauteng, KwaZulu-Natal or North West.

An international study by Nock et al. (2008) indicated that, in the United States, unmarried and unemployed women with low levels of education were at risk for suicidal behaviour. Results in a study undertaken by Violanti et al. (2008) indicated that the prevalence of suicidal ideation among women increased significantly as age increased. The prevalence of suicidal ideation in women also increased as the number of years of police service increased. On the other hand, the prevalence of suicidal ideation decreased in both genders as levels of education increased. However, the trend was noted to be statistically significant only in male police officials (Violanti et al., 2008).

2.5.2 Substance abuse and suicidal ideation

Alcohol abuse and dependency have long been observed as problematic for many members of the police. Majority of the police were reported to ingest large amounts of alcohol as a way of coping with life stressors and work tension (Lindsay & Shelley, 2009; Pienaar & Rothmann, 2005). The results in Rothmann and Van Rensburg's (2002) study showed that police members who had a minimum of 14 alcoholic drinks each week were more likely to experience suicidal thoughts. The same police officers also scored considerably lower on a self-efficacy scale, active coping, and enthusiasm to seek out support or help compared with the control group. Similarly, Violanti (2004) reported that police members who consume extreme volumes of alcohol as a means of dealing with Post Traumatic Stress symptoms were at significant risk of experiencing suicidal ideation.

Evidence for the relationship between high levels of alcohol consumptions in police samples can also be found in a study by Pienaar and Rothmann (2005). This study found higher than expected counts in the category of suicidal ideation in police officers who reported to be taking 8 to 14 drinks per week with an average of 2.96. Results further indicated that South African police officers who consumed alcohol excessively were doing so as a way of relieving stress, and were also experiencing marital problems and job dissatisfaction.

In a study by Davey, Obst and Sheehan (2001), drinking problems correlated with social interaction among officers. Results in Davey et al.'s (2001) study indicated that alcohol consumption was a significant factor within the police social outlets. When asked to comment

about colleagues who do not drink, about 31% of police officers reported that those who did not consume alcohol were perceived as suspicious and antisocial people.

On the other hand, existing research has further provided contrasting information about the reasons why police officers consume excessive amounts of alcohol. Interestingly, in their study of 1,328 full-time police officers, Lindsay and Shelley (2009) attributed high amounts of alcohol consumption among police officers to the creation of a sense of belonging. Remarkably, police officers made a clear distinction between drinking alcohol to fit in within the police subculture and consuming alcohol as a means of enhancing socialisation. Lindsay and Shelley (2009) state that "The officers most at risk for drinking problems admitted that fitting in was highest on their list of why they drank alcohol" (p. 87). Furthermore, when asked to state their reasons for drinking, Lindsay and Shelley (2009) reported that "officers responded that drinking inspired camaraderie and served as a medium for the celebration of professional accomplishment" (p. 88). Results from a recent international study by Chae and Boyle (2013) also indicated that increases in the risk of suicidal ideation is a consequence of several factors, although alcohol remains amongst the five prominent risk factors associated with suicidal ideation in policing.

2.5.3 Marital status and suicidal ideation

A study by Berg, Hem, Lau, and Ekeberg (2006) showed that married police officers did not experience high levels of organisational strain when compared to unmarried officers. Specifically, results showed fewer chances of married female officers becoming emotionally drained by adversarial work pressures.

Similarly, Burke and Mikkelsen (2007) reported that unmarried police members were at significantly greater risk of suicidal ideation than members who were in committed relationships; the latter further reported by Violanti et al. (2009) to be less likely to develop psychological problems and suicidal ideation than their unmarried counterparts. Gender is an important consideration to make here, as results also showed that amongst unmarried female police officers, the risk for suicidal ideation was four times greater than their married colleagues. It was also found that female officers who were married and had children were less distressed compared to unmarried female officers with no children (Violanti et al., 2009).

2.5.4 Stress and suicidal ideation

There is mounting empirical research that has examined the relationship between stress and suicidal ideation among police officers. From previous literature, in comparison with other professions, policing has been recognised as one of the most demanding occupations (Anshel, 2000; Pienaar et al., 2007; Webster, 2013; Violanti, Mnatsakanova & Andrew, 2013). This is particularly true for members of the South African Police Service, where the political and socio-economic turmoil of the past decades has been characterised by high levels of violence and crime (Masuku, 2000). Pienaar, Rothmann and Van De Vijver (2007) reported that high levels of suicidal ideation in police officials are often a response to a repeated stressful or traumatic event which can often lead to suicide. It is estimated that the number of police officers who are exposed to severe traumatic events ranges from 10-15% (Bishopp & Boots, 2014). It is such police officers who are at a higher risk for suicidal ideation.

With the above mentioned sociodemographic correlates of suicides, it can be argued that although we may never fully understand the exact factors that lead to the development of suicidal ideation among police officers, some of the possible factors are the engagement in high-risk behaviours, which include alcohol dependency and the psychological, occupational and familial factors all associated with a lack of effective coping skills.

Given the above correlates of suicide behaviour within suicide and coping strategies literature, a gender paradox has been noted. Fatal suicidal behaviour is more common in males, while suicidal ideation and non-fatal suicidal behaviour are more common in females (Canetto, 2008; He et al., 2005; Nock et al., 2008). Despite the given correlates of suicide, it has been noted that research on these factors has rarely invoked theoretically based explanations of suicide and coping strategies. Therefore, research focusing specifically on theoretical explanations of these factors may be useful.

2.6 Explanations of suicide and suicidal ideation models in policing

In reviewing literature on suicide, it has been noted that although several models have been developed to explain suicidal ideation, there is still a lack of theories to help provide theoretical explanations for suicidal ideation. Reynolds (1991a) viewed suicidal behaviour on a continuum varying on severity; from thoughts to intentions, attempts and lastly, completion. Thus suicidal ideation is perceived as a critical and significant component when evaluating the risk of suicide in a person. According to Reynolds (1991a), suicidal ideation, given its cognitive specificity,

can be viewed as a self-statement domain which is more consistent with cognitive behavioural focus. In his theory of suicidal ideation, Firestone (1997) also contended that thoughts that are destructive diverge along an intensity continuum which ranges from mild self-approach to high suicidal ideation. In the same way, behavioural actions that are self-destructive also exist along a continuum and may include behaviours that are self-defeating and involve substance use, self-denial and eventually actions that may directly cause bodily harm. Hence there is a relationship between the two continua in which a person's behaviour becomes significantly influenced by his negative thinking and thought processes.

2.6.1 The interpersonal theory of suicide

While a theoretical consensus has not been reached, an interpersonal theory of suicidal behaviour has been regarded by many as a sound theoretical framework to explain suicidal ideation and behaviours (Fassieux, 2009; Joiner, 2005; Van Orden et al., 2010). An interpersonal theory of suicidal behaviour has been introduced and proposes that the desire to die by and the means to commit suicide are the main contributing factors to suicide behaviour (Joiner, 2005).

Interpersonal theory suggests that suicidal ideation is an operationalised practice of the concept of suicidal desire (Ribeiro & Joiner, 2009). However, suicidal desire alone is insufficient to result in fatal suicidal behaviour. Acquiring the ability to enact fatal self-injury is therefore a second requirement. The interpersonal theory argues that suicidal ideation comprises of two main psychological aspects: perceived burdensomeness and low sense of belongingness which are primarily associated with suicidal desirability and the attained ability to commit suicide. Thus the main elements underlying suicidal ideation and suicidal behaviour start with examining the desire to commit suicide and the principal components of such thoughts and behaviour (Ribeiro & Joiner, 2009; Van Orden et al., 2010). The theory suggests that the desire to die is characterised by an individual's ability to simultaneously grasp two psychological states of thwarted belongingness and perceived burdensomeness or social alienation (Ribeiro & Joiner, 2009; Van Orden et al., 2010). Also, in order to commit suicide, fears associated with suicidal behaviour must not exist. The possibility of acquiring capacity for suicide, characterised by increased tolerance of physical pain and decreased fear of lethal self-injury that enables a person to commit suicide must exist (Ribeiro & Joiner, 2009). Van Orden et al. (2010) stated that "what is needed to improve prediction of suicidal behaviour is a theory that

is both precise allowing scientific falsifiability and clinical utility and comprehensive allowing the theory to account for both suicidal ideation and suicide attempts" (p. 8).

2.6.1.1 Perceived burdensomeness or social alienation

Pienaar and Rothmann's (2005) study of police officers showed that job suspension and marital problems were the main risk factors relating to police members' resolutions to engage in suicidal behaviour. In addition, Burke and Mikkelsen (2006) found a significant relationship between suicidal ideation, family conflict, and work exposure in Norwegian police officers. Van Orden et al. (2010) argued that the extreme psychological state of perceived burdensomeness is associated with suicidal ideation. Family conflict, lack of employment and physical illness are regarded as leading factors of suicidal ideation. The theory proposes that the likelihood of developing an awareness of burdensomeness is the most common strand between family conflict, lack of employment and physical illness.

2.6.1.2 Thwarted belongingness

Interpersonal theory also relates thwarted belongingness to risk of suicidal behaviour, arguing that this is a dynamic state influenced by both interpersonal and intra-personal factors. The present study adapted this theory to explain suicidal ideation among police as it covers a broad range of factors that have been argued in previous literature on suicide among police officers. Interpersonal theory addresses issues of family conflict and sense of belongingness, which have been identified by various scholars as some of the risk factors associated with high levels of suicidal thoughts among police officers (Rothmann & Van Rensburg, 2002; Violanti et al., 2009).

Nordentoft's (2007) study indicated that police officers, by virtue of their profession, should be people who are trusted and can protect the community they serve. However, police officers and members of the community were seen as enemies; police officers often did not socialise with members of the community, and neither were they perceived as belonging to the communities they serve. Subsequently, they were faced with personal isolation due to alienation experienced in both their communities and families, the latter attributed to long hours at work. As a result of a thwarted sense of belongingness and social support, suicidal ideation tends to occur. In addition, obtaining a sense of belongingness within the police community itself can be equally challenging (Lindsay & Shelley, 2009). To resolve this challenge it is reported that police officers drink alcohol not only as a way of managing difficult situations,

but also to make it easy for them to obtain a senses of belongingness; they are thus able to socialise with less effort within their own work environment (Lindsay & Shelley, 2009).

Thwarted belonging involves being predisposed to interpret other people's behaviours as indicative of rejection (Van Orden et al., 2010). This predisposition becomes likely when the sense of belongingness is weak. On the other hand, the critical question is; at what point and under which circumstances do dissatisfied needs for belongingness lead to suicidal ideation? Van Orden et al. (2010) conducted a study that tested the interpersonal theory of suicide among adults and found a significant relationship between suicidal ideation and dissatisfied sense of belonging. Results also showed that "painful and provocative experiences significantly predicted acquired capability scores. Also, the interaction of acquired capability and perceived burdensomeness predicted clinician-rated risk for suicidal behaviour" (p. 72).

However, it is important to note that various risk factors are involved in individuals who present with suicidal thoughts and suicidal behaviour. Thus no distinct risk factor has yet been found to be a primary contributing factor. Theoretical models of suicide should be capable of accounting for the wide-ranging array of risk factors that related to fatal and non-fatal suicidal behaviour.

2.7 Literature on coping

Literature on the concept of coping is vast and indicates that researchers have long been concerned with the manner in which people deal with challenging situations and the skills they use. Coping has been examined by different scholars from both theoretical and research perspectives. However, coping is still regarded as a complex phenomenon and is not amenable to easy explanation. Folkman and Moskowitz (2004) added that coping cannot be regarded as a separate concept. It is probably rooted in a more multifaceted and dynamic stress process that includes the environment, person and the association between the two.

According Folkman and Moskowitz (2004), research on coping has been undertaken with the hope that it might help to provide explanations on why certain people cope better than others when facing stressful events. They further pointed out that there are numerous other concepts (for instance, personality, culture and developmental history) that can be useful in explaining individual differences and the manner in which they deal with difficult situations. However, coping is different from these concepts as it supports cognitive-behavioural interventions. According to Folkman and Moskowitz (2004) "as such, its allure is not only as an explanatory

concept regarding variability in response to stress, but also as a portal for interventions" (p. 746).

Furthermore, literature on coping has portrayed men as better than women at dealing with life stressors. On the other hand, numerous studies indicate that women are more likely to seek professional or non-professional help from various social support systems (Gross & Graham-Bermann, 2006; He et al., 2005). This has been linked to the idea of barriers to help-seeking as it is seen as a subset of coping.

Grossman and Graham-Bermann (2006) also argued that the complexity of coping as a construct comes with the idea that there is no single theory to fully explain it. Even so, the challenge with existing literature is that most of it has studied the concept of coping through or in relation to other concepts such as stress. In general, studies in the area of coping have frequently focused on areas where an individual has encountered traumatic life events and how the person has implemented coping strategies in response to stressful situations (Barnes, 2011). On the other hand, stress has also been regarded as a complex concept, as to some it can bring positive motivation while in others it may result in ineffective adaptation. For example, coping with a stressful situation can have a positive impact in the sense that it can foster personal change and growth rather than affecting a person's overall health and well-being in a negative manner (Barnes, 2011).

It is argued that when coping is transformational, change takes place, and this change can either be positive or negative, fleeting or permanent. On the other hand, when coping is exhibited in a homeostatic manner, emotions can be managed and problems resolved (Barnes, 2011). Differences in coping manifestations are critical to this study.

Although barriers to help-seeking behaviour are not the main variable in this study, they are seen as contributing factors to maladaptive coping and suicidal ideation. For example, in 2012, the Minister of Police, mentioned that barriers to help-seeking behaviour were a major concern within the SAPS. The problem faced by members of the SAPS was that seeking professional help was regarded as a sign of weakness, especially for men. Although this component forms part of the major topic in this study, it will not be measured *per se*, as the 'seeking emotional support' sub-scale of the COPE questionnaire subsumes help-seeking.

2.8 Coping from a theoretical perspective

A major proportion of existing literature on coping can be drawn from the work of Lazarus (1996). Lazarus (1993) stressed two approaches to coping. The first approach perceives coping as a person's characteristic (coping as a style) and the second approach emphasizes coping as process, "that is, efforts to manage stress that change over time and are shaped by the adaptational context out of which it is generated" (Lazarus, 1993, p. 234).

According to Folkman and Moskowitz (2004), most previous studies on coping have been embedded within the ego-psychology framework and defence concept as demonstrated in the work of Haan (1969), and Vaillant (1977) (Folkman & Moskowitz, 2004; Lazarus, 1993). These studies, according to Folkman and Moskowitz (2004) focused more on pathology and depended largely on evaluating unconscious processes. In response to this, Lazarus presented a different contextual approach to coping that looked beyond the boundaries of coping to include individuals' cognitive and behavioural responses to life stressors.

2.8.1 Coping as hierarchical style

Coping as a hierarchical style drew from psychoanalytic formulations. According to Lazarus (1993), a three-way hierarchical model was proposed. This model viewed coping as a healthy and developmentally advanced process of adaptation. As the concept of coping was regarded as a defence, some defences were regarded to be healthier and less regressed than others. Basically, these approaches construed coping as a type of defence mechanism that an individual uses to deal with various unconscious conflicts or drives, especially aggressive internal conflicts (Barnes, 2011). Hierarchical coping approaches further expanded on coping trait measures, such as the difference between avoidance and denial (repression in some versions) and sensitisation (vigilance or isolation in other versions). As this approach is centred on internal psychodynamics rather than external environmental forces, one limitation of this approach is that it does not offer a detailed description of the specific coping strategies employed in stressful contexts. In essence, coping styles reportedly do not offer adequate explanations or predictions of intra-individual differences in terms of the manner in which sources of stress are handled within certain contexts.

2.8.2 Coping as a process

In response to hierarchical style, Lazarus (1993) offered a different approach that took into consideration individuals' cognitive and behavioural responses to life stressors. In essence,

Lazurus's (1993) model intended to measure and study coping as a process while examining its consequences for adaptation. However, his model on coping has over the years undergone several revisions.

In the early 1980s, Folkman and Lazarus defined coping as "a cognitive and behavioural efforts made to master, tolerate, or reduce external and internal demands and conflicts among them" (Folkman and Lazarus, 1980, p. 223). According to Krohne (2002), the definition provided by Folkman and Lazarus comprises of several implications. These include the following: (a) Actions of coping are classified in accordance with certain characteristics involved in the coping processes rather than according to their effects. (b) Coping process comprises of cognitive and behavioural reactions in a person. (c) In many cases, coping comprise various single actions and is arranged in a sequence, forming an episode of coping. This means that coping often includes simultaneous occurrences of various actions which result in an interconnection of episodes of coping. (d) Lastly, actions of coping are differentiated from others as they tend to focus more on various elements of a stressful encounter.

Basically, Lazarus's model of coping is useful to understand the interactions between an individual's thought processes and the environment. The reason for placing emphasis on the problem is that it is assumed that coping is a conscious process, and attention is given to how and what a person thinks or does in a given or specific context.

From the previous literature, the concept of coping may well be used to refer to the strategies one employs or results. Coping as a strategy refers to the various ways and means a person can use to manage his or her stressful circumstances. On the other hand, coping as a result speaks of the eventual outcomes of this strategy for the individual. Given this, for the purpose of this present study, the focus is on coping as a strategy employed to manage various circumstances.

2.9 Coping approaches

It has been found that suicide risk can be predicted by coping strategies (Meyer et al., 2003). Meyer et al.'s (2003) study also showed that suicidal ideation in police officers correlated positively with the use of passive coping strategies. However, Rothmann and Van Rensburg's (2001) study found no significant relationship between coping approaches and suicidal ideation among police members.

Folkman and Lazarus (1980) and Meyer et al. (2003) make a distinction between two coping orientations: problem-focused and emotion-focused coping orientations. These coping modes, as Carver et al. (1989) call them, are made up of several different coping strategies. These are discussed below.

2.9.1 Emotion-focused coping approach

Violanti (1992) found that higher levels of psychological distress result from the practice of emotion-focused coping strategies. The emotion-focused coping approach has been reported to be among the less productive approach to coping in policing (Swanepoel & Pienaar, 2004). This coping mode focuses mainly on changing the manner in which a stressful situation is perceived. It further aims to change the personal interpretations or meanings regarding the situation which result in one seeking social approval from others or distancing him/herself from the event. Emotion-focused coping strategies also focus on internal emotional states rather than on emotional responses that have been triggered by external situations (Carver et al., 1989; Folkman & Folkman, 1980; Swanepoel & Pienaar, 2004). Emotion-focused strategies have also been found to relate more to high measures of stress, including alcohol consumption, family conflict (divorce rates) and suicidal ideation in police officers (Swanepoel & Pienaar, 2004). According to Pienaar and Rothmann (2005), police officers often tend to compound stress by refraining from the use of emotion-focused coping strategies as using such coping strategies only intensifies their level of psychological stress, which is unacceptable within the policing subculture.

2.9.2 Problem-focused coping approach

In contrast to the emotion-focused coping approach is problem-focused coping approach which functions to change the relationship by way of acting on both the person and environment, and is achieved by altering the stressor through direct action. According to Meyer et al. (2003), problem-focused coping involves the actions a person takes during an encounter with a stressful occasion. The actions taken are aimed to manage, improve and change the unpleasant experience and reduce its effects. Problem-focused strategies include using confrontative coping skills, positive reappraisal, accepting responsibility and developing and setting new behavioural standards.

Nonetheless, both problem-focused and emotion-focused coping approaches have been found to function simultaneously and are mostly used in response to various stressful events.

However, research has shown that police officers tend to rely more on problem-focused coping strategies (Meyer et al., 2003). According to Meyer et al. (2003), research found that there was no significant relationship between emotion and problem-focused coping approaches. This suggests that these two coping approaches are diverse constructs rather than simply two opposing poles on one continuum. The distinction between these two coping modes has served as a theoretical background in South African studies on coping in relation to suicidal ideation in police samples (Meyer et al., 2003).

Jones and Kagee's (2005) study with SAPS officers in the Western Cape Province indicated a significant relationship between problem-focused coping and Post-Traumatic Stress Disorder which was reportedly unexpected as policing is generally perceived as a problem-solving occupation. Although the reported significant correlation was unexpected, it was found to be similar to the results found in a study by Patterson (cited in Jones & Kagee, 2005) on a sample of United States police offers, in which the results indicated that the problem-focused coping strategy did not have any positive effect on work events. According to Jones and Kagee (2005), "one explanation of these results is that, while persons attending a police academy may experience general stress, this is typically of a non-traumatic nature. Police personnel, on the other hand, are far more likely to encounter traumatic events in their daily duties, which problem-focused coping appears to exacerbate" (p. 221). Although the findings from Jones and Kagee (2005) and Patterson (2003) were similar, they contradicted those reported in Violanti's (1992) study which indicated that problem-solving coping correlated considerably with a decrease in self-reported burn-out among United States police officers. A cross-sectional study conducted by Kaur, Chodagiri and Reddi (2013) found the problem-focused approach to be the most commonly used method of coping at 60.46% among police officers.

2.10 Coping strategies and suicidal ideation among police officers

Previous research internationally and in South African contexts indicates that one of the basic problems on the topic of suicide and suicidal ideation in policing concerns coping, or ways in which police officials attempt to deal with the myriad life stressors to alleviate strain (Kaur et al., 2013; Nordentoft, 2007; Pienaar et al., 2007). Despite intense research on the topic of suicidal ideation and coping among police members, most existing research in the South African context is out-dated. Nonetheless, previous studies (Meyer, Rothmann & Pienaar, 2003; Pienaar et al., 2007; Wiese, Rothmann & Storm, 2003; Rothmann & Van Rensburg, 2002; Swanepoel & Pienaar, 2004) have set up a useful background for this topic in the South

African context. Therefore, analysis of these studies unearths the transitions and changes in literature, and provides a useful platform for research which aims to continue the exploration of suicide and suicidal ideation among police officials in South Africa. This research is summarised below.

Rothmann and Van Rensburg (2002) studied "psychological strengths, coping and suicidal ideation in the South African Police Services in the North West Province" (p. 39). The COPE questionnaire by Carver et al. (1989), which is similar to the one used in this study, was used to examine police officers' coping strategies. It was found that most police officers scored higher on religion coping strategy, which means that most police officers focused on spiritual coping skills as a way of facilitating emotional support. Most police officers also scored highest on the planning scale which measures ability to think about different strategies that can be used to resolve a problem. Rothmann and Van Rensburg (2002) contended that police officers' ability to turn to religion as a coping approach is not surprising. This is based on the fact that the SAPS often appoints religious personnel to take care of the officers' religious well-being.

While many police officers scored higher on planning and religious coping strategies, they also scored lower on denial as a coping strategy. Denial is the individual's attempt to reject the reality of the stressful event. Scoring low on denial suggests that most police officers had the ability to accept that a stressful event has occurred and it is real (Rothmann & van Rensburg, 2002). Although this is probably not a very effective coping strategy, most police officers scored the lowest on the venting of emotions coping strategy. Rothmann and Van Rensburg (2002) became concerned with this, arguing that this may explain why many police officers do not seek professional help when experiencing emotional difficulties. In addition, this tendency was argued to result from a lack of emotional attachment due to the nature of their working environment. Interestingly, no positive significant relationship was found between suicidal ideation and coping strategies. However, there was a significant negative correlation between substance use, behavioural detachment and sense of coherence. High levels of suicidal ideation among police officers correlated significantly with job dissatisfaction and low sense of coherence rather than certain coping strategies. The impact of coping methods on levels of suicidal thoughts amongst police members was found to be possible by increasing officers' generalised self-efficacy and sense of coherence (Rothmann & Van Rensburg, 2002).

In another South African study exploring coping strategies, personality traits and suicidal ideation among members of the SAPS, results showed that many police members were likely

to develop thoughts about suicide. The risk of developing suicidal thoughts was related to officers' low scores on emotional stability and coping style. Interestingly, Pienaar et al.'s (2007) study indicated that police members at risk for developing suicidal thoughts were those who obtained the lowest scores on religious coping strategy. Furthermore, while Rothmann and Van Rensburg (2002) found no significant relationship between coping strategies and suicidal ideation, a logistic regression analysis by Pienaar et al. (2007) indicated that the combination of three specific coping strategies and two specific personality dimensions could best predict suicidal ideation among South African police officers. These coping strategies were; low turning to religion, low approach coping and high avoidance coping; while the personality dimensions were low conscientiousness and low emotional stability. According to Pienaar et al. (2007), these findings implied that police members who were not using approaching coping, not turning to religion and avoided situational stressors were at risk of thinking about suicide, especially when their emotional stability and conscientiousness levels were low.

Correspondingly, the effectiveness of approach coping as found by Pienaar et al. (2007) has been reported in a recent international study by Webster (2013). In his meta-analysis of perceptions of police officers regarding occupational stress, his study showed a significant positive relationship between improved stress results and approach coping. Avoidant coping was markedly associated with higher stress levels in police officers (Webster, 2013). An international study by Chae and Boyle (2012) also showed that police officers' inability to employ effective coping strategies to deal with organisational and personal problems often led to stress and burnout which may result in the development of suicidal ideation.

Based on the literature review, it is clear that the manner in which police officers cope with stress and other issues poses a serious threat to the health of police officers. Furthermore, one can deduce that in a sample of SAPS members, significant levels of suicidal ideation correlate positively with passive coping strategies, job-related stress and the officers' personality traits. More precisely, low turning to religion, occupational stress, high avoidance, low emotional stability, low approach coping are the best predictors of suicidal ideation.

2.11 Summary of literature review

In going through literature on the topic of suicide (including suicidal ideation and both fatal and non-fatal suicidal behaviour) in policing, it is clear that most police officers experience thoughts related to suicide, and there is a significant increase in the rates non-fatal suicidal

behaviour and fatal suicidal behaviour. Furthermore, previous studies have shown inconsistent findings concerning the relationship between suicidal ideation and coping strategies. Moreover, previous findings have shown discrepancies in the relationship between suicidal ideation and various demographic factors such as marital status, age and gender. In terms of gender, research indicated that more female police officers are at risk of developing suicidal thoughts while male police officers are more likely to complete suicide (Rothmann & Pienaar, 2005; Rothmann & Strijdom, 2002; Violanti, 2004).

There are still no theoretically focused explanations of suicide rates among police officers. For example, although several factors such as marital problems, gender, stress and alcohol have been identified as possibly contributing to suicidal behaviour when stressful events occur; there remains an insufficient theoretical foundation to explain suicidal behaviour within the police subculture, with special focus on different ethnic groups. However, taking into consideration the methodological and theoretical controversies addressed in previous studies would help to reduce complications involved in studying the concept of coping and suicidal ideation in police officers and the general population. Doing so may provide a better understanding of the contextual and qualitative reasons for the development of risk factors in suicide and suicidal ideation amongst police officers and the general population.

Given these previous findings which link suicidal ideation with coping strategies, the current study aimed to investigate the relationship between thoughts about suicide and coping strategies and to determine what may be missing from recent South African literature in this regard. In addition, the present study appears to be the first study to examine the relationship between coping strategies and suicidal ideation among police officers in KwaZulu-Natal.

CHAPTER 3

METHODOLOGY

3.1 Introduction

The current study aimed to explore the relationship between suicidal ideation and coping skills among SAPS members in KwaZulu-Natal. This chapter discusses methodological issues applicable to this study. A research design is defined as "a blue-print or detailed plan of how research study is to be conducted. This blue-print or plan offers the framework according to which data to investigate the research hypothesis or question is to be collected in the most economical manner" (Fouché and De Vos cited in Mogane, 2010, p.46)

3.2 Research aims

- The overall aim of this study was to examine the relationship between coping skills and suicidal ideation in a sample of police officers in KwaZulu-Natal.
- To investigate whether there is a relationship between suicidal ideation and coping strategies and the demographic variables of gender and marital status.

3.3 Research questions

- What is the frequency of suicidal ideation in SAPS members in the current study sample?
- What is the pattern of coping skills in SAPS in KwaZulu-Natal?
- Are there coping strategies associated with high or low suicidal ideation?
- Is there a relationship between coping strategies and suicidal ideation among police officers?
- Is there a relationship between suicidal ideation and demographic characteristics, specifically gender and marital status?

Having identified the above research questions, the objectives of the present study are encapsulated in the following statements:

- To explore suicidal ideation frequency in SAPS members.
- To identify patterns of coping skills among SAPS.
- To identify coping strategies associated with low or high suicidal thoughts.

- To explore the correlation between coping strategies and suicidal thoughts among SAPS officers.
- To investigate the correlation between suicidal ideation and other variables such as gender and marital status.

3.4 Research hypotheses

- Maladaptive/Dysfunctional coping strategies will correlate positively with suicidal ideation.
- Functional coping strategies (problem-focused and emotion-focused coping strategies) will correlate negatively with suicidal ideation.
- Demographic variables (e.g., gender and marital status) will impact on suicidal ideation.

3.5 Research design

The present study took a quantitative approach using a cross-sectional design. This design allowed the researcher to draw the sample at one time and describe the population using information collected at that particular time. According to Swanepoel and Pienaar (2004) this design is suitable for validating and developing questionnaires. Steyn et al. (2013) also stated that "this design is suitable for describing the population as well as the calculation of correlations between measured constructs" (p. 20). Steyn et al. (2013) indicated that the strengths of quantitative research are that results can be generalised and that data is objective. This allows the researcher to make comprehensive comparisons and also provide a study with an internal validity. Although it is argued that quantitative techniques do not provide much thorough understanding and that there is a loss of depth when compared to qualitative techniques, it is important to note that in this study, individuals' experiences about suicidal ideation are not examined. The present study aimed to determine the relationship between suicidal ideation and coping skills among police officers. Therefore, quantitative techniques were suitable for this study as the focus was on examining the relationship between two variables (coping skills and suicidal ideation).

3.6 Sample

Quantitative research requires large samples (minimum of 30 participants) as the accuracy of representation of a study is affected by the size of the sample. The larger the sample, the less

chance of error (Fraenkel & Wallen, 2009). A total number of 125 police officers took part in this study. A convenient sample of police officers was drawn from a police station in KZN. Owing to the sensitivity of the research topic, about 15 police officers withdrew from participating in the study. Obtaining permission from SAPS Head Office to conduct the study and making arrangements with the Employee Assistance Programme Unit within the police station (which is aimed at providing professional psychological services in support of employee assistance programmes) took place as an initial orientation to the context of the study. However, several challenges were encountered in getting the gatekeeper's permission and securing the sample; these challenges are discussed in chapter six.

The sample was ethnically diverse (Black, White, Indian and Coloured, see Figure 1). All participants were also above the age of 18 years which was ethically necessary as the study required adult participants. The majority of the police officers were Black followed by Indians. The White and Coloured groups were the smallest with the same percentages (see Table 1).

Table 1: Sample distribution by race and gender

		Black	white	Indian	Coloured	Total
Gender	Female	33	1	3	2	39
	Male	71	5	6	4	86
Total		104	6	9	4	125
Percentage		83.2	4.8	7.2	4.8	

Data shown in Table 1 show that overall there were more than twice as many male than female participants. A possible reason for this significant gender difference could be that policing has always been considered to be a male dominated occupation (Berg et al., 2006).

3.7 Procedure

A police station in KZN was approached and asked to allow their police officials to participate in the study. Due to the sensitivity of the research topic, prior to data collection, the researcher communicated with the Station Commander who asked that proper arrangements with the Employee Assistance Programme unit, which provides psychological services, be made. This was done for the purpose of referring and providing counselling to participants who may have found the questionnaires challenging to their emotional state and upsetting. Even in this regard, confidentiality was ensured. All necessary official written permissions and ethics approval

from the UKZN Social Sciences and Humanities Research Ethics Committee (approval no. HSS 0381/014M, see Appendix 6) were received.

Once participants were recruited, they assembled in a hall and the nature and purpose of the study as well as the process of completing the questionnaires was thoroughly explained to them. All participants were made aware that their participation in the study was voluntary and that they had the right to withdraw without risk of penalty or negative consequence, although they were encouraged to participate fully in the study. The two questionnaires (the COPE questionnaire and Adult Suicide Ideation Questionnaire) were handed to all participants who voluntarily agreed to participate in the study (see Appendices 4 and 5). Informed consent was obtained from each participant before they started completing all the questionnaires. All participants were given an opportunity to ask questions and the researcher responded to all questions asked. These detailed statements of procedures acted as the main guidelines to conducting the present study.

3.8 Measuring instruments

Two instruments were selected and utilised to examine the relationship between suicidal ideation and coping skills, namely: The Coping Orientations to Problems Experience Questionnaire (COPE) by Carver et al. (1989) and Adult Suicide Ideation Questionnaire (ASIQ) by Reynolds (1991). Biographic participant information was gathered using a biographical questionnaire.

The main reason for choosing these instruments was that while they provide significant information in examining the relationship between coping skills and suicidal ideation, they are also suitable in guiding and helping participants to see whether or not they are experiencing suicidal thoughts that require essential interventions. A brief review of each of these two instruments is provided below.

3.8.1 The Adult Suicide Ideation Questionnaire

The Adult Suicide Ideation Questionnaire (ASIQ) was developed by Reynolds (1991) to measure the level of suicidal ideation in adulthood. This is a self-report measure which consists of 30 screening questions for suicidal ideation. The questionnaire consists of 30 sentences relating to thoughts that people from time to time are likely to have. This questionnaire provides a 7-point rating scale with a built-in scoring key. The response format ranges from 0 (I have never had this thought) to 6 (Almost every day).

Reliability and validity of the ASIQ have been reported adequately in previous studies. Reynolds (1991) reported an internal consistency coefficient that ranges from 0.96 to 0.98. He further reported a test-retest reliability ranging from 0.86 to 0.95. He further commented on the construct, content and criterion-related validity reporting that, although the insignificant difference in terms of the ASIQ scores for gender have been reported for both community and psychiatric populations with no suicide attempts, male suicide attempters appear to obtain higher ASIQ scores than female attempters.

Studies conducted in South Africa have also reported an adequate reliability and validity of the ASIQ. In a study by Meyer et al. (2003), a retest coefficient that ranges between 0.86 and 0.95 was reported with Cronbach's Alpha of 0.97. Correspondingly, De Bruin (2008) reported a Cronbach's Alpha for the ASIQ of 0.99. Cronbach's Alpha reliability was also tested in the present study. All items on the ASIQ show that they reliably test the latent construct (Cronbach's α=0.9035).

Therefore, the ASIQ was chosen because the items on the questionnaire represent a range of contexts in which thoughts about suicide have been reliably measured. The statements written in the questionnaire can be arguably said to provide a reliable prognosis of suicidal ideation. The Cronbach's Alpha for the present study was 0.90. This scale is therefore appropriate for assessing the levels of suicidal ideation among police officers who took part in the study.

3.8.2 The Coping Orientations to the Problems Experienced Questionnaire (COPE)

The COPE questionnaire by Carver et al. (1989) was used to assess police officials' coping strategies. The COPE Questionnaire has a broad range of coping responses which assess how individuals cope across situations. This multi-dimensional questionnaire has 60 items which asks individuals to indicate what they generally do and feel when experiencing stressful events (Carver et al., 1989). This questionnaire is the longest version which consists of 60 items answered on 4-point Likert scale (1 = I usually don't do this at all; 2 = I usually do this a little bit; 3 = I usually do this a medium amount; 4 = I usually do this a lot).

Carver et al. (1989) reported Cronbach's Alpha reliability for each sub-scale as follows: active coping = 0.62; planning = 0.80; suppression of competing activities = 0.68; restraint coping = 0.72; seeking of instrumental social support = 0.75; behavioural detachment = 0.63; seeking of emotional social support = 0.85; positive reinterpretation and growth = 0.68; acceptance = 0.65; denial = 0.71; religious coping = 0.92; venting of emotions = 0.77; and mental disentanglement

= 0.45. All the sub-scales showed sufficient reliability levels, with the exception of the mental disengagement sub-scale.

Wiese et al. (2003) reported a test-retest reliability which varied from 0.46 to 0.86 and from 0.42 to 0.89 which is rather low but no alternate suitable instrument was locally available. Pienaar and Rothmann (2003) reported suitable alpha values together with inter-item correlation ranging between 0.25 (on the Acceptance coping) and 0.65 (Turning to Religion coping), indicating levels of internal consistency that are acceptable.

The above mentioned sub-scales have been further categorised into three more major sub-scales to measure three distinct coping approaches, namely; maladaptive, problem-focused and emotion-focused coping strategies. An additional five scales assess problem-focused coping strategies (looking for social support, planning, suppression of activities, active coping, restraint coping). Emotion-focused coping strategy is measured by the following scales: seeking emotional social support, acceptance, positive growth, being in denial and religious coping. Maladaptive coping strategy is measured by the following scales: venting of emotions, mental disengagement behavioural disengagement and use of alcohol.

The Cronbach's Alpha, with a cut-off point of 0.7, was used to test the COPE questionnaire sub-scales for internal consistency in this study. The Cronbach's Alpha for each sub-scale was as follows: focus on venting emotions $\alpha = 0.72$; denial $\alpha = 0.68$; substance use $\alpha = 0.76$; behavioural disengagement $\alpha = 0.62$; mental disengagement $\alpha = 0.57$; humour $\alpha = 0.83$; positive reinterpretation and growth $\alpha = 0.72$; use of instrumental social support $\alpha = 0.83$; active coping $\alpha = 0.68$; religious coping $\alpha = 0.72$; restraint $\alpha = 0.55$; acceptance $\alpha = 0.59$; suppression of competing activities $\alpha = 0.65$; planning $\alpha = 00.74$, and use of emotional support $\alpha = 0.86$. All items on the COPE reliably test the latent construct ($\alpha = 0.94$). For research purposes, a Cronbach's Alpha of 0.60 was considered acceptable. On this basis the following scales were considered to have a low Cronbach's Alpha: mental disengagement $\alpha = 0.57$; restraint $\alpha = 0.55$; acceptance $\alpha = 0.59$. Inter-item correlation was low in sub-scales with a lower Cronbach's Alpha. Overall inter-item correlation ranged from 0.24 to 0.61. It is important to note that the average inter-item correlation for the COPE questionnaire was only tested during data analysis. Had the researcher tested this before data collection, perhaps some items on the sub-scales with low Cronbach's Alpha could have been considered for revision.

In relation to the research question about the pattern of coping skills in SAPS members, the scales were grouped according to a specific coping strategy. This has been adopted from Carver

et al. (1989). On the other hand, Pienaar and Rothmann (2003) report that the following coping sub-scales measure similar coping strategies: restraint coping, use of emotional social support, use of instrumental social support, acceptance, focus on and venting of emotion, denial and humour). There seem to be no studies that have commented on this. The COPE instrument was ideal for this study as it allows the identification of a specific pattern of coping skills in an individual.

3.8.3 Biographical questionnaire

This questionnaire was designed for the purpose of obtaining participants' demographic details. The questionnaire required that participants fill in their date of birth and age, gender, marital status, number of children and how long they have been members of the South African Police Service (see Appendix 3).

3. 9 Data analysis

The aim of this study was to investigate the relationship between coping skills and suicidal ideation among SAPS members in KwaZulu-Natal. After sampling was complete and statistical analysis has commenced, analysis showed that the study sample did not meet statistical requirements for correlational study. As a result, request to amend the initial study title was submitted to the Ethics committee and the amendment was approved. The amendment of the study tittle had no impact on participants (see Appendix 7). Statistical techniques obtained from the Statistical Package for Social Sciences version 23 (IBM SPSS statistics 23, 2013) were used to analyse data. Pearson's product momentum correlation was used to test for association between two categorical variables: suicidal ideation and coping strategies (Fraenkel & Wallen, 2009). The interpretation was performed at 95% confidence limit. Cronbach's Alpha, with a cut-off point of 0.7 was used to test for internal consistency. The Descriptive statistics were used to designate the important features of the data obtained as they offer simple summaries regarding the population and the methods used. Cronbach's Alpha coefficients and inter-item correlation coefficients were used to assess the reliability and validity of the measuring instruments.

A discriminant analysis was done to identify variables which might categorise members of the police into two groups: those with either low or high suicidal thoughts. The main hypothesis of discriminant analysis is that, on the one hand, independent factors are continuous and on the other hand, factors that are dependent variables are categorical (Swanepoel and Pienaar, 2004).

3.10 Ethical considerations

There is a need for all research to comply with ethical guidelines (Wassenaar & Durrheim, 2006). For that reason, the below mentioned ethics issues were addressed, following the outline of Wassenaar and Mamotte (2012).

3.10.1 Social value

The social value of this study is that results obtained from this study could possibly generate a better understanding of suicidal ideation and behaviour among police officers in South Africa, further opening new ways of designing intervention programmes aimed at improving the work conditions and coping skills for police officers.

3.10.2 Scientific validity of the instruments

Neither the ASIQ nor the COPE has been normed on South African population (Pienaar & Rothman, 2005). Therefore, for this reason, all results obtained in the study should be interpreted with caution.

3.10.3 Fair selection of participants

Participants in the study were police officers above the age of 18 which was necessary because the study examined the correlation between coping skills and suicidal ideation among SAPS members. Also, the Adult Suicide Ideation questionnaire requires adult participants to complete it.

3.10.4 Favourable risk ratio

The potential benefit and knowledge gained through this study is hoped to be higher than anticipated risks to the participants. All participants were treated with care and respect. As suicide is considered a sensitive topic, and as indicated earlier under the procedure followed in collecting data, prior to data collection, referral and counselling arrangements were made with the police station to refer participants to the employment assistance programme unit within the police station which is aimed at providing professional psychological services. This was done for the purpose of referring any participant who might have found the questions upsetting and/or challenging to his or her emotional state.

3.10.5 Informed consent

Informed consent was obtained from each participant before the research process began. The aim and purpose of the study was explained to the participants. Participation in the study was voluntary and all police officials who participated in the study had the right to withdraw from the research at any point without enduring penalty or any undesirable consequences to themselves. All responses to the questionnaires were kept confidential and anonymous.

3.10.6 Respect for study population and communities

During the process of data collection, the current study aimed to protect and respect participants' privacy and the police station as a whole during every step of the data collection process. No identifiable details from participants or the research site (police station) have been recorded or reported. As part of the gatekeepers' (SAPS) requirements, it is expected that the researcher forward the results obtained in the study to the SAPS Head Office, Provincial Office and local police station (where the data was collected). Even in this regard, all participants' identifying data has been kept confidential and their privacy remains intact. Some participants provided their email addresses as they wished to receive feedback regarding the results of the study which remain confidential and were not linked to the data.

3.11 Validity, reliability and rigour

In the process of collecting and analysing data, the researcher ensured the rigour, credibility and validity of the study. These three major components are discussed in detail bellow to offer coherence as well as an indication of the qualities of this study.

3.11.1 Credibility/validity

To improve credibility of the current study, the researcher with the help of the supervisor thoroughly checked the accuracy of analysis and the methodologies employed throughout the study. Although Steyn et al. (2013) pointed out that the strengths of quantitative research is that results are generalisable as data is objective, allowing the researcher to make comprehensive comparisons and also providing a study with an internal validity, the researcher was critical of any conclusions drawn from the study population ensuring that results obtained from the present study are not over-generalised.

The COPE questionnaire and ASIQ were described above. Their validity and reliability have

been reported. Reynolds (1991) provided evidence for criterion-related and content construct validity of the adult suicidal ideation. Also, Wiese et al. (2003) reported sufficient Alpha coefficients of all the sub-scales of the COPE.

3.11.2 Transferability

According to Durrheim (2006), transferability can be achieved by producing detailed descriptions of the frameworks used in the study. Therefore in the process of laying out the framework for the research rationale, this study outlined a thorough description of theoretical and empirical literature which the study is based on.

3.11.3 Reliability

Both the ASIQ and COPE questionnaires have been used before and their reliabilities have been reported. Wiese and colleagues (2003) reported the test-retest reliability of the COPE which varied from 0.46 to 0.86 and from 0.42 to 0.89. Reynolds (1991) reported internal consistency coefficients of the Adult Suicide Ideation Questionnaire that range from 0.96 to 0.98 with retest coefficients that range from 0.86 and 0.95. In addition to this, although these instruments have not been standardised in a South African population, which could possibly be regarded as one of the limitations of this study (Pienaar & Rothmann, 2005), part of the statistical analysis of the current study included a detailed analysis of the instruments in order to test and evaluate their reliability and internal consistency using Cronbach's Alpha. As mentioned above, the Cronbach's Alpha for ASIQ was Cronbach's $\alpha = 0.9035$ and $\alpha = 0.9468$ for the COPE questionnaire.

CHAPTER 4

RESULTS

This chapter presents results obtained from the analysis. The results are presented in table and figure form. A brief explanation of each table is provided to state the purpose of the table and describe its contents. The results were analysed using descriptive and inferential statistics.

4.1 Descriptive statistics

Figure 1: Sample distribution by race

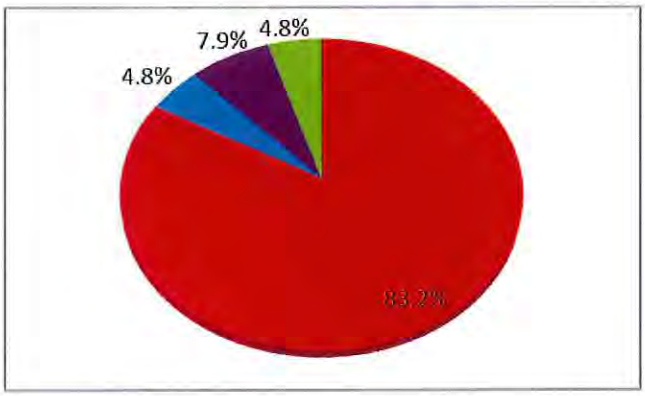

Figure 1 shows the percentage of the sample per race. The biographical questionnaire only allowed participants to choose the following racial groups: Black, White, Indian and Coloured. Based on the data presented above the largest group of participants was Black at 83.2%. Indian participants were the second largest group at 7.9%. Both White and Coloured groups comprised the same proportion of participants at 4.8%.

Figure 2: Gender distribution

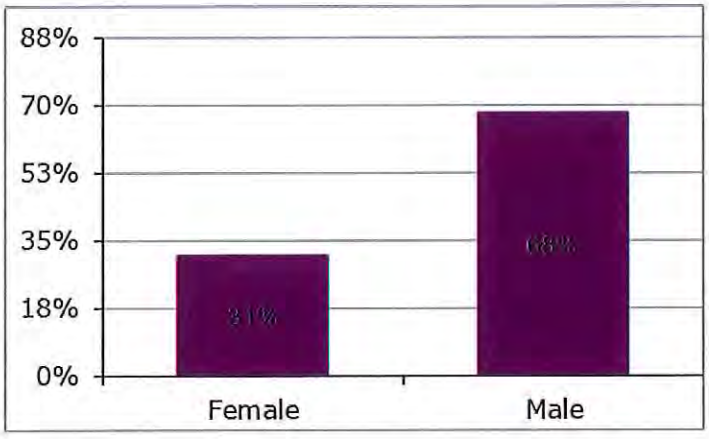

Figure 2 illustrates that the study sample consisted of 68% male and 31% female participants. Policing is regarded as a male dominant occupation, compatible with this data.

Table 2: Number of children

Number of children	Frequency	Valid percentage	Cumulative percentage
0	24	19.2	19.2
1	22	17.6	36.8
2	41	32.8	69.6
3	22	17.6	87.2
4	11	8.8	96
5	3	2.4	98.4
6	1	0.8	99.2
9	1	0.8	100
Total	125	100	
Mean	1,7		

Table 2 shows frequency of the number of children that the participants had. Of the 125 participants, most participants (32%) had 2 children. Only 18.8% of the sample had no children. The mean number of children was 1.7.

Table 3: Gender and age of participants: Cross-tabulations

Count		Participants age			
		22-30	31-40	41 Above	Total
Gender	Female	14	22	3	39
	Male	25	37	23	85
Total		39	59	26	124
Mean age		34			

Table 3 shows the age of the study population by gender. The sample only consisted of individuals above age 18. A total of 39 females and males fell in the 22-30 age group. A total number of 59 female and male participants were in the 31-40 age group. Furthermore, the age group for 26 participants was 41 and above. The mean age of the participants was 34 years.

Table 4: Gender and marital status: Cross-tabulation

		Marital Status				
		Single	Married	Divorced	Widowed	Total
Gender	Female	22	14	2	1	39
	Male	49	34	1	2	86
Total		71	48	3	3	125
Percentage		56.8	38.4	2.4	2.4	

Table 4 represents the participants' marital status by gender. Of the sample, the majority of participants (56.8%) showed that they were single. A total of 48 (38.4%) participants were married. The total number of divorced and widowed participants was equal (3 = divorced and 3 = widowed) (2.4%).

Table 5: How long have you been a member of the SAPS: Cross-tabulation

		Length of service in SAPS			
		10 & Below	20 years	21 & Above	Total
Gender	Female	32	5	1	38
	Male	54	9	18	81
Total		86	14	19	
Percentage		72.3	11.7	16	119

Information regarding length of service in the SAPS was also gathered. Most participants (72.3%) had been in the SAPS for a period of 0-10 years. A total of 11.7% participants had more than 11 years of service as members of SAPS. A total of 19 respondents (16%) were in the 21 years and above range. Information concerning participants' years of service is shown in Table 5.

Table 6: Suicidal ideation frequency

	Frequency	percentage	cumulative percentage
Low suicidal thoughts	115	92	93.6
High suicidal thoughts	8	6.4	100

Table 6 shows suicidal ideation among the participants. Participants had to score more than 31 to be considered suicidal as per ASIQ scoring criteria. Participants who scored between 0-30 were considered to be not suicidal as per ASIQ scoring criteria. Results show that 6.4% of the sample had significant levels of suicidal ideation. These participants scored above the 31 on the ASIQ.

4.2 Inferential statistics

Table 7: Coping patterns

Descriptive Statistics

Coping strategy	N	Mean	Std. Deviation
Religious coping	122	13.7131	2.67365
Positive Reinterpretation	123	13.0894	2.93372
Planning	121	12.8347	2.91647
Use of instrumental social support	123	12.4959	3.41974
Active coping	122	12.3525	2.96236
Use of emotional support	123	11.7805	3.74283
Acceptance	122	11.6557	2.95635
Restraint Coping	122	11.459	2.85503
Suppression of Competing Activities	122	11.2623	2.97872
Mental disengagement	123	9.935	3.09346
Focus on and venting of emotions	123	9.374	3.37881
Denial	122	8.5492	3.20666
Behavioural Disengagement	122	7.8033	3.11923
Substance use	123	5.6423	2.61186
Valid N (list wise)	118		

Table 7 indicates coping patterns used by participants according to their mean scores. Coping strategies are arranged according to the highest mean score. According to data presented in Table 7 the following top five coping strategies (as per the highest mean) were the most used: religious coping, positive reinterpretation, planning, use of instrumental social support and active coping. It is important to note that the top five most used coping strategies were a combination of problem-focused coping strategies (planning, use of instrumental support and active coping) and emotion-focused coping strategies with the first two coping strategies being part of emotion-focused coping strategies (religious coping and positive interpretation). The

least used 5 coping strategies formed part of maladaptive coping strategies (mental disengagement, venting of emotions, denial, behavioural disengagement and substance use).

Table 8: Linear discriminant function for police members with low and high suicidal ideation

Low suicidal ideation	Mean	Std. Deviation	Valid N (list wise)	
			Unweighted	Weighted
Positive Reinterpretation and Growth	13.1273	2.96805	110	110
Use of Instrumental Social Support	12.5091	3.46078	110	110
Active coping	12.3636	2.97922	110	110
Religious coping	13.6818	2.68168	110	110
Planning	12.8455	2.94658	110	110
High Suicidal ideation				
Positive Reinterpretation and Growth	13.25	2.60494	8	8
Use of Instrumental Social Support	12.75	3.45378	8	8
Religious coping	14.75	2.43487	8	8
Planning	13.625	2.66927	8	8
Use of Emotional Support	12.875	3.52288	8	8

Table 8 shows coping strategies associated with low and high suicidal ideation. A discriminant analysis was done to help determine coping strategies that separate police officers with low and high suicidal ideation. Only the five coping strategies with the highest means were selected in both categories. Participants with low suicidal ideation used the following coping strategies: positive reinterpretation, instrumental social support, religious coping, active coping and planning. These coping strategies are a combination of problem-focused and emotion-focused coping strategies. Interestingly the top five coping strategies considered as the 'pattern of coping strategies' were similar to coping strategies employed by participants who scored low

on the ASIQ. Table 8 further indicates that participants who scored high on the ASIQ coped by using religious coping, positive reinterpretation, instrumental social support, planning and seeking emotional support. Again, these coping strategies form part of both emotion-focused and problem-focused coping strategies.

4.3 Correlations between coping strategies and suicidal ideation

Table 9: Suicidal ideation and problem-focused coping strategy

Correlations		Suicidal ideation	Problem Focused coping strategies
Suicidal ideation	Pearson Correlation	1	.052
	Sig. (2-tailed)		.573
	N	124	119
Problem-focused Coping strategies	Pearson Correlation	.052	1
	Sig. (2-tailed)	.573	
	N	119	119

Table 9 shows a correlation analysis between suicidal ideation and problem-focused coping strategies. Results show a negative correlation between suicidal ideation and problem-focused coping strategies.

Table 10: Suicidal ideation and emotion-focused coping strategies

		Suicidal ideation	Emotion-focused coping strategies
Suicidal ideation	Pearson Correlation	1	.132
	Sig. (2-tailed)		.149
	N	124	121
Emotion-focused coping strategies	Pearson Correlation	.132	1
	Sig. (2-tailed)	.149	
	N	121	121

Table 10 provides an analysis of the correlation between suicidal ideation and the emotion-focused coping strategy. The results indicate a negative correlation between suicidal ideation emotion-focused coping strategies.

It was hypothesised that functional coping strategies (problem-focused and emotion-focused) would correlate negatively with suicidal ideation. The hypothesis was not supported, as seen in Tables 9 and 10.

Table 11: Suicidal ideation and maladaptive coping strategies

		Suicidal ideation	Maladaptive coping strategies
Suicidal ideation	Pearson Correlation	1	.137
	Sig. (2-tailed)		.133
	N	124	122
Maladaptive coping strategies	Pearson Correlation	.137	1
	Sig. (2-tailed)	.133	
	N	122	122

Table 11 shows the correlation analysis between suicidal ideation and maladaptive coping strategies. Results show a negative correlation between suicidal ideation and maladaptive coping strategies. The hypothesis was that dysfunctional/maladaptive coping strategies would correlate positively with suicidal ideation. The hypothesis was not supported.

Table 12: Suicidal ideation and religious coping strategy

		Suicidal ideation	Religious coping
Suicide	Pearson Correlation	1	0.103
	Sig. (2-tailed)		0.258
	N	124	122
Total Religious Coping	Pearson Correlation	0.103	1
	Sig. (2-tailed)	0.258	
	N	122	122

Table 12 indicates the correlation analysis between suicidal ideation and religious coping strategy. A negative correlation was found between suicidal ideation and religious coping strategy.

Table 13: Suicidal ideation and substance abuse

		Substance use	Suicidal ideation
Substance use	Pearson Correlation	1	.188*
	Sig. (2-tailed)		0.037
	N	123	123
Suicidal ideation	Pearson Correlation	.188*	1
	Sig. (2-tailed)		0.037

*Correlation is significant at the 0.05 level (2-tailed).

A correlation analysis between suicidal ideation and coping strategies is shown in Table 13. A positive correlation was found between suicidal ideation and substance use as a coping strategy. It is interesting to see that although a negative correlation was found between suicidal ideation and maladaptive coping strategies which includes substance use, a correlation analysis between suicidal ideation and substance use indicates the opposite.

4.4 The relationship between suicidal ideation and demographic variables

Table 14: Gender and suicidal ideation

	F	Sig.	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference		
							Lower	Upper
Equal variances assumed	7.462	0.007	121	0.062	4.86722	2.58296	-0.24643	9.98086
Equal variances not assumed			56.963	0.099	4.86722	2.90594	-0.95192	10.68635

A T-test was performed in table 14 in order to assess the relationship between gender and suicidal ideation. A significant relationship was found between participants' gender and suicidal ideation. Results are depicted in Table 14.

Table 15: Group Statistics for gender and suicidal ideation

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Suicidal ideation	Female	39	1.1026	.30735	.04922
	Male	85	1.0471	.21302	.02311

Table 15 reflects the mean score measured for gender and suicidal ideation. Results show that female participants scored the highest on the ASIQ with a mean score of 1.1026 while male participants scored lower with a mean score of 1.0471.

Table 16: Suicidal ideation and marital status

Suicidal ideation	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	285.271	3	95.09	0.518	0.671
Within Groups	21846.7	119	183.586		
Total	22131.97	122			

Table 16 shows analysis of the relationship between suicidal ideation and marital status. ANOVA results indicate no significant relationship between suicidal ideation and marital status.

4.5 Summary of results

The study found that 6.4% of police officers in this KwaZulu-Natal sample scored above 31 on the ASIQ. Analysis of the pattern of coping strategies employed by police members indicated the following pattern of coping strategies (in a descending order of significance): religious coping, positive reinterpretation, planning, use of instrumental social support and active coping. These coping strategies were found to be similar to those used by police officers with low levels of suicidal ideation. Results further indicated that police officers with significantly high levels of suicidal ideation employed similar coping strategies except for active coping. Instead of using 'active coping', police officers who scored high on the ASIQ used 'emotional support coping strategy'. The following coping strategies: religious, problem-focused, maladaptive and emotion-focused coping approaches correlated negatively with suicidal ideation. Although maladaptive coping strategies correlated negatively with suicidal ideation, a positive correlation was found between suicidal ideation and substance use. There was no significant relationship between participants' marital status and suicidal ideation. A significant relationship was found between suicidal ideation and demographic variables for gender. Female officers obtained a higher mean score on the ASIQ than male police officers.

CHAPTER 5

DISCUSSION

Previous studies on the epidemiology of suicide have over the years generated several key findings (Bishopp & Boots, 2014; Pienaar & Rothmann, 2005; Rossouw, 2000). International estimations propose that suicide is among the leading causes of death and suicide rates will increase significantly over the coming decades and especially by the year 2020 (Bertolote et al., 2009; Matthew, 2008; Schlebusch, 2012). Despite substantial developments in research and improved health facilities worldwide, there is still an increase in global suicide rates (Schlebusch, 2012). Suicide literature in South Africa has reported a higher incidence of suicidal behaviour among police officers than the general population (De Bruin, 2008; du Preez et al., 2011; Swanepoel & Pienaar, 2004). The present study appears to be among the first to examine suicidal ideation and coping skills among police members in KwaZulu-Natal.

Research has indicated high rates of suicidal ideation among South African police officers although some studies reported low rates (De Bruin, 2008; Meyer et al., 2003; Pienaar, 2002). The present study found significant high levels of suicidal ideation among police officers in KwaZulu-Natal. Results indicated that 6.4% of police officers who took part in this study had significant levels of suicidal ideation, scoring above 31 on the Adult Suicide Ideation Questionnaire (i.e., above the 97th percentile). These results are lower than those reported in a national study by Pienaar (2002) who found that 8.64% of his study sample had significant levels of suicidal ideation. Nonetheless, the 6.4% found in the current study is much higher than percentages reported in some other previous South African studies. For example, Meyer et al.'s (2003) study indicated that 4.9% of police officers in the Eastern Cape had significant levels of suicidal ideation. De Bruin's (2008) study with police officers in Eastern Cape showed that 1.4% of police officers had significantly high rates of suicidal ideation. The present findings are similar to the 6.4% found in an international study by Berg et al. (2003) which consisted of 3,272 Norwegian police officers.

The 6.4 % suicidal ideation rate found in the present study is a serious concern. It has been argued that police officers are not skilled in disclosing their personal issues, particularly issues relating to suicidal behavior or mental disorders which are perceived as shameful and taboo subjects (Gross & Graham-Bermann, 2006; Rothmann & Van Rensburg, 2002). The police officers' willingness to disclose their thoughts about suicide in the present study could be explained by the manner in which the ASIQ questions are designed. The ASIQ format might

have enabled easy recognition and disclosure and facilitated a willingness to recognise and understand their own suicidal thoughts. For example, the ASIQ asks "I thought it would be better if I was not alive" instead of using the word "suicide". Phrasing questions in a way that avoids taboo words might have favoured recognition and acknowledgement of officers' thoughts about suicide. Again, the 6.4% reporting suicidal ideation is of concern considering the fact that 72.3% of the sample has been in the police service for less than 10 years. An analysis of the relationship between suicidal ideation and years of service could perhaps be necessary for future research.

From the analysis, the following was identified as a pattern of coping strategies used by police officers in the present study: religious coping, positive reinterpretation and growth, planning, use of instrumental social support and active coping. Alcohol use was the least used coping strategy reported. This is interesting considering the fact that alcohol use correlated positively with suicidal ideation in the present study. Alcohol use has also previously been found to be among the best predictors of suicide (Meyer et al., 2003). The current results suggests that police officers who use alcohol as a coping strategy are more inclined to suicidal ideation.

According to Anshel (2000) and Violanti, (2004) factors that may lead to thoughts about suicide among police officers are, besides the stressful work environment, marital status and health problems. Rothmann and Van Rensburg (2001) reported that high levels of alcohol consumption increased the potential risk for the development of suicidal ideation. The current findings are in accordance with results from Rothmann and Van Rensburg (2001) which indicated that police members who consumed a minimum of 14 alcoholic drinks each week were more likely to experience suicidal thoughts. Recently, a study by Chae and Boyle (2013) also showed that alcohol use was amongst the five prominent risk factors associated with suicidal ideation in policing. However, Pienaar (2002) and De Bruin (2008) found no significant relationship between alcohol and suicidal ideation.

Despite these reported findings, high amounts of alcohol consumption among police officers remains controversial. International studies report that high alcohol consumption among police officers does not only serve as a coping strategy but also as a means to fit into the police culture (Chae & Boyle, 2013; Davey et al., 2001; Lindsay & Shelley, 2009). Lindsay and Shelley (2009) attributed high frequencies of alcohol consumption among police members to the creation of a sense of belonging. Police officers in their study reported that fitting in within the policing subculture was the most significant reason for drinking alcohol. Similarly, Davey et

al.'s (2001) study found a significant correlation between drinking problems and social interaction among police officers. Furthermore, 31% of the police officers in their study reported that officers who did not consume alcohol were regarded as antisocial. The interpersonal theory of suicide used in this study may help to understand alcohol use a means to obtain a sense of belonging. The theory has addressed the concept of thwarted belonging which may contribute to suicidal behaviour. Therefore, obtaining a sense of belonging within the police community itself can be challenging at times and, as a result, some police members tend to use alcohol not only as a means to deal with stress situations, but also a way of fitting in and socialising better within the working environment (Lindsay & Shelley, 2009).

A discriminant analysis which aimed to determine coping strategies that separated police officers into low and high suicidal ideation was performed (see Table 8). The resulting analysis indicated that police officers who scored high on the suicidal ideation questionnaire differ slightly in terms of coping strategies from those who scored low. As shown in Table 8, police with low levels of suicidal ideation used 'active coping strategy' while those who obtained high scores on ASIQ used 'emotional support coping strategy'. The mean score for religious coping strategy was the highest in police officers with low suicidal ideation and those with high significant levels of suicidal ideation. Again, the mean score for religious coping was higher than that of other coping strategies in the pattern of coping strategies employed by police officers in the present study (see Table 7 and Table 8).

There is a perception that holding religious beliefs will prevent the individual from developing suicidal behaviour (Botega et al., 2005). Results from Rothmann and Van Rensburg (2001) showed that most police officers tended to use religion as a coping strategy. Similarly, a study by Pienaar et al. (2007) also indicated that police officers at risk of developing suicidal ideation were those who scored the lowest scores on religious coping strategy. The present study found no significant correlation between religious coping strategy and suicidal ideation. Despite this result, it is interesting to see that police officers who measured both low and high on the suicidal ideation obtained the highest mean score on religious coping strategy. This confirms results found in the studies of Rothmann and Van Rensburg (2001) and Rothmann and Strijdom (2002); that religious coping appears to be a generic coping strategy within the SAPS. Rothmann and van Rensburg (2001) stated that police officers' use of religion as a coping mechanism was not unexpected. This may be why the South African Police Services often employ religious chaplains to take care of the officers' religious well-being. Therefore, the SAPS may be a setting which actively encourages turning to religion as a coping mechanism,

and thus the police officers' turning to religion seems logical. However, the issues which need investigating here are perhaps the nature/purpose of this particular coping strategy, and the extent to which turning to religion has been successful or not in alleviating stress and potentially preventing the onset of suicidal ideation. Also, provision for different religious groups needs to be taken into consideration as police officers are unlikely to have a common belief system. The question of whether all police officers make use of religious counselling services offered in their workplace remains unanswered and there seems to be no current or recent studies on this issue.

Hypothesis one

In terms of coping strategies, Horesh indicated that the manner in which police officers cope with stressful experiences can pose a serious threat to their health (cited in Meyer et al., 2003). Furthermore, research has shown that suicide risk can be predicted by coping strategies (Swanepoel & Pienaar, 2004). The present study hypothesised that in a sample of police officers in KwaZulu-Natal, passive/maladaptive coping strategies will correlate positively with suicidal ideation. This hypothesis was not supported in this study (see Table 11). Current results indicated a negative correlation between maladaptive coping skills and suicidal ideation, signifying that police officers who employ passive coping strategies may not necessarily be more prone to suicidal ideation. However, Meyer et al. (2003) found a positive correlation between passive coping strategies and suicidal ideation. Swanepoel and Pienaar (2004) also found a positive correlation between passive coping strategies and suicidal ideation.

Hypothesis two

The present study further hypothesised that functional coping strategies (problem-focused coping strategies and emotion-focused coping strategies) will correlate negatively with suicidal ideation. The hypothesis was supported in the present study (see Table 9 and Table 10). Findings in the present study showed a negative correlation between suicidal ideation and an emotion-focused coping approach. Emotion-focused coping strategies have been reported to be the least used coping strategies among SAPS, according to Swanepoel and Pienaar (2004). While problem-focused coping strategies are considered to be the most dominant coping strategies used by police officers, this study found a negative correlation between problem-focused coping strategies and suicidal ideation. These findings are similar to those of Rothmann and van Rensburg (2001) who reported no significant relationship between these coping strategies and suicidal ideation. Despite the given results and findings from previous

literature, while most studies investigating suicidal behaviour have shown that maladaptive coping strategies predict the outcomes of suicidal ideation, no previous studies tested which coping strategies (problem-focused and emotion-focused coping strategies) predict the transition from the use of dysfunctional coping strategies to suicidal ideation.

Hypothesis three

Amongst the socio-demographic factors related to suicidal ideation, international scholars (Botega et al., 2005; De Bruin, 2008; Nock et al., 2008) have put much emphasis on the following factors: alcohol abuse or dependence, being female, high levels of stress and depression, marital status (with special emphasis on not having a steady partner), being divorced, single or separated. Anshel (2000) reported that female and male police officers experience stress differently and utilise different coping strategies. Consistent with Anshel's (2000) findings, the present study found significantly different levels of suicidal ideation based on gender. The percentage of females in this study was low (31%) compared to the male percentage (68%). Despite this stated discrepancy, results showed that female police officers obtained a higher mean score on suicidal ideation than did males officers (Table 15). A T-test (Table 14) showed a significant relationship between gender and suicidal ideation. However, no significant relationship was found between marital status and suicidal ideation. Even though a significant relationship between gender and suicidal ideation was found in the current study, De Bruin's (2008) study showed no significant statistical relationship between suicidal ideation and officers' gender and marital status.

Interestingly, Pienaar and Rothmann (2005) found a high frequency of 1.14% of suicidal ideation among males which was 12 times higher compared to other national reports reported by Pienaar (2002). Nonetheless, Nock et al. (2008) found high levels of suicidal ideation among unmarried women. Violanti et al.'s (2008) study also showed that the prevalence of suicidal ideation in females increased significantly with age. The current results indicate, unsurprisingly, that gender is predictive of current levels of suicidal ideation. This may be due to the fact that females more often report suicidal ideation while more males commit suicide and are reluctant to seek professional help when experiencing personal difficulties (Canetto, 2008; He et al., 2005).

Results on the relationship between demographic variables and suicidal ideation confirmed the third hypothesis except for marital status. Analysis of the relationship between suicidal ideation and marital status indicated no significant relationship between the two variables (Table 16). It

is evident in Table 4 that 56.8% of the participants were single, despite most police officers indicating that they had children (Table 2). Although results showed that certain demographic characteristics can impact suicidality, the idea of why and how has not been explicitly established.

CHAPTER 6

CONCLUSIONS

6.1 Implications of the study

Results from the current study may have a number of implications for the prevention and management of suicidal ideation among police members. Results indicated that substance use had a significant relationship with suicidal ideation. Previous studies have also shown that high alcohol consumption among police members is a major problem. This shows that there is a need for future studies to examine whether high amounts of alcohol consumption lead to thoughts about suicide or whether suicidal ideation leads to high alcohol consumption. This finding also proposes that prevention efforts, aimed at reducing rates of suicidal ideation, should target these coping strategies.

6.2 Limitations of the study

One of the identifiable limitations of this study is that although data was gathered from a reasonably large sample (N=125), the sample was not randomly chosen. The sample symbolised a convenient study population of police officers. Quantitative research requires a larger study sample. In addition, due to the nature of the research paradigm, the researcher made use of self-report questionnaires which did not allow much interaction with participants and prevented the researcher from assessing participants' familiarity with the topic of suicidal behaviour and coping in policing.

Furthermore, the fact that this study employed a quantitative research paradigm means that the questionnaires gave respondents the opportunity to answer questions based on a Likert scale. Had the questionnaires prompted participants to state the reasons why they responded in the manner in which they did, perhaps this could have helped to explain the underlying reasons for suicidal behaviours. Evaluating the core reasons that influence the engagement of police officials in suicide acts and reasons for suicidal ideation was not possible and future qualitative research should explore this

Generalising from the results is not possible, as they cannot be generalised to other occupations, police officers in other provinces in South Africa, or other racial groups in the SAPS. For example, owing to the sample size of the group, some of the sub-groups, namely Coloureds, White and Indians, had small numbers. This limits the generalisability of this study.

One of the study limitations is based on the on-going controversies concerning the exact statistical rates of police suicide nationwide. There are still many questions about the validity and accuracy of the rates of police suicide. This study made use of the ASIQ. It is possible that the criterion used to identify levels of suicidal ideation among police officers in the present study was not valid, reliable or precise enough.

A negative correlation was found between suicidal ideation and coping strategies. This makes it challenging to determine if the identified negative correlation between suicidal ideation and coping strategies could be attributed to the low reliability (Cronbach's alpha) on some of the sub-scales of the COPE questionnaire or to the small sample size. This, once more, does not allow generalisability of results to SAPS in general.

6.3 Challenges

Several challenges to this study were encountered after the sampling was completed and statistical analysis had already commenced. The biggest and unanticipated challenge was regarding data analysis. Several statisticians were approached to help with data analysis. They all stated that the sample size did not meet the criteria for a correlational study. This led to the amendment of the study title and the study aims. However, this had no impact on participants.

Owing to the perceived sensitive nature of the research topic (suicidality), it was difficult to get gatekeeper permission. A request to conduct the study, which explained the study procedures and purpose, was sent to the SAPS station in which data was to be collected. The station gave a response within 4 weeks stating that due to the nature of the research topic, the station commander could not give full permission to conduct the study. The request was forwarded to the Provincial Office and after a period of approximately 3 weeks the response was still the same. The researcher made arrangements to travel to the SAPS Head Offices in Pretoria where the study purpose and procedures were further discussed. Permission was granted after approximately seven weeks.

Again, based on the nature of the study topic, most police officers seemed uneasy about participating in the study. As mentioned in Chapter 3, about 15 police officers withdrew from the study after they were informed that the study was voluntary and were free to withdraw from the research at any time without risk of penalty. Nonetheless, it was found that participants became more at ease after anonymity was ensured where appropriate — for example, the names of participants and specific stations were anonymised.

Despite the above mentioned limitations, results obtained from this study hopefully generate a better understanding of suicidal ideation and behaviour as well as coping skills among police officers in South Africa, and may support new ways of designing prevention and intervention programmes aimed at improving the work conditions and coping skills for our police officers.

6.4 Recommendations for future research

Future research on the topic of suicidal ideation among police officers should perhaps aim at conducting longitudinal and interventional studies with the objective of identifying pathways for the identification of early signs of suicidal behaviour among police officers. This would help to employ strategies that may tackle suicide behavioural patterns early in officers' careers. Again, conducting a study with qualitative data to supplement quantitative data could help to understand some underlying dynamics of suicidal ideation and suicide rates among police officers.

Further, research could also examine the influence of cultural factors, societal norms and values on police coping strategies and suicidal behaviour although a bigger and more diverse sample size would be essential. Also, the pattern of coping strategies among police officers requires further investigation. Based on the highest mean scores obtained on religious coping strategy, future research is also needed to examine the role of religion in the South African police members.

Based on the lowest Cronbach's Alpha on some of the COPE questionnaire sub-scales, it seems necessary for future scholars to develop a South African standardised questionnaire to help assess coping strategies within the South African population.

It is worth noting that the purpose of this study was not to determine whether there was a correlation between high suicidal ideation in police officers who have been diagnosed with psychological problems compared to those without such disorders. However, it could be that some officers had undiagnosed psychological problems. However, to be able to determine the degree to which levels of suicidal ideation differ in police officers having or not having mental health related problems or any other serious life stressors, it could be beneficial to have a study which controls for psychological wellness.

6.5 Conclusion

The current study found a relatively high frequency of suicidal ideation (6.4%) among police officers in KwaZulu-Natal, similar to other South African studies. Most significantly, participants in this study who measured higher on the ASIQ should remain a major concern to the KwaZulu-Natal SAPS employee wellness unit. The role of alcohol in suicidal ideation needs closer research and critical attention. Police officers with high and low suicidal ideation seemed to be using similar coping strategies. Future research needs to focus more on examining the relationship between suicidal ideation and coping strategies to assess specific coping strategies that may predict the risk of suicidal behaviour.

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APPENDICES

Appendix 1

School of Applied Human Sciences
Discipline of Psychology
P/Bag X01 Scottsville
PIETERMARITZBURG, 3209
South Africa
Phone: +27 33 2605371
Fax: +27 33 2605809

South African Police Services
Private Bag X94
Pretoria CBD
0001

Dear .....

RE: Permission to conduct a research

My name is Manoko Mogoroga and I'm currently a registered master's student in counselling psychology at the University of KwaZulu-Natal, Pietermaritzburg campus. As part of my course I have to complete a research project. I hope to conduct my research in the area of suicide and coping skills examining the relationship between these two variables in a sample of police officers at .....police station in Pietermaritzburg.

I was therefore wondering if you would be able to grant me permission to conduct my research at the police station. The results obtained from this study could possibly generate a better understanding of suicidal ideation and behavior among police officers in South Africa; and further open new ways of designing intervention programmes aimed at improving the work conditions and coping skills for police officers.

Informed consent will be obtained from each member of the police service. I declare that all information sought from individuals and participants from the police station will be kept confidential. Also, participation in this study is entirely voluntary and that participants will have the opportunity to decline or withdraw from the study at any time without any harm or being threatened. As suicide is considered a sensitive topic, the present study may involve the following risks: participants may come across questions that rise or challenge his/her emotional state and upsetting. However, arrangements with the Employment Assistance Programme Unit within the police station which is aimed at providing professional psychological services in support of employee assistance programmes will be made to help participants who may experience any emotional disturbance.

Should you require further information on the project please do not hesitate to contact me.

I would greatly appreciate it if you could help me in this regard.

Yours sincerely
Manoko Mogoroga
Email: manokowm@gmail.com
Cell: 082 760 849

Supervised by:
Prof D. R. Wassenaar
Discipline of Psychology (UKZN

Appendix 2

School of Applied Human Sciences
P/Bag X01 Scottsville
PIETERMARITZBURG, 329
South Africa
Phone: +27 33 2605371

Information Sheet and Consent to Participate in Research

Date: 10 March 2014

Dear Respondent

My name is Manoko Mogoroga, a first year Masters in psychology student from the discipline of psychology, University of KwaZulu-Natal. This study will be conducted as a partial fulfilment towards obtaining a Master's degree in counselling psychology.

You are being invited to consider participating in a study that involves research on suicidal ideation and coping skills. The main aim of this research is to investigate the relationship between suicidal ideation and coping skills among police officers. The study is expected to enrol approximately +/- 80 participants.

As participants, you will be expected to complete two questionnaires: Adult Suicide Ideation questionnaire and the COPE questionnaire which assess how individuals respond when confronted with stressful and challenging work related situations. The average time taken to complete both questionnaires will be +/-30 minutes. All information obtained will be kept confidential and anonymous. Also, no information on a police officer's suicidal ideation or their coping skills will be shared with anyone else including other members of SAPS.

As suicide ideation which has defined as "the domain of thoughts and ideas about death, suicide, and serious self-injurious behaviour" (Pienaar, Rothmann & Van De Vijver, 2007, p.

246) is considered a sensitive topic, the present study may involve the following risks: participants may come across questions that rise or challenge his/her emotional state and upsetting. However, arrangements with the Employment Assistance Programme Unit within the police station which is aimed at providing professional psychological services in support of employee assistance programmes will be made to help any participants who may experience any emotional disturbance. All participants will have the right to withdraw from the study at any point; and in the event of refusal/withdrawal of participation the participants will not incur penalty or loss of treatment or other benefit to which they are normally entitled.

Through your participation in this project, the researcher hopes that the results obtained from this study could possibly generate a better understanding of suicidal ideation and behavior among police officers in South Africa; and further open new ways of designing intervention programmes aimed at improving the work conditions and coping skills for police officers.
A clear report will be available for any participants should they wish to view the results. Please provide your email address should you wish to receive feedback regarding the results of the study. Your email address will remain confidential and not be linked to the data. The results will also be submitted in a form of a written thesis to the researcher's supervisor and department of psychology.

In the event of any problems or concerns or questions you may contact the researcher at: (Mobile: 082 760 8494. Email: manokowm@gmail.com). Supervised by: Prof D. R. Wassenaar, Email: or the University of KwaZulu-Natal Research Ethics Committee, contact details as follows:

HUMMANITIES & SOCIAL SCIENCES RESEARCH ETHICS COMMITTEE (HSSREC)

The Research Office: Ms. Phumelele Ximba
Ext. +031 260 3587
Private Bag X54001
Durban
400
KwaZulu-Natal, South Africa

Declaration of Consent

I ..... have been informed about the study entitled: coping skills and suicide ideation in the South African Police Services members in KwaZulu-Natal: A correlational study by Mogoroga M.W.

I understand the purpose and procedures of the study.

I have been given an opportunity to answer questions about the study and have had answers to my satisfaction.

I declare that my participation in this study is entirely voluntary and that I may withdraw at any time without affecting any treatment or care that I would usually be entitled to.

I have been informed about any available risk ratio and anticipated problems and majors that will be taken to protect my autonomy throughout the study and after the study.

If I have any further questions/concerns or queries related to the study I understand that I may contact the researcher at provided details.

----------	.....	----------
Signature of Participant	Participant's email address (optional)	Date

Appendix 3

School of Applied Human Sciences
P/Bag X01 Scottsville
PIETERMARITZBURG, 329
South Africa
Phone: +27 33 2605371

Participants' Demographic Details

Date: 10 March 2014

Dear Respondent

Thank you for your willingness to participate in the study. All information obtained will be kept confidential and anonymous. Please fill in your demographic details below:

Date of birth and age :
Gender :
Race :
Marital status :
Number of children :
How long have you been a member of the SAPS?

Appendix 4

COPE QUESTIONAIRE

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

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

When a problem in this area comes about,  I do the following 	1 = I usually don't do this at all	2 = I usually do this a little bit	3 = I usually do this a medium amount	4 = I usually do this a lot
COPING STRATEGIES				
1.Focus on and venting of emotions (FVE)				
1. I get upset and let my emotions out. (3=Upset)				
2. I get upset, and am really aware of it. (17=Upset and Aware)				
3. I let my feelings out. (28=Let out)				
4. I feel a lot of emotional distress and I find myself expressing those feelings a lot. (46=Distress)				
2.Denial (D)				
5. I say to myself "this isn't real." (6=QB6Unreal)				
6. I refuse to believe that it has happened. (27=QB27Refuse)				

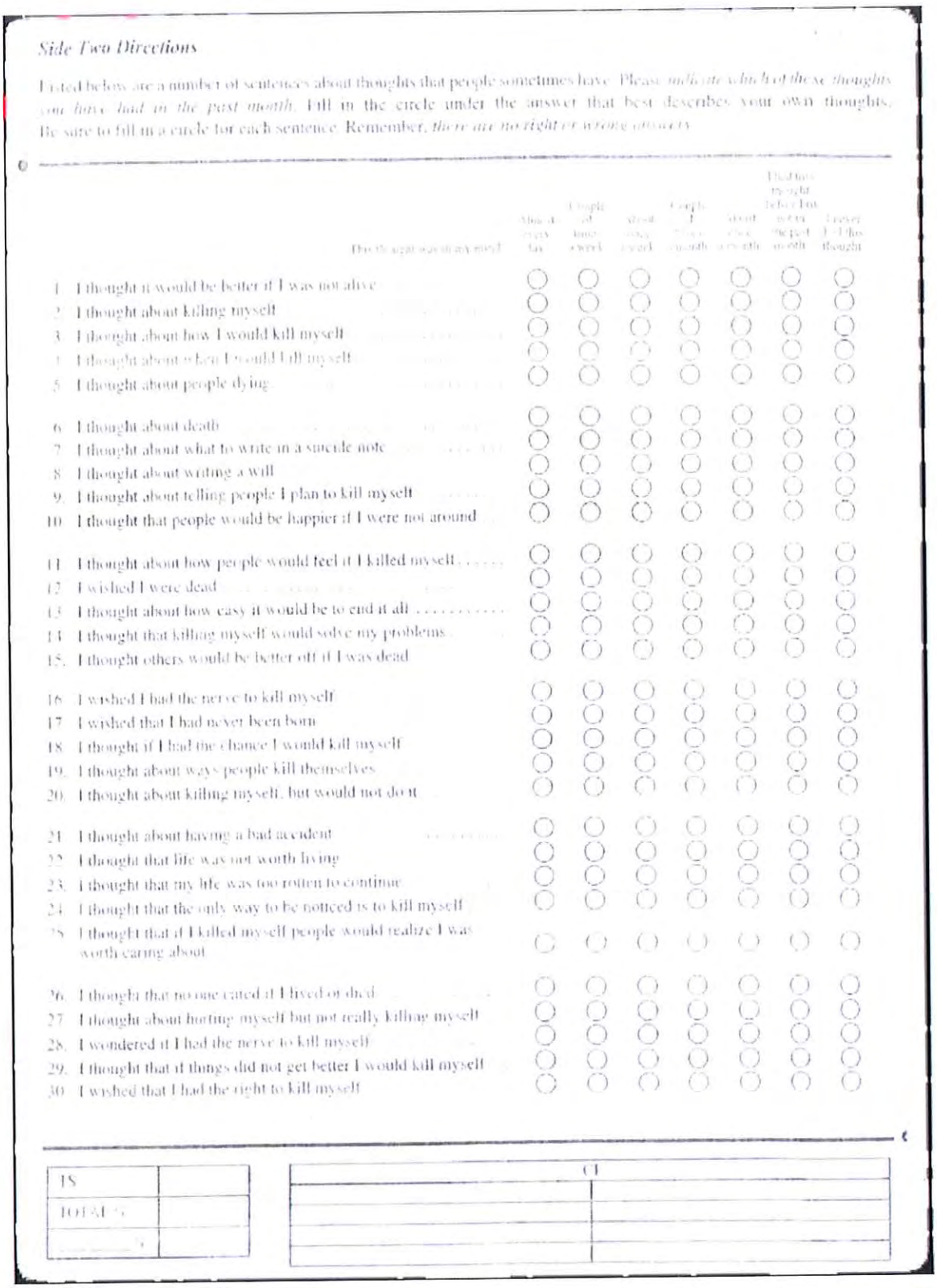
7. I pretend that it hasn't really happened. (40=QB40Pretend)				
8. I act as though it hasn't even happened.(57=QB57Act)				
3. Substance Use (SU)				
9. I use alcohol or drugs to make myself feel better (12=QB12Alcohol)				
10. I try to lose myself for a while by drinking alcohol or taking drugs. (26=QB26Lose self)				
11. I drink alcohol or take drugs, in order to think about it less. (35=QB35Drugs)				
12. I use alcohol or drugs to help me get through it. (53=QB53Substance)				
4. Behavioural Disengagement (BD)				
13. I admit to myself that I can't deal with it, and quit trying.(9=QB9Quit)				
14. I just give up trying to reach my goal. (24=QB24Giveup)				
15. I give up the attempt to get what I want. (37=QB37Attempt)				
16. I reduce the amount of effort I'm putting into solving the problem. (51=QB51Reduce)				
5. Mental Disengagement (MD)				
17. I turn to work or other substitute activities to take my mind off things. (2=QB2Work)				
18. I daydream about things other than this. (16=QB16Day dream)				
19. I sleep more than usual. (31=QB31Sleep)				
20. I go to movies or watch TV, to think about it less. (43=QB43Movies)				
6.Humour (H)				
21. I laugh about the situation. (8=QB8Laugh)				
22. I make jokes about it. (20=QB20Jokes)				
23. I kid around about it. (36=QB36Kid)				
24. I make fun of the situation. (50=QB50Fun)				
7. Positive Reinterpretation and Growth (PRG)				
25. I try to grow as a person as a result of the experience. (1=QB1Grow)				

26. I try to see it in a different light, to make it seem more positive. (29=QB29Positive)				
27. I look for something good in what is happening. (38=QB38Something good)				
28. I learn something from the experience. (59=QB59Learn)				
8. Use of Instrumental Social Support (UISS)				
29. I try to get advice from someone about what to do. (4=QB4Advice)				
30. I talk to someone to find out more about the situation. (14=QB14Talk)				
31. I talk to someone who could do something concrete about the problem. (30=QB30DoSomething)				
32. I ask people who have had similar experiences what they did. (45=QB45SimilaExperiences)				
9. Active Coping				
33. I concentrate my efforts on doing something about it. (5=QB5Efforts)				
34. I take additional action to try to get rid of the problem. (25=QB25Additional Action)				
35. I take direct action to get around the problem. (47=QB47DirectAction)				
36. I do what has to be done, one step at a time. (58=QB58Done)				
10. Religious Coping (RC)				
37. I put my trust in God. (7=QB7God)				
38. I seek God's help. (18=QB18Seek God)				
39. I try to find comfort in my religion. (48=QB48Religion)				
40. I pray more than usual (60=QB60Pray)				
11. Restraint (R)				
41. I restrain myself from doing anything too quickly (10=QB10Restrain)				
42. I hold off doing anything about it until the situation permits. (22= QB22Situation Permits)				
43. I make sure not to make matters worse by acting too soon. (41=QB41Worse)				

44. I force myself to wait for the right time to do something. (49=QB49Wait)				
12. Acceptance (A)				
45. I get used to the idea that it happened. (13=QB13Happend)				
46. I accept that this has happened and that it can't be changed. (21=QB21Accept)				
47. I accept the reality of the fact that it happened. (44=QB44Reality)				
48. I learn to live with it. (54=QB54Live)				
13. Suppression of Competing Activities (SCA)				
49. I keep myself from getting distracted by other thoughts or activities (15= QB15 Distracted)				
50. I focus on dealing with this problem, and if necessary let other things slide a little. (33=QB33Focus)				
51. I try hard to prevent other things from interfering with my efforts at dealing with this (42=QB42Interfering)				
52. I put aside other activities in order to concentrate on this (55=QB55Put Aside)				
14. Planning (P)				
53. I make a plan of action. (19=QB19PlanofAction)				
54. I try to come up with a strategy about what to do. (32=QB32Strategy)				
55. I think about how I might best handle the problem. (39=QB39Handle)				
56. I think hard about what steps to take (56=QB56ThinkHard)				
15. Use of Emotional Support				
57. I discuss my feelings with someone. (11=QB11Discuss)				
58. I try to get emotional support from friends or relatives (23=QB23 Emotional Support)				
59. I get sympathy and understanding from someone (34=QB34Sympathy)				
60. I talk to someone about how I feel. (52=QB52Feel)				

Appendix 5

Adult Suicide Ideation Questionnaire (ASIQ)



Side Two Directions

Listed below are a number of sentences about thoughts that people sometimes have. Please *indicate which of these thoughts you have had in the past month*. Fill in the circle under the answer that best describes your own thoughts. Be sure to fill in a circle for each sentence. Remember, *there are no right or wrong answers*.

Do not mark more than one oval.	Almost every day	Couple of times a week	About once a week	Couple of times a month	About once a month	Don't have thought before but in past month	Haven't had this thought
1. I thought it would be better if I was not alive	○	○	○	○	○	○	○
2. I thought about killing myself	○	○	○	○	○	○	○
3. I thought about how I would kill myself	○	○	○	○	○	○	○
4. I thought about when I would kill myself	○	○	○	○	○	○	○
5. I thought about people dying	○	○	○	○	○	○	○
6. I thought about death	○	○	○	○	○	○	○
7. I thought about what to write in a suicide note	○	○	○	○	○	○	○
8. I thought about writing a will	○	○	○	○	○	○	○
9. I thought about telling people I plan to kill myself	○	○	○	○	○	○	○
10. I thought that people would be happier if I were not around	○	○	○	○	○	○	○
11. I thought about how people would feel if I killed myself	○	○	○	○	○	○	○
12. I wished I were dead	○	○	○	○	○	○	○
13. I thought about how easy it would be to end it all	○	○	○	○	○	○	○
14. I thought that killing myself would solve my problems	○	○	○	○	○	○	○
15. I thought others would be better off if I was dead	○	○	○	○	○	○	○
16. I wished I had the nerve to kill myself	○	○	○	○	○	○	○
17. I wished that I had never been born	○	○	○	○	○	○	○
18. I thought if I had the chance I would kill myself	○	○	○	○	○	○	○
19. I thought about ways people kill themselves	○	○	○	○	○	○	○
20. I thought about killing myself, but would not do it	○	○	○	○	○	○	○
21. I thought about having a bad accident	○	○	○	○	○	○	○
22. I thought that life was not worth living	○	○	○	○	○	○	○
23. I thought that my life was too rotten to continue	○	○	○	○	○	○	○
24. I thought that the only way to be noticed is to kill myself	○	○	○	○	○	○	○
25. I thought that if I killed myself people would realize I was worth caring about	○	○	○	○	○	○	○
26. I thought that no one cared if I lived or died	○	○	○	○	○	○	○
27. I thought about hurting myself but not really killing myself	○	○	○	○	○	○	○
28. I wondered if I had the nerve to kill myself	○	○	○	○	○	○	○
29. I thought that if things did not get better I would kill myself	○	○	○	○	○	○	○
30. I wished that I had the right to kill myself	○	○	○	○	○	○	○

IS	
TOTAL	

CI	

Appendix 6

Ethical clearance

14 August 2014

Ms Manoko Winnie Mogoroga (214550091)
School of Applied Human Sciences – Psychology
Pietermaritzburg Campus

Protocol reference number : HSS/0381/014M
Project title: Coping skills and suicide ideation in the South African Police Service members in KwaZulu-Natal Province A correlational study

Full Approval Notification – Committee Reviewed Protocol

This letter to notify you that your response to our letter dated 13 June 2014 in connection with the above was reviewed by the Humanities & Social Sciences Research Ethics Committee, has now been granted **Full Approval.**

Any alterations to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach/Methods must be reviewed and approved through an amendment /modification prior to its implementation. Please quote the above reference number for all queries relating to this study.

PLEASE NOTE: Research data should be securely stored in the school/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basi

Best wishes for the successful completion of your research protocol

Yours faithfully

.....
Dr Shenuka Singh (Chair)

/ms

Cc Supervisor: Professor Doug Wassenaar
Cc Academic Leader Research: Professor D McCracken
Cc School Administrator: Mr Sbonelo Duma

Humanities & Social Sciences Research Ethics Committee
Dr Shenuka Singh (Chair)
Westville Campus, Govan Mbeki Building

Telephone: +27 (0) 31

1910 - 2010
100 YEARS OF ACADEMIC EXCELLENCE
Edgewood Howard College Medical School Pietermaritzburg

Appendix 7

Ms Manoko Winnie Mogoroga (214550091)
School of Applied Human Sciences – Psychology
Pietermaritzburg Campus

Protocol reference number : HSS/0381/014M
New project title: Coping skill and suicide ideation in the South African Police Service members Province

Approval Notification – Amendment Application

This letter notify you that your application and request for an amendment on 22 July 2015 has now been approved as follows:

- Change in Title

Any alterations to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form; Title of the Project, Location of the Study must be reviewed and approved through an amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number.

PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

Best wishes for the successful completion of your research protocol.

Yours faithfully

.....
Dr Shenuka Singh (Chair)

/ms

cc Supervisor: Professor Doug Wassenaar
cc Academic leader Research:
cc

Humanities & Social Sciences Research Ethics Committee
Dr Shenuka Singh (Chair)
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Website:

1910 - 2010
100 YEARS OF ACADEMIC EXCELLENCE

Founding Campuses: Edgewood Howard College Medical School Pietermaritzburg Westville

Appendix 8

All letters from the South African Police Services (SAPS) regarding permission to conduct the study are not included for confidentiality reasons. They are only available on request.