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Chapter 1
Introduction

The law enforcement sector is considered to be one of the occupational groups at risk for suicide (Williams, Nicholas, & Bawa, 2011) and, according to Violanti (1996), suicide within the United States law enforcement profession can be described as an epidemic. In Quebec (Canada), police officers have twice the suicide rate when compared to that of the general population (Charbonneau, 2000), while in the South African (SA) context, Masuku (2000) theorised that members of the South African Police Services (SAPS) were eleven times more likely to commit suicide compared to their civilian counterparts. Although suicide is usually a solitary act, it exerts a catastrophic impact on the families of the deceased. Family members and friends are left behind to mourn their deaths and try to comprehend why the individual has taken his or her life (Cerel, Jordan, & Duberstein, 2008). In the case of police suicides, this final act could also have a devastating effect on the morale of fellow officers who may suffer intense feelings of guilt, remorse, and even disillusionment (Slovenko, 1999).

Violanti (2007a) argues that police members are not only at risk for individual suicides, but also Homicide-Suicides (H-S). According to Marzuk, Tardiff, and Hirsch (1992, p. 3179), H-S "is a dramatic, violent event in which an individual commits homicide and shortly thereafter commits suicide". It is suggested that police officers are more inclined to commit H-S killings compared to civilian populations due to the following job-specific risk factors: aggression, domestic violence, exposure to violence in the line of duty, the easy access to firearms, and work related attributes of the law enforcement officer (Violanti, 2007a). Suicide, aggression, and hostility are strongly associated with one another (Van Praag, 2001; Slovenko, 1999). Plutchik and Van Praag (1990) postulated that approximately 30% of individuals guilty of violent behaviour also exhibited self-destructive tendencies and between 10% and 20% of suicidal individuals have a recorded history of violence. Furthermore, both suicide and violent behaviour seem to be influenced by similar

psychological variables which include depression, hopelessness, impulsivity, and poor support structures (Plutchik, Van Praag, & Conte, 1989).

According to Violanti (2007a), the H-S phenomenon appears to be increasing among the US law enforcement sector. Rossouw (1998) also found an increasing tendency amongst SAPS members to wound or even kill others before taking their own lives. Although several SA studies on H-S have implicated the SAPS as a high risk occupational group for such killings (Jena, Mountany, & Muller, 2009; Mathews et al., 2008; Roberts, Wassenaar, Canetto, & Pillay, 2010; Osborne, 2001; Skead, 2010; Townsend, 2003), no systematic research that exclusively focuses on police H-S has ever been conducted within the RSA or on the African continent. According to the Gauteng Police and Prisons Civil Rights Union (POPCRU), the phenomenon of policemen and women killing others before taking their own lives is not limited to the SAPS, but "stretches across the entire security cluster" (Makhetha, 2015, p.1). Unfortunately, the law enforcement sector in SA possesses limited psychological knowledge regarding the etiologic factors concerning H-S, and thus the current study aims to determine the underlying causes of police H-S killings. Hopefully, these findings can be used to not only save the lives of the law enforcement officers, but also to address violence against women and children in police families.

The current study was inspired by the annual "16 Days of Activism" awareness-raising campaign that is directed towards curbing gender based violence amongst women and children. Since 1998, SA has also adopted this international campaign which has been officially recognised by the United Nations since 1999 (South African Government, 2014). This campaign is built on the premise that violence against women and children is considered to be a violation of their human rights, resulting in numerous physical and psychological consequences, even death. Violence against this vulnerable group places strain on not only the health care system of a country, but also on its judicial system (UN Women, 2016). Moreover, H-S is considered to be a "public health concern" because the violence that claims the lives of the two parents usually leaves the children without their primary caregivers (Klinoff, Van Hasselt, & Black, 2014, p. 102), and there is also a risk that the children themselves can fall prey to such violence (Hatters- Friedman, Hrouda, Holden,

Noffsinger, & Resnick, 2005). Therefore the scientific behavioural research conducted in this study can be considered to make an important contribution towards gaining a better understanding of gender-based violence, and may yield results that could help to curb this form of family tragedy in the law enforcement sector.

1.1 The Challenges of a Police Career

Literature suggests that law enforcement as an employment sector is one of the most dangerous and stressful working environments (Hill & Clawson, 1988; Anshel, Robertson, & Caputi, 1997; Violanti, 2004). The occupational stressors that confront the police official not only include shift work, little control over outcomes (e.g., the conviction of criminals by the judicial system), and lack of support from supervisors, but also little or no input from subordinates into managerial decision making (Finn, 1997, as cited in Copes, 2005; Stevens, 1999a, b). Negative outcomes from such a stressful working environment include absenteeism from work, using aggressive tactics when making arrests (e.g., the use of excessive force), burnout, early retirement from the occupation, insubordination, transfers, and even fatigue on the job (Rothmann & Jorgensen, 2007; Vila, Morrison, & Kenney, 2002; Kop & Euwema, 2001).

In the South African context, police members not only have to face high levels of crime, lack of resources, and organisational transformation (e.g., adopting a community and service orientated approach) as potential occupational stressors (Kopel, 1996; Anshel, 2000; Rothmann & Agathagelou, 2000; Rothmann & Strijdom, 2002; Rothmann & Jorgensen, 2007; SAPS, 2010; Young, Koortzen, & Oosthuizen, 2012), but they also have to contend with the killing of fellow officers by armed criminals (Nicolson, 2015). During the 2014-2015 financial year, 63 police officers were killed in the line of duty (SAPS, 2015). Of these killings, 71% took place when the police were responding to the needs of the public and can be summarised as follows:

- 45.7% were killed while attending to robberies, hijackings, and cash in transit heists;
- 11.4%, during evasion of arrests;

- 5.7%, while searching persons or motor vehicles;
- 5.7%, while pursuing suspects;
- 5.7%, while attending to domestic violence complaints;
- 2.9%, when escorting suspects to police holding cells; and lastly,
- 2.9% of police officials were attacked while on duty at their respective police stations

(SAPS, 2015).

Although these occupational stressors can lead to medical boarding, alcohol abuse, and higher rates of medical illness amongst police officers, the most tragic aftermath may be suicide (Anshel, 2000; Rothmann & Agathagelou, 2000; Rothmann & Strijdom, 2002). According to Janik and Kravitz (1994), suicide appears to be increasing worldwide within the law enforcement sector. Loo (2003) argues that it is due to the high suicide rate among the police that researchers often investigate the factors underlying suicide in this occupational group. Thus, research has revealed that the following factors may have an effect on police suicides:

- Organisational stress, especially bureaucratic regulations (e.g., micro managing subordinates in order to ensure adherence to strict regulations);
- Exposure to violence and aggression in the line of duty (traumatic incidents);
- Working shifts which disturb normal sleeping patterns or the circadian rhythm;
- Alcohol dependency in order to cope with daily stressors; and lastly,
- Relationship problems amongst police officials and their spouses (Chae & Boyle, 2013).

1.2 Suicidal Behaviour

Suicidal behaviour can be placed on a continuum varying in severity, ranging from suicidal ideation (suicidal thoughts), to suicide threats, attempting suicide, and lastly, completing the act (Swanepoel, 2003). Several local studies have investigated suicidal ideation within the SAPS and concluded that suicidal thoughts can be considered the first step towards the

final act of ending one's own life (Rothmann & Van Rensburg, 2002; Swanepoel, 2003; Pienaar & Rothmann, 2005). The frequency of this 'final act' is displayed in Table 1.1.

Table 1.1

Suicide rates for the SAPS for the period 2009 to 2012

SAPS suicide rates for the years 2009 to 2012 per 10 000				
Year	2009	2010	2011	2012
Frequency	73	97	85	98

(SAPS, 2013b)

Table 1.1 indicates a sharp increase in police suicides during 2010, which slightly decreased the following year. The reasons for the rise in the suicide figures during 2010 and 2012 are currently unknown, although several public protests turned violent and police officers lost their lives in the line of duty during this period. The most well-known protest during this time was the "Marikana massacre" on 16 August 2012 (Marinovich, 2016). Thirty-six miners were killed by members of the SAPS and two members of the law enforcement sector also lost their lives during this conflict on the platinum belt (News24, 2015). Shooting incidents are usually regarded as the most stressful experience in the line of duty, especially as a result of the trauma involved (Kitaeff, 2011). These traumatic events could have exerted a negative psychological impact on these police members, especially on their morale.

The aforementioned 2009-2012 suicide statistics were made public during a SAPS Suicide Summit in order to create awareness of this phenomenon amongst its own members as well as the general population (SAPS, 2013b). Unfortunately, the SAPS have a strict policy regarding making any suicide statistics public (Lt.-Col. M.S. Watson, personal communication, April 12, 2013) and therefore more recent statistics were unavailable for inclusion.

1.2.1 Homicide-suicide (H-S): An extended suicide.

As stated previously, police officials do not just commit individual suicides, but may also kill others before taking their own lives. The following excerpt from a local newspaper article illustrates the tendency of SAPS members to kill others before committing suicide (Rossouw

1998): “It was not clear why Sergeant Thamasanqa Tsolo, 40, gunned down his 39-year-old wife, Ntswaki, but police said the circumstances surrounding the apparent murder-suicide were being investigated. Their bodies were found at the police residential house at the academy. The couple leave behind their two children. A case of inquest and murder are being investigated” (Makhetha, 2015, p.1). Another media report highlighted the various factors that possibly contributed to this type of tragedy; for instance, low salaries, being stressed due to high levels of crime and having easy access to a service firearm (Mudzuli, 2014). Unfortunately, the media’s explanations of factors leading to H-S events are usually subjective, speculative, and non-scientific in nature (Liem, 2009).

Research on H-S is sparse and was mostly conducted in the US (Roma et al., 2012). Although H-S killings have a catastrophic impact on the families of both the perpetrators and their victims (Cerel et al., 2008), the offspring of the couple, and their communities (Liem, 2009), this phenomenon is under- researched in developing countries. According to Galta, Olsen, and Wik (2010, p.397), data on H-S killings are purposefully withheld from researchers due to an “altruistic motive". The purpose of this motive is to spare the surviving family members from further suffering and humiliation. The reasons for not conducting H-S research in non-Western countries are twofold. Firstly, there is a lack of a reliable H-S database due to the approach used to register H-S events. In most countries, including SA, H-S killings are usually tracked as two different entities instead of a single linear event (Saleva, Putkonen, Kiviruusu, & Lönnqvist, 2007; Skead, 2010). This reporting system not only leads to the underreporting of H-S events, but also makes it difficult to identify true H-S cases for research purposes (Adinkrah, 2003). Secondly, H-S is a relatively rare occurrence (Eliason, 2009), making it difficult to find sufficiently large samples for the study of this phenomenon.

Studying suicidal behaviour, especially H-S, within the police service presents its own challenges, because these events are considered a sensitive issue within the law enforcement sector and permission to study these killings is not always granted (Violanti, 1996; Heiman, 1975 as cited in Hem, Berg, & Ekeberg, 2001). Also, obtaining enough H-S cases within a single occupational group can be considered a difficult endeavour for

researchers in this field (Heiman, 1975 as cited in Hem et al., 2001). Therefore, only two international studies have researched H-S within the law enforcement sector (Violanti, 2007a; Klinoff et al., 2014). A major obstacle in H-S research is that both perpetrators and victims are deceased (Van Wormer, Mallow, & Ward, 2009; Galta et al., 2010). In most cases, insufficient information or clues were left behind about the contextual factors leading to the H-S incident (Oliffe et al., 2014), which presents a difficult challenge to researchers who try to understand this complex but tragic phenomenon.

1.3 Studying H-S on Three Different Levels

According to Liem (2009), H-S should be studied using three different levels of analysis in order to gain an accurate perspective of this phenomenon. Unfortunately, most international and national studies have focused on only one or two levels, thereby neglecting the third and final level of analysis (see Chapter 3 for a complete literature review). The current study focuses on all three of these proposed levels.

1.3.1 Macro level analysis.

On the first level of analysis, attention is afforded to socio-demographic data (e.g., incidence rates, gender, and age of the parties involved). This level was used to also test Durkheim's socio-cultural explanations of H-S. According to this theory, social factors not only contribute to suicide (Barlow & Durand, 2002), but also to the H-S phenomenon (Bills & Li, 2005). Thus, H-S is considered an extreme form of suicidal behaviour triggered by a lack of social integration (Liem, 2009). Integration in this regard refers to the degree to which an individual assimilates into society at large (Holmes & Holmes, 2006).

Unfortunately, general statistical data do not yield sufficient insight into specific details of the event, and information about its perpetrators, and victims. This requires a next level of analysis, the meso level (Liem, 2009).

1.3.2 Meso level analysis.

On this second level, the antecedent history of the perpetrator, especially psychiatric factors (e.g., suicide threats or attempts) is considered alongside the motive for the final act (Liem, 2009). This information is usually obtained from interviews with the survivors who accidently survived these attacks (either perpetrators or victims). In the current study, this level of analysis is addressed by relying on both quantitative (document analysis) and qualitative (interviews) information. This second level of analysis was also used to test the intrapsychic explanations of H-S. According to Freud, the death drive or Thanatos, which is named after the demon of death in Greek mythology, is in constant conflict with the life instinct (Eros). Freud speculates that this conflict is initially directed towards other individuals or objects in the form of aggressive and destructive behaviour, but the Thanatos, eventually returns to the original object (the physical body of the person), and compels the person to engage in violent and self-destructive actions (Litman & Tabachnick, 1994). Henry and Short (1954) used Freud's notion of intrapsychic conflict to explain the H-S phenomenon (Bills & Li, 2005) and postulated that victims of H-S attacks are not only a source of frustration, but also a source of nurturance for the perpetrator. Thus, a paradox governs the relationship between the parties involved. When the victim is killed during a homicide attack, the perpetrator not only loses his or her source of frustration, but also their source of nurturance. If the victim was more a source of nurturance than a source of frustration for the perpetrator, he or she may also choose to commit suicide (Henry & Short, 1954). In this instance, H-S can be seen as "a variation of homicide" (Liem, 2009, p.136).

1.3.3 Micro level analysis.

The final level of analysis examines the dynamics of an H-S relationship using purely qualitative techniques. This level is not only used to further investigate the H-S phenomenon, but also to strengthen the validity of both macro and meso levels of analysis. Unfortunately, the most recent studies on this phenomenon lack information regarding this micro level (Liem, 2009). In the current study, three interviews were conducted with the survivors (victims) of an H-S attack, providing in depth information regarding 'life with the perpetrator'. In the H-S context, the micro level addresses the question: "What are the

dynamics that operate in a relationship that ends in an H-S killing"? This final level of analysis complements the other two levels, because it adds a deeper level of analysis that was not captured by the other two levels.

Therefore, the current study is considered to be the first non-Western scientific endeavour to study this phenomenon within the law enforcement sector using all three levels of analysis as well as two different theories to explain this violent act.

1.4 Firearm Regulation and H-S

The firearm plays a significant role in H-S killings and for this reason the American Association of Suicidology (AAS) argues for less accessibility and availability of firearms in order to save human lives (Berman & Lindahl, 2001). According to Liem, Barber, Markwalder, Killias, and Nieuwbeerta (2011), it is much easier to commit H-S using guns than by any other means. Although restricting access to firearms does not prevent individuals from committing either individual suicide or H-S, it makes it much more difficult to use that particular method for self-destruction (Clarke & Lester, 2013). Nonetheless, restricting access to firearms can greatly assist in the prevention of impulsive suicides (Ajdacic-Gross et al., 2008) and in a large number of H-S studies, stricter gun regulation has been advocated (Koziol-McLain et al., 2006; Mathews et al., 2008; Dogan, Demirci, Gunaydin, & Buken, 2010; Liem et al., 2011).

However, the police sector relies on their side arms to protect themselves and members of the community from armed and dangerous criminals. In this instance, it will not be conducive to disarm a police service which has to operate in a country with high levels of violent crime (Anshel, 2000; SAPS, 2015). As Violanti (1996, p.44) states: "The police firearm becomes the officer's physical and psychological shield at work". In SA, police officers are considered to be on duty 24 hours of the day even if their 'regular' shifts have ended, thus a firearm becomes indispensable. In practical terms, this means that society can ask for law enforcement even if the members are already off duty and at their residential homes (SAPS, 2015). Unfortunately, easy access to a gun increases the likelihood of an H-S incident. Statistically, if a firearm is kept in the home of an individual this increases the possibility of

committing suicide by 3.4 times, and in the case of homicide, the likelihood is increased to 1.4 times (Banks, Crandall, Sklar, & Bauer, 2008). In the SA context, police officials are issued with a 9mm pistol accompanied by 30 rounds of ammunition (Lieutenant- Colonel J. Rudolph, personal communication, October 27, 2015), which creates a dangerous environment for police families due to the proximity and convenience of possessing a handgun. The international study of Klinoff and her co-workers (2014) concluded that the police official's service firearm was the first choice for both suicide (98%) and homicide (89%) killings.

It should be clear that restricting access to firearms within the SAPS is much more problematic compared to regulating private gun ownership. Therefore, it is more important to rather identify the factors associated with police H-S killings and to provide a prevention strategy, especially in a profession where guns are readily available (Skead, 2010). In order to start this prevention effort, knowledge of the underlying mechanisms in H-S is critically important (Ajdacic-Gross et al., 2008). Lester (1992) suggested that countries should systematically collect data on suicidal behaviour in order to reveal both the protecting and the precipitating factors in police H-S killings. Only by understanding the factors that lead to H-S can effective prevention programmes be developed in order to counter this family tragedy.

According to the SAPS National Suicide Coordinator (Lt.-Col. M.S. Watson, personal communication, October 16, 2013), the precipitating factors that lead to H-S incidents within the police are largely unknown. Most data of this organisation are based on individual suicides, but unfortunately, the SAPS have limited psychological knowledge of the factors involved in H-S killings. Thus, no systematic and scientific research that exclusively focuses on the H-S phenomenon within the SAPS has ever been conducted within SA, thus rendering the current study an important research endeavour.

1.5 Summary

This first chapter commenced with background information on suicidal behaviour within the law enforcement sector, especially H-S killings. In such an event, a police official commits

homicide and shortly thereafter takes his or her own life. The following section discusses the challenges of a police career with special emphasis placed on the killing of fellow officers. For example, 63 law enforcement officers were killed during 2014-2015 in the line of duty. Next, the focus falls on individual suicides within this organisation and suicide statistics for the period 2009-2012 are presented. Unfortunately, police members not only committed individual suicides, but also H-S. Excerpts from two local newspaper articles are furnished, which highlights such police family tragedies, followed by a discussion on the difficulties inherent in H-S research. As already pointed out, three levels of analysis (macro, meso, and micro) were proposed for the study of the H-S phenomenon to explore the socio-cultural and intrapsychic aspects associated with H-S occurrences. The role of the service pistol is discussed, because this plays a significant role in such tragedies and stricter firearm control appears to offer a solution to curb H-S killings. Unfortunately, police officials need their side arms to perform their duties. This chapter concludes with the reasons for conducting research on the H-S phenomenon within the police setting.

1.6 Preview of Subsequent Chapters

Chapter 2

This chapter furnishes a definition of the H-S phenomenon, followed by Coid's three epidemiological laws of H-S. Next, the two classification typologies of H-S advanced by Marzuk, et al. (1992) and Hanzlick and Koponen (1994) are discussed. Attention is also afforded to the different types of H-S killings, alongside their relevant case studies. This section is followed by a discussion of the link between major depressive disorder and H-S. An historical overview of suicide, which covers different periods and civilisations, is then presented. Three theories of suicide that explain suicidal behaviour from either a socio-cultural, intrapsychic, or neurobiological perspective are discussed. The last part of this chapter focuses on the tracking of H-S events within the SAPS and concludes with the SAPS "Choose Life Program", which has the primary motive of preventing suicide within this organisation.

Chapter 3

This chapter commences with the mention of the different incidence rates of H-S in Western and non-Western countries. The main focus of this chapter not only falls on the review of international literature on H-S, but also SA studies on this rare phenomenon. The common factors in H-S killings are identified and discussed, followed by the various H-S profiles obtained from the literature. This chapter concludes with the rationale and research questions that guided the current study.

Chapter 4

This chapter describes the methodology employed in the current study, and explains the quantitative and qualitative approaches used for the data analysis. Due to the small sample, only a non-parametric technique (Chi-square analysis) was used to investigate the relationships between categorical variables such as gender, culture, level of education, and age in H-S killings, and a phenomenological perspective was used for the qualitative part of the data analysis because the social phenomena associated with H-S events are typically context-bound. Thirty-eight (38) police H-S cases were included in the current national study which stretched over a two year period (2012-2013). Information on H-S killings was collected via two methods, namely document analysis and interviews with three survivors of a police H-S attack. As already stated, both quantitative and qualitative techniques were employed to analyse the information obtained from these two data sources. The last part of this chapter concludes with the ethical considerations that guided the current research study.

Chapter 5

The results of the current study are discussed in Chapter Five in terms of the first three research questions that were formulated. The first question discusses the instance of H-S within the SAPS as an organisation, while the second question addresses the precipitating factors in police H-S killings. The third question describes the dynamics that operate in a relationship that ends in an H-S attack.

Chapter 6

The last chapter discusses the results of the study as set out in the previous chapter. Emphasis is placed on the two remaining research questions that were originally formulated in Chapter 3. In the first remaining question, the SAPS precipitating factors on H-S are compared with those of other studies on this phenomenon, while the last question discusses a proposed prevention strategy for H-S killings within this particular occupational setting. This chapter concludes with the limitations of the current study and further recommendations are made regarding future research on the H-S phenomenon.

Chapter 2
Theoretical Background

2.1 Introduction

This chapter presents the relevant terms, concepts, and the theoretical framework associated with H-S research. The purpose is to furnish sufficient background information on H-S to understand the current state of research regarding this phenomenon. This chapter begins with a definition of H-S followed by the various periods between a homicide and subsequent suicide (either directly afterwards or until seven days had elapsed) that are used by researchers in their operational criteria for inclusion. The next part of this chapter discusses Coid's three epidemiological laws of H-S, followed by the two classification typologies that are widely used in the literature. Different types of H-Ss with their accompanying case studies are also discussed. The following section reports on the link between major depressive disorder and H-S. A historical overview of suicide covering different periods and civilisations is furnished followed by three distinct theories of suicide. The remaining part of this chapter focuses on the tracking of H-S events within the SAPS as well as the Choose Life programme offered by this organisation, which serves as a suicide prevention programme.

2.2 Definition of Terms

The following section discusses the key terms and concepts that have been used by researchers to describe the H-S phenomenon.

2.2.1 Homicide-suicide (H-S).

Although no standardised operational definition of H-S exists (Jena et al., 2008), this phenomenon can be defined as "an incident in which an individual kills another person and subsequently takes his or her own life" (Roma et al., 2012, p.462). Thus, H-S is a generic

term used to describe a murder followed by a suicide committed by the same actor (Liem, 2010).

Various studies have used different operational criteria for inclusion, which usually concerns the time the perpetrator takes to commit suicide. Certain H-S studies include a 24 hour time interval between the murder and the suicide (Logan et al., 2008), while others use several days (Felthous & Hempel, 1995), a full week (Marzuk, et al., 1992), and finally, even no timeline at all (Dettling, Althaus, & Haffner, 2003). According to Marzuk et al. (1992), an H-S event can be defined by first looking for evidence that the homicide was committed by the subject and secondly, by establishing the interval between the homicide and suicide killings.

Although a working definition of the H-S phenomenon has been provided, a critical question still remains: "Is H-S more closely related to homicide or to suicide?" Theoretically, H-S is a complex phenomenon which should occupy a "distinct epidemiological domain" (Marzuk et al., 1992, p. 3179) and cannot be classified as a homicide or suicide alone (Liem, 2010). Nonetheless, Skead (2010) argues that researchers have traditionally linked H-S more closely to suicide than homicide, because of the various theories that exist to explain suicide as well as the motivations for this act. Suicide can be considered a "mental health problem", while homicide is usually seen as a "criminal justice problem" (Harper & Voigt, 2007, p. 295). The current study also places suicide at the starting point to describe the H-S phenomenon, although the homicide component is also taken into consideration.

2.2.2 Epidemiological laws of H-S.

After reviewing the literature and studying H-S patterns from 1900 to 1979, involving ten nations, Coid (1983) suggested three epidemiological laws that define the H-S phenomenon. The first law states that the higher the homicide rate, the lower the number of perpetrators who are a) mentally ill and b) likely to commit suicide. The next law claims that the rate of mentally ill offenders, and those who take their own lives, appears to remain the same in the different countries, although there are usually overall differences in the homicide rates in these countries. The final law states that over time the rate of mentally ill perpetrators

and those who kill themselves remains the same in spite of fluctuations in the overall homicide rates.

Studies conducted during the 1990s supported all three laws, but there is especially strong support for the first two laws (Marzuk et al., 1992; Milroy, 1995; Carcach & Grabosky, 1998). In effect, research has shown that the higher the homicide rate is in a country, the lower the proportion of homicide offenders who commit suicide, and secondly, H-S rates tend to vary less across countries when compared to their total homicide rates. Coid's third law is more difficult to confirm due to the long periods of time necessary to establish H-S trends (Gartner & McCarthy, 2009). The two studies carried out by Milroy (1998) and Kivivuori and Lehti (2003) supported the third law, focusing on England (1946-1996) and Finland (1960-2000) respectively. These studies concluded that the H-S rate was relatively stable for the two countries over the mentioned periods, but the proportion of H-S perpetrators who killed themselves afterwards declined substantially.

A more recent study undertaken by Gartner and McCarthy (2009), which focused on the cities of Buffalo, Seattle, Toronto, and Vancouver, over a ninety-year period (1900-1990), also tested the applicability of Coid's three laws. Unfortunately, the results found limited support for the first law, which states that the higher the homicide rate the lower the H-S rate. On the one hand, the two cities of Toronto and Seattle, each with the lowest and highest homicide rates respectively, showed that a similar number of perpetrators also committed suicide, which does not support this epidemiological law. On the other hand, if this law is assessed by using data trends that cover a long period, the results indicate that during the 1970s and 1980s homicide rates peaked while the percentage of H-S rate was at its lowest point during that period of the century. This form of analysis then supports Coid's first law. Coid's second law, which claims that the rate of mentally disturbed perpetrators who take their own lives appears to remain the same in the different countries, also did not receive support from this study. The researchers postulated that the studies which confirmed the first two epidemiological laws included a wider range of countries as well as countries with similar homicide and suicide rates compared to their study which displayed uneven distribution rates. Thus, Coid's first two laws cannot be regarded as invalid, even

though their generality can be questioned. His third law states that H-S rates remain a stable phenomenon over time in spite of the fluctuation in the total homicide rates of the various countries. Both rates and ratios can be used to test his final law. The measurement of the rates can be obtained by comparing the difference between the lowest and highest points in a period, while the ratios involve the usage of juxtaposing the mean of each rate with its own standard deviation. However, even though they used two different techniques of analysis, the authors still concluded that H-S decreased during the twentieth century in these four North American cities. This is not consistent with Coid's third law which asserts that H-S rates will remain stable.

2.2.3 Classification typologies of H-S.

Various H-S classification typologies or theories have been discussed in the literature. For instance, Stack (1997) used a multivariate quantitative analysis to develop a five level typology of H-S based on the relationship between the perpetrators and their victims. These five types of H-S include current spouse or lover, past spouse or lover, current boy or girlfriend, friends, and children. In turn, Harper and Voigt (2007) proposed a classification scheme that is based on both H-S studies and mass murder literature. Their categories include intimate or domestic lethal violence-suicide, family annihilation, mercy killing-suicide, public killing spree-suicide, mistaken or accidental homicide-suicide, felony murder-suicide, terrorist murder-suicide and cult mass murder-mass suicide. The classification systems of both Marzuk et al. (1992) and Hanzlick-Koponen (1994) are the two most widely used typologies in the literature (Skead, 2010; Liem, 2010; Logan et al., 2008; Malphurs & Cohen, 2002) and both classification schemes are discussed in greater detail in the following sections.

2.2.3.1 Classification typology of Marzuk et al. (1992).

Marzuk and his colleagues developed a H-S classification system that was based on the relationship between the victims and their offenders (Liem, 2010). This clinical typology can be depicted as follows.

Table 2.1

Classification Typology according to Marzuk, et al.

I. Spousal or consortial	II. Familial	III. Extra- familial suicide
Perpetrator a) Spouse b) Consort	Perpetrator a) Mother b) Father c) Child (under 16 years old) d) Other adult family member (over 16 years of age)	Includes the following precipitating factors: a) Amorous jealousy b) Mercy killing (due to terminal illness & declining health) c) Altruistic or extended suicides (e.g., fantasies of rescue and escape from a "cruel world") d) Family, financial, and social stressors e) Retaliation f) Other; and g) Unspecified
Type of homicide a) Uxoricidal (spouse killing) b) Consortial (killing of lover)	Type of homicide a) Neonaticide (baby less than 24 hours old) b) Infanticide (children older than 1 day, but less than one year old) c) Pedicide (children between 1 and 16 years old) and d) Adult family member (over 16 years of age)	

(Marzuk et al., 1992).

Examining the above classification system, five subtypes of H-S are proposed which include the following: Firstly, spousal H-S, coupled with amorous jealousy which involves infuriated males who murder their intimate partners and subsequently kill themselves, is often regarded as the most common subtype. Secondly, spousal H-S can also occur in older

couples with ill health as the main motive for the killings. Thirdly, filicide-suicide involves mothers who suffer from a mood disorder with psychotic characteristics; they kill their offspring and commit suicide afterwards. Fourthly, in familicide-suicide killings the male of the household is usually depressed, paranoid and intoxicated before committing this act. The main motive for annihilating the entire family often revolves around financial adversity and marital conflict alongside the belief that it is their responsibility to save the family from hardship. Finally, extrafamilial murder-suicides are characterised by paranoid, disgruntled persons who are convinced that they have been wronged by others and they murder those individuals who have presumably hurt them. Even an innocent bystander who 'gets in their way' (e.g., the police) will also be killed before they commit suicide (Harper & Voigt, 2007).

2.2.3.2 Hanzlick-Koponen (1994) classification typology.

This classification typology is an adapted version of the Marzuk et al. (1992) classification system which not only includes socio-demographic factors and event related information, but also precipitating stressors (Liem, 2010).

This typology, which was later modified by Malphurs and Cohen (2002), consists of five perpetrator victim relationships and thirteen precipitating factors in H-S killings which can be described as follows.

Table 2.2

Hanzlick- Koponen Classification Typology

Relationship subtypes	Precipitating factors
I. Femicide-suicide, includes married couples, intimate friends, common law partners or homosexual partners.	a) Impending divorce
II. Familicide-suicide, involves perpetrators killing family members.	b) Previous divorce
III. Filicide-suicide includes both infanticide and pedicide-suicide killings. The offenders are the parents who murder their child/children under the age of 16 years.	c) Real or perceived loss of a non-marital partner
IV. Extra-familial suicide involves perpetrators and victims who were unrelated, but were either roommates, friends or acquaintances.	d) Jealousy
V. Mass murders and workplace killings usually include three to five people killed in the H-S act.	e) Retaliation
	f) Mercy killing
	g) Altruism
	h) Financial stressors
	i) Dysfunctional family or stress
	j) Alcohol usage
	k) Other drug usage
	l) Psychopathology
	m) Unspecified unknown factors

(Malphurs & Cohen, 2002).

According to Liem (2009), this typology not only includes socio demographic factors, event related information, and precipitating stressors, but also several 'special classifications'. These special categories include the following situations: The family annihilator, who wipes out the entire family. In dyatic death, the perpetrator kills others and himself or herself. Triadic death involves the murder of the offender's estranged partner or rival lover and afterwards himself or herself. The last entry included under special classifications involves mass or serial murders followed by suicide.

Unfortunately, the Hanzlick-Koponen classification typology can be criticised for not including the age of the perpetrators and their victims, and the occupational categories and health status of the individuals involved (Malphurs & Cohen, 2002). The same critique can also be levelled against the typology of Marzuk et al. (1992), which omits to include the age, population group, occupation, the weapon or method used (Skead, 2010), and also does not indicate whether the H-S was intra- or interracial or bi- or homosexual in nature (Hanzlick-Koponen, 1994). All these factors can be considered to be important information for researching this phenomenon. Nonetheless, both typologies remain useful in classifying H-S events (Malphurs & Cohen, 2002).

2.2.4 Specific types of H-S.

In the following section, the different types of H-S will be discussed alongside a case study for each subtype. The purpose of these case studies is to highlight the differences between the specific types of H-S discussed in the literature. Thus, case studies are used to put theory into practise, which translates into a 'real world experience' for the reader. Both the Hanzlick-Koponen and Marzuk et al. (1992) classification typologies are employed as taxonomies to distinguish between the different H-S subtypes in the discussion below.

2.2.4.1 Intimate partner H-S (especially femicide-suicide).

The most common subtype of H-S found in the literature involves a male killing his intimate female partner and then subsequently taking his own life (Bossarte, Simon, & Barker, 2006; Koziol-McLain et al., 2006; Saleva et al., 2007; Mathews et al., 2008; Roberts et al., 2010). Intimate partners usually include the wives, ex- wives, consorts, and current or ex-girlfriends of the H-S offenders (Eliason, 2009). In a limited number of cases, females were identified as the perpetrator and males as the victim in H-S killings (Gartner & McCarthy 2009; Panczak et al., 2013). Researchers have concluded that an important precipitating factor in femicide-suicide appears to be the intimate partner ending the relationship with the offender (Harper & Voigt, 2007; Palermo, Smith, Jentzen, Henry, & Witeck, 1997; Marzuk et al., 1992). Perpetrators of H-S usually feel a deep sense of jealousy and resentment towards the person ending their once happy relationship, which could lead to

the Othello syndrome. This syndrome is characterised by the decision that: "If I can't live and be happy, neither will you" (Malmquist, 2006, p. 501). Yet the question remains: 'why are males more inclined to kill themselves after committing homicide than females in similar situations'? Malmquist (2006) suggested that women may feel that murder in an intimate relationship can be equated to abuse. If a murder is committed by the female due to an abusive male (retaliation), there is no need to kill herself because the murder will suffice. In the same vein, Swatt and He (2006) theorised that abused women may rather feel liberated after killing their abuser instead of feeling guilty and remorseful. The following case study demonstrates an intimate partner H-S.

Case study one: Estrangement and a femicide-suicide killing

> Two people are left dead after an apparent homicide-suicide killing Saturday evening in Lawrence County in the United States. County sheriff confirmed that the estranged wife died of multiple gunshot wounds inflicted by her estranged police husband moments before he turned the gun on himself. The incident occurred just before 17:00 at the residence of her brother. Evidently they had been having troubles. The victim died the same day she left her husband and had gone to stay with her sibling. Just before 17:00 the victim was sitting in her car outside the relative's driveway after returning from work, when her husband walked up to the vehicle and shot her several times. The family had three children, a grown up child, a teenager son who was at the residence when the incident took place and a seven year-old daughter (Violanti, 2007b).

Unfortunately, intimate partner H-S not only includes estrangement as a trigger factor in H-S killings, but other common factors are also important. These factors include terminal illnesses and declining health, jealousy killings, and suicide pacts. Attention will now be afforded to each of these three factors followed by accompanying case studies.

Firstly, terminal illness and declining health (also known as 'mercy killing') usually occurs when one or both persons in a committed relationship develop a terminal illness (e.g.,

cancer) and they realise that their health is declining. In this relationship both the males and females are dependent on one another for care and when the offender realises that his partner (later on, the victim) is dying or becoming more helpless, he may commit an H-S killing (Malmquist, 2006). According to the literature, non-violent methods are often used in mercy killings (e.g., poisoning) compared to firearms (Marzuk et al., 1992); although Harper and Voigt (2007) found the converse to be true in their study.

Case study two: Terminal illnesses and a mercy killing

> A 72 year-old man supposedly murdered his wife aged 75 before killing himself. Neighbours confirmed that the married couple both suffered from terminal illnesses which were interfering with their ability to care for each other. The elderly woman suffered a stroke four weeks before the incident and the male was physically frail due to prostate cancer which spread to the rest of his body. The male offender, in the days leading up to the event, is described by his neighbours as distraught, depressed and "complaining that he could no longer lift his wife, he had not slept and was depressed over his inability to properly care for her" (Harper & Voigt, 2007, p. 306-308). According to police reports, the old man closed all the windows and doors from the house before turning on the gas supply in their communal home. The bodies of both the offender and victim were found in their bedroom. It appears that both died of gas inhalation, but an autopsy report that is expected early next week, will confirm the cause of death (Harper & Voigt, 2007).

Secondly, jealousy killing usually involves a pathological possessive male killing his intimate female partner and subsequently commits suicide (Koziol-McLain et al., 2006). The male's patriarchal power over the female (Oliffe et al., 2014) is usually coupled with 'amorous' jealousy (Jena et al., 2009; Panczak, et al., 2013), also known as 'psychotic' or 'morbid' jealousy (Marzuk et al., 1992). This can lead to 'patriarchal terrorism' which is a form of domestic violence aimed at controlling and subordinating women in a relationship (Johnson, 1995). According to the Power and Control Wheel that was developed by the Domestic

Abuse Intervention Project of Duluth in Minnesota, various signs can be identified in relationships characterised by domestic violence. These signs can be illustrated as follows.

Figure 2.1: The power and control wheel of domestic violence

According to Figure 2.1, these signs or types of abuse may interact with one another and more than one type of abuse could be identified in a single relationship (Ward & Bradley, 2009, p. 67-68). Unfortunately, patriarchal terrorism is likely to increase in both duration and frequency until it reaches a deadly point (Swatt & He, 2006). Roberts et al. (2010, p. 892) states that when the female ends the relationship, this termination may be seen "as a violation of the patriarchal order, with interpersonal violence by the man against the woman being an understandable, if not legitimate response".

Case study three: A security officer's jealousy

> A birthday argument between a security guard and his wife escalated into a homicide-suicide last Wednesday evening. Both were found dead in their home just before 23:00. According to police, the guard shot his wife with a 9mm semi-automatic pistol and then turned the gun on himself. Neighbours reportedly saw the couple arguing outside their family home both earlier in the week and in the hours before the shooting. The husband believed his wife was having an affair with a colleague. According to friends, she threatened to leave him a month earlier. He shot his wife of 18 years (Violanti, 2007b).

Finally, suicide pacts, also known as double suicides (Malmquist, 2006) can be defined as a "mutual agreement between two people to kill themselves at the same time usually in the same place" (Murthy, Agnihotri, Millo, & Lalwani, 2001, p. 11). These acts are more difficult to distinguish from the more common H-S incidents, especially if confirmation for the act (e.g., suicide notes) is lacking. In general, if both parties agree to die together, for diverse reasons (e.g., chronic illness or family feuds,) it would be seen as a pact. However, if one of the parties responsible for the pact suggestion is more persuasive or dominant than the other, a clear distinction between a pact and a common H-S could become blurred (Malmquist, 2006).

Case study four: A young couple's suicide pact

> A 22 year-old boy and his 23 year old girlfriend were found dead in an air-conditioned car in a pool of blood. Two discarded shells of a 9mm pistol and a suicide note was found at the scene. Both individuals were students at local colleges and wanted to marry but his parents were opposed to the idea. The girl was married previously, but got divorced and was suffering from Thalasemia (Murthy et al., 2001). This inherited blood disorder leads to the destruction of a large number of red blood cells which results in anaemia (Medline Plus, 2014). The suicide note was signed by both parties and read the following: "We are responsible for our death and fed up with the world" (Murthy et al., 2001, p. 11).

2.2.4.2 Child H-S (filicide-suicide).

This subtype involves the killing of children followed by suicide of the offender and is the second most common H-S type (Marzuk et al., 1992; Hatters-Friedman et al., 2005; Harper & Voigt, 2007). The killing of babies less than 24 hours old (neonaticide), children younger than one year (infanticide-suicide), and the killing of children between 1 and 16 years (pedicide-suicide) are all grouped under filicide-suicide (Marzuk et al., 1992; Malmquist, 2006). Although research has demonstrated that both male and females commit filicide-suicide (Byard, Knight, James, & Gilbert, 1999; Hatters-Friedman et al., 2005), this subtype is usually committed by the mother instead of the father (Adinkrah, 2003; Gupta & Singh, 2008). Also, the biological parents are predominantly involved in child H-S killings than step parents (Marzuk et al., 1992), and genetic parents who murder their offspring are more likely to commit suicide than step parents (Daly & Wilson, 1994).

Resnick (1969 as cited in Hatters-Friedman et al., 2005, p. 496) identified five possible motives for filicide, namely: altruistic, acutely psychotic, accidental filicide (fatal maltreatment), unwanted child, and spouse revenge filicide. More recent studies have shown that altruism is the most common motive for filicide-suicide killings (Adinkrah, 2003; Gupta & Singh, 2008). In altruistic filicide-suicide, mothers kill their children and then commit suicide which illustrates a personal cause for these killings. This variation in H-S is usually committed out of love in order to relieve the child's suffering which can be either real or imagined. For instance, a mother who is depressed and suicidal may not be willing to leave her offspring behind in a 'cruel world'. In such instances, she may murder her child and afterwards take her own life (Hatters-Friedman et al., 2005). Other possible motives for filicide-suicide include euthanasia, acute psychosis, postpartum mental disorder, unwanted child and pregnancy, angry impulses, spouse revenge, sexual abuse, Munchausen-by- proxy, violent older child, negligence and neglect, sadism and punishment, drug and alcohol abuse, a seizure disorder, and lastly, an innocent bystander (Guileyardo, Prahlow & Barnard, 1999).

Case study five: A mother's filicide-suicide

> A report was received of a house fire in which a mother and her two young children had perished. After fire investigators and the police examined the scene, evidence revealed that accelerant was used with a characteristic pattern of burning and a gasoline container within the house. After interviewing neighbours, the police established that the three victims had been alone in the house during the time of the blaze. This suggested that the children had been murdered by their mother who had taken her own life in the fire (Byard, Veldhoen, Kobus, & Heath, 2010).

2.2.4.3 The family annihilator (familicide-suicide).

Compared to the two previously discussed H-S subtypes, familicide-suicide killings are more rare occurrences (Logan et al., 2008; Liem, Postulart, & Nieuwbeerta, 2009) and predominantly committed by males (Marzuk et al., 1992; Byard et al., 1999; Sautter, Gapert, Tsokos, & Oesterhelweg, 2014). The goal of the offender is to eliminate all family members present (Malmquist, 2006), sometimes extended relatives and family pets as well (Marzuk et al., 1992; Roos, Beyers, & Visser, 1992); hence the term 'family annihilator' (Milroy, 1995). According to Harper and Voigt (2007), familicide-suicide seems to be planned, typically by the head of the family. In such cases, males usually perceive that they cannot care for the family anymore and conclude that their loved ones cannot survive without them if they commit individual suicides. As a result, the head of the household annihilates their children and/or family members before committing suicide. Another motive for familicide-suicide involves 'dependant-protective' males, who command their relationship in such a manner that he believes that only he can satisfy the needs of their victims (families). When the status quo of the relationship is threatened (e.g., the spouse threatens with separation), he reacts with a "homicidal-suicidal rage" (Marzuk et al., 1992, p. 3181).

Frazier (1975) distinguished between two main types of familicide-suicide offenders. In 'murder by proxy' cases, victims of H-S are chosen by the perpetrator beforehand, because they are 'extensions' of the primary target. Thus, the overarching motive in these cases is revenge. For example, the father murders the couple's children in order to 'get even with

their mother' and afterwards kill himself as a result of the fear of the consequences or feelings of guilt or shame. In contrast to the first type, 'suicide by proxy' involves despondent feelings by the head of the household who not only wants to commit suicide, but also feels that it is necessary to take his children and spouse with him. The purpose of killing the rest of the household is to protect them from possible pain and suffering in the future.

Case study six: My father the family annihilator

> A County Sheriff's Office Jailer shot his 4 year old son and his wife. The corrections officer called 911 and informs the dispatcher of the situation before turning the gun on himself. The sheriff confirmed after the killings that the officer had been in good spirits and did not exhibit signs of depression or agitation at any time before the killings. He worked as a corrections officer and dispatcher for the sheriff's office. Last week, allegations were made by the family accusing the sheriff's office of not acting on information about domestic abuse. The victim's father said that he contacted the County officials on numerous occasions to report domestic abuse but to no avail. Previously, the concerned father made calls to county dispatchers alleges that his daughter was the victim of physical abuse and he even saw her with a black eye (Violanti, 2007b).

2.2.4.4 Extrafamilial H-S.

Harper and Voigt (2007) referred to this subtype as 'public killing spree-suicide', which not only included H-S between roommates, friends, and acquaintances, but also mass murders (Logan et al., 2008). Religious terrorism in the form of a suicide bombing (Post, 2015) refers to an individual who kills himself or herself in order to kill other people (Post et al., 2009). Not only males transform their bodies into "human bombs" (Bloom, 2005, p. 27), but females (girls and women) have also begun to join their ranks (Allen, 2009). Although suicide terrorism is inspired by religious convictions, non-religious groups (e.g., the Kurdistan Workers Party) are motivated by political convictions to execute mass murders. In the former case, suicide terrorists kill in the name of God while the latter kill in order to

protect their identity, culture, and rights as a minority group. The hijacking and crashing of airliners into the World Trade Centre and the US Pentagon, publicly known as the 9/11 attacks during 2001, are considered to be one of the most devastating attacks on the West by Islamic fundamentalists, killing approximately 3000 individuals (Post, 2015).

Variations of murders in the workplace have been identified by Simon (1996, as cited in Malmquist, 2006) who included the following:

- Employment in a high risk and dangerous occupation, especially in the law enforcement sector.
- Acts of terrorism may claim innocent victims (e.g., employees working at the World Trade Centre who lost their lives during the September 11 attacks).
- A disgruntled employee may feel that he has been deprived of something (e.g., was overlooked for a job promotion) and wants to take revenge.

Unfortunately, not only those who have failed or disappointed the perpetrator become victims, but also whoever is present is murdered. Afterwards, the homicide is complemented with individual suicide by the perpetrator killing him or herself or choosing to die with a shootout with law enforcement officers. The goal of this 'last stand' is to get killed by the police (Malmquist, 2006). Literature refers to this phenomenon as 'suicide by cop' (Klinger, 2001), which is viewed as a form of suicide.

Extrafamilial-suicides are often perpetrated in academic centres (e.g., high schools and universities), post offices, healthcare facilities (e.g., hospitals), lawyer's offices, and court buildings (Malmquist, 2006) with firearms as the method of choice for both homicide and suicide killings (Meloy et al., 2004).

Case study seven: A police official's public killing spree-suicide

> A police constable killed 4 people in the Alexandra police station before he fled the scene to take a last stand against his colleagues at home. Police members from the Tactical Response Team (TRT) gave chase and the enraged police officer also fired at

them, prompting them to retaliate and kill him. The four victims that were mowed down were his estranged intimate partner, her uncle and neighbour who accompanied her to the police station to lay a charge of domestic violence against the Constable. The officer at the police station who was opening the case of domestic abuse was also not spared. It is alleged that prior to the killings, the constable's service firearm was seized after he held his girlfriend hostage in her home. He had apparently found her with another man and in a fit of rage he held the two at gunpoint and fired shots in the street. The Constable allegedly tricked his colleagues at the Alexandra police station to re-issue him with another firearm which the perpetrator used to commit the killings (Olifant & Dipa, 2015).

2.2.4.5 Parricide, siblicide and H-S.

Liem (2010) identified the murdering of one's parents or siblings followed by suicide as another variation in H-S killings. Although the killings of parents (parricide) or siblings (siblicide) are irregular occurrences, committing suicide afterwards is even more uncommon (Liem, 2010). In the case of parricide, the lack of taking one's life afterwards is unnecessary, because the child has now successfully separated from the parent (Crimmins, 1993 as cited in Liem, 2010), while Merleau (2003, as cited in Liem, 2010) postulated that when the brother and/or sister is murdered, the siblicide perpetrator has symbolically annihilated part of the self, rendering suicide a needless act. Thus, in both killings, the primary target for aggression is others instead of the self (Liem, 2010). Parricide can be subdivided into matricide (the murdering of the mother) or patricide (the killing of one's father), and males are more likely to murder their parents than females (West & Feldsher, 2010).

Case study eight: "Mom, I need money for drugs"

A 16 year old high school dropout shot and killed his divorced mother who had been giving him money for drugs, but had recently refused to continue to do so. When he was younger, she had beaten him with a belt and when he reached the age of 16 they had physical altercations. When she refused to give him money to fuel his drug

habit, he shot her while she was still asleep. Afterwards he took money to buy drugs and in the morning he returned home as if nothing has happened (Malmquist, 2010).

Due to the focus of the current study falling on homicide followed by suicide, this discussion will not further elaborate on parricide and siblicide, which usually includes only a homicide component.

2.2.5 Major depressive disorder and H-S.

The most common psychological disorder that has been identified amongst perpetrators of H-S killings is major depression (Malphurs & Cohen, 2005; Moskowitz, Simpson, McKenna, Skipworth, & Barry-Walsh, 2006; Bourget, Gagne, & Whitehurst, 2010; Dogan et al., 2010). This psychiatric condition is grouped under the category of mood disorders (Barlow & Durand, 2002) and refers to "disturbances in emotions" which affect an individual's ability to function (Sue, Sue, & Sue, 1997, p. 325). Although major depression may affect any age group, it appears to peak in the 23-30 year age group, and the course of this disorder varies significantly between people. Some may experience remission for only a short period (two or more months), while others may experience many symptoms up to three years before their next episode. Factors that negatively interfere with recovery rates include psychotic features, anxiety and personality disorders, and symptom severity. Younger individuals are more likely to suffer from hypersomnia and hyperphagia compared to older individuals who usually suffer from melancholic symptoms, especially psychomotor disturbances (American Psychiatric Association, 2013).

Other psychological disorders that regularly co-occur with major depression include substance abuse disorders, panic disorders, obsessive compulsive disorder, anorexia and bulimia nervosa, and lastly, borderline personality disorder. There is also a possibility of suicide during the course of a major depressive episode, especially if there was a past history of suicide attempts or threats. Unfortunately, most completed suicides take place without a history of previous unsuccessful attempts.

Major depression is currently diagnosed according to the DSM-V classification which is summarised and discussed in the following section (American Psychiatric Association, 2013).

2.2.5.1 DSM- V classification for a major depressive disorder.

The person experiences five or more of the following symptoms (criteria) during a continuous two-week period and at least one of the symptoms is either a depressed mood or loss of interest or pleasure. All of these symptoms are indicated either by the person's subjective account or observations made by others. The following criteria apply to a major depressive disorder:

- Firstly, he or she suffers from a depressed mood for most of the day, accompanied by feelings of emptiness or hopelessness and being tearful almost every day. Some individuals who suffer from this criterion usually describe their current emotional state as being "down in the dumps", while others exhibit increased irritability that is characterised by persistent anger, angry outbursts, or over reacting to minor events. The person suffering from this disorder usually experiences a lack of pleasure (anhedonia) or interest in most or all of the activities that he or she has previously enjoyed.
- This second criterion usually includes a loss of interest in hobbies (e.g., "not caring anymore") and sexual desire.
- Thirdly, the person suffers from significant weight loss, even though the individual is not on a weight loss programme (diet). The converse can also be true; a person may crave certain types of food (e.g., sweets) resulting in weight gain. In both cases, the person shows a change of more than 5% in their normal body weight per month.
- Fourthly, he or she may experience sleeping difficulties in the form of either hypersomnia or insomnia. The latter sleeping disturbance can be subdivided into middle insomnia (waking up during the night and having difficulty falling asleep again), terminal insomnia (waking up too early and being unable to go to sleep again), and initial insomnia (difficulty falling asleep). In the case of hypersomnia, the

person may experience prolonged sleeping periods at night or an increase in daytime sleeping.

- The fifth criterion refers to psychomotor agitation or retardation that is experienced nearly every day. Agitation is usually indicated by the inability to sit still or by the fiddling with clothes or other objects while slowed speech, thinking, and body movements are indicators of psychomotor retardation.
- In criterion six, the individual suffers from fatigue or a general loss of energy, even without physical exertion. Individuals who suffer from this disorder report that dressing and getting ready for their daily activities are exhausting and take much longer than usual.
- Criterion seven involves feelings of worthlessness or inappropriate guilt. In this instance, the person negatively evaluates his or her own self-worth or feels excessively guilty over minor failings in the past. He or she may also have trouble concentrating on the task at hand or experience indecisiveness almost every day.
- In the eighth criterion, the person usually complains of concentration problems or the inability to make minor decisions.
- Lastly, the individual experiences recurrent thoughts of death (not just the fear of dying), recurrent suicidal ideation without a specific plan, a suicide attempt, or even a specific plan for taking one's own life.

Furthermore, these symptoms also interfere with the social, occupational, and other important domains of functioning and cause impairment for the individual involved. The major depressive episode is not caused by a substance or a medical condition and there is not a past history of a manic or hypomanic episode. However, this exclusion criterion does not apply if the manic or hypomanic-like states were caused by substance use or a medical condition. Lastly, the major depressive episode is not better explained by other psychological disorders which include schizoaffective disorder, schizophrenia, schizophreniform disorder, delusional, or other psychotic disorders.

It is important to note that during a significant loss (e.g., during bereavement, financial adversity, and a serious medical condition), a person may also have feelings of intense sadness, weight loss, and insomnia, which mimic a depressive episode. Although these symptoms are considered appropriate to the circumstance, the presence of major depression alongside the normal response should also be considered in such cases (American Psychiatric Association, 2013).

2.3 History and Suicide

The phenomenon of suicide has not always had the same meaning as in contemporary western civilisation and in the past attitudes toward suicide have usually revolved around the culture of the person and their relationship with God. The word suicide first appeared in the English language around 1651 (Hankoff, 1979) and is derived from Latin. When divided into sections, *Sui* means 'of oneself' and *Cide* can be roughly translated to 'cut, chop, or kill'. Thus, suicide literally means to 'kill oneself' in Latin (Holmes & Holmes, 2006).

2.3.1 Ancient Greece and suicide.

The suicide act was usually condemned in this ancient culture. Their polytheistic belief system stated that the gods created humankind in order to serve them and suicide prevented human beings from fulfilling this special obligation. The killing of oneself will infuriate the gods who in turn will not only punish the perpetrator, but also destroy the society that permitted such a criminal act (Holmes & Holmes, 2006). If citizens do commit suicide, they were denied burial, pre-burial rites, and cremations (Tondo, 2014). According to the Attic law, the hand of an individual that committed suicide must be amputated and buried in a different place, away from the rest of the body (Cassidy & Russo, 1979). The offender's personal property was also forfeited to the state (Holmes & Holmes, 2006).

Leading Greek philosophers were opposed to the idea of suicide (Cassidy & Russo, 1979). Pythagoras was convinced that the world was able to hold only a certain number of souls and committing suicide may upset this equilibrium and jeopardise the entire universe. In turn, Plato believed that a man was a soldier in service of his country and equated suicide to

desertion from the Greek army. Lastly, Aristotle believed that suicide was an insult against society and condemned it as a criminal act against the state and country. However, suicide was permitted in the following three instances: Firstly, when an individual suffered from a terminal illness, accompanied by excruciating pain. Secondly, suicide was even encouraged if a soldier sacrificed his life in service of his country (Holmes & Holmes, 2006), and thirdly, if an individual was rejected by a lover (Tondo, 2014).

2.3.2 Ancient Rome and suicide.

Although the Roman government was opposed to suicide (Cassidy & Russo, 1979), the Roman gods were not particularly opposed to this act if compared to ancient Greece (Holmes & Holmes, 2006). In ancient Rome, suicide was considered a positive act, especially for those citizens with higher social standings (Holmes & Holmes, 2006). Many prominent politicians (e.g., Appius Claudius, Atticus Crassus, and Quintilio Publius Varus) of the time committed suicide in order to escape Caesar's wrath and oppressive practices (Grise, 1982 as cited in Tondo, 2014). Various methods were used to commit suicide among the social classes. The lower classes, including slaves, mainly hanged or drowned themselves, while the upper classes, which included politicians and military leaders, used poison or their own weapons respectively (Holmes & Holmes, 2006).

In certain instances, the killing of oneself was allowed and even encouraged. Widows of fallen soldiers, women who had been raped, or elderly men who committed suicide (Minois, 1999) were not only praised, but proper burials were also allowed within the city (Holmes & Holmes, 2006). Two philosophical schools of thought in Rome approved suicide under different conditions. According to the school of Epicureanism, the goal of man is to pursue happiness, and if this is not achieved, there is no purpose to life anymore. In contrast, the school of Stoics maintained that reason, virtue, and morality take precedence over life's pleasures, and this stoic lifestyle sometimes led to a state of detachment and a lack of interest in what life has to offer (Tondo, 2014).

2.3.3 Judaism, Christianity, Islam, and suicide.

The deliberate act of spilling one's own blood was strongly denounced by Judaism and its two daughter religions, namely Christianity and Islam (Hankoff, 1979). In the Jewish tradition, the body of an individual who committed suicide should not receive any respect from family and loved ones, especially if the act was committed intentionally. However, suicide was deemed a natural death if the individual suffered from a psychological disorder or feared torture if taken prisoner by the Roman army (Tondo, 2014). In Biblical terms, the earliest reference to suicidal behaviour can be found in the books of the Hebrew Bible which described the creation of mankind until the fifth century B.C. During this period, six instances of suicide and several examples of suicidal ideation were recorded in the Bible (Hankoff, 1979). The following table presents an overview of completed suicides:

Table 2.3

Self- destruction in the Hebrew Bible

Character	Historical Date	Source	Method used	Precipitating Event
Abimelech	1200 B.C.	Judges 9:54	Sword	Skull fracture
Ahitophel	980 B.C.	Judges 16:30	Strangled	Advice unheeded
Armour-bearer	1020 B.C.	1 Samuel 31:5, 1 Chronicles 10:5	Sword	Saul's suicide
Samson	1100 B.C.	Judges 16:30	Crushing	Captive
Saul	1020 B.C.	1 Samuel 31:4, 2 Samuel 1:6, 1 Chronicles 10:4	Sword	Defeated in battle
Zimri	876 B.C.	1 Kings 16:18	Burning	Defeated in battle

(Hankoff, 1979, p.6).

All six of these suicide episodes were committed by males in stressful situations or when death was imminent. Except for Saul's armour-bearer, all the characters were prominent figures of their respective times whose leadership were threatened or their reputations suffered damage. The deaths of both Abimelech and Zimri can be attributed to their sinful lives, especially the massacres they orchestrated in their rise to political power. Furthermore, the precipitating event in Abimelech's case was a mill stone thrown from a tower which crushed his skull. Although he had not died from this incident, he committed

passive suicide by ordering one of his soldiers to take his life (Hankoff, 1979), and King Zimri killed himself by setting his house on fire (Holmes & Holmes, 2006). In both the Samson and Ahitophel cases, communal elements were present. Samson committed suicide during a Philistine festival and was buried by his family, and Ahitophel who had foreseen military defeat, returned to his home town and explained that he preferred suicide over punishment from the enemy. He was presumably buried by those citizens who received his final wishes. The suicides of King Saul and his armour-bearer were the result of a looming defeat in battle and remain the most important suicides in Biblical terms (Hankoff, 1979). Saul was especially concerned that if he loses the battle with the Philistines, he would be killed by this "uncircumcised" enemy. To protect his honour, he chooses to commit suicide, but unfortunately his body remained behind. The Philistines dishonoured his body by decapitating him and publicly displayed the rest of his body (Reverend J.P.L. Van Straaten, personal communication, May, 10, 2016). Another famous example of suicide found in the New Testament relates to Judas (Matthew 27:3-5) and his betrayal of Jesus Christ for 30 pieces of silver. This apostle believed that God would not forgive him for his sin and committed suicide by hanging himself (Holmes & Holmes, 2006).

Lastly, examples of suicidal ideation in the Bible are to be found in the cases of Elijah (1 Kings 19:4), Jonah (Jonah 1:11; 4:3 & 4:8-9), and Job (Job, 7:15). In all of these cases, suicide was rejected, probably due to a prohibition against the killing of oneself (Hankoff, 1979).

During the fifth century, Christianity propagated the notion that life was a gift from God and suicide was a rejection of that gift, and ultimately God himself. The Fifth Commandment, "Thou shalt not kill" was strictly adhered to by Augustine of Hippo and other important church figures of that time (Holmes & Holmes, 2006; Rev. J.P.L. Van Straaten, personal communication, May, 10, 2016). This commandment not only referred to murder, but also to the killing of oneself as suicide deprives a sinner of the opportunity for repentance (Cassidy & Russo, 1979). Only God can take a person's life and suicide then became one of the worst sins (Holmes & Holmes, 2006). Enduring life's suffering, instead of committing suicide, was deemed a positive value worthy of God's grace (Tondo, 2014). Thus, people

who killed themselves were destined to spend the rest of eternity suffering in the afterlife (Holmes & Holmes, 2006).

Christianity became the official religion during the reign of the Roman Emperor, Constantine (272-337), and suicide was strictly sanctioned by the church and the government (Tondo, 2014). Since the fourth century, policies have been implemented to deter citizens from taking their own lives. For instance, if a person committed suicide in order to escape a legal trial, their property was confiscated by the state and the suicide was viewed as an admission of guilt. Another dramatic way to punish an individual for committing this criminal act was to mutilate their bodies publicly in order to warn onlookers of the consequences of taking their own lives. The binary purposes of these deterrents were to stimulate interest in life because of the low life expectancy of that time (less than 40 years) and the Roman Empire also needed an enormous amount of physical labour in order to maintain its vast borders (Tondo, 2014).

Compared to Judaism and Christianity, Islam holds a much firmer position in regard to the sinfulness of taking one's own life. Unlike the Hebrew Bible in which there is no explicit denunciation of suicide, the Noble Qu'ran outright condemns this act. Surah An-Nisā' dictates: "Do not kill or destroy yourself, …(Worchel & Gearing, 2010, p.73)… certainly Allah will be more merciful with you" (Tondo, 2014, p.5). Individuals who committed suicide are destined to spend the rest of eternity burning in hell (Worchel & Gearing, 2010). However, fellow believers can pray to Allah to forgive an individual who committed this grave sin (Holmes & Holmes, 2006). The prophet of Islam, Muhammad (570-632) taught that a human being should resign to divine will under any circumstance and for this reason Islam does not even permit euthanasia (Tondo, 2014).

Although the Qu'ran explicitly prohibits suicide, the killing of innocent people as well as the killing of other Muslims (Hafez, 2006), contemporary radical interpretations by religious terrorists of this Holy Book have led to suicide terrorism (Post, 2015). These terrorists view suicide bombing not as an act of taking one's own life, but rather martyrdom (Ali & Post, 2008). Thus, H-S killings are reframed as martyrdom whereas individual suicide is

considered a weak, selfish, and mentally disturbed act (Post et al., 2009). The "shahid" (martyr) fights a "jihad" (a holy war) and after successful completion of the mission, brings honour to their family and organisation (e.g., Al- Qaeda) to whom he or she belonged. The reward for successfully executing a H-S bombing attack is eternal paradise (Pugliese, 2008) and the following quote highlights one of the benefits in paradise awaiting the shahid: "May the virgins give you pleasure" (Kelley, 2001 as cited in Post et al., 2009, p.20).

2.3.4 Nineteenth century and suicide.

Although the government, and especially the clergy, still held the view that suicide was a sin and attempted suicide should be punished by either whipping or incarceration, this act could also be attributed to a mental condition. This 'new attitude' towards suicide in the early nineteenth century was stimulated by a court case in London in which Lord Castlereagh, alias Robert Stewart, took his own life in 1822. The state coroner had to decide if this act was criminal or the result of a mental disorder. If the act was deemed to be criminal, the Lord must be buried under a crossroad which was considered a disgraceful burial at the time, but if the deed was ascribed to a mental illness, this information would become public. Finally, the coroner attributed the suicide not only to a mental condition due to the Lord's expression of suicidal ideation, but also to his belief that he was being persecuted before committing this final act. Lord Castlereagh received a state funeral at Westminster Abbey, but his funeral provoked anger amongst the public and even some of his colleagues. Although this event stimulated a debate about a possible connection between suicide and a mental disorder, the generation of this period remained hesitant to accept this connection (Tondo, 2014).

In the United Kingdom (UK), local news reports were supplemented with suicide reports containing interpretations of why individuals took their own lives. Female suicides were usually attributed to emotional delusions or the loss of chastity accompanied with remorsefulness, while male suicides were often related to financial adversity (Tondo, 2014). Young and 'innocent' women from the rural areas migrated to the cities in search of decent employment. Unfortunately, 'bad company' corrupted these girls by impregnating them

leading to suicide by drowning themselves in either the Seine or Thames River. The most common suicide methods used in Victorian England during 1861 were hanging (48%) and drug overdose (7%), but during 1911, suicide by hanging had decreased to 29%, while suicide by means of drugs had increased to 14%. During this time, new means were also used to commit suicide. Individuals started using pistols, jumping in front of moving trains or throwing themselves from skyscrapers (Van Hooff, 2000).

In the late 19th century, suicide became more of a medical phenomenon, which not only led to investigating biological factors (e.g., an unusually thicker skull bone), but also focused on mental clues for this phenomenon (Van Hooff, 2000). Also, a link between alcohol abuse and suicide was suspected and by 1877, alcoholism was officially deemed a disease. Modern studies of suicide that used scientific principles started to appear. The Belgian mathematician and sociologist, Adolphe Quetelet (1796-1874), began to statistically analyse suicide. This scientific trend was continued by Enrico Morselli (1852-1929), a Professor of Psychiatry at Turin (Tondo, 2014). The French sociologist Emile Durkheim (1857-1917) looked for the causes of suicide by focusing on social factors (Giddens, 1997), while Sigmund Freud (1856-1939), a renowned Jewish psychiatrist, ascribed suicide to intrapsychic conflict (Meyer, Moore, & Viljoen, 1997). These influential pioneers investigated suicide from either a sociological, psychological, or medical perspective in order to describe, understand, and prevent suicidal behaviour (Tondo, 2014). The socio- cultural explanation of Durkheim and Freud's intrapsychic perspective on suicide are discussed in further detail in section 3 of the current chapter.

2.3.5 Contemporary view of suicide.

Current thinking on suicide revolves not only around social and psychological factors, but also considers the biological dimensions of this phenomenon (Barlow & Durand, 2002). The biopsychosocial model attempts to conceptualise the different causes of suicidal behaviour by including many etiological factors necessary for taking one's own life, although none of these factors is individually sufficient to cause suicide on its own. These factors include influences from the social environment, the impact of life experiences on the psyche of the

individual and biological vulnerability (Engel, 1980). The latter neurobiological perspective is discussed in greater detail in the following section.

According to the biopsychosocial model of suicide, certain factors predispose individuals to commit self-destruction. Predispositions to suicide includes genetic and biological factors (e.g., low 5- HIAA serotonin levels, family history of suicide), life experiences (e.g., abuse or traumatic history, previous suicide attempts), and psychiatric history (mood and personality disorders, substance abuse). This predisposition is activated by an environmental stressor (negative social influences) in the form of a perceived loss which includes relationship problems, financial adversity, legal battles, and the onset of an illness. The biopsychcosocial model of suicide not only includes negative social influences, but also protective factors, which could decrease the risk of suicidal behaviour. These protective factors act as a buffer against biological vulnerability and psychological risk factors. Positive social influences can include strong relationship ties with family or friends and having children around. Thus, social influences can either serve as a protective factor against suicide or function as a risk factor alone (Morrow, Bryan, & Appolonio, 2010).

In the case of negative social influences, the biologically vulnerable individual is now affected in all four spheres. Their thought dimensions include hopelessness, loneliness, and self-hate, while their behavioural dimension involves suicide threats, social withdrawal, and even suicide rehearsals. In turn, their emotional dimensions include feelings of guilt, anger, and depression, while their physiological dimensions are associated with sleep disturbances, concentration problems, and physical pain. These subsystems interact with one another, thereby sustaining the suicidal state, which could lead to the final act of the person killing himself or herself (Morrow et al., 2010).

It can be concluded that suicide is a complex phenomenon. It involves many etiological factors which are included in the modern multidimensional biopsychosocial model.

2.3.5.1 Suicidal behaviour disorder.

In the current DSM- V edition, "Suicidal behaviour disorder" is included under the proposed sets of criteria. These proposals were identified by experts in the relevant fields and are based on literature reviews, data reanalysis, and field trial results. The purpose of these proposed criteria is to encourage future research on the topic in order to better understand these conditions and to possibly include them as disorders in forthcoming DSM editions. Unlike the disorders listed in Section II of the new DSM- V, which are recognised and used in clinical settings, these proposals are not intended for clinical use. Nonetheless, the proposed suicidal behaviour disorder offers direction and a common language for researchers who are interested in studying this phenomenon (American Psychiatric Association, 2013).

The proposed criteria for suicidal behaviour disorder in terms of the DSM- V include the following:

The person has attempted suicide within the last 24 months and expected that the suicide attempt would lead to his or her demise. The suicide act does not meet the criteria for non-suicidal self-injury which is a separate disorder included under the proposed criteria sets. The latter disorder involves self-injury to the surface of the person's body in order to obtain relief from negative feelings or cognitive states or to achieve a positive mood condition. The diagnosis is not applicable to both suicidal ideation and preparatory acts. The act was not undertaken by the person during a state of delirium or confusion, nor was the act motivated by a political or religious objective. Lastly, it is important to distinguish between a current state (not more than 12 months since the last attempt) and early remission (12-24 months since the last suicide attempt).

2.3.5.2 Other practical considerations.

In order to meet the criteria for suicidal behaviour disorder, the person involved must have made at least one suicide attempt. A suicide attempt can be defined as a behaviour which was undertaken by a person in order to end his or her life. This sort of behaviour may lead

to injury (e.g., lacerations) or even serious medical consequences (e.g., skeletal trauma). The following factors should not be considered when making the diagnosis: poor planning, lack of knowledge about the deadliness of the chosen method, low intentionality or ambivalence, and intervention by others to interrupt the suicide attempt. If the person changes his or her mind before committing the act or is dissuaded by others not to take their own life, the diagnosis should not be assigned to these individuals. By contrast, the diagnosis of suicidal behaviour disorder should be made if a person uses a substance (e.g., alcohol) before killing himself or herself with the aim of reducing anticipatory anxiety and minimising interference with the act of suicide (American Psychiatric Association, 2013).

Indicators of suicidal behaviour or 'markers of risk' include the following: degree of planning which involves the date and time of the act, high levels of acute agitation, current discharge from psychiatric care, and the recent discontinuation of psychiatric medication, especially mood stabilisers. Other triggers include the sudden and unexpected loss of a loved one, displacement from housing, loss of employment, or being diagnosed with a life threatening disease (e.g., cancer).

Research has shown that 20-30% of individuals who have tried to kill themselves in the past, will make further suicide attempts in the future (American Psychiatric Association, 2013). More specifically, people who tried to commit suicide remain at higher risk for further attempts and death, especially during the first 24 months after the initial suicide attempt. Suicidal behaviour can occur at any stage of a person's life, but is a rare phenomenon, especially in young children under the age of 5 years (American Psychiatric Association, 2013).

Lastly, it is important to realise that suicidal behaviour seldom occurs in isolation from other psychiatric conditions. Other mental disorders that "exist in a state of comorbidity" (Barlow & Durand, 2002, p. 86) with suicidal behaviour disorder include mood disorders (major depression & bipolar disorder), personality disorders (borderline & antisocial personality disorders), schizophrenia, anxiety disorders (especially panic disorders associated with catastrophic & PTSD flashbacks), adjustment and eating disorders, substance use disorders

(particularly alcohol abuse), and schizoaffective disorder (American Psychiatric Association, 2013).

2.4 Theories of Suicide

Various theories of suicide exist to explain suicide, and ultimately the H-S phenomenon. The socio-cultural explanation of Durkheim claimed that social factors influence suicides and postulated four types of suicide namely: Egoistic, Altruistic, Anomic and Fatalistic suicides. The intra psychic explanation of Freud focuses on the conflict between the life instinct and the death drive and its relation to suicide. He also divides the psyche into three distinct structures (id, ego, and superego) and explains suicidal behaviour in terms of the constant conflict between these structures, and also within them. Thus, researchers have suggested that two ego defence mechanisms, namely splitting and projection, may play a role in H-S killings (Townsend, 2003; Skead, 2010). The psychological ego defence mechanism of projection refers to an individual's effort to keep his or her unconscious psychic content on an unconscious level by attributing their unacceptable motives or characteristics to other people (Meyer et al., 1997), while the second ego defence mechanism of splitting, individuals will see themselves as either all good or all bad without integrating both views (Furst & Ostow, 1979). These two defence mechanisms and their relation to H-S are further discussed in sections 2.4.2.1 and 2.4.2.2 of the current chapter. The last theory of suicide involves the central monoamine theory which includes neurobiological explanations of suicide.

2.4.1 Socio cultural explanations.

The French sociologist, Emile Durkheim, postulated that social life can be studied objectively in the same manner as scientists study the natural world. One of Durkheim's most comprehensive works focused on the analysis of suicide. Although suicide is considered an individual act, Durkheim demonstrated that social factors strongly influenced this personal act as well as suicide rates (Giddens, 1997).

Suicide rates vary according to age, gender, marital and occupational status, religion, socio economic class, and ethnicity (Sue et al., 1997). According to Durkheim (1951), differences in suicide rates can be attributed to social and cultural conditions, and therefore he proposed four types of suicide. He argues that all four categories of suicide, egoistic, altruistic, anomic, and fatalistic, are closely linked to either the integration into or regulation by society (Thorlindson & Bjarnason, 1998 as cited in Ritzer, 2000). Integration refers to the degree to which an individual assimilates into a society, while regulation refers to the rules of society. Thus, it is not only important for an individual to live in harmony with society, but also to acknowledge and abide by its external constraints (Holmes & Holmes, 2006). The four categories of suicide and its relation to both integration and regulation can be summarised in the following manner:

Figure 2.2: Social structures and types of suicide

Figure 2.2 (Pope, 1976 as cited in Ritzer, 2000) can be interpreted as follows: Egoistic suicide on the one hand, is associated with a low degree of integration, while Altruistic suicide is associated with a high level of integration. Fatalistic suicide, on the other hand, is associated with a high level of regulation while anomic suicide, with a low degree of regulation. Durkheim theorised that these two dimensions of integration and regulation will influence the behaviour of an individual and if they are either too strong or too weak it may lead to suicidal behaviour (Holmes & Holmes, 2006). The four categories of suicide are now discussed in greater detail.

2.4.1.1 Anomic suicide.

The first type of suicide usually occurs when society's regulative powers are unsettled (Ritzer, 2000). Anomie can be described as "a feeling of aimlessness or despair provoked by modern social life" (Giddens, 1997, p.9). Durkheim argued that anomie is the result of the rapid and intense social change in the modern world, which can lead to social difficulties (Giddens, 1997). More specifically, when drastic changes (both upward and downward mobility) occur in the life of an individual, these conditions may become too overwhelming for the person involved who may choose to commit suicide (Sue et al., 1997). For instance, losing personal wealth after the Great Depression in the early 1930s led to some people committing suicide by jumping from office windows (Holmes & Holmes, 2006). A similar outcome can be observed when individuals unexpectedly acquire great wealth (e.g., winning the lottery). This economic success may lead to changes in the life of a person in that they may quit their current employment, move to a more affluent suburb, or even find a new life partner. These sudden changes disrupt the regulative effect of existing and established structures, resulting in a lack of control over individual passions. Although people are now free from external constraints, their individual passions will enslave them, and this may lead to destructive behaviours and could even end in suicide (Ritzer, 2000).

2.4.1.2 Altruistic suicide.

In this second category, the individual is seen as subordinate to the group's cause (Holmes & Holmes, 2006). As previously illustrated in Figure 2.2, altruistic suicide usually occurs when integration is too strong (Durkheim, 1951) and the life of an individual becomes unimportant (Holmes & Holmes, 2006). This type of suicide was clearly illustrated during the Vietnam War (1955-1975) where Buddhist Monks knelt in a public domain, drenched their bodies with petroleum and set themselves alight (Sue et al., 1997). The purpose or goals of these public demonstrations were to highlight the alleged atrocities of the war and the killing of innocent women and children during the conflict (Holmes & Holmes, 2006). More recently, suicide bombers sacrifice their own bodies to kill thousands of people (Post et al., 2009). The altruistic nature of these H-S acts is clearly reflected in the following statement made by a failed suicide bomber: "I did this because of the suffering of the

Palestinian people… I did this for God and the Palestinian people" (Argo, n.d. as cited in Hafez, 2006, p. 50). In general, those individuals who commit altruistic suicide do so because they feel obliged (Ritzer, 2000) to do so in order to attain some social, personal, or religious goal (Holmes & Holmes, 2006).

2.4.1.3 Egoistic suicide.

According to Durkheim, this third type of suicide results from a lack of integration within larger society. This lack of close ties with the community may lead to isolation, alienation from other human beings (Sue et al., 1997), and even a sense of meaninglessness in life (Ritzer, 2000). Egoistic suicide can be observed in elderly citizens who commit suicide after losing contact with their family and loved ones (Barlow & Durand, 2002). A strong integration within the family unit and religious groups contributes to collective conscience that strongly discourages the killing of oneself (Ritzer, 2000). Durkheim (1951, p. 214) argued that societal disintegration may lead to "currents of depression and disillusionment" which predisposes an individual to commit suicide. He further argued that although egoistic suicide is an individualistic act, a person is never free from social constraints and will always be bound by the force of collectivity (Ritzer, 2000). According to Liem (2010, p.155), H-S is the result of "extreme social disintegration" and this notion is supported by an empirical research study which has demonstrated that social isolation is an important contributing factor in H-S killings (Cohen, Llorente, & Eisdorfer, 1998).

2.4.1.4 Fatalistic suicide.

Unfortunately, this last type of suicide was underdeveloped by Durkheim (1951) because at the time he believed that this sort of suicide does not often occur in contemporary society. In fatalistic suicide, individuals usually kill themselves when they are excessively regulated or even oppressed by their society. A classic example is evident when a slave commits suicide because every action that he performs is excessively regulated, leading to feelings of hopelessness. This hyper regulated environment triggers currents of melancholy which results in a higher incidence rate of fatalistic suicide (Ritzer, 2000). This type of suicide can also be seen in an abusive relationship or marriage where a woman believes that there is no

escape from her current situation. Thus, the feeling of being unable to escape from her current circumstances is a key component of this form of suicide (Holmes & Holmes, 2006). Cavan (1928, as cited in Mukherjee, Kumar, & Mandal, 2010) further elaborated on this fourth type of suicide by linking it to H-S. According to this theorist, the potential perpetrator of H-S reaches a point in their life where suicide is the only option and they believe that another individual prevented their happiness. In a fit of rage, jealousy, or revenge they will kill this person whom they believe is responsible for their misfortune before taking their own life. Cavan (1928, as cited in Harper & Voigt, 2007) concludes that H-S results from only one emotional outburst without any remorse or fear between the two acts.

2.4.1.5 Critique against Durkheim's sociological explanation of suicide.

Although Durkheim's work highlighted the social factors that contribute to suicide (Barlow & Durand, 2002), the following objection can be raised against his work. Durkheim's attribution of suicide to only one sociological factor (e.g., economic depression) can be described as being too simplistic. This mechanistic cause-and-effect relationship does not include intrapsychic factors which also play a significant role in suicidal behaviour (Sue et al., 1997). Lukes (1972, as cited in Ritzer, 2000, p. 102) states that "explaining suicide and explaining suicide rates must involve explaining why people commit it". Thus, Durkheim extensively focused on the impact of social conditions on human beings, but ignored the way individuals perceive, interpret, and react to these social circumstances (Lukes, 1972 as cited in Ritzer, 2000). Also, Durkheim rejected psychopathology and alcoholism as potential causes of suicide (Ritzer, 2000). Current research on H-S clearly demonstrated that a major depressive disorder (Bourget et al., 2010; Dogan et al., 2010) and alcohol abuse (Koziol-McLain et al., 2006) are important causal factors in these events. In spite of these objections, Durkheim's study on the analyses of suicide remains a classical work which is still relevant today.

2.4.2 Intrapsychic explanations.

Early psychological theories of suicide ignored the social factors involved in self-destruction and only focused on the intrapsychic factors involved (Sue et al., 1997). According to Sigmund Freud, suicide can be seen as an impulse to commit homicide, which is directed inwards (Liem, 2009). In psychoanalytic terms, all human beings possess a death drive, the Thanatos, (see section 1.3.2) which is initially directed towards the self, but is soon redirected towards others (Baron & Byrne, 2000). In this regard, Freud (1938-1975, p. 236, Vol. 5) stated that "the trend to self-destruction is present to a certain degree in very many more human beings than those in whom it is carried out". The death wish (Thanatos) is in constant conflict with the life instinct (Eros). This conflict between these two drives results in aggressive and destructive behaviour directed outwards towards other people and objects (Litman & Tabachnick, 1994). Eventually, the Thanatos returns to the body of the individual involved and causes death. After death, the individual reaches a tensionless state which he called 'nirvana', the unconscious purpose of life (Meyer et al., 1997). Menninger (1938) used these Freudian elements and suggested that all forms of suicide consist of three unconscious dimensions, namely revenge and/or hate (a wish to kill), depression/hopelessness (a wish to die) and guilt (a wish to be killed). Thus, H-S can be considered to be a two stage process in which the angry-aggressive response takes place before committing the suicide act.

The psychoanalytical concepts of the ego, id, and superego (Meyer et al., 1997) can also be used to explain the H-S phenomenon. Before applying these concepts to H-S, a short description of each element is furnished. According to Freud, the psyche consists of these three distinct structures which function on different levels of consciousness. The 'Id' (which is a Latin word for 'it') can be described as the primitive component of the psyche and receives all its energy from the body of the individual. This energy is linked to both the Eros and the Thanatos drives and it functions according to the pleasure principle. In contrast, the ego is based on the reality principle and is responsible for the survival of the individual. The task of the ego is to satisfy the needs of the id by finding suitable objects to satisfy its urges. While the id is focused on immediate gratification, the ego uses rational thoughts, memory,

and learning before taking suitable action. The superego functions on an intrapsychic level and represents the moral rules of society. Thus, the superego is based on the morality principle which means that this part of the psyche punishes an individual by instilling feelings of guilt and self-blame if he or she acts immorally. Freud calls this punishment for immoral behaviour the person's 'conscience'. All three psychic structures are in constant conflict with one another. On the one side, the aggressive (e.g., murder and suicide) and sexual urges demand immediate gratification, which can be harmful to society, and on the other side, the moral rules of society (e.g., 'Thou shalt not kill') attempt to control these urges in order to protect society from destructive behaviour (Meyer et al., 1997).

Although Henry and Short (1954) used a socio- economic explanation as an angle of incidence to explain both homicide and suicide, they also included the psychoanalytical concepts of id, ego, and superego in their model. According to these theorists, suicide is the result of an over-developed superego, which forbids the expression of aggression towards others. They distinguished between individuals who were psychologically or physically punished as children. In the case of psychological punishment, individuals may direct their aggression inwards, because they fear losing the love and nurturance of the parents. This response is in strict contrast to physical punishment where the child can still react violently towards others without losing the affection of their parents. If an individual with an overdeveloped superego kills another human being, he or she may be more inclined to commit suicide after the homicide because of their internalised morality that regulates the outward expression of aggression. Suicide is motivated by guilt and self-blame and can be viewed as a form of self-punishment that is initiated by the superego after the individual has resorted to violence that was unacceptable (Liem, 2010).

Furthermore, Henry and Short (1954) postulated that victims of H-S attacks are not only a source of frustration, but also a source of nurturance for the perpetrator. When the victim is killed in a homicide attack, the perpetrator not only loses his or her source of frustration, but also their source of nurturance. Unfortunately, the homicide can further exacerbate the perpetrator's frustration over the loss of their 'love-hate object', resulting in suicide. The relationship between the perpetrator and victim is characterised by a high level of

interpersonal frustration, which usually leads to a high incidence of domestic violence amongst the perpetrators of H-S killings. Therefore, H-S killings can be considered to be primarily homicidal in nature (Liem, 2009).

In the Freudian tradition, the following two main psychological defence mechanisms can be used to explain the aggressive inclination in H-S killings.

2.4.2.1 Projection.

As previously stated in section 2.4, this psychological defence mechanism refers to a person's effort to keep his or her unacceptable motives on an unconscious level by attributing these motives to other's (Meyer et al., 1997). The case of catathymic homicide illustrates this defence mechanism in H-S. Catathymic is derived from the Greek language, which literally means homicide "in accordance with emotions" (Abramsky & Helfman, 1999, p. 296). This type of murder usually follows a chain of events leading to the homicide and eventually suicide.

The series of events begins with the potential offender suffering a traumatic blow to his or her self-esteem due to the spouse or consort threatening to leave or actually ending the relationship. This traumatic event is internalised by the future offender and is accompanied by a feeling of emasculation or an attack on the sense of self. The offender starts to project all the blame for their relationship problems onto the potential victim while psychologically denying any responsibility. This situation is followed by an incubation period which is characterised by constant tension between the couple. All the psychic energy of the offender is now focused on the traumatic event, which overwhelms and devastates him or her. Due to the ego defence of projection, the perpetrator sees the offending party now as evil, malicious, and without remorse. This state is exacerbated by paranoid ideation, which is characterised by misinterpreting the facts and exaggerating the events. For instance, amorous jealousy is an important precipitating factor in femicide-suicide, with the offender convinced that his spouse or consort is cheating on him. A trigger event usually sets the perpetrator off to commit the homicide act. In the example of a pathologically jealous husband, he sees his wife having lunch with a male colleague and interprets this as an

unequivocal sign that she is having an extra marital affair. After killing the spouse, a catharsis is achieved in which the perpetrator returns to a normal level of functioning. During this period, the offender is often baffled by his erratic behaviour and, in certain instances, commits suicide or attempts suicide (Meloy, 1992 as cited in Abramsky & Helfman, 1999).

2.4.2.2 Splitting

In this second ego defence mechanism (see section 2.4), a person will see themselves as either all good or all bad without integrating both these views (Furst & Ostow, 1979). When applied to familicide-suicide, an H-S subtype, the perpetrator will not only project the bad object onto the victim, but also the good object onto the offspring of the couple. This results in saving the so-called good children from the so-called bad spouse or consort by killing all three parties involved in order to 'rescue' the family (Skead, 2010).

2.4.2.3 Critique against Freud's intrapsychic explanation of suicide.

Although the psychoanalytical theory of Freud can be used to explain a variety of phenomena, including war, homicide, suicide, aggression, and death, it can be criticised on the following grounds (Meyer et al., 1997). From a scientific point of view, theoretical underpinnings should be tested in order to find empirical proof for or against a theory. Freud's theory uses concepts (e.g., the id, ego, and super ego) that can be described as ambiguous and vague, which cannot be scrutinised empirically (Liebert & Spiegler, 1982 as cited in Meyer et al., 1997). This situation is further aggravated by the fact that his theory encompasses concepts that make it possible to interpret the same behaviour in different ways. For instance, in a situation where a parent displays much love towards his or her child, it can be interpreted that the parent is displaying either true love or using the ego defence mechanism of reaction formation against repressed hate towards the child (Meyer et al., 1997). Thus, Freud's theory does not indicate when the behaviour of an individual can be accepted as such or interpreted as meaning the opposite. Lastly, the psychoanalytical theory can be used to explain human behaviour that has already taken place, but fails to give an adequate prediction of future behaviour (Meyer et al., 1997). In the case of H-S, a

personality theory that predicts future behaviour is of the essence in order to save the family unit from possible annihilation.

2.4.3 Biochemical explanations.

Although sociological and psychological factors are involved in suicide, evidence suggests that neurobiological factors also play a role in suicidal behaviour (Sue et al., 1997). According to the central monoamine theory, deficiencies in the monoamines norepinephrine (NE) and/or serotonin neurotransmitter systems contribute to both depression and suicide (Chandley & Ordway, 2014). Research has demonstrated that most perpetrators of H-S suffer from a depressive disorder (Malphurs & Cohen, 2005; Moskowitz et al., 2006; Bourget et al., 2010), thereby confirming the link between a mood disorder and suicidal behaviour (Worchel & Gearing, 2010).

2.4.3.1 Serotonergic abnormalities in depression and suicide.

In general, low levels of serotonin are associated with impulsive behaviour, instability, and overreacting to situations (Spoont, 1992). More specifically, 5- hydroxytryptamine (5- HT) regulates an individual's mood, sleep-wake cycle, memory, and aggressive responses, and a chemical imbalance in the serotonergic region may lead to the development of psychiatric disorders and/or suicidal behaviour (Arango & Bach, 2014). Research conducted by Arango and Mann (1992) has demonstrated that the brainstem tissue of individuals who committed suicide had less 5- HT and its metabolite, 5- hydroxyindoleacetic acid (5- HIAA), compared to that of a control group. Research conducted by Asberg (1997) examined the concentration of 5-HIAA in the Cerebrospinal Fluids (CFS) of patients diagnosed with depression. This researcher concluded that patients suffering from a depressive disorder showed reduced 5-HIAA levels in their CSF, and speculated that these reduced levels were linked to suicide attempts and also completed suicides. Thus, cognitive neuroscience research evidence suggests that individuals with low levels of 5- HIAA may be more likely to kill themselves, use violent methods to commit suicide, and have a past history of violence and aggression (Edman, Asberg, Levander, & Schalling, 1986).

Other biochemistry involved in depression and suicide relates to impaired serotonin receptors (Sue et al., 1997). The 5- HT_{1A} receptor plays an important role in mood and temperature regulation, neuroendocrine functioning, and sexual behaviour (Raymond et al., 2001). Dysfunctional 5- HT_{1A} receptors may lead to the development of major depression, anxiety, and even suicidal behaviour (Mann, 2003). Research carried out by Arango and colleagues (2001) demonstrated that depressive individuals who commit suicide have less serotonin transporter dorsal raphe nuclei and 5- HT_{1A} compared to that of a non- psychiatric control group, suggesting changes in the serotonin levels. A similar conclusion was drawn by Deakin and Ben (2003), who reported a reduced 5- HT_{1A} receptor binding in the brains of depressed patients who had committed suicide.

2.4.3.2 Noradrenergic abnormalities in depression and suicide

Although research studies that focused on the norepinephrine system have not been as robust when compared to studies which involved the serotonergic system (Trivedi & Varma, 2010), research indicates that both systems play a role in depression and suicide (Chandley & Ordway, 2014). Norepinephrine (NE) regulates the stress response (arousal) of human beings, their attention and memory, the sleep-wake cycle, and cognitive functioning, especially decision making. Increased NE activity can cause insomnia, anxiety, irritability, and even hyperactivity, while decreased NE activity can result in lethargy and loss of vigilance (Chandley & Ordway, 2012). Chronic activation of the Locus Coeruleus (LC) brain region, due to chronic stress, can lead to the depletion of NE, which in turn may lead to depression and an increased risk of suicidal behaviour (Chandley & Ordway 2014). There seems to be a bidirectional relationship between stress and depression. Initially, stress can cause a bout of depression and depression can cause even more stress for the patient suffering from this disorder (Pianta & Egeland, 1994). There appears to be a strong relationship between stress and the development of a mood disorder and suicide (Mundt, Reck, Backenstrass, Kronmuller, & Fiedler, 2000).

Another mechanism that contributes to NE availability involves Monoamine Oxidase (MAO-A). This enzyme breaks down both serotonin and NE neurotransmitters into an inactive

metabolite (Barlow & Durand, 2002), but this process does not occur if NE is protected by uptake into the synaptic cavities (Chandley & Ordway, 2014). By using a Positron Emission Tomography (PET) imaging scan (Sue et al., 1997), researchers have demonstrated that patients suffering from depression exhibited elevated MAO-A levels (Meyer, 2012). Thus, MAO inhibitors are used as antidepressant drugs which block the MAO-A enzyme in individuals suffering from depression (Barlow & Durand, 2002).

It can be concluded that a dysfunctional neurotransmitter system is part of a neurobiological pathology that contributes to both depression and suicidal behaviour (Chandley & Ordway, 2014).

2.4.3.3 Critique against biochemical explanations of suicide.

Although biochemical factors do contribute to suicidal behaviour, the following objections can be raised against this theory of suicide. Pharmacological companies that develop anti-depressive drugs to treat mood disorders base the development of the drugs on the central monoamine theory, but research on the effectiveness of these drugs has not yielded clear results (Chandley & Ordway, 2014). According to this theory, depression is the result of the depletion of the serotonin, norepinephrine and/or dopamine levels within the central nervous system. Antidepressant medication elevates the levels of these neurotransmitters within the patient's brain, resulting in alleviating the symptoms of the mood disorder (Delqado, 2000). Unfortunately, these drugs are not always effective in treating these disorders. Between 40-50% patients do not respond to these drug treatments and a considerable percentage of the remainder struggle with residual symptoms (Barlow & Durand, 2002). Neurobiological studies use both animal (e.g. rodents) and human subjects to measure the therapeutic effect of antidepressant drugs on NE levels (Chandley & Ordway, 2012). During laboratory tests, environmental stressors can produce similar biochemical changes in these animals compared to people, but unfortunately, human behaviour is not the same as animal behaviour (Sue et al., 1997). Human behaviour is more complex if compared to rodent behaviour, and it is unclear if animals experience depression in a similar fashion as human beings. Nonetheless, neurobiology has significantly

contributed to our understanding of the biological factors involved in mood disorders and their relation to suicidal behaviour in human beings.

2.5 Tracking of H-S Events within the SAPS

According to Adinkrah (2003), the H-S phenomenon is under-researched in developing countries due to a lack of reliable H-S data. This lack of reliable and valid data can be attributed to the approach used to register H-S events. In most countries, H-S killings are usually tracked as two different entities instead of a single linear event (Cengija, Cuculic, Petaros, Sosa, & Bosnar, 2012; Saleva et al., 2007). This reporting system can lead to the underreporting of H-S events which makes it difficult to identify true H-S cases for research. Fortunately, the SAPS Psychological Services keeps proper records of all H-S cases within the organisation. In the past, this organisation grouped individual suicides and H-S under the same category of 'suicide' without making a clear distinction between these two events. Since 2012, the SAPS began to distinguish between individual suicide and H-S killings (Lt.-Col. M.S. Watson, personal communication, October 16, 2013). Their "Suicide Follow- up Questionnaire" not only registers individual suicide and H-S, but also suicide threats and attempts. This document contains the biographical information of the parties involved in H-S, the geographical area where the act was committed, details about the act, underlying stressors, and the psychiatric history of the perpetrator (see Annexure A). Information that is used to complete the questionnaire was obtained by interviewing the commander and close colleagues of the deceased police officer. Only professionals from the SAPS Psychological Services, which include registered psychologists, counsellors, and psychometrists, are allowed to collect information on the deceased member. After obtaining the information, a member of the Psychological Services will send the completed questionnaire to the head office for proper record keeping (Lt.-Col. M.S. Watson, personal communication, October 16, 2013).

2.6 Suicide Prevention within the SAPS

In order to address the occurrence of suicide within the SAPS, the Psychological Services developed a suicide prevention workshop during 2012 known as the "Choose Life Program". This program consists of seven modules which address the following topics on suicide:

Table 2.4

SAPS Choose Life Program

Module	Description
1	Suicide warning signs and on the scene intervention
2	Emotion competence and suicide
3	Stress reactions, management of stress and suicide
4	Depression and suicide
5	Bullying in the workplace and suicide
6	Relationships and homicide-suicide
7	HIV and suicide

(SAPS, 2013a).

Module 1 includes the following learning goals: myths surrounding suicide, warning signs of suicide, practical skills to help a suicidal individual, identify support services in local communities, and the standard operating procedures for first time responders at a suicide scene. Module 2 focuses on the emotional process, clear communication of emotions, regulating of emotions, and the link between culture and the expression of emotions. The third module deals with the various aspects of stress, which include the causes of stress, different types of stress (e.g., internally generated stress), phases of stress (e.g., intermittent phase), and the influence of stress on the immune system. This module concludes with negative thinking patterns and how to change these thought processes. Module 4 focuses on the link between depression and suicide by highlighting clinical depression in adults as well as the causes of this mood disorder (e.g., post- partum depression). The next module (5) includes the following learning goals: the difference between bullying and harassment, the types of bullying in the workforce (e.g., pressure bullying) and how to deal with this sort of behaviour. Part one of Module 6 focuses on relationships, which includes the types of relationships (e.g., romantic relationships), developmental phases of relationships (e.g., acquaintance stage) as well as the ingredients of a happy relationship. Part two of the latter module deals specifically with H-S, and lists

the possible causes of this phenomenon. This second part identifies the following possible precipitating factors in police H-S: jealousy, abusive relationships, stress, aggressive behaviour, and access to a firearm. Lastly, Module 7 focuses on the link between HIV, stress, health counselling and testing (HCT), psychological disorders, and suicide. Special emphasis is placed on the comorbidity between HIV and adjustment disorder, generalised anxiety disorder, major depression or substance abuse disorders (SAPS, 2013a).

2.7 Summary

This chapter commenced with a definition of H-S, although no standardised operational definition exists for this phenomenon in the literature. The focus also fell on the different periods between a homicide and suicide used by researchers in their inclusion criterion. Next, emphasis was placed on how closely related the H-S phenomenon is to either suicide or homicide. Special focus was also placed on Coid's three epidemiological laws of H-S, which claim that a) the higher the overall homicide rate, the lower the H-S rate; b) the rate of perpetrators who commit suicide appears to remain the same in the different countries; and c) H-S rates remain a stable phenomenon over time and these rates are weakly associated with the total homicide rates of a country. Next, the classification typologies of Marzuk et al. (1992) and Hanzlick-Koponen (1994) were discussed, followed by the different types of H-S. These types include intimate partner H-S, including femicide-suicide, along with its subtypes (jealousy killings, mercy killings and suicide pacts), filicide-suicide, familicide-suicide, extrafamilial-suicide, parricide and siblicide-suicide. The next part of the chapter focused on the link between major depression and H-S killings, and concluded with the DSM- V classification of a major depressive disorder. Next, a historical overview of suicide was furnished, which covered different civilisations and their views of this phenomenon. Emphasis was placed on Ancient Greece and Rome, the three major religions (Judaism, Christianity, and Islam), the nineteenth century, and the contemporary world of today. This chapter also discussed three theories of suicide, which included the social cultural explanation of Durkheim, the intrapsychic explanation of Freud, and the biochemical explanation which focused on both serotonergic and noradrenergic abnormalities. This chapter concluded with a discussion of the SAPS tracking system on H-S

events as well as their “Choose Life Program” and its modules, which are used to address suicide within the organisation. Special emphasis was placed on Module 6, which specifically deals with the H-S phenomenon.

Chapter 3
Literature Survey

3.1 Introduction

The first part of this chapter focuses on the incidence rates of H-S in western and non-western countries. Special attention is paid to seven South African studies which investigated the H-S phenomenon on the African continent. The next part of this chapter identifies the common factors involved in H-S killings. These factors include mental illnesses, relationship problems, domestic violence, substance use and intoxication, the weapons used, and financial adversity. This chapter also reports on H-S profiles which were obtained from the various studies involved. This chapter concludes with the rationale and accompanying research questions that directed this current study.

3.2 H-S Incidence Rates

Although H-S is considered a rare occurrence, these events are widely publicised in the news and therefore appear to be increasing. In 2009, Eliason mentioned that literature reviews since 1992 indicated that H-S frequency rates had been stable for the past 40 years in the USA and other western countries 2009). After reviewing 17 studies ranging from 1900-1979, involving ten nations, Coid (1983) concluded that that the H-S phenomenon occurs at a relatively constant rate with an incidence rate of 0.2 to 0.3 per 100 000. In a more recent study, Marzuk et al. (1992) also estimated an incidence of H-S between 0.2 and 0.3 per 100 000 per year in the USA.

Other US studies also found incidences of 0.2 to 0.3 per 100 000. Campanelli and Gilson (2002) found similar incidences for the period 1995 to 2000 in New Hampshire, Comstock et al. (2005) reported a similar incidence rate (1994-2001) in Oklahoma, and Bossarte et al. (2006) also found such an incidence rate for the period 2003-2004 in multiple states. Australia showed an incidence rate of 0.16 per 100 000 for a 3 year period (1989-1991), while the European countries of England and Wales showed instances of 0.07 per 100 000

(1980-1990) compared to Scotland's lower rate of 0.05 per 100 000 for 1986 to 1990 (Byard et al., 1999). In turn, Switzerland reported H-S rates of 0.09 and 0.10 per 100 000 for two different periods, 1991 and 2001 respectively (Panczak et al., 2013). Among non-western countries, researchers showed that the incidence of H-S was 0.22 per 100 000 in Hong Kong (Chan, Beh, & Broadhurst, 2004) over a ten year period (1989-1998), while Gupta and Singh (2008) found a low incidence rate of 0.06 per 100 000 in India (2000-2004).

In the US policing sector, Violanti (2007a) conducted a study involving 29 H-S cases that had occurred between January 2003 and February 2007. This study reported 1 H-S case in 2003, but this increased to 7 events in 2005 and peaked with 15 cases in 2006. The author concluded that police H-Ss were increasing. The methodology involved the use of newspaper articles which were obtained from a website that focused on problems within police households (e.g., domestic violence). Unfortunately, newspaper surveillance studies can be criticised for their subjective nature and unreliable content (Malphurs & Cohen, 2002; Roberts et al., 2010), while Rainey and Runyan (1992, as cited in Violanti, 2007a) argued that newspapers are a feasible and economical way of collecting information on intentional injuries.

A more recent police H-S study conducted by Klinoff et al. (2014) included 43 cases between June 2007 and February 2014. This US study used the same methodology as the previously discussed study undertaken by Violanti (2007a). In contrast to the Violanti (2007a) study, Klinoff and her colleagues (2014) could not determine whether police H-S was increasing annually. However, these killings have increased steadily since 2007 (2 cases) until they peaked during 2010 with 12 incidents. During the period 2011-2012, a decrease was observed (5 & 2 cases respectively), and in the following year, an increase was noted with 8 incidents being reported. Lastly, 2014 included only two months with 2 H-S cases for this period. Other findings from these two law enforcement studies are discussed in the remainder of this chapter.

In the South African context, Jena and her colleagues (2009) studied 46 H-S events in the Pretoria area over a 5 year period (1997-2001). These researchers found estimated annual

instances of H-S between 0.8 and 1.3 per 100 000 compared to the total SA population, which is significantly higher than the international rates of 0.2 to 0.3 per 100 000 (Coid 1983; Bossarte et al., 2006). The methods employed to obtain H-S information involved data obtained from the records of the Medico-Legal Laboratory (MLL), mortuary files (autopsy reports), South African Police Service (SAPS) documentation, and lastly, by contacting the SAPS investigating officer. The two municipal areas which recorded the most H-S cases were Mamelodi with 26% (12), and Atteridgeville with 13% (6) of the case load. Most of these deaths occurred in residential areas (78.2% (36)) and the rest of these deaths took place in both public areas (10.9% (5)) and hospitals (10.9% (5)). Lastly, an important limitation of the study conducted by Jena et al. (2009) relates to the low number of cases that had occurred, which makes generalisation of the findings statistically difficult.

The study carried out by Townsend (2003) served as a pilot investigation for Roberts et al. (2010). Both of these SA studies focused on the Durban region for the same 2 year period (2000-2001). Therefore, only the more recent study undertaken by Roberts et al. (2010) is further discussed. This regional study included 21 cases and found H-S instances of 0.89 per 100 000, which also exceeds the international rates. For unknown reasons, there was a 16% increase in H-S killings from 2000 to the following year; a total of 43 people died in these events. Data originated from coroners or district surgeon reports which were supplemented by police files. The results revealed that 30% of the perpetrators and only one victim (4%) were employed in the police service or security sector. In contrast to the number of perpetrators and victims who were engaged in formal employment, 25% of the perpetrators and 30% of the victims were unemployed at their time of death.

Although this study made a significant contribution towards the understanding of H-S events and creating a first general profile of perpetrators, victims, and the methods employed in such killings, the results cannot be generalised to the rest of South Africa. A national study is of utmost importance in order to obtain a comprehensive profile of the H-S perpetrators and their victims so that the said profile can be generalised for the rest of the country. Secondly, mental illness as a risk factor in H-S that would be statistically representable for this country was not included in the aforementioned study. The

international study conducted by Lecomte and Fornes (1998) clearly illustrates that a substantial number of people who committed H-S suffered from a psychiatric disorder. By including the psychiatric history, a more detailed profile of H-S offenders could be generated.

In the third SA study, researchers used a cross sectional design which included 1349 perpetrators of intimate femicide on a national level (Mathews et al., 2008). According to these researchers, the estimated H-S rate in South-Africa amounts to 1.7 per 100 000, indicating an H-S rate which greatly exceeds the reported incidences in developed countries. Intimate femicide was further sub divided into intimate femicide-non-suicide in 80.6% (1088) cases and intimate femicide-suicide in 19.4% (261) of the cases. The latter group (19.4%) of perpetrators of intimate femicide committed suicide within one week of the original murder. The methods used for data collection in this study included sourcing information from mortuary files, autopsy reports, and police interviews. This study can be criticised for the choice of the comparison groups that were used. The two groups consisted of an intimate femicide group and intimate femicide-suicide group in which the former group refers to the killing of a female by her intimate partner without committing suicide, and the latter, the intimate partner kills himself after committing the homicide. By comparing these two groups, the common risk factors which contribute to each different subtype can become clouded or even invisible.

The following two SA studies used press reports as the method to gather information on H-S cases (Osborne, 2001; Skead, 2010). The first study identified 83 cases of H-S between 1997 and 2001, while the second study identified 328 H-S cases that had occurred during an eight-year period (2002-2009). Both studies not only included femicide-suicide, but all types of H-S killings (e.g., filicide and extra-familial suicide). The Osborne (2001) study did not report on incidence rates while Skead (2010) found an average incidence rate of 0.09 per 100 000 for the eight-year period. This incidence rate is significantly lower than most international (0.2 to 0.3 per 100 000 (Coid 1983; Bossarte et al., 2006)) and national (between 0.8 and 1.3 per 100 000 (Jena et al., 2009); 1.7 per 100 000 (Mathews et al., 2008)) H-S rates. This finding could be attributed to the fact that H-S tragedies often occur

in poorer communities, which renders these events less newsworthy than interesting events (Osborne, 2001).

The last noteworthy South African study was conducted before the first democratic elections of 1994 (Roos et al., 1992). This apartheid era study included 11 H-S cases which spanned over an unspecified 2 year period. The data collection method included interviews with extended family members, neighbours, the investigating officers of the police, general practitioners of the families, church ministers, and even school teachers. The H-S cases were identified by utilising police referrals and the said study focused on family murders. The study highlighted the psychiatric and psychological factors involved in H-S killings. Roos and his colleagues concluded that certain personality traits, suicidal ideation, and depression precipitated by marital discord, and financial problems created a slippery pathway to H-S. Unfortunately, this dated study did not report incident rates and can be criticised regarding the small sample that relied on only police referrals.

Although it is clear that South Africa has an unusually high H-S rate compared to other countries, an important question still remains: What are the factors that could lead to H-S events?

3.3 Common Factors in H-S

H-S can be described as a complex human phenomenon which involves biological (e.g., psychopathology) and social factors (e.g., availability of firearms, conflict in relationships and financial difficulties) (Fox & Levin, 1998; Kennedy-Kollar & Charles, 2010), which are intertwined. The literature identifies several variables that are presumably responsible for triggering an H-S incident. These factors, with their accompanying studies, are discussed in the following section in greater detail.

3.3.1 Mental illness.

In most of the international studies, a mental disorder was identified in the perpetrators of H-Ss. In most cases, depression was diagnosed (Cohen et al., 1998; Bourget, Gagne & Moamai, 2000; Campanelli & Gilson, 2002; Malphurs & Cohen, 2002; Chan et al., 2004;

Malphurs & Cohen, 2005; Moskowitz et al., 2006; Bourget et al., 2010; Dogan et al., 2010) followed by other psychopathology. Other psychological disorders included substance abuse, for instance, alcohol problems (Koziol-McLain et al., 2006), drug abuse (Bossarte et al., 2006), schizophrenia (Virkunnen, 1974; Campanelli & Gilson, 2002), psychosis (Gudjonsson & Petursson, 1982; Hatters-Friedman et al., 2005), antisocial personality disorder (Dogan et al., 2010), and schizoaffective disorder (Hatters-Friedman et al., 2005). In SA, the Jena et al. (2009) study found a psychiatric history in 15% (7 perpetrators) of the H-S cases and of these cases, 42.9% (3 offenders) displayed a positive psychiatric history. The authors concluded that this sort of tragedy usually peaked during autumn and winter, which possibly indicates mood disorders. The apartheid era study conducted by Roos et al. (1992) found that 83% of the perpetrators had experienced mood disorders prior to the killings. More specifically, 59% of these offenders suffered from a major depressive disorder compared to the 6% who suffered from a bipolar mood disorder.

The press report study by, Skead (2010) found psychiatric illnesses in some of the cases (1.22%), but unfortunately the media did not specify the type of psychiatric disorders that played a role in these killings. The international study undertaken by Cohen et al. (1998) used both newspaper surveillance and medical examiner files as data sources. This study reported a distinct difference between older (over 55) and younger H-S offenders. Higher levels of depression were found amongst older perpetrators from both West Florida and South-Eastern Florida (37% and 19% respectively) compared with younger offenders (10.8% and 11.5%) from these locations. Other mental illnesses were also indicated in this study, but unfortunately, these disorders were not clearly identified.

Another international study conducted by Malphurs and Cohen (2002) also made use of newspaper surveillance as the research methodology. Histories of psychiatric illnesses were found in only 3.8% of the cases without specifying the type of psychological disorder involved. Unfortunately, press reports do not usually investigate psychiatric motives (Roma et al., 2012) and as mentioned previously, these studies are often criticised for their subjective reporting and unreliable content (Malphurs & Cohen, 2002; Roberts et al., 2010).

This lack of reliability could exert a significant influence on the understanding of the H-S phenomenon.

Most of the international studies employed various definitions of mental illness and failed to indicate the degree of overlap between the various psychological disorders (Roma et al., 2012). For instance, the Campanelli and Gilson (2002) study identified three different psychiatric disorders, namely depression (38%), alcoholism (25%), and schizophrenia (6%). Unfortunately, a possible overlap (comorbidity) between these mental disorders remains unclear. The same trend was observed in the Rosenbaum study (1990) which identified depressive disorders in 75% of the cases involved. These mood disorders included major depression, bipolar, and dysthymia. Research carried out by Klein and colleagues (2000) reported that certain individuals can suffer from both major depression and dysthymia simultaneously and that this 'double depression' was not considered in the aforementioned study.

3.3.2 Relationships.

Most H-S cases involved a male killing a female, usually a wife, girlfriend, or ex-wife/girlfriend (Marzuk et al., 1992; Bossarte et al., 2006; Banks et al., 2008; Eliason, 2009). All five of the SA studies reached the same conclusion (Osborne, 2001; Mathews et al., 2008; Jena et al., 2009; Roberts et al., 2010, Skead, 2010). More specifically, the two SA press report studies conducted by Osborne (2001) and Skead (2010) found that men were the most common perpetrators in 88% and 90.8% of the cases respectively. Skead (2010) also concluded that an intimate relationship was the most common victim-perpetrator relationship (45.5%) in H-S.

Jena et al. (2009) identified 45 male perpetrators in their Pretoria regional study and found that 36% of the victims were married, 4% divorced, and 54% single. In the Durban regional study conducted by Roberts et al. (2010), they also reported that 95% of the perpetrators were male and that 75% of the couples were either married or had current or past intimate relationships. In the Mathews et al. (2008) cross sectional study, 40.4% of H-S killings were

committed by the cohabitating partner, secondly by the husband (30.8%), and thirdly by the boyfriend of the victim (28.8%).

In a limited number of cases, females were the perpetrators and males were the victims in H-S killings. The North American study undertaken by Gartner and McCarthy (2009), which spanned over a 90 year period (1900-1990), found that 20% of the female offenders committed suicide after killing their intimate male victims. The Swiss national cohort study of Panczak et al. (2013), which included 73 H-S cases, reported that only three female perpetrators (4.1%) killed their husbands compared to the 55 events (75.3%) in which male spouses murdered their wives. In the SA context, Jena et al. (2009) identified only one female perpetrator, while Skead (2010) reported that female offenders mainly targeted their male children rather than their male consorts or spouses. The apartheid study carried out by Roos et al. (1992) reported that 59% of the perpetrators were male compared to their female (41%) counterparts.

According to Bossarte et al. (2006), H-S incidents seldom occur between strangers (less than 5%) when compared to current or former intimate partners (58%). Gartner and McCarthy (2009) reported that 21% (83 of 395) of H-Ss occurred between offenders and victims who cannot be classified as either intimate partners or kin. This 'sub category' of victims included landladies, neighbours, and co- workers with whom the perpetrators were infatuated or had even pursued in the past, but had been rejected by them. The Northern Australian study of Richards and Weaver (2009) also included nurses and prostitutes in this sub category, which highlighted morbid obsession amongst offenders. In these cases, males turned violent against females who rejected their sexual advances, whom Mathews et al. (2008, p.553) referred to as 'rejected would-be lover(s)'. There were never romantic relationships between the killers and their victims and these 'relationships' were based on the fantasies and mental derangement of the men.

In some of these studies, estrangement was an important factor in H-S cases alongside impending divorce and separation (Hannah, Turf, & Fierro, 1998; Palermo et al., 1997). In SA, amorous jealousy was identified in 13.9% of the 46 cases in the study conducted by Jena

et al. (2009). This jealousy coupled with possessiveness by the partner of the female could be an important causal factor in H-S events (Cooper & Eaves, 1996; Bourget et al., 2000; Dawson & Gartner, 1998 as cited in Mathews et al., 2008). Even perceived or real infidelity could be an important precipitating factor in H-S (Aderibigbe, 1997; Chan et al., 2004), especially when the relationship is terminated. The ending of a relationship has been described by Richards and Weaver (2009, p.310) as 'an especially dangerous moment' for the female.

The SA newspaper study of Skead (2010) found that the most common precipitating factor in H-S was a quarrel or conflict between a male and a non-spousal female in 17.68% of these cases, followed by marital conflict (14.94%). A similar conclusion was reached by Mathews et al. (2008), who found that H-S took place after an argument (53.5%) or the female ending the relationship (29.0%). Cohen et al. (1998) discovered a distinct difference between older (over 55) and younger couples in H-S. Older couples were more likely to suffer from medical ailments whereas the younger couples were more inclined to have a history of verbal arguments. Lastly, separation also played a more dominant role in the younger couples compared with the older group. In turn, Panczak et al. (2013, p.4) reported that H-S peaked in middle and older age groups. This study found that "amorous jealousy" was an important factor in younger couples between 30-49 years, while "mercy killing suicide" in older couples (70-80+ years) was the impetus for H-S killings.

In most of the previous studies, males killed their spouses or consorts and then committed suicide. It could possibly be deducted that the female victims did not have any desire to be killed by their intimate male partners. In contrast, during lover's suicide pacts, both parties decide to kill themselves using the same method. This 'variation' in H-S can be attributed to different precipitating factors, including opposition of parents to marry, family feuds, social isolation, and chronic illness (Murthy et al., 2001). Chronic illnesses can include gastric cancer, lymphoma, HIV/AIDS, diabetes, chronic back pain (Jensen, Gilbert, & Byard, 2009), and thalasemia (Murthy et al., 2001).

In the police literature, Violanti (1997) suggested that relationship problems are one of the major causes of police suicides and that aggression which results from dysfunctional relationships can also create a slippery pathway to H-S (Violanti, 2007a). A similar conclusion was reached by Klinoff et al. (2014) that divorce and estrangement were important motives in the majority of H-S cases, especially if the relationship had been characterised by a history of previous separations.

In certain instances, H-S killings can also be extended to the offspring of the couple. The descriptive study conducted by Hatters-Friedman et al. (2005) included 30 filicide-suicide cases which spanned 44 years (1958-2002). Results showed that 65% of the husbands attempted to kill their spouses along with their children compared with 0% of the female spouses who killed only their children, but not their husbands. Byard et al. (1999), who identified 13 cases during 1969-1998, reached a similar conclusion. The latter study reported that mothers killed only their children and not their spouses, while the male spouses killed their wives as well as their children. Other important findings of the Hatters-Friedman study (2005) relate to the sex of the children. Most of the victims were girls (65%) compared with the 35% who were boys. Also, seven additional children were attacked, but survived the event. More girls survived the attack (57%) compared with a lower percentage of boys (43%). Older children with a mean age of 7.1 years were the main the target in H-S killings, rather than infants. Byard and his colleagues (1999) reported an average age of 6 years for the 22 children included in their study, with an equal sex distribution of 11 girls and 11 boys.

3.3.3 Domestic violence.

In some of the studies, domestic violence was a strong prognosticator of H-S (Bourget et al., 2000; Koziol-McLain et al., 2006; Logan et al., 2008). Bourget et al. (2000) compared an H-S group with a homicide only group. In both cases, a history of violence was evident with respective figures of 48.6% for the H-S group and 80% for the non-suicidal offenders. When comparing H-S perpetrators with subjects who had committed only individual suicide, Malphurs and Cohen (2005) found that 25% of the H-S perpetrators had a history of

domestic violence compared with the 5% of the group who had committed suicide only. The results further indicated a noteworthy trend in these two groups. The H-S couples were described as being closer to one another when compared with the other couples in which only one of the partners had committed suicide. In the Campanelli and Gilson (2002) study of H-S, 54% of the cases also had a history of domestic violence.

In contrast with 'intimate relationship H-S' which involved only males and females with documented evidence of domestic violence, the filicide-suicide study conducted by Hatters-Friedman et al. (2005), which included the couple's children as victims, found no significant histories of child abuse. A similar conclusion was reached by Morton, Runyan, Moracco, and Butts (1998, as cited in Hatters-Friedman et al. (2005) who found no history of domestic violence amongst H-S families. Thus, filicide-suicide did not seem to be the pinnacle in abusive parent-child relationships.

Unfortunately, none of the SA studies reported on domestic violence. This can be attributed to the following reasons: Mathews et al. (2008) claims that a history of domestic violence is seldom investigated by the SAPS, while the regional study carried out by Jena et al. (2009) found that almost no information was available in the criminal records of the perpetrators, because there was no need to prosecute the deceased. In turn, Roberts et al. (2010) could not link police records to prior reported acts of domestic violence, while the two newspaper studies could not determine with certainty whether there was a history of domestic violence due to the lack of detail in the newspaper articles (Osborne, 2001; Skead, 2010).

In the police literature, Violanti (2007a) discovered that domestic violence together with exposure to violence and aggression in the line of duty can trigger an H-S event. Studies which compared police domestic violence incidence rates with the general population showed a significantly higher rate of 25-40% for the police than the 16% for civilians (Pam, 2001). Klinoff et al. (2014) also concluded that domestic violence is not only a key factor in civilian H-S, but also in police H-S killings. According to the latter study, domestic violence accounted for 24% of reported motives. The police milieu encourages aggression, authoritarianism, domination, and control in the line of duty, which correlates with

aggressive behaviour when the official is off duty and at home (Pam, 2001). D' Angelo (2000, as cited in Violanti, 2007b) suggests that police officials can even become desensitised to verbal, physical, and emotional violence due to their line of work. The law enforcer can become addicted to violence, over which they have little or no control over the amount, frequency, or duration. Their expression of anger and rage intensifies over time, which could result in H-S events.

In the SA context, the high prevalence of police officials among perpetrators of H-S could be attributed to exposure to high levels of crime and violence (Kopel & Friedman, 2004; van den Heever, 2013), financial adversity (Rossouw, 2000), 24 hour access to a service pistol, over identification with a macho authoritarian role, and a culture of resolving problems with firearms (Roberts et al., 2010).

3.3.4 Substance use and intoxication.

The most common substance used in H-Ss was alcohol. In their New Hampshire study, Campanelli and Gilson (2002) found that 31% of the H-S perpetrators tested positive for alcohol, of which 16% struggled with chronic alcoholism. The latter study also reported that 16 % of the victims of H-S tested positive for other substances, including illicit drugs, and pain medications. Bossarte et al. (2006) discovered that 29% of the H-S perpetrators in multiple states tested positive for alcohol or drugs. More specifically, 9.1% of the offenders had a history of alcohol and drug abuse. Palermo et al. (1997) not only found that 27% of H-S perpetrators used alcohol, but that 22% were also intoxicated at the time of the incident. In the same trend, Travis, Johnson, and Milroy (2007) also discovered that 30% of the H-S perpetrators used alcohol of which 22% individuals were legally intoxicated.

Logan et al. (2008), who used data from 17 US States over a three year period (2003-2005), found that 22.3% (91) of the perpetrators were suspected of being intoxicated during the H-S killings and only 6.1% (25) had suffered from alcohol dependence. Bourget et al. (2000) compared Non-Suicidal Offenders (NSO) with Suicidal Offenders (SO) in Quebec for the period of 1991-1998. Toxicology reports showed that the NSOs (45.6%) used more drugs

and alcohol compared to the SO group (20.8%). Alcohol was the substance most frequently used by the NSO group.

The H-S study of Hatters-Friedman et al. (2005) which also involved child victims, reported that 27% of the parents had used alcohol or other substances before committing H-S killings. Unfortunately, the 'other substances' were not clearly identified in this study. Toxicology reports were available in only 4 of 13 cases in the filicide-suicide study undertaken by Byard et al. (1999). The results showed that no alcohol was consumed before the family killings occurred in these four cases.

In the SA context, Jena et al. (2009) found that only a third of the H-S offenders used alcohol before the act. More specifically, the blood alcohol levels for Caucasians were negative in 80% of the cases and 63.9% of the Black African sub-group. In the Durban regional study, toxicology reports were available for only 80% of the perpetrators. Results showed that only perpetrators tested positive for alcohol and that none of their victims tested positive for this substance (Roberts et al., 2010). Skead (2010) identified alcohol usage as a precipitating factor in H-S, even though it was used in only two of the 328 identified cases (0.61%). The other newspaper surveillance study conducted by Osborne (2001) did not report on precipitating factors, making it difficult to determine substance use prior to H-S killings. Unfortunately, Mathews et al. (2008) did not report on any substance use in their cross-sectional study.

In the police literature, Violanti (2004) proposed that there could be a synergistic effect of alcohol use and suicide. According to this effect, traumatic events in the line of duty could increase PTSD symptoms, which in turn increased alcohol abuse, and ultimately suicide ideation. More specifically, the combined effect of both PTSD and increased alcohol consumption increased the risk for suicide ideation by tenfold for this occupation group. Volpicelli and colleagues (1999) hypothesised that alcohol consumption or even abuse usually occurs after a trauma, rather than before the incident. They claim that alcohol as a substance may relieve PTSD symptoms, which compensates for the deficient endorphin activity after a traumatic incident.

3.3.5 Weapon used.

In the literature, most H-Ss were committed with a firearm (Palermo et al., 1997; Bourget et al., 2000; Campanelli & Gilson, 2002; Logan et al., 2008; Oliffe et al., 2014). In the New Hampshire study carried out by H-S Campanelli and Gilson (2002), they found that firearms were used in 69% of homicides and 75% of suicides. More recently, Bossarte et al. (2006) found that a firearm was used to inflict injury in 82.7% of homicides and in 80.4% of suicides. Even amongst older people, firearms were the method of choice in all (100%) of the H-S cases in the study conducted by Malphurs and Cohen (2005). The filicide-suicide study undertaken by Hatters-Friedman and colleagues (2005) reported that the majority of parents (73%) shot their offspring, and the mothers as well as the fathers used firearms to murder their children. Two other studies also showed a strong association between guns and an increased risk for H-S (Lund & Smorodinsky, 2001; Koziol-McLain et al., 2006). Other studies even found that offenders of H-S were 8 times more likely to commit suicide using a firearm compared to single handed suicides (Felthous & Hempel, 1995; Barraclough & Harris, 2002). The study on suicide pacts undertaken by Murthy et al. (2001) also reported that a firearm was used to commit both homicide and suicide.

In SA, Jena et al. (2009) reported that 95.7% of the perpetrators used a gun to commit suicide and 96% also used a gun in the homicides. Hand guns were used in 93.1% of the case load, followed by rifles (4.5%) and unknown gun types (2.3%). Consistent with these findings, Osborne (2001) and Skead (2010) also found that shooting was the method of choice in H-S killings. The first mentioned media study showed that firearms were used in 78% of the cases, while the latter study reported that of 70.94% of perpetrators had chosen this method, which was also used for 70.65% of the victims. Roberts et al. (2010) also showed that the most common method was the use of firearms in 84% of their 21 H-S cases. A similar conclusion was reached by Mathews et al. (2008), who reported that the firearm was the main means of death in 82.7% of the intimate femicide-suicides. In the policing sector, Violanti (2007a) found that the service pistol was used in 90% of all the H-Ss, while Combe and Boyle (2013 as cited in Oliffe et al., 2014) argued that firearms are closely linked to masculine identities, especially in the law enforcement sector. Lastly, Klinoff and her co-

workers (2014) also concluded that the police official's service firearm was the primary choice to commit both homicide (89%) and suicide (98%) acts.

When stricter gun laws were implemented in the UK and Wales, Travis et al. (2007) found that strangulation/asphyxiation was the primary method for homicides (36%). Other weapons associated with H-Ss were sharp objects/ blunt instruments (Bossarte et al., 2006), poisoning (Logan et al., 2008), burning (Gupta & Singh, 2008; Byard et al., 2010), explosives (Cengija et al., 2012), and motor vehicles (Violence Policy Center, 2002 as cited in Violanti, 2007b). The rarest H-S method in the current literature involved carbon dioxide poisoning (CO_2). This gas is colourless, odourless, and almost impossible to detect during autopsies and toxicology screening. When this chemical is administered to an unsuspecting victim (e.g., while sleeping), unconsciousness sets in within a few seconds, rendering the victim helpless to defend him/herself. Within minutes, irreversible brain damage occurs, leading to respiratory arrest and cardiac arrhythmia (Sautter et al., 2014).

3.3.6 Financial adversity.

In some of the studies, financial difficulties were identified as an important social factor in H-S killings. In a recent study, Oliffe et al. (2014) identified 45 cases in North America using 296 newspaper articles. Three central themes emerged from the data: domestic desperation, workplace justice, and school retaliation. The first theme, which is relevant to the current literature survey, involved the killing of family members due to the perception of the men that they had failed to provide economic security for their family. In 27 of the original 45 cases, financial and/or relationship problems were important precipitating factors in H-Ss. Sautter et al. (2014) also found that business and financial problems contributed to H-S in the family. Bossarte et al. (2006) included 209 H-S cases and reported that 9.3% of the perpetrators had experienced job or financial difficulties, which highlight the importance of situational factors in H-S killings.

In the SA literature, Jena et al. (2009) also concluded that social and financial stressors were important causal factors in H-S events (16.7%). The media surveillance study of Skead (2010) identified financial stressors as a common motive in 15 cases (4.57%) of the initial

328 H-S cases. Although Roberts et al. (2010) did not report on financial difficulties, this study found that 30% of the offenders were unemployed. Thus, poor economic conditions could have been an important precipitating factor in H-S in the Durban area. In contrast to the previous study, Mathews et al. (2008) found that H-S was more likely to occur amongst the white collar/professional occupational class, which is generally synonymous with those with better economic prospects. The study on the lover's suicide pact, undertaken by Murthy et al. (2001), also concluded that financial difficulties was an important precipitating factor in their single case study. The study of Roos et al. (1992) found that financial and marital problems were present in more than 75% of the H-S cases studied.

Although the literature identified some common factors in H-S, background factors are difficult to determine, because both parties (offenders and victims) are deceased (Byard et al., 1999; Van Wormer et al., 2009). Oliffe et al. (2014, p.2) drew a similar conclusion, claiming that the "primary actor" died in the incident without leaving sufficient information about the contextual factors leading to this event. This presents a difficult challenge for researchers who attempt to understand this complex phenomenon.

3.4 H-S Profiles

International studies have developed the following general profile for H-S: This 'family occurrence' is usually committed by a middle-aged white male perpetrator who is older than the female victim, the male is depressed and recently separated or estranged from his wife/partner, and has access to a firearm (Eliason, 2009; Roma, 2012). Violanti's (2007a) study on police H-S suggested the following profile for US law enforcers: H-Ss are usually committed by a male police officer who is older than his female victim. The mean age for both perpetrators and victims were 39 and 33 years respectively. The victim is usually a spouse or acquaintance of the offender and the service pistol is the weapon of choice to commit both homicide and suicide. Lastly, these killings usually occur at local police departmental levels compared with those at state and federal levels. A similar conclusion was reached by Klinoff et al. (2014), who reported a mean age of 46 for male perpetrators

and 35 for their female victims. Also, the victim's relationship to the perpetrator was that of either a wife or ex-wife, which was characterised by past and/or current domestic violence.

Two of the SA studies developed regional profiles for H-S. Jena et al. (2009) developed two profiles for the Pretoria and surrounding areas: In the first instance, a young single black male (18-29) shoots his girlfriend and later himself at his/her residence. The second profile included an older white male (40+) who is married and shoots his spouse and himself at their residential home. The mean ages for both perpetrators and victims were 31 and 27 years respectively. Other general characteristics included unemployment, especially in the first profile, or employment in the peace enforcement agencies (e.g., the police, correctional services, and private security firms). In the second SA regional study, Roberts and his colleagues (2010) developed an H-S profile for Durban. In this study, the majority of the perpetrators were black males and usually older than their female victims. The average age of the perpetrators was 32 and their intimate partners, 27. Lastly, most of the perpetrators were employed in the security sector where guns are readily available.

In turn, the other two local studies developed national H-S profiles for SA. Mathews et al. (2008) found that male perpetrators had an average age of 30 while the average age of the female victims was 26 years. Also, perpetrators were more likely to commit suicide after an intimate homicide, especially if the perpetrators stemmed from a white racial background. Most of the perpetrators were employed either as a professional or white collar worker (police service, defence force, or private security firm), and owned a legal firearm. In the press report study, Skead (2010) developed the following demographic profile: Black African males who are 37 years old and most likely employed in the security sector would use a firearm to commit both homicide and suicide. The African female victims were intimate partners or wives of the perpetrators and likely to have been approximately 25 years old. This act was probably triggered by either marital conflict/non-spousal arguments or the perceived loss of an intimate partner. It is noteworthy that the other newspaper surveillance study carried out by Osborne (2001) found that one quarter of the H-S perpetrators, which involved 83 cases, were members of the SAPS. Furthermore, the majority of the perpetrators were black males who were older than their female victims.

Shooting was also the most frequently used method for the killings. Unfortunately, no mean age was reported for this particular study.

3.5 Problem Formulation, Research Aims, and Questions

Although individual suicide as well as H-S killings exert a catastrophic impact on the families of the perpetrators and victims (Cerel et al., 2008), offspring of the couple, and their communities (Liem, 2009), this phenomenon is under researched in developing countries owing to the lack of reliable H-S data and the rarity of the occurrence (Adinkrah, 2003). As previously stated in Chapter 2, the lack of reliable and valid data can be attributed to the approach that was adopted to register H-S events. In most developed and developing countries, H-Ss are typically tracked as two different entities rather than a single event (Saleva et al., 2007). This reporting system can lead to the underreporting of H-S events, which could significantly influence the accuracy of the prevalence rates in a country.

As mentioned previously, another obstacle in H-S research is that both perpetrators and victims are deceased (Van Wormer et al., 2009). Most of the time, insufficient information was left behind about the contextual factors leading to this tragedy (Oliffe et al., 2014). This presents a difficult challenge to researchers who attempt to understand this complex phenomenon. Therefore, most of the H-S studies relied on coroner and autopsy reports, suicide notes, police records, newspapers (Jena et al., 2009; Roberts et al., 2010), and rarely, interviews with family members and close friends (Koziol-McLain et al., 2006). Unfortunately, this method rendered many studies less reliable, but researchers simply have no alternative but to make use of these sources. The most reliable way to collect H-S information is to interview an offender or victim who accidently survived the killings (Brett, 2002; Gupta & Singh, 2008; Skead, 2010). Unfortunately, in most events, the use of the said method is highly unlikely because most parties involved were instantly killed, especially in the case when a firearm was utilised.

In all five SA studies, the security sector, which included the defence force, private security firms, and especially the SAPS, were identified as a high risk occupational group for H-S killings (Jena et al., 2009; Mathews et al., 2008; Osborne 2001; Roberts et al., 2010; Skead,

2010). A scientific study of police H-Ss in a developmental setting can further psychological knowledge of this phenomenon, especially in the law enforcement sector where guns are readily available (Skead, 2010) and a country in which H-S rates greatly exceed that of other developed countries (Mathews et al., 2008). This type of research is of the essence, mainly because it can address gender based violence that is directed towards women and children (Roberts et al., 2010). Knowledge obtained from this study will hopefully contribute to the growing amount of national and international literature on H-S.

An exploratory analysis was used for the current study with five interrelated research aims and their attendant research focus areas:

Research aim 1 (RA 1): To explore the demographic, social and cultural factors associated with H-S in the SAPS and based on this, establish an incidence rate for H-S in this occupational sector for the 2012-2013 research periods. Drawing from the aforesaid, some tentative inferences are made about the prevalence of H-S in the broader security sector of South Africa.

Research aim 2 (RA 2): To determine some of the contextual factors associated with the occurrence of H-S in the SAPS, and investigate social, environmental factors, and interpersonal relationships between the victims and the perpetrators of H-S killings. The purpose of aim three is to identify the factors presumably responsible for triggering a police H-S attack. As previously discussed in section 1.3, three levels of analysis are used in the current research to study the H-S phenomenon. The second aim thus focuses not only on the macro level of analysis associated with the socio-demographic factors (e.g., incidence rates, gender, and age of the parties involved) of these events, but also on the meso level. This focus of the latter level of analysis falls on the antecedent historical factors related to the perpetrator (e.g., suicide threats or attempts) alongside the motive for the final act. These levels will then be used to test Durkheim's socio-cultural explanations of H-S as well as the intrapsychic explanations of H-S. The former theory claims that H-S is considered an extreme form of suicidal behaviour (Liem, 2009) triggered by a lack of social integration, while the latter theory focuses on the conflict between the Thanatos and the Eros (Litman &

Tabachnick, 1994). The victims of an H-S attack are not only seen as a source of frustration, but also a source of nurturance for the perpetrators of these attacks (Henry & Short, 1954).

Research aim 3 (RA 3): To further explore the personal dynamics between a perpetrator and a victim in H-S. The focus here is to identify and describe the dynamics that operate in a relationship that ends in a police H-S attack, and to establish the possible role that patriarchy plays in such a relationship. Thus, this aim focuses on the role of patriarchy as a factor in H-S killings. The micro level of analysis is included under the third aim which highlights the dynamics of a relationship that ends in an H-S attack. This final level is specifically used to strengthen the validity of both the macro and meso levels of analysis.

Research aim 4 (RA 4): To compare and interpret the situational factors and incidence of H-S in the SAPS with the available statistics from national and international H-S studies. The purpose of this aim is to compare the situational factors in police H-S killings identified in this study with other civilian and law enforcement studies on H-S. This research aim is essentially a consequence of the research results obtained.

Research aim 5 (RA 5): Try to establish the causal factors based on both quantitative and qualitative data obtained from the study and hence, to make certain recommendations for preventative strategies.

Based on the five research aims, five basic research questions were derived:

Research question 1 (RQ 1): What demographic, social, and cultural factors are associated with H-S in the SAPS, and based on this, what is the incidence rate for this particular occupational setting? The first question is derived from the first aim and provides the situational context in which police H-S takes place.

Research question 2 (RQ 2): What are the main precipitating factors (social, environmental, and interpersonal) underlying the occurrence of police H-S in South Africa? This question was derived from the second aim which specifically focused on the common factors in H-S

killings within the African context in a particular occupational setting (see section 3.3 of the current chapter).

Research question 3 (RQ 3): What role does patriarchy play in police H-S killings, and is there any evidence that patriarchy and masculinity may have been contributing factors in the police H-S killings in this sample? This question was formulated after reviewing the H-S literature (see sections 3.3.2 & 3.3.3 of the current chapter) and was deducted from aim three.

Research question 4 (RQ 4): How do the SAPS precipitating factors of H-S compare with other national and international studies on this phenomenon? Question 4 was deduced from aim four and was specifically developed to place the current research findings in a particular academic context, namely the H-S field of study.

Research question 5 (RQ 5): How can the results from the current study be used to develop an H-S prevention strategy for a sector in which firearms are readily available? The last question was derived from the fifth aim and the purpose is to practically use the current research findings to address gender based violence against women and children (Roberts et al., 2010).

3.6 Summary

This chapter initially discussed the incidence rates recorded in various countries. The U.S reported incidence rates of between 0.2 and 0.3 per 100 000 compared with the higher S.A rate of 1.7 per 100 000. Subsequently, the common factors in H-S killings were identified. A major depressive disorder was identified as the most common mental illness involved in H-S. Another important factor relates to the relationship between the perpetrator and the victim. Most H-S events involved a male killing a female, especially when the spouse or consort terminated the relationship. Also, a history of domestic violence is an important precipitating factor in H-S events. Alcohol was the most commonly used substance and the firearm was the method of choice when committing H-S killings. The last common factor identified in the literature was financial adversity.

The third part of the chapter discussed various H-S profiles. Unfortunately, no universal profile applied to all the H-S killings, but in most cases, the male as perpetrator was usually older than the female victim and had access to a firearm. Thereafter, the challenges encountered in H-S research were discussed, concluding with the research aims and questions that directed the current study.

Chapter 4
Methodology

4.1 Introduction

This chapter describes the research methodology used to guide the current H-S study. The phenomenological perspective was adopted, alongside a mixed-method approach that involved both quantitative and qualitative methodologies. Information was collected via two methods, namely document analysis and interviews with the survivors of an H-S attack. Data obtained from the SAPS dockets as well as the "Suicide Follow-up Questionnaires" of this organisation were coded on the SAPS Homicide-Suicide Incidence Coding Form and computerised in order to calculate the descriptive statistics. Semi-structured interviews conducted with the survivors of a H-S event yielded qualitative information. The interviews were subsequently transcribed and interpreted using six analytical steps. This chapter concludes by explaining the ethical considerations that guided the research.

4.2 Research Design

Qualitative research consists of a variety of approaches that can be employed in psychological research (Kinmond, 2012). The interpretive phenomenological perspective was adopted in the current research project, which aimed to explore the subjective and lived experience of the individuals of an H-S attack (Smith & Eatough, 2007). This translated into 'meaning', which is always dependent on the particular situation of the person concerned (Lyons & Coyle, 2007). In practical terms, the meaning of H-S actions can be established only within the context in which it occurred. A mixed method approach was employed, which involved a qualitative as well as quantitative methodology known as "triangulation" (Todd, Nerlich, & McKeown, 2004, p. 9). By investigating H-S using both statistical methods as well as the social context in which it took place leads to a better understanding of this rare and under researched phenomenon (Adinkrah, 2003; Skead, 2010).

In the current study, information on H-S was collected via two methods, namely document analysis and interviews. Document analysis and interviews with the survivors of an H-S attack are usually embedded in interpretive research (Hugh-Jones & Gibson, 2012). In the first instance, the following documents were analysed for information: police dockets which included autopsy and toxicology reports as well as suicide notes, if available. In order to complement these documents, the SAPS "Suicide Follow-up Questionnaire" (section 2.5) which registered H-S events within this organisation, was employed. As stated previously, this questionnaire not only contained the biographical information of the perpetrator, but also the geographical area where the act was committed, details about the event, the underlying stressors, and lastly, the psychiatric history of the offender, if available (see Appendix A). The SAPS Homicide-Suicide Incidence Coding Form (see Appendix B) was used to code both the SAPS dockets as well as the said Suicide Follow-up Questionnaires in specific categories. Any information that was missing from these two documents was coded as such. After coding the data, the information was computed in order to obtain descriptive statistics of all police H-S attacks. A Chi-Square Test for Independence was also performed to further analyse the data where applicable. The purpose of using this specific test was to establish whether certain H-S variables (e.g., motive for the H-S act) were significantly disproportionate or had occurred by chance only (Gravetter & Forzano, 2012).

Secondly, interviews were conducted with three (3) survivors of a police H-S attack. Semi-structured interviews were conducted, which included an interview schedule containing a list of key topics that were derived from the literature. Interviews can produce new information on H-S, which may not have been captured or evident during the document analysis. Although only three interviews were obtained, these interviews could provide some support to corroborate the information obtained from the document analysis, thus enhancing the reliability of the study. The international H-S study conducted by Gupta and Singh (2008), as well as the national study of Skead (2010), previously discussed in sections 3.2 and 3.5, stated that the most reliable way to collect H-S information is to interview an offender or victim who accidently survived those killings. In the SA context, no interviews had been conducted with the survivors of H-S attacks, rendering the current study a

pioneering endeavour. In the qualitative tradition, interviews can produce rich data which were subsequently "orthographically" transcribed (from audio data to a word-for-word format) and analysed using various methods of analysis (Gibson & Hugh-Jones, 2012, p.142). The method employed in the current study involved six analytical steps which are discussed in further detail in section 4.6.2. More specifically, the overall purpose was to extract themes from the H-S context itself in order to better understand these killings from a phenomenological perspective (Howitt & Cramer, 2008).

As previously mentioned in section 3.2, H-Ss are considered rare occurrences (Eliason, 2009; Jena et al., 2009) and therefore most of the cases found were included in the current study. Specifically, two cases were excluded from the current study, because in these instances the perpetrators were civilians rather than police officers, while their victims were functional police members. It is possible that the dynamics of a civilian and police H-S may differ from one another. Another reason for including most cases was that the current study focused only on a small sub population group (SAPS) instead of the entire country (Mathews et al., 2008) or even regions of the country (Roberts et al., 2010; Jena et al., 2009). Although convenience sampling was adopted, the following inclusion criteria were employed in the current study: SAPS members who killed their spouses, life partners, girl or boyfriends (known as intimate partners), children (filicide), all the family members which also included extended relatives (familicide), and lastly, roommates, friends, acquaintances, or neighbours (extra familial), and committed suicide afterwards. These inclusion criteria were based on the literature that was previously discussed in section 2.4.

The research focused only on a 2 year period (2012-2013) because the SAPS had not previously distinguished between individual suicide and H-S cases (Lt.-Col. M.S. Watson, personal communication, October 16, 2013). In other words, H-S events were viewed as individual cases without linking the homicide event with the final suicide act, making it difficult to identify true H-S cases. Another reason for focusing only on this period revolved around the legal aspect of homicides and suicides within South- Africa. All homicide and suicide cases involving police officials must be investigated not only by the SAPS, but also by the Independent Police Investigative Directorate (IPID). After completing these

investigations, a report containing the findings of these cases must be sent to the state prosecutor for adjudication (IPID, 2011). Thus, due to the legal procedures involved and the risk of compromising the criminal investigation, the researcher could not acquire any more recent H-S cases, that is, those that had occurred since 2014.

4.3 Sample Group

The current study focused on the SAPS on a national level, which included eight (8) of the nine provinces. Although SA has only nine provinces, the SAPS also makes provision for their National Head Office which can be considered a 'tenth province' (SAPS Human Resources Utilisation Col. B. Visagie, personal communication, June 7, 2016). Against this backdrop, both the Northern Cape as well as the SAPS National Head Office were not represented in the current study, because no police H-S incidents were recorded for these two provinces during the 2012-2013 period. Nonetheless, due to the relatively large number of H-S cases (38) identified for a single occupational sector, the results obtained from the current study can be generalised to the rest of the SAPS as an organisation.

As previously discussed in section 2.1.1, no operational definition of H-S exists (Jena et al., 2008). Nonetheless, the following description of the phenomenon by Roma et al. (2012, p.462) guided the sampling procedure for the current study: "An incident in which an individual kills another person and subsequently takes his or her own life". In the literature, the time lapse between the initial homicide and the ensuing suicide varied between directly afterwards (Roma et al., 2012), within a 24 hour period (Logan et al., 2008), one week (Marzuk et al., 1992), or even three months afterwards (Allen, 1983). In order to qualify for inclusion in the current study, all suicides should have been committed either directly after the homicide or within a maximum period of three months thereafter. Therefore, cases were selected based on the proposed definition of H-S as well as the time lapse between the homicide and subsequent suicide.

Based on these theoretical criteria and by using the SAPS Suicide Follow-up Questionnaire, to identify true H-S events within this organisation (section 2.5), thirty-eight (38) police H-S cases qualified for inclusion in the current study. Other cases were disqualified on the

following grounds. As previously mentioned in the research design section, some perpetrators were civilians and not police officers, while their victims were police members, some police dockets were still at the offices of the state prosecutor for adjudication, and lastly, police dockets were sometimes misplaced, thus rendering it impossible to obtain these records. Nine (9) of the initial thirty-eight (38) cases included survivors of a police H-S attack, and in all nine cases, the perpetrators had assumed that their victims were already dead after which they killed themselves. Unfortunately, only three of these survivors participated in the current study. The other six survivors could not be included for the following reasons: two (2) of these survivors had passed away (due to advanced age), one (1) survivor declined to participate, one (1) survivor was only five years old during the original H-S incident, and lastly, two (2) of these survivors could not be tracked down. The biographical information of the three participating survivors is discussed in the following section without compromising their true identity.

4.3.1 Situating the three respondents.

Background information on the three survivors of an H-S attack who were interviewed, is furnished below.

Maria is an African female, aged 30 at the time of the H-S attack. The perpetrator was five years older than her. She has a tertiary qualification and is employed in the public sector. She had been married (both civil and traditionally) to the deceased for ten years and they had two children together.

Anna, 32, has a Grade 12 level of education and is a police official. This African female holds the rank of a constable, while her partner was a captain in the SAPS. Anna has a child from a previous relationship, but did not have children with the attacker, although she had had a miscarriage. This couple had been traditionally married for five years, with an age difference of ten years between them.

Lisa, 39, was two years older than the perpetrator and has a Grade 12 certificate. This African female is a sergeant in the SAPS, while the deceased was a constable employed by

the same organisation. The perpetrator was married to another spouse, while Lisa was divorced from her husband. The extra marital affair between Lisa and the perpetrator lasted approximately two years and both parties had children from their first marriages. The survivor is HIV positive.

4.4 Measuring Instruments

Three measuring instruments were employed, namely the SAPS Suicide Follow-up Questionnaire, the SAPS H-S Incidence Coding Form, and a semi-structured interview schedule. These instruments are individually discussed below.

4.4.1 The SAPS Suicide Follow-up Questionnaire.

This questionnaire is used by the SAPS and records not only suicide attempts or threats, completed individual suicides, but also H-S events committed by the members of this organisation. This questionnaire was developed by the SAPS Psychological Services in order to keep proper records of all suicide events and this information is used to determine any differences between the annual suicide rates (Lt.-Col. M.S. Watson, personal communication, October 16, 2013). In the SA context, there is currently no population surveillance system that can assist in identifying H-S cases (Skead, 2010). Instead, all H-S cases are assigned to either an individual suicide or a homicide without linking the two acts (Townsend, 2003). Fortunately, the SAPS Suicide Follow-up Questionnaire greatly assisted the current researcher to identify true H-S cases and provided additional information on the circumstances surrounding the H-S event that had not been captured by the official police dockets.

Although this questionnaire was developed by the SAPS to be used internally, it can be considered to possess some content validity. It is based on previous scientific research which investigated suicide ideation within the police service (Swanepoel, 2003; Pienaar & Rothmann, 2005) as well as clinical observations by psychologists that are or were employed by the police service. These professionals can be considered experts who have years of experience with suicidal police officers and know the organisational milieu because of their

own employment within the said organisation. Furthermore, this questionnaire included interviews with colleagues, commanders, and spouses, or life partners of the deceased. In some of the H-S cases, the perpetrator had killed his intimate partner from an extra marital affair, leaving his spouse behind who provided important background information on the precipitating factors of the incident. Thus, interviewing different stakeholders, each with their own point of view of the surrounding circumstances that led to the H-S attack, provided a more holistic and reliable picture for each individual case.

4.4.2 SAPS H-S Incidence Coding Form.

All the data obtained from the SAPS dockets and their "Suicide Follow-up Questionnaires" were coded on the SAPS Homicide-Suicide Incidence Coding Form (see Appendix B). This form was a modified version of the Durban Metro Murder-Suicide Incidence Coding Form that was used in one of the local South African studies on H-S. The aforementioned coding form was based on the original Homicide-Suicide Incidence Coding Form that was developed in the USA; this coding form has been used by the Colorado State University to specifically investigate H-S events (Townsend, 2003). In this study, the following adaptions were made to the local Durban Metro Murder-Suicide Incidence Coding Form:

- The regional study of Roberts et al. (2010) mentioned in section 3.2, included only the Durban metro area, while the current study covered the national level. The "Town or district in which the death occurred" in the original Durban study was now replaced with all nine (9) provinces from South Africa (see section 3 on the current coding form).
- The "Type of H-S" was included in the current coding format in order to identify the most common type found within the SAPS (Section 7). This finding can assist the law enforcement agency to further develop a new suicide prevention programme or to refine their current "Choose Life Program" that includes a short module on police H-S killings (see section 2.5). From a scientific point of view, this result can also be used to determine whether international studies on police H-S display a similar trend as their SA counterparts or reveal a different tendency. Lastly, information obtained

from this item can be employed to develop an H-S profile of police perpetrators, which in turn can be used to address violence against women and children within this occupational sector (Roberts et al., 2010).

- Section 18, which involved the "Antecedent history" of the perpetrator, added three new precipitating factors. These three factors are "Outstanding disciplinary cases", "Death of a colleague", and "Exposure to violence and aggression in the line of duty". The first two factors were identified by psychologists from the SAPS, after having worked with suicidal clients in the past. Thus, by consulting with experts in the field, two new items were added, which contributed to the content validity of the study. The second factor was identified by the author after reviewing the literature on police H-S within the United States (Violanti, 2007a).

- The SAPS Homicide-Suicide Incidence Coding Form included the "Motive for the act" (Section 19), which was not included in the original Durban regional study (Townsend, 2003). The latter study specifically noted the difficulty in obtaining sufficient information on the motive and circumstances surrounding H-S killings. These different types of "Motive for the act" (Section 19) were identified by the author after reviewing the literature on H-S killings (see Chapter 3). Unfortunately, research on H-S is sparse (Roma et al., 2012) and the author had to rely only on the limited amount of literature available to identify these factors.

- The original Durban Metro Murder-Suicide Incidence Coding Form used eight (8) categories for the "Level of education". These categories were reduced in the current coding form (Section 20), which included only six (6) options. More specifically, the "None" and "Primary schooling" categories were not included in the current SAPS Homicide-Suicide Incidence Coding Form because it is compulsory for all police officers to have a Grade 12 education, making these extra options redundant (SAPS Human Resources Management, Major M. Williams, personal communication, January 15, 2016). The current coding format included a "Below grade 12" option to cater for special enlistments (known as "Special Constables") within this organisation. These employees managed to obtain a Std. 8 school education only and were

originally enlisted between 1986 and 1992 to perform guard duties, crime prevention and foot patrols (SAP, 1990; SAP, 1994).

- The rank of the perpetrator (Section 22) was included in the SAPS coding form. The reason for doing so was to identify at which position level H-S mostly occurs. The rank of the perpetrator not only plays an important role when developing a H-S profile for the law enforcement sector, but this information can also be used by the SAPS Psychological Services to target a specific segment of the organisation in their efforts to prevent H-S.
- The original Durban Metro Murder-Suicide Incidence Coding Form included "Medical history" and "Medication history" sections which were not included in the current coding format. These two sections were excluded because police dockets do not investigate medical background or even drug abuse (SAPS Detective Services, Capt. H. Van Staden, personal communication, June 10, 2015). Also, the original "Toxicological findings" section of the Durban coding form, which stems from the "Medication history" section that was previously discussed, was reduced in the current SAPS coding format to include only blood alcohol levels. According to a SAPS detective who investigates homicide and suicide cases, the state pathologist will request a full toxicological report only if he or she suspects that drugs or medication played a significant role in these killings. This is seldom requested because the perpetrator is already deceased and cannot be criminally charged for the act (Capt. H. Van Staden, personal communication, June 10, 2015). Thus, the current coding format included only the blood alcohol levels for both the perpetrator and victim, and if available, whether they were intoxicated before the act or not (Sections 28 & 29).
- Lastly, the Durban regional study carried out by Townsend (2003) completed a separate Durban Metro Murder-Suicide Incidence Coding Form for each individual involved in an H-S incident. In other words, each case was coded as either a murder or a suicide and the suicide act was coded on only one occasion, even if more than one homicide was committed by the same perpetrator. The current SAPS Homicide-

Suicide Incidence Coding Form recorded every case on only one coding form, but used a "P" and "V" to clearly distinguish between the Perpetrator and Victim in the different sections. For instance, if the perpetrator killed his victim with his service firearm and later committed suicide by hanging himself the "Method of death for both the perpetrator and victim" is coded separately under P09 (Hanging) and V01 (Firearm) respectively. If more than one victim was murdered, the researcher recorded it as v1, v2, and v3 etcetera, thereby including all the individuals who were killed, each with their own manner of death. For instance, if a perpetrator killed three individuals (including himself) this will be recorded as v1= 01 (v1 refers to the first victim and 01 refers to the method used, in this particular case a firearm), v2= 01 (v2 refers to the second victim and 01 refers to the method used, also a firearm), and lastly, P09 (P refers to the perpetrator involved and 09 refers to the method used, i.e., by hanging himself). By recording the homicide and suicide acts simultaneously, a more 'holistic picture' emerges, which contributes to a better understanding of the H-S phenomenon as a "distinct epidemiological domain" (Roma et al., 2012, p.462) that differs from ordinary homicide and suicide events (Wolfgang, 1958 as cited in Roma et al., 2012).

4.4.3 Interview schedule.

In the current study, a semi-structured interview schedule was used to interview the survivors of a police H-S attack (see Appendix D). Although this interview schedule was originally derived from the literature (see section 3.3), these topics were further formulated by the research participants themselves (Howitt & Cramer, 2008). This allows for a balance between "researcher-led questions" that are based on theory and "participant-led issues" that may assist the researcher to identify other issues that were initially not even considered (Hugh-Jones & Gibson, 2012, p.104). The second last part of the schedule, which focused on the 'Aftermath of an H-S attack', was developed by the author. The latter item not only enquired about the relationship of the survivor with their parents-in-law, but also about their current romantic relationships. The researcher's attention was initially drawn to the relationship between the survivors and their in-laws during a telephonic conversation

with one of the survivors of an H-S attack (see the procedure section 4.5, paragraph 4 in the current chapter). This accidental finding led to a noteworthy new focus area (a "participant-led issue"), which may ultimately be ground breaking and most probably contribute to the H-S literature.

Although the international studies of Koziol-McLain et al. (2006) used interviews with close friends and relatives, and Harper and Voigt (2007) made use of interviews with police officers, acquaintances, friends, and families, these studies did not include the original interview schedules that were used. An interview schedule which had already been developed could have been a useful instrument to guide the current research study. The international study undertaken by Adinkrah (2014) used unstructured interviews with a forensic pathologist, a psychiatrist, and senior law enforcement officer to obtain supplementary data, although the main source of data stemmed from articles from a single newspaper. This methodology differs from the current study which not only used police dockets and the SAPS Suicide Follow-up Questionnaire as primary data sources, but also semi-structured interviews with the survivors of an H-S attack. Nonetheless, both studies employed a mixed method approach to investigate the H-S phenomenon. Unfortunately, none of the SA studies included interviews in their research methodology to investigate this rare occurrence. Thus, a local interview schedule was needed to investigate H-S within the SAPS context and can be summarised as follows.

4.4.3.1 State of the relationship.

This topic covers the relationship factors including amorous jealousy, domestic violence, separation, and impending divorce.

4.4.3.2 Financial adversity

The second item focuses on the financial history of the couple by specifically enquiring about debt counselling and if the couple made use of micro lending services commonly known as 'loan sharks'.

4.4.3.3 Chronic illnesses.

The third question enquires about chronic or serious illnesses amongst the perpetrators and the victims. The following diseases and conditions were included: diabetes, cancer, HIV or AIDS (known as dread diseases), and chronic back pain.

4.4.3.4 Substance use.

The next topic focuses not only on alcohol and drug history, but also whether the parties involved were intoxicated before the final act.

4.4.3.5 Psychiatric history.

This topic enquires about the mental illness (e.g., depression) of the perpetrators, admission to psychiatric facilities in the past, length of treatment, and history of suicide threats or attempts.

4.4.3.6 Precipitating factors.

In this part of the interview schedule, the survivor is required to describe the events that occurred just before the final attack. Emphasis is placed on a heated argument, intoxication, physical violence, or a threat to end the current romantic relationship.

4.4.3.7 Aftermath of an H-S attack.

This second last part of the interview schedule focuses on how the event has affected the survivor. Attention is afforded to the relationship of the survivor with their in-laws as well as the state of their current romantic relationships.

4.4.3.8 General comments.

Lastly, the survivors are requested to share any thoughts on any issues that were not covered during the interview.

4.5 Procedure

To gain access to the research information, the researcher initially contacted the Head of the EHW, Major-General M.C. Mzamane and scheduled a meeting with this officer. Permission was not only granted by the said manager, but also by the Divisional Commissioner of Human Resource Management (HRM), Lieutenant-General N.N.H Mazibuko, to conduct H-S research in the SAPS. After obtaining the necessary authorisation, the next step was to gain access to the "Suicide Follow-up Questionnaires" held by the organisation, which contained information on police H-S killings. A meeting was scheduled with the National suicide prevention manager, Lt.-Col. M.S. Watson, who keeps records of these questionnaires and has physical access to these documents. The permission that was originally obtained from the two senior managers to conduct research within the organisation was communicated to the suicide prevention manager, and copies of the H-S cases were handed over to the researcher. Subsequently, these questionnaires (cases) were perused to see if they met the inclusion criteria that were stipulated before the start of the research project (see section 4.2 of the current chapter).

Next, police stations across SA were initially contacted via telephone to make the first contact, followed by emails to request copies of the original investigation dockets. The authorisation letter that was signed by the Head of the EHW as well as the Divisional Commissioner of HRM was attached to these e-mails in order to obtain the cooperation of the various police stations involved. These e-mails not only referred to the original telephonic conversations, but also contained biographical and background information on each case. After requesting the dockets from the various police stations (Detective Services), each station had to search their docket stores for the specific case files. Once the SAPS Detectives had obtained these requested files, the researcher was contacted to collect them personally, because official investigation dockets are not allowed to be couriered.

After obtaining the copies of these official dockets, each case was individually perused along with the accompanying SAPS "Suicide Follow-up Questionnaire". By combining two different sources of information, a more holistic picture emerged from every case. This

strategy of combining two different sources was particularly useful, especially when information on certain variables was missing from either source (e.g., the underlying stressors). After a detailed analysis of each case, the relevant information was coded on the SAPS Homicide-Suicide Incidence Coding Form. Any survivors of an H-S attack were also flagged during the coding phase, which later assisted the researcher to compile a list of survivors to be contacted for possible interviews at a later stage. After coding all 38 cases, these coded forms were analysed for descriptive statistics using the JMP Statistical Analysis System (JMP, 2016).

The next step involved contacting the previously identified survivors of an H-S attack for possible interviews. As stated earlier, nine (9) survivors were identified, but unfortunately only three (3) survivors could be included in the current study (see section 4.3 regarding the sample group). Initially, four survivors were telephonically contacted by the researcher in order to make the initial contact with them. During these telephonic conversations, the researcher identified himself to the survivors followed by a request to have five minutes of their time. All the survivors were informed of the purpose of this scientific research project and that they could decline to participate if they wished to do so. As stated earlier, one of the four participants declined to participate in the current study, while another survivor was initially reluctant to talk to the researcher. She was convinced that her parents-in-law were behind the call because "They are out to get me". After a proper explanation concerning the purpose of the research, this survivor was more amenable to being interviewed. The other two respondents were more comfortable and accessible than the first survivor and they agreed to participate in the research. Although interviews could not be secured with all of the nine (9) participants, statements were obtained by the SAPS after each H-S attack from eye witnesses or individuals who knew the background of the relationship of the couple (e.g., close family members). These statements enabled the researcher to determine the surrounding factors that led to the respective H-S incidents.

Possible interview dates were identified by the researcher and communicated to the three respondents in order to determine their availability on the particular date and at a specified time. The timeframe for these interviews ranged from July 2015 to November 2015. The

interviews were conducted at the participant's place of employment which ensured that they felt comfortable in their own familiar environment. The interviews were conducted in the participant's second language (English) and the duration of these interviews amounted to approximately one hour each. After welcoming the participants on the day of their interview, informed consent was discussed with each participant. The informed consent document (see Appendix C) explained the purpose, procedures, and risks involved in the current research without using academic jargon. In particular, the importance of voice recording the session was discussed with the participants as well as attending a debriefing session afterwards (see ethical considerations section 4.7 in the current chapter). The purpose of this debriefing session was to contain possible emotional reactions after talking about their various traumatic ordeals. In addition, voluntary participation was discussed together with the right of the participants to withdraw from the interview session at any time. After each participant had accepted the informed consent, they were requested to sign the document. Each interview was recorded using a digital voice recorder and field notes were also used by the researcher to compliment these recordings. After the interviews, each participant had access to trauma counselling, as explained in section 4.7.3. No recording or field notes were made during these debriefing sessions. Later, the interviews were transcribed and analysed by using six analytic steps within the qualitative tradition (see section 4.6 below).

4.6 Techniques of Analysis

The data obtained from both the document analysis and the interviews were each analysed using quantitative and qualitative methods respectively. Firstly, the quantitative methods employed for analysing documents, and secondly, the six 'analytic steps' used to understand the H-S phenomenon from a qualitative approach are discussed below.

4.6.1 Quantitative analysis.

As previously discussed in this chapter (section 4.4.2), the data obtained from the SAPS dockets and their "Suicide Follow-up Questionnaires" were coded on the SAPS Homicide-Suicide Incidence Coding Form. After coding the data, this information was computed in

order to calculate the descriptive statistics of H-S occurrences during the period 2012-2013 in the SAPS using the JMP SAS version 12.0 software package (JMP, 2016). The Chi Square Test for Independence was also utilised to further analyse the associations or relationships between the H-S subtype and the classification of relationship, the type of relationship between the victim and the perpetrator, and lastly, the motive for the act (Vercruyssen & Hendrick, 2012). The values obtained from this non-parametric method were used to determine whether there were any statistically significant patterns in the data (Howell, 2010). It should be noted that the sample may be small, and the analysis may therefore yield only some trends rather than statistically significant results owing to power restrictions (Gravetter & Wallnau, 2007). Lastly, the results obtained from the analysis were then presented graphically in various tables and charts in order to describe the H-S phenomenon.

4.6.2 Qualitative analysis.

Although data analysis in interpretive research rarely proceeds in an orderly fashion, certain steps were used as a guideline to analyse the data that were obtained from the three interviews that were conducted with the survivors of a police H-S attack. Howitt and Cramer (2008, p.379) suggested six analytic steps which are summarised as follows:

- Step one: Initial familiarisation with a case and initial comments
  While gathering the data, the researcher started developing ideas and even possible theories about H-S. This afforded the researcher a preliminary understanding of the phenomenon. Next, the researcher immersed himself in one of the interviews and accompanying field notes by reading through the text a couple of times and making notes. This enabled the researcher to become familiar with the data and which interpretations were supported or not supported by the material involved.
- Step two: Inducing themes
  In this second step, the researcher tried to identify the main principles that arose from the material. While it is important that the themes are clearly related to what the participant said, these themes should express their words on a more theoretical level. Although the type and number of categories cannot be deducted in advance,

the researcher planned to use various systems without settling on only one too quickly. Only after trying various kinds of themes did the researcher make the final decision which system to use.

- Step three: Looking for connections between the different themes and coding the data

  Coding literally means breaking up the data and then assigning it to a theme. Sentences, phrases, or even paragraphs that are relevant to a specific theme can be coded either electronically (e.g., by copying and pasting the information) or manually (e.g., writing the text on cards). This third step is closely linked to the previous step. This means that the themes tended to change during the process of coding as the researcher formed a better understanding of the themes involved. Thus, the codes were not viewed as static entities that could not be changed.

- Step four: Developing a table of themes with quotations

  During this step, the superordinate themes are grouped together alongside their subordinate themes with accompanying quotations in a table format. The themes in this table are ranked in terms of importance and include a sentence or short phrase from the participant's own account in order to illustrate that particular theme. This process provided the researcher with a fresh perspective regarding the material in order to gain a better understanding of this phenomenon. Sometimes, researchers will find that certain of the extracts that they originally grouped together under a specific theme actually differed.

- Step five: Continuing with further cases

  If more than one case is included in a study, the other cases are analysed in a similar fashion as described in the previous four steps. The themes from the first case are usually used as a template for the following cases in order to look for similar or different themes. After all the cases have been analysed a final table that contains all the different themes is produced.

- Step 6: Writing the analysis

  In this final step, a written account was given of H-S within the SAPS by using the

thematic categories that had been identified during the analysis phase. This last step offers an opportunity to groom the interpretation and to alter any possible weak points. The qualitative report should include a section covering both the results and a discussion on the results. Where the former section describes and illustrates the themes, the latter section relates the themes to existing H-S literature.

4.7 Ethical Considerations

Due to the sensitive nature of H-S research (Townsend, 2003) and working with the survivors of these attacks, the following ethical considerations were deemed important.

4.7.1 Institutional approval.

In order to conduct research on H-S killings, two separate institutional approvals were necessary. Firstly, written approval was needed from the SAPS, which records H-S statistics within the law enforcement sector. Approval was necessary from the latter organisation, because the SAPS possesses the legal power over the release of its information (Durrheim & Wassenaar, 2002). Secondly, it was also necessary to obtain approval from the Ethical Committee of the University of South Africa (UNISA) to conduct academic research on this topic. After obtaining approval from both institutions, the research was conducted according to the approved research protocol (HPCSA, 2006).

4.7.2 Informed consent.

During the initial telephonic conversations with the three survivors of a police H-S attack, the respondents were informed about the purpose and nature of the current research. These survivors were also informed that they could decline to participate in the research process if they wished to do so.

Before conducting the actual interviews, informed consent which covered the following areas was discussed with each of the participants:

- Firstly, a working definition of H-S was provided followed by the purpose of

conducting scientific research on this phenomenon. Emphasis fell on identifying the precipitating factors in police H-S killings as well as developing profiles for both perpetrators and victims of police H-S attacks.

- Secondly, participants were informed about the importance of voice recording the interview and that these recordings would not be used in any way that would disclose their true identities (HPCSA, 2006). The duration of the session was also discussed and the researcher obtained informed consent from each participant prior to the voice recording of these interviews.
- Thirdly, the survivors were informed that H-S is a sensitive topic which may evoke strong feelings and cause high levels of emotional discomfort. After each interview session, the participants would have the opportunity to talk to a trained trauma worker from the SAPS EHW section. This section consists of psychologists, registered counsellors, chaplains, and social workers, and the purpose of the diffusing session is to counter the traumatic effects of reliving the original incident. Trained professionals from the SAPS Psychological Services would also provide more long-term trauma counselling if needed by the survivors.
- Lastly, the focus fell on voluntary participation and participant rights. Participants were informed that they have the right to withdraw at any time from the research process for any reason, especially during the interview session, without any penalty. The participants were also offered an opportunity to ask questions and receive answers regarding any uncertainties before or even after the interviews were conducted (HPCSA, 2006).
- These measures enabled the participants to make an informed decision to participate or not to participate in the research.

4.7.3 Debriefing and counselling of participants.

During the explanation of the informed consent, the participants were informed about the strong emotions that may be evoked when talking about their H-S ordeal. For this reason, a debriefing session was scheduled for each participant after their interviews in order to deal

with possible traumatic reactions. These debriefing sessions were scheduled to be provided by a trained debriefer from the SAPS EHW section. After their individual interview sessions were concluded, all three of the participants had the opportunity to talk to a debriefer in order to contain their emotions.

The participants were also informed that they would have access to long term trauma counselling, if needed. This service would be provided by the SAPS Psychological Services, without any financial implications for the survivors (e.g., consultation fees). These debriefing and counselling sessions constituted a reasonable effort to minimise possible harm to the participants (HPCSA, 2006).

4.7.4 Protecting identities.

Due to the sensitive nature of the research, care was taken to protect the identities of the parties involved. Not only were the true identities of the three survivors concealed, but also the families of the perpetrators and victims alike. When presenting the results from the current study, the focus is to indicate patterns of H-S killings instead of identifying individual records. The personal identities of all three of the survivors of an H-S attack were concealed by allocating an alias to each of the participants and these survivors were referred to via their aliases. Any data (e.g., copies of police dockets, SAPS "Suicide Follow-up Questionnaires" and interview recordings) which contained the biographical details of the participants were securely stored and destroyed after the current research was concluded (Durrheim & Wassenaar, 2002).

4.8 Summary

The current national study focused on a two year period (2012-2013) and identified 38 police H-S cases. The phenomenological perspective was used in the current research with a mixed method approach that involved both quantitative and qualitative methodologies. Information on H-S was collected via two methods, namely document analysis and interviews. The former method included police dockets as well as the SAPS Suicide Follow-up Questionnaires, while the latter method consisted of three semi-structured interviews

with the survivors of a police H-S attack. Information obtained from these two sources were analysed using both quantitative and qualitative methods respectively. Data originating from the two SAPS documents (official dockets and Suicide follow-Up Questionnaires) were coded on the SAPS Homicide-Suicide Coding Form and computed in order to obtain descriptive statistics. The Chi Square Test for Independence was also performed to further analyse associations between certain variables. In turn, the interviews were transcribed and then interpreted using six analytical steps. To conduct research on this topic, institutional approval was obtained from both the SAPS as well as Ethical Committee of UNISA. Ethical considerations also revolved around informed consent, debriefing, and counselling of the participants after their interviews, and lastly, protecting the identities of the parties involved.

Chapter 5
Results

5.1 Introduction

This chapter discusses the results of this police H-S research, using techniques from both the quantitative and qualitative tradition. As discussed in section 3.5, certain aims guided the current research on police H-S killings. The following results are presented according to the first three of these research aims and the remaining two aims are addressed in Chapter 6. The main objective of the following analysis is to provide a tentative epidemiological profile of H-S within the SAPS.

5.2 RA 1: To Explore the Demographic, Social, and Cultural Factors Associated with H-S in the SAPS, and Based on this, Establish an Incidence Rate for H-S in this Particular Occupational Sector for the 2012-2013 Research Period

The following section addresses the characteristics of the perpetrators, the victims, and the survivors of an H-S attack. The manner of death as well as the year of death are discussed followed by noting the provinces in which police H-S attacks were perpetrated. This section concludes with the incidence rate that was calculated for the SAPS.

5.2.1 The characteristics of the perpetrators, victims, and survivors of a police H-S attack.

Table 5.1

Characteristics of the perpetrators

	Perpetrators (n=38)						
Age	**19-29**		**30-39**		**40-49**		**50-60**
	7		21		8		2
Home language	**Sepedi**	**Zulu**	**Venda**	**N Sotho**	**S Sotho**	**Afrikaans**	
	1	8	2	5	3	2	
	Setswana	**Tsonga**	**Tswana**	**Ndebele**	**Xhosa**	**Unknown**	
	1	2	3	2	5	4	
Rank	**S/Cst**	**Cst**	**Sgt**	**W/O**	**Lt**	**Capt**	**Lt Col**
	1	25	3	6	1	1	1
Gender	**Male**	**Female**					
	37	1					

The mean age of the perpetrators was 35,36 years. Mostly black African individuals were represented in the current study, although they actually belonged to different cultural and language groups. Coloured individuals were also included, but no Indian and White population groups were represented. Mostly males perpetrated this act, and only one female was recorded as an offender. Lastly, the rank of constable within the SAPS was overrepresented in the current study.

Table 5.2

Characteristics of the victims and survivors

	Victims (n=39)			**Survivors (n=09)**	
Age: victims	**1-18**	**19-29**	**30-39**	**40-49**	**Unknown**
	3	16	9	7	**4**
Age: survivors	**1-18**	**30-39**	**50-59**	**60+**	
	2	4	2	1	
Gender: victims	**Male**	**Female**			
	6	33			
Gender: survivors	**Male**	**Female**			
	5	4			
Occupation	**Unemployed**	**Unspecified/ Other**	**Elementary-Occupation**	**Craft/ Trade-Worker**	**Clerks**
	7	4	3	2	11
	Service worker/ Market sales	**Technician/ Assoc. Prof.**	**Unknown**	**N/A**	
	8	1	7	5	

The mean age of the victims was 30,14 years while the mean age of the survivors was 37 years. The latter age is almost the same as the mean age of the perpetrators (35,36 years). Unfortunately, the ages of four victims were missing from the data (police dockets) and could therefore not be included and calculated. Thus, the victims 'real' mean age is probably slightly higher than the current mean age of 30,14 years. Only one interracial relationship was recorded between a coloured male and a black African female; this factor can be considered to be important information when researching this phenomenon. As previously discussed in sections 2.2.3.1 and 2.2.3.2, the classification typology put forward by Marzuk et al. (1992) as well as that of Hanzlick-Koponen (1994) were criticised for not

including the nature of the relationship between the parties involved because it is possible that H-S killings may differ between intra and interracial relationships.

Although nine (9) individuals survived their H-S attack, only three (3) survivors participated in the current study. The occupational groups of these nine individuals involved the following: one (1) survivor was classified under the Unspecified/Other occupational group (Head man), one (1) occupied an elementary occupation (yard foreman), while four survivors (4) were classified under the Not Applicable (N/A) category which involved an unemployed individual, a scholar, a minor, and a pensioner. The last three (3) survivors were placed under Service workers or Market sales (two police officials), while the third occupied a technician or associate professional (managerial) post.

5.2.2 The manner of death.

As stated in the previous chapter, 38 H-S cases were included in the current study for the period from the 1st of January 2012 to the 31st of December 2013. The manner of death for both perpetrators and victims is presented in Table 5.3.

Table 5.3

Frequency table for manner of death

Manner of death	Frequency	Percentage
Homicides	39	50,64
Suicides	38	49,35
Total	77	100

A total of 77 individuals lost their lives in police H-S killings. In terms of Table 5.3, 50,64% or 39 victims were murdered compared to 49,35% or 38 perpetrators who committed suicide afterwards. The majority of H-S cases involved only two individuals, a perpetrator and a single victim (31 cases or 81,57%), while in other instances more than one victim was killed. More specifically, in two H-S cases (5,26%) each perpetrator killed two victims and the most victims who were killed during a single incident involved four victims and one perpetrator.

In 8 cases (21,05%), nine individuals survived an H-S attack and in all of these cases, the perpetrators believed that their victims were dying or were already dead before turning the gun onto themselves. In 4 (10,52%) of these cases, the main focus of the perpetrators was to kill his spouse or girlfriend, but other individuals (e.g., children or other relatives) were also in the same vicinity as the main target. In one case, the girlfriend of one the perpetrators, their child and grandmother were busy preparing food for the family when the perpetrator suddenly entered the kitchen and started shooting at the girlfriend. Therefore, the two survivors were wounded because they were in close proximity to the girlfriend of the male perpetrator. In one (2,63%) of these eight cases, two individuals survived the same H-S attack that was perpetrated by a single offender and none of the perpetrators survived their suicide attempts.

5.2.3 Year of death.

The year of death in which the H-S incidents took place is indicated in Table 5.4.

Table 5.4

Frequency table for year of death

Year	Frequency	Percentage
2012	45	58,44
2013	32	41,55
Total	77	100

As indicated in Table 5.4, 45 individuals (58,44%) lost their lives in 2012 after a H-S attack followed by 32 individuals (41,55%) the following year. There was therefore a slight decline in H-S cases from 2012 to 2013, but the overall rate of H-S killings is high for both years.

5.2.4 Provinces in which H-S killings were perpetrated.

In the following section, the different provinces in which H-S killings took place are discussed, followed by the geographical distribution of police members within the Republic of South Africa.

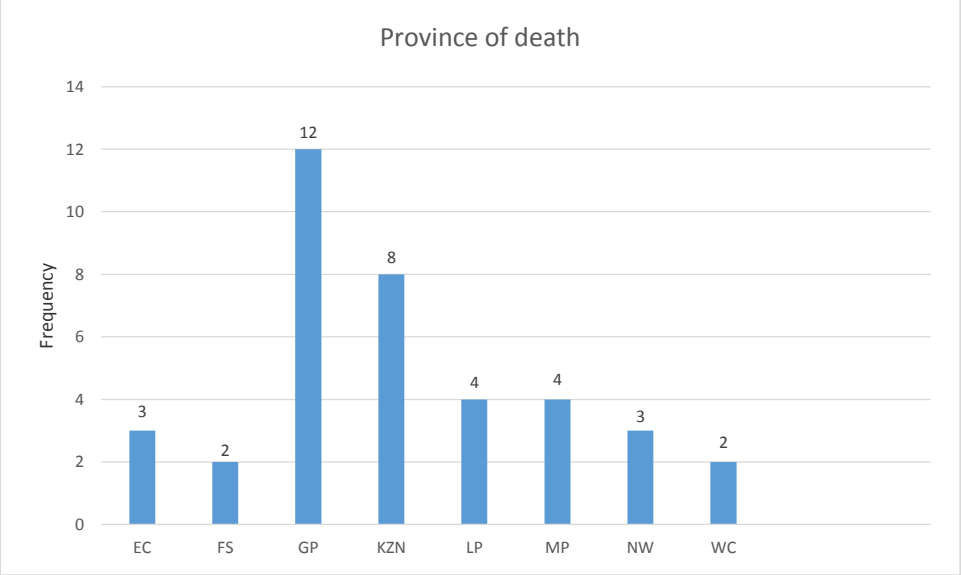

Figure 5.1: Provinces in which H-S killings were perpetrated

As indicated in Figure 5.1, Gauteng province recorded the highest proportion of H-S killings with twelve cases (31,58%) compared to that of the other eight provinces. This province was followed by KZN with eight cases (21,05%) and a fairly equal distribution of H-S attacks were found for the remaining provinces. Although Figure 5.1 indicates that both Gauteng and the KZN province displayed the highest incidence of H-S attacks, the geographical distribution of SAPS members should also be taken into consideration when interpreting these results. The following section addresses the distribution of police officials within the different provinces in order to place this finding in perspective. As previously stated in section 4.3, the Northern Cape Province as well as the National Head Office (NHO) were not represented in the current study due to the fact that no police H-S incidents in these areas were recorded in the SAPS database during the 2012-2013 period under research (SAPS National Suicide Coordinator Lt.-Col. M.S. Watson, personal communication, October 16, 2013). More specifically, as previously discussed in section 2.5, all of the SAPS individual suicides and H-S cases are recorded on the SAPS "Suicide Follow-up Questionnaire" and no cases for these two provinces were registered on this particular instrument.

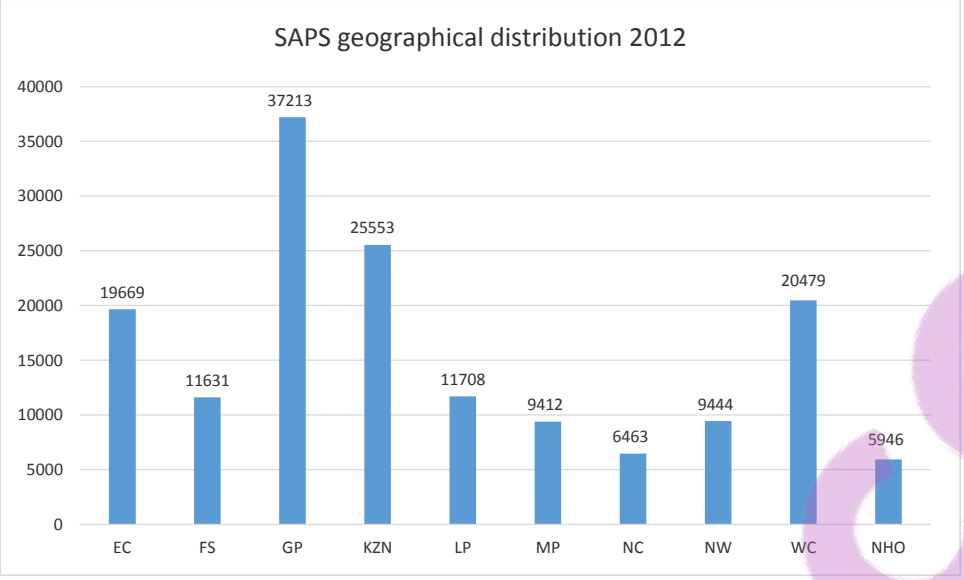

Figure 5.2: Geographical distribution of police members for 2012

During 2012, 157 518 police officials were employed by the SAPS (SAPS Human Resources Utilisation Col. B. Visagie, personal communication, June 7, 2016). As indicated in Figure 5.2, Gauteng (23.62%) has by far the greatest number of police officials stationed in this province followed by KZN (16,22%). Thus, most H-S attacks took place in these two provinces during this period. Although the SAPS also employees public service act members, these administrative personnel were not included in the actual workforce count, because no H-S attacks were perpetrated by their civilian counterparts.

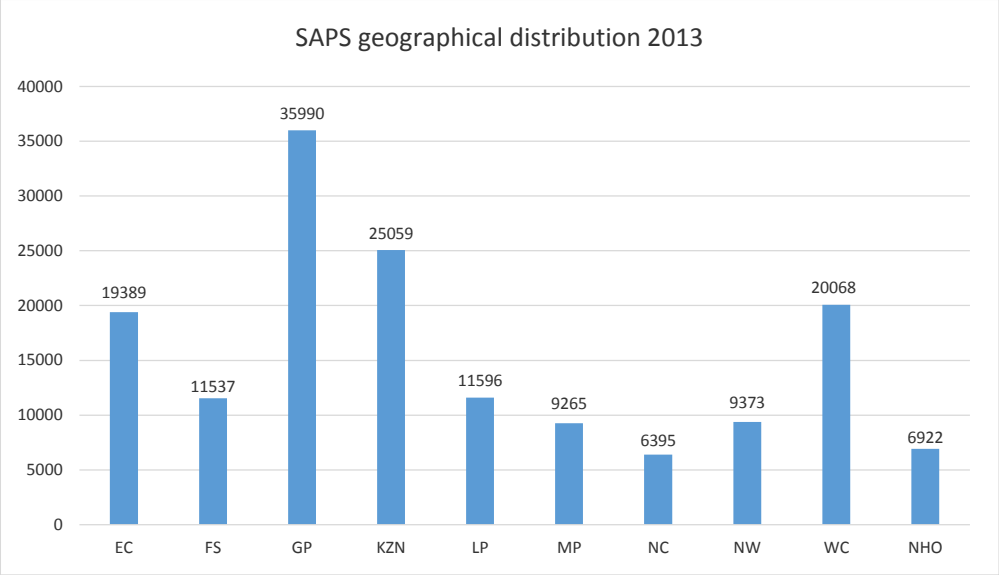

Figure 5.3: Geographical distribution of police members for 2013

Perhaps it should be noted that during 2013 the law enforcement sector employed 155 594 police members, which is less than that of the previous year (SAPS Human Resources Utilisation Col. B. Visagie, personal communication, June 7, 2016). More specifically, the workforce of the organisation declined by 1924 members in 2013. Nonetheless, Gauteng still accounted for the greatest number of police officials (23,13%) stationed in this particular province, followed by KZN (with 16,10%) for this particular year.

Although Gauteng and KZN displayed the highest proportion of H-S attacks within the 2-year research period (2012-2013), this finding should be interpreted with caution. It should be clear that more SAPS members were allocated to these two particular provinces and therefore more H-S attacks could be expected.

5.2.5 The H-S incidence rate for the SAPS.

To determine an H-S incidence rate for this occupational sector, this incidence rate first needed to be calculated using a method that was devised by Felthous and Hempel (1995), which is now internationally accepted (total number of perpetrators/total population group) X 100 000. The method calculates the H-S incidence rate by dividing the total amount of perpetrators (N=38) by the SAPS average geographical distribution total (N=156 556). The H-

S incidence is therefore: 38 / 1.56556= 24.27 per 100 000 police officers over a two year period.

5.3 RA 2: To Determine Some of the Contextual Factors Associated with the Occurrence of H-S in the SAPS, and Investigate Social, Environmental Factors, and Interpersonal Relationships between the Victims and Perpetrators of H-S Killings

In section 3.3, certain common factors that are presumed to be responsible for triggering an H-S attack were identified in the literature. These factors included relationship issues, domestic violence, substance use and intoxication, financial adversity, the weapon used, and mental illness (especially major depressive disorder). Keeping these common factors in mind, the following section discusses the results of the current study.

5.3.1 Gender of the individuals involved in a police H-S attack.

The following table addresses the gender of the parties involved in a police H-S attack.

Table 5.5

Frequency table for gender of the individuals involved

	Gender	Subtotal	Frequency	Percentage
Perpetrator		38		
	Male		37	97,36
	Female		1	2,63
Victim		39		
	Male		6	15,38
	Female		33	84,61
Survivor		9		
	Male		5	55,55
	Female		4	44,44

As indicated in Table 5.5, 37 H-S killings (97,36%) were perpetrated by males compared to only one female offender (2.63%). In the case of the victims, 37 (84,61%) females were murdered compared to six males (15,38%) who lost their lives in an H-S attack. In the case of the survivors, the difference between the genders involved was not statistically significant.

Please note that due to the large number of possible associations between the variables in this study, and the small cell frequencies in some tables, the Chi- Square Test of Independence was not used to draw inferences about the relationship between all the nominal variables (e.g., gender, race, or levels of education) in this study.

The Chi-square Test of Independence was mainly used in the current study to test the associations between the H-S subtype and various other variables. These variables include the classification of the relationship between the perpetrator and the victim, the type of relationship between the perpetrator and the victim, and the motive for the act. Several other associations were also investigated using the Chi-square test. More specifically, other associations that were tested involved the relationships between gender and the different age categories, non-commissioned and commissioned officers with their level of education (e.g., grade 12), and lastly, the association between the different provinces in which police H-Ss were perpetrated and the two research periods (2012 and 2013). However, these latter associations were not statistically significant.

5.3.2 Age of the subjects involved.

The following table addresses the age of the parties who were involved in H-S attacks.

Table 5.6

Frequency table for age of the subjects

Age	Perpetrator	Victim	Survivor
Mean	35,4	30,14	37,0
Min	24	8	5
Max	50	46	70

Table 5.6 indicates the mean age of the perpetrators (35,4 years), the victims (30,14 years) and the survivors (37 years) of a police H-S attack. Unfortunately, in four of the perpetrator-victim pairs, the ages of the victims were unknown. As mentioned in section 5.3.1, most perpetrators were male and their ages ranged from 24 to 50 years, while only one female who was 30 years old perpetrated an H-S act. In the case of the victims, the youngest was 8

years old while the oldest victim was 46 years of age, and lastly, the survivors ranged from 5 to 70 years of age.

Table 5.7

Frequency table for the age difference between the subjects

Perpetrator	Victims	Survivors
28	*30	
46	40	
28	25	
32	28	
24	*27	*30
38	*40	
36	*42	
42	27	18
35	35	
49	46	
39	*46	
30	23	*59, 5
32	25	
39	28	*70
34	27	
50	46, 39, 10, 15	
37		*39
35		30
33	32	
32	Unknown	
31	22	
41	Unknown	
26	Unknown, Unknown	
29	21	
30	29	
26	*33	
41	27	
31	*34	
24	23	
31	29	
38	38	
50	8	
31		*50
48	41	
46	31	
31	25	
41		32
30	28, *35	

*Indicates victims and survivors that were older than their respective perpetrators

As previously indicated in section 5.3.2, the ages of four victims were unknown, which affected the correct mean age of the victims. Nonetheless, in Table 5.7, 22 perpetrators (57,89%) were older than their victims (25 or 64,10%), and in only eight victim-perpetrator pairs (*)the victims were older than their respective attackers. In one case, the perpetrator was older than the first victim, but younger than his second victim. Lastly, in two victim-perpetrator pairs, both had the same chronological age of 35 and 38 respectively. In four of the survivor-perpetrator pairs (44,44%), the perpetrators were older than the survivors, but in the remaining five pairs (55,55%), the attackers were younger than their survivors. Double survivors were recorded in one (11,11%) of the survivor-perpetrator pairs. In this particular case, the perpetrator was older than the survivor of 5 years, but in turn, younger than the other survivor of 59 years.

5.3.3 Racial distribution.

In the following table, the different races of the individuals who were involved in H-S killings are discussed.

Table 5.8

Frequency table for distribution of race

Race		Subtotal	Frequency	Percentage
Black		83		96,51
	Perpetrator		36	
	Victim		38	
	Survivor		9	
Coloured		3		3,48
	Perpetrator		2	
	Victim		1	
Total		86	86	100

As illustrated in Table 5.8, most H-S killings involved individuals of Black African descent. In particular, 36 (94,73%) H-S attacks were perpetrated by black police officials followed by 5,26% coloured members (or two perpetrators). If most police officers belong to a black African cultural group, it can be expected that a large percentage of the perpetrators would

belong to this group. In the case of victims, 97,43% belonged to the black African population group (38 victims) and one victim was coloured (2,56%). One interracial relationship was recorded between a coloured male and a black African female. Thus, 74 black (96,10%) and 3 coloured (3,89%) individuals died in police H-S killings and no other population groups were involved in these attacks during the 2012-2013 period. All of the nine survivors were of black African descent. Unfortunately, the SAPS were unwilling to provide specific statistics on racial distribution, which makes it difficult to compare the results of the current study with racial distribution in this organisation. Nonetheless, the SAPS are a sub-population of the broader South African society, and therefore a similar racial distribution can be expected because after the first democratic elections (1994), more black Africans were now employed by the SAPS in order to be more representative of the country's demographical composition.

5.3.4 Types of H-S killings.

In section 2.2.4, a distinction was drawn between the different types of H-S killings. The results of these types of killings in the current study are discussed below.

Table 5.9

Frequency table for H-S subtypes

H-S subtype	Frequency	Percentage
Extra-familial H-S	3	7,89
Familicide-suicide	1	2,63
Fillicide-suicide	1	2,63
Intimate partner H-S	33	86,84
Total	38	100

The most common H-S subtype found within the SAPS was intimate partner H-S with 33 cases (86,84%), followed by three cases of Extra-familial suicide (7,89%). An equal distribution of 2,63% (or 1 case each) was found for the remaining two subtypes, suggesting that these two subtypes rarely occur in the law enforcement sector.

5.3.5 Relationship between the perpetrators, the victims, and the survivors.

This section consists of two parts: In the first part, the results of the classification of the relationship between the perpetrators, the victims, and the survivors are reported, followed by the type of relationship between the various parties involved.

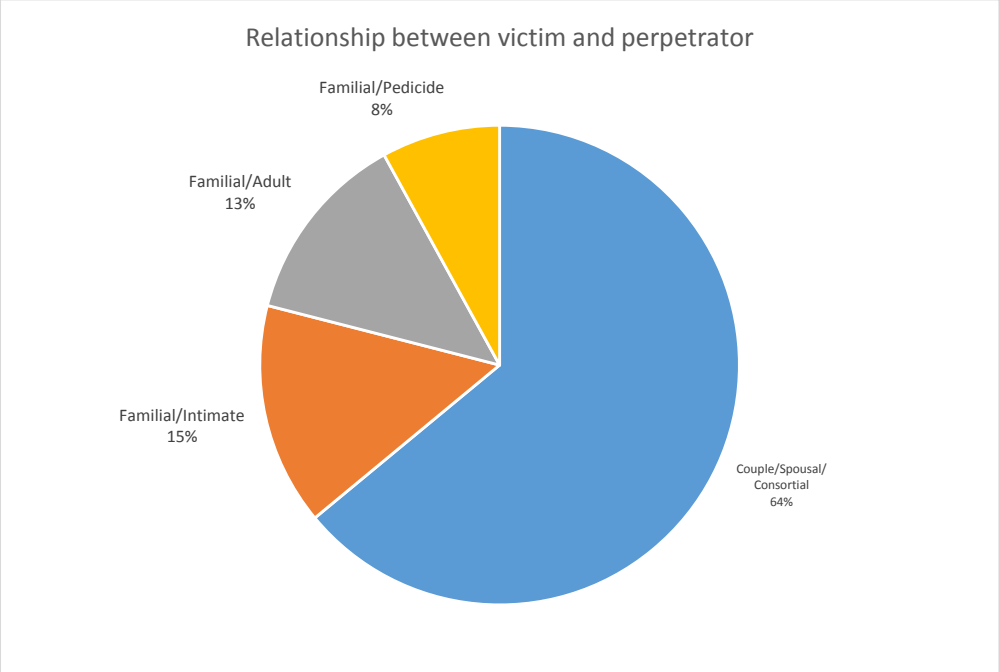

Figure 5.4: Classification of relationship between the victim and perpetrator

As indicated in Figure 5.4, most H-S relationships within the law enforcement sector were classified as either couple, spousal, or consortial, with 25 victims (64%) followed by 6 victims within the familial-intimate (15%) category. Next, five victims (13%) were recorded under the familial-adult category, and lastly, three victims (8%) fell into the familial-pedicide category. Thus, most of the H-S attacks (79%) were perpetrated by individuals who were in a relationship which involved sexual intimacy.

Table 5.10

Chi- Square Test for Independence for H-S subtype and classification of relationship between the perpetrator and victim

Chi- Square*	31.30
Degrees of Freedom	9

Note. * 20% of the cells have expected counts less than 5.

As illustrated in Table 5.10, a significant association was found between the intimate partner H-S and the couple, spousal, or consortial classification category (χ^2=31.30, p< .05).

In Table 5.10, 20% of the cells have expected counts of less than five, whereas it is assumed by some researchers that expected frequencies should be at least five (Flynn et al., 2009). However Howell (2010, p. 151) maintains that the latter is a conservative position, and that he would not feel "overly guilty" when he violating it. More specifically, Bradley and his co-workers (1979, as cited in Howell, 2010) tested Type I errors in a computer-based sampling study using both 2 x 2 and 4 x 4 tables and the results indicated that the percentage of Type I errors rarely exceeded .06, even for small sample sizes of 20. Only a few Type I errors were found in 2 x 2 tables consisting of samples as small as eight (Camilli & Hopkins, 1979, as cited in Howell, 2010). The current study included a sample of 38 H-S cases, which clearly exceeded the sample sizes used in these two studies. Therefore, the results represented in Table 5.10 and also in the rest of the Chi-square tests used in this chapter can be considered a valid reflection without violating the assumptions of this non-parametric technique. In any case, subsequent analysis of some of the contingency tables using Fisher's exact test, which is often recommended for such tables containing cells with small expected frequencies, confirmed the Chi Square results.

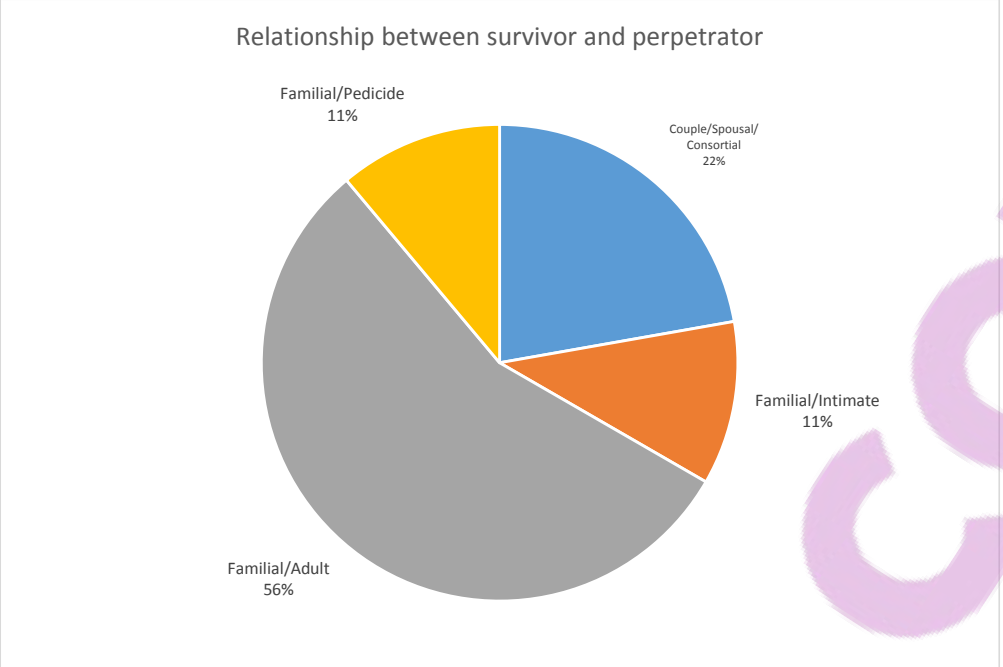

Figure 5.5: Classification of relationship between the survivor and perpetrator

In Figure 5.5, most H-S relationships between the different categories of survivors and perpetrators were classified as being familial-adult with five survivors (56%), followed by two relationships in the couple, spousal, or consortial category (22%). The two other remaining relationships were classified as being either familial-intimate or a familial-pedicide, with one case registered under each category (11%). Although these statistics classified the relationship between the parties involved, a key question remains: "What type of relationship was there between the victims and the perpetrators as well as between the survivors and their perpetrators?" This question is addressed in the following section.

Table 5.11

Frequency table for type of relationship between the victim and perpetrator

Relationship	Frequency	Percentage
Boyfriend-Girlfriend	14	35,89
Boyfriend-Girlfriend/separated	3	7,69
Divorced	1	2,56
Extra marital affair	6	15,38
Married	9	23,07
Married/separated	1	2,56
Other	2	5,12
Other relative	1	2,56
Parent-child	2	5,12
Total	39	100

The most common type of relationship between the victims and the perpetrators was the boyfriend-girlfriend one with 14 recorded victims (35,89%) followed by 9 married victims (23,07%). Other important types of relationships included six victims (15,38%) related to extra marital affairs as well as three boyfriend-girlfriend-separated victims (7,69%). The remaining relationship categories were more evenly distributed with one case each (2,56%), although the parent-child category displayed a slightly higher percentage of 5,12% (or two victims). The "Other" category was specifically used in order to list love triangles between two couples and needs to be further explained. Although these two cases were unrelated, the perpetrators were both in committed relationships, but their female partners were also involved with other romantic partners. These other two male partners were not in any way related to the perpetrators nor had they met their acquaintance prior to the H-S incident and can therefore be considered total strangers. For this reason, "Other" was considered to be the most appropriate category in this regard.

Table 5.12

Chi- Square Test for Independence for H-S subtype and type of relationship between the perpetrator and victim

Chi- Square*	78.17
Degrees of Freedom	24

Note. * 20% of the cells have expected count less than 5.

In Table 5.12, a significant association was found between intimate partner H-S and being in a boyfriend-girlfriend type of relationship (χ^2=78.17, p< .05).

Although not graphically presented, most of the relationships between the nine survivors and their perpetrators were evenly distributed (11,11%) amongst the different relationship categories. Nonetheless, the "Other relative" category displayed a slightly higher proportion of 22,22% (or two survivors). These survivor-perpetrator relationship categories resemble the victim-perpetrator relationship categories that were originally displayed in Table 5.11, although two optional categories were now added, namely the "Acquaintance" and "Friend" categories to accommodate these single individuals.

5.3.6 Living characteristics between the parties involved in H-S attacks.

In this section, the results of the living characteristics of the victims and their perpetrators are discussed, followed by the characteristics of the survivors and their attackers.

Table 5.13

Frequency table for living characteristics of the perpetrators, victims, and survivors

	Victims	Frequency	Percentage	**Survivors**	Frequency	Percentage
Together		16	41,02		3	33,33
Separately		23	58,97		6	66,66
Total		39	100		9	100

According to Table 5.13, most of the victims lived separately from the perpetrators (58,97%) compared to 41,02% who stayed with their respective attackers. A similar trend was observed in the case of the survivors in which six (66,66%) of the nine survivors lived

separately from the perpetrators and three (33,3%) stayed with their attackers. It should be clear that although the majority of both victims (58,97%) and survivors (66,66%) did not live at the same residential address as their perpetrators, they were still attacked at the place of their own accommodation.

5.3.7 Antecedent history related to the perpetrator.

The following table presents the antecedent history of the perpetrator.

Table 5.14

Frequency table for antecedent history of the perpetrator

Antecedent Historical Factor	Frequency	Percentage
Alcohol abuse	4	10,52
Death of a colleague	4	10,52
Depression	1	2,63
Exposure to violence-in the line of duty	2	5,26
Financial stress	7	18,42
History of physical-violence	11	28,94
History of verbal-discord	8	21,05
Intimate separation	3	7,89
Outstanding disciplinary cases	6	15,78
Physical health problems	2	5,26
Previous psychological/ psychiatric treatment	4	10,52
Previous suicide attempt	2	5,26
Previous suicide threats	9	23,68
Talk of suicide	3	7,89

Table 5.14 illustrates potential precipitating factors that played a role in the lives of police H-S perpetrators. Information on these potential factors were obtained from both the SAPS official Suicide Follow-up Questionnaires and dockets that contained information and statements made about the H-S incidents. The most important factors, in descending order, include the following: A history of physical violence was recorded for 11 perpetrators (28,94%), nine perpetrators threatened suicide (23,68%), a history of verbal discord (heated

arguments with the wife or girlfriend in the past) was identified in the lives of eight perpetrators (21,05%), seven perpetrators had experienced financial stress (18,42%), and six attackers (15,78%) had outstanding disciplinary cases at the SAPS. Other less important factors included alcohol abuse, the death of a colleague, and previous psychological or psychiatric treatment, which were recorded for four perpetrators respectively, or 10,52% for each factor. The remaining factors not only pertained to talk of suicide and intimate separation (each factor included three perpetrators or 7,89% respectively), but also the exposure to violence or aggression in the line of duty, previous suicide attempts, and physical health problems (each factor included two perpetrators or 5,26%). Depression was identified in only one perpetrator (2,63%) as a precipitating factor in a H-S killing. Although a substantial amount of data was available on the antecedent history of the perpetrator (e.g., history of physical violence and previous suicide threats), a large proportion of information was unavailable regarding mental health issues (e.g., depression and other psychiatric problems). This can be largely attributed to the fact that the SAPS do not investigate the psychiatric history of police officials who have committed H-S killings. Although the SAPS Psychological Services "Suicide Follow-up Questionnaire" makes provision for recording the psychiatric history of the perpetrator, this information is seldom known by commander and colleagues of the deceased member (see section 2.5). Thus, obtaining the psychiatric history of the perpetrators involved proved to be a difficult endeavour.

5.3.8 Perpetrators level of education.

The following table indicates the police perpetrators level of education.

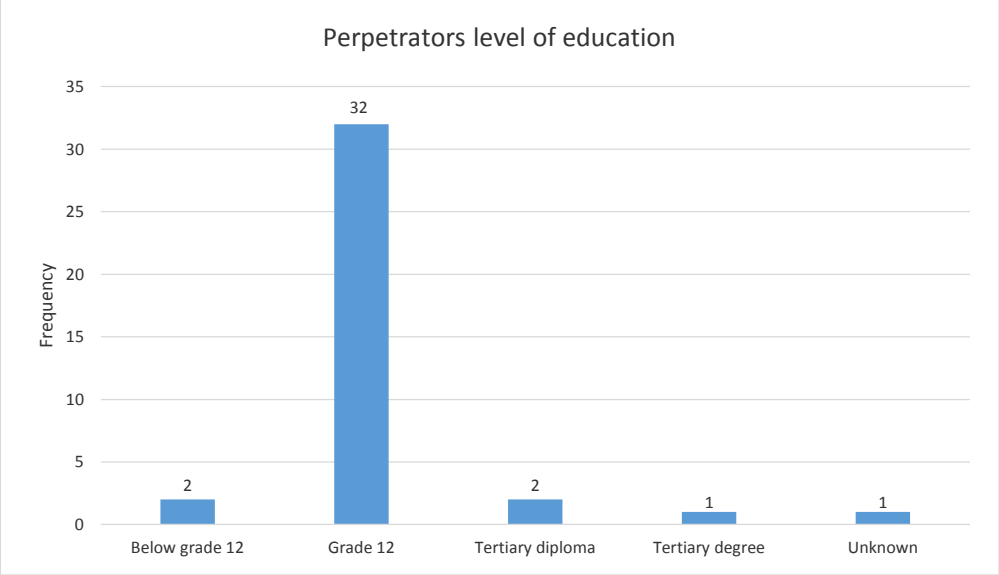

Figure 5.6: Perpetrator's level of education

The majority of the perpetrators (84,21%) had a secondary school education, while two offenders (5,26%) had not achieved their Grade 12 certificates. Two perpetrators had acquired a tertiary diploma (5,26%) and one perpetrator (2.63%) had acquired a tertiary degree. Unfortunately, in one of the cases, the educational level of the offender was unknown and was indicated as such.

5.3.9 Ranking structure of the perpetrators.

The following table depicts the perpetrators rank level before the H-S incident.

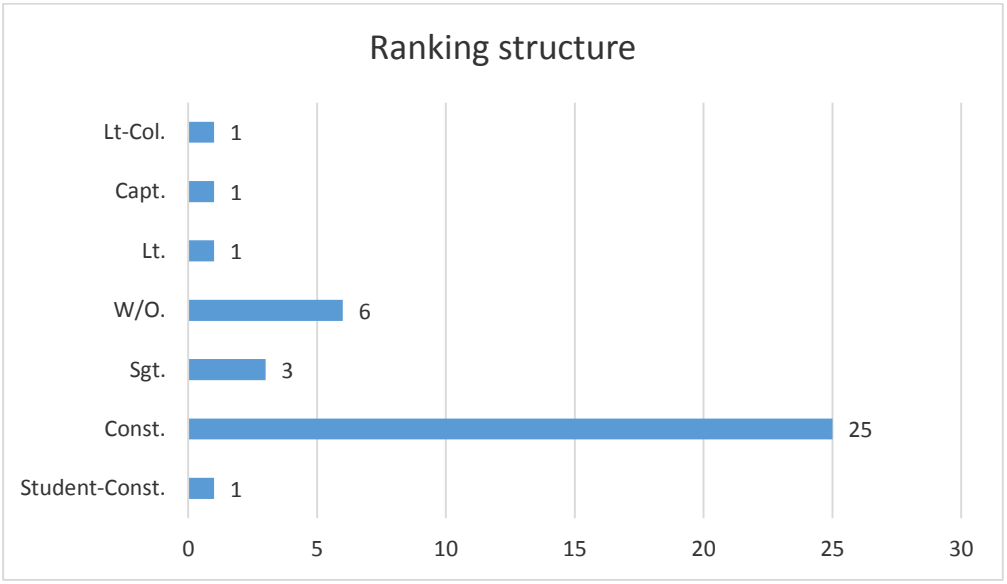

Figure 5.7: Rank of the perpetrator

Most perpetrators held the non-commissioned officer's rank of constable (25 or 65,79%), followed by six warrant officers (15,79%) and three sergeants (7,89%), while one student constable (2,63%) committed a H-S attack. Three commissioned officers, which included a lieutenant, captain, and lieutenant-colonel (2,63% each) also committed this act, but no other senior commanding officers from colonel upwards were represented in the current study. Therefore, the H-S phenomenon appears to be more common amongst the SAPS non-commissioned officers.

5.3.10 Occupation of victims.

The following table describes the type of employment of the victim before the H-S act.

Table 5.15

Frequency table for the occupation of victims

Employment Category	Frequency	Percentage
Clerks	11	28,20
Craft/Trade worker	2	5,12
Elementary occupations	2	5,12
N/A	3	7,69
Service work/Market sales	5	12,82
Technicians/Assoc. prof.	1	2,56
Unemployed	5	12,82
Unknown	8	20,51
Unspecified/Other	2	5,12
Total	39	100

The majority of the victims performed administrative duties in either the private or public sector. Eleven individuals (28,20%) held clerical jobs and five victims (12,82%) were employed as Service workers or Market sales agents. These victims not only included a female police officer, but also four individuals working in the retail industry (e.g., Edgars). Two victims (5%) were classified in the "Unspecified or Other" category, a traditional community worker and a student, and five victims (12,82%) were unemployed during the H-S killings. Also indicated in Table 5.15, three victims (7,69%) were allocated to the "Not Applicable" (N/A) category which warrants further explanation. This category included three children who were at primary school during these attacks and were therefore not part of the labour market. The remaining victims in Table 5.15 belonged to a broad distribution across various occupations which included two craft or trade workers (5,12%) within the railway and mining sectors, elementary occupations which included two cleaners (5,12%),

and a technician (2,56%) who was employed in the telecommunication sector. Lastly, the occupational status of eight (20,51%) of the victims was unavailable for inclusion in the current study.

5.3.11 Occupation of survivors.

In turn, the following table describes the survivor's type of employment before the H-S attacks.

Table 5.16

Frequency table for occupation of the survivors

Employment Category	Frequency	Percentage
Clerks	1	11,11
Elementary occupations	1	11,11
N/A	4	44,44
Service work/Market sales	2	22,22
Unspecified/Other	1	11,11
Total	9	100

As illustrated in Table 5.16, four survivors (44,44%) were allocated to the N/A category. One survivor was only 5 years of age at the time of the incident and the second survivor was a scholar still in primary school. Thus, both these survivors were considered minors at the time of the H-S attacks. The third survivor, who was allocated to the N/A category, was a pensioner, and therefore cannot be considered part of the active labour force. Lastly, the fourth survivor was unemployed at the time of the H-S attack. Furthermore, two survivors (22,22%) were classified in the "Service worker or Market sales" category, both of whom are serving police officers. The remaining survivors belonged to a broad distribution across various occupations which included a clerical worker (supervisor), unspecified or other (headman), and lastly, an elementary occupation (yard foreman).

5.3.12 Method of death.

The following table indicates the type of weapon used to commit H-S killings.

Table 5.17

Frequency table for method of death for both victims and perpetrators

Method of death	Frequency	Percentage
Hanging	1	1,29
Shooting	76	98,70
Total	77	100

As indicated in Table 5.17, the method of choice for committing both homicides (victims) and suicides (perpetrators) was the firearm. More specifically, the official service pistol was used in the majority of H-S cases, although there was an exception to this rule on two occasions. In the first instance, the perpetrator used his service pistol to murder the victim, but later used his private firearm to commit suicide. In the second instance, a perpetrator hanged himself (1,29%) in prison after he was convicted of both murder and attempted murder by killing his ex-girlfriend and wounding both their child and a relative during the same attack with his service pistol. Thus, a different suicide method was utilised by this particular perpetrator in the absence of a firearm. Although not indicated on Table 5.17, in the instances of the nine survivors (attempted homicides) a firearm was also used to wound them.

5.3.13 Number of wounds.

The following section reports on the number of wounds sustained by the victims, survivors, and perpetrators involved in an H-S attack.

Table 5.18

Frequency table for number of wounds sustained by the perpetrators, victims, and survivors

		Subtotal	Frequency	Percentage
Perpetrators		38		
	Single		36	94,73
	Multiple		0	0
	Unknown		2	5,26
Victims		39		
	Single		9	23,07
	Multiple		26	66,66
	Unknown		4	10,25
Survivors		9		
	Single		2	22,22
	Multiple		6	66,66
	Unknown		1	11,11

Table 5.18 compares the number of wounds that were sustained by the parties involved in an H-S attack. Nine victims (23,07%) and 36 perpetrators (94,73%) had single wounds to their bodies at the time of autopsy, while two of the survivors (22,22%) each sustained one bullet wound. Next, 26 victims (66,66%) had multiple wounds on their bodies while none of the perpetrators sustained more than one wound due to the lethal use of a firearm to commit suicide. Only one perpetrator used a different suicide method (hanging), and in this case, the offender also succumbed to only one 'wound'. Three victims sustained 10 or more gunshot wounds and one of these victims sustained the most wounds to her body, that is twelve wounds. The majority of survivors sustained three and four wounds respectively, while the most wounds sustained by a single survivor amounted to 16 gunshot wounds

while she was sitting in her motor vehicle. Unfortunately, data on the number of wounds were missing for four victims (10,25%), two perpetrators (5,26%), and one of the survivors (11,11%); this was indicated as "Unknown" on the South African Police Service Homicide-Suicide Incidence Coding Form. Nonetheless, a firearm was utilised to commit both the killings (homicide and suicide) as well as the attacks (attempted homicide) in these cases that fell into the unknown category.

5.3.14 Location proximity and body location.

This section discusses both the location proximity and the location of the body of the victims and their perpetrators.

Table 5.19

Frequency table for location proximity

Location proximity	Frequency	Percentage
Same building	2	5,26
Same property	7	18,42
Same room	19	50,00
Same town/city	8	21,05
Other	1	2,63
Unknown	1	2,63
Total	38	100

In half of the 38 H-S cases (50,00%), the victim-perpetrator pairs were found in the same room followed by eight cases (21,05%) occurring in the same town or city. In seven cases (18,42%), the victim-perpetrator pairs were discovered on the same property while only one case (2,63%) was registered under the "Other" category. In this particular case, the perpetrator committed suicide in prison after being convicted of murder and attempted murder (see section 5.3.12 on the method of death). In the remaining cases, two (5,26%) were registered under the same building category and the location proximity was unknown

for only one victim-perpetrator pair (2,63%). While these statistics classify the location proximity between the victims and the perpetrators involved, the next section discusses where the bodies of the victims and perpetrators were found.

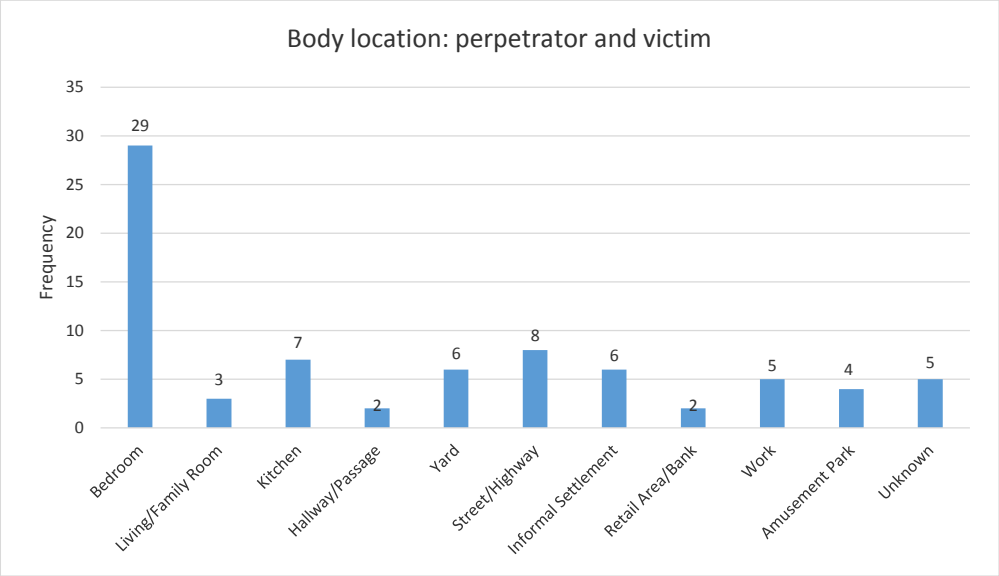

Figure 5.8: Body locations for perpetrators and victims

In most cases, 29 bodies of both the perpetrators and their victims were mainly discovered in the bedroom (37,66%), while eight bodies were found in the street or on the highway (10,38%). Seven bodies (9,09%) were found in the kitchen area, while six bodies (7,79%) were discovered in both the yard and informal settlement areas respectively. Five corpses (6,49%) were discovered at work. Unfortunately, the body location was unknown for five bodies (6,49%) and was indicated as such on the coding form. An equal distribution of two bodies (2,59%) was found for each of the following categories: hallway or passage and retail or bank area. Four corpses (5,19%) were discovered in amusement parks, and lastly, three bodies (3,89%) were found in the living or family room area.

5.3.15 Presence of suicide notes and authorship.

In this section, the presence of suicide notes, tapes or visual recordings is discussed, along with an examination of information about the authorship of the suicide notes in cases where such notes were found.

Table 5.20

Frequency table for presence of suicide notes

Type of suicide notes	Frequency	Percentage
Hand written	3	7,69
Recordings (electronic-device)	1	2,56
None left	35	89,74
Total	39	100

Three suicide notes (7,69%) were left behind by the perpetrators of a police H-S attack. In one instance, the perpetrator not only left a suicide note, but also made a visual recording on an iPad moments before the attack. Unfortunately, the detectives who found both the suicide note (that contained the PIN code) as well as the iPad, incorrectly entered the pin code more than once, which locked this electronic device. After numerous attempts by the SAPS Cyber Intelligence, this device could not be opened to unlock the stored visual recording. In the two remaining cases, the perpetrators were also the authors of their respective suicide notes. Lastly, most of the perpetrators did not leave any sort of suicide notes (either handwritten or electronically) (89,74%).

5.3.16 Toxicological findings and intoxication before the act.

In the following section, the availability of toxicological results is discussed followed by the perpetrators and victim's blood alcohol levels before the H-S killings were committed.

Table 5.21

Frequency table for available toxicological findings (blood alcohol levels)

	Available results	Total	Frequency	Percentage
Perpetrator		38		
	Yes		7	18,42
	No		31	81,57
Victim		39		
	Yes		4	10,25
	No		35	89,74
Survivor		9		
	Yes		0	0
	No		9	100

According to Table 5.21, seven (18,42%) toxicological reports were available for the perpetrators and four (10,25%) reports for the victims. Unfortunately, the blood alcohol levels of the survivors were not tested after their respective H-S attacks. Thus, possible intoxication was unknown for 31 H-S perpetrators (81,57%), 35 victims (89,74%), and all of the nine survivors.

Table 5.22

Frequency table for intoxication before the act

	Intoxicated	Frequency	Percentage
Perpetrator			
	Yes	3	7,89
	No	4	10,52
Victim			
	Yes	0	0
	No	4	10,25

Table 5.22 illustrates that slightly more perpetrators (10,52%) were not intoxicated before committing the H-S killings compared to the perpetrators (7,89%) who were intoxicated. In contrast, none of the four victims (10,25%) had used alcohol before they were killed by their attackers. However, it is important to note that some police dockets in which the toxicological results were still outstanding from the state laboratories or those which did not

request blood alcohol tests, contained additional photographic evidence of alcoholic beverages that were present at the scene of the crime. Therefore, it is likely that more individuals had used alcohol before the final H-S act.

5.3.17 Motive for the act.

Although section 5.3.7 reported on the antecedent history of the perpetrators, the next section highlights the triggering event that probably initiated the final H-S attack.

Table 5.23

Frequency table for the motive for the act

Motive	Frequency	Percentage
Amorous jealousy	10	26,31
Ending relationship	7	18,42
Financial adversity	2	5,26
Heated argument/quarrel	16	42,10
Infidelity (real/perceived)	9	23,68
Marital conflict	4	10,52
Other	2	5,26
Relationship conflict	3	7,89
Unknown	5	13,15
Total	38	100

In most of the police H-S cases, a heated argument or quarrel was the most important precipitating factor in the lives of 16 perpetrators (42,10%), followed by 10 amorous jealous perpetrators (26,31%). According to statements obtained from family members or friends, nine perpetrators committed H-S killings due to real or perceived infidelity (23,68%). Other motives included the ending of a relationship in the lives of seven perpetrators (18,42%), four perpetrators had marital conflict (10,52%) while three perpetrators struggled with relationship conflict (7,89%). It is important to note that in 20 of the 38 H-S cases, more

than one motive was identified, although it was deemed impossible to establish which motive was more decisive than the others. Also indicated in Table 5.23, the "Other" category was used to classify two other H-S motives which do not fit into one of the existing categories. In the first instance, the perpetrator raped the victim before he committed the H-S killings, and in the second instance, the victim's parents did not want to accept the police official in the family and refused to accept his "Lobola" (bride price). Furthermore, the parents of the victim later forced their daughter to marry another man who was financially more successful than the police official, but was HIV positive. This last instance could not be classified under "Ending of a relationship", because this category was originally intended to be used when a couple breaks up and the immediate reaction thereafter is an H-S attack. The couple in question had already ended their relationship a few months prior to the final H-S incident. Lastly, in the lives of five of the perpetrators (13,15%), the motive was unknown and was documented as such.

Table 5.24

Chi-square Test for Independence for H-S subtype and motive for the act

Chi-square*	28.37
Degrees of Freedom	24

Note. * 20% of the cells have expected count less than 5.

In this last Chi-square test, there was a significant association between intimate partner H-S and a heated argument or quarrel as the motive for the final act (χ^2=28.37, p< .05).

5.3.18 H-S profiles of a typical perpetrator and victim of such attacks.

The following profiles of a typical police H-S perpetrator and victim were developed by using the results of the current section:

The perpetrator is likely to be a black African male who is 35 years old with a grade 12 education. He is a constable within the SAPS, has a history of domestic violence, and has threatened to commit suicide in the past. Furthermore, his victim is usually an intimate

partner and she is probably younger than he is. The official service pistol would be used to commit both H-S killings.

The typical victim of a police H-S attack would be a female of black African descent who is 30 years of age. She is usually the girlfriend of the perpetrator and is employed as an administrative clerk in either the public or private sector. The victim would probably be shot multiple times and killed by her amorous jealous boyfriend due to a heated argument or quarrel.

5.4 RA 3: Further Explore the Personal Dynamics between a Perpetrator and a Victim in H-S and to Establish the Possible Role that Patriarchy Plays in Such a Relationship.

In order to answer this aim, three interviews were conducted with survivors of an H-S attack. Four main themes emerged from the transcripts, namely: patriarchal dynamics in H-S relationships, financial issues and the patriarchal order, the death wish ("Thanatos") of the perpetrator, and lastly, H-S survivors as double victims. Lastly, themes one and four have their own sub divisions and are discussed accordingly.

5.4.1 Patriarchal dynamics in H-S relationships.

This theme is subdivided into amorous jealousy and the H-S perpetrator as well as real or perceived infidelity.

5.4.1.1 Amorous jealousy and the H-S perpetrator.

As stated in section 2.2.4, jealousy killings usually involve a pathological possessive male killing his intimate female partner, and he subsequently commits suicide (Koziol-McLain, 2006). The male's patriarchal power over the female (Oliffe et al., 2014) is usually coupled with amorous jealousy (Jena et al., 2009) where the male isolates the female from her friends outside the relationship:

> *He paid Lobola for me and then I moved in with him. Then he started choosing friends for me that I must not go with who, I must not go home, I must not go visit my mom.*

If I go home I must just go for a few seconds and come back and then I started to see I've got a problem but I said to myself no it's fine you know maybe he will be fine along the way... Sometimes even on Sundays when I come out of church, maybe my phone would be off when I switch on my phone, I would get his SMS saying: "Ja you bitch you went to do your things there. You lied to me say you going to church you know!" I was used to that (Anna, 32).

Maria (30) had a similar experience:

Yes, he was very jealous, I never had any male friends. There was that I went to school with, I attended school with. He didn't want to see them anywhere near me, he was very jealous. I was to be alone not to associate with anyone but only himself… he had friends both male and females but I never said anything about it.

Thus, amorous jealousy was continuously observed during each of the interviews and this patriarchal power was also evident in the lives of the other respondents:

He was so jealous, very very jealous. Because I remember he used to, if I'm going home he didn't want me to take a taxi so he was always taking me home with his car, so he was so jealous (Lisa, 39).

Amorous jealousy can lead to patriarchal terrorism which is a form of domestic violence aimed at controlling and subordinating women in relationships (Johnson, 1995). Patriarchal terrorism is likely to increase in both duration and frequency until it reaches a deadly point (Swatt & He, 2006). During the interviews, it became evident that patriarchal terrorism escalated from yelling and swearing to full blown domestic violence that involved physical altercations as well as threatening the female with a firearm:

Where are you coming from"? I told him no I told you I'm accompanying my friend to the bridal expo because she is getting married, "Ja, you are stupid"! Well I was use to him swearing at me, every time when he is drunk he'd swears at me if he is not drunk he is quiet, he is a nice guy but once he gets drunk he changes. Then he

started to punch me in front of my friend, punch me with one fist and then, while my friend was there ok and then I got a cut in my face and then my friend took me to hospital (Anna, 32).

In the case of Maria (30), the perpetrator slapped her at first:

When I asked him where he was from we started arguing and then he slapped me and later he became more violent in their relationship by using

His fists most of the time.

He was short tempered and he was reacting in such a way that I didn't understand. I don't know how to explain, but anyway it happened. Then we started this relationship, it was fine in the beginning but he started to demand if he want something he would demand it... then he grab me cocked the firearm said he is going to kill me. I can't remember what we were arguing about so that's when I started to get worried because I saw that this guy is capable of doing anything (Lisa, 39).

According to Roberts et al. (2010, p.892), when the female ends the relationship, this termination may be seen: "as a violation of the patriarchal order, with interpersonal violence by the man against the women being an understandable, if not legitimate response". The ending of a relationship has been described by Richards and Weaver (2009, p. 310) as "an especially dangerous moment" for the female. It was observed that when the female threatens to leave the relationship, the perpetrator retaliates by threatening to kill her in return. This can be seen as a desperate attempt to command and control his 'prized possession' that is slipping away.

In 2013 I asked him to part ways. I asked him for a divorce and he said if he can't have me nobody else will. He used to tell me that every time when we fought, I will say I'll leave him I promise to leave him but never did then he'll say ok if I can't have you nobody else will and it was like that every time we fight and it was like that. And for the past years I was actually scared that

maybe he might kill me that's why I didn't leave him... then there came a time I told him I had enough. I'm done with this relationship and then he thought I was joking and when he realised I was serious, he even came to my workplace to threaten me (Maria, 30).

He said I can't leave him, I can't be in a relationship with someone else, so we need to talk about that. I have to compromise. I have to be in a relationship with him... I moved back to my husband he went home told my mother he is going to kill me because he can't live without me. He also phoned my husband as I was already staying with him that no I'm going to kill her you are not going to get her (Lisa, 39).

5.4.1.2 Real or perceived infidelity?

In this patriarchal order, the male perpetrator 'permits himself' to engage in extra marital affairs while the female victim is not allowed to look or talk to any male individuals. This was especially true for Anna (32)*:*

If there is a new guy at work then he would always accuse me: "…I saw you talking to that new guy which means you are in a relationship with him".

Every male is seen as a potential threat to the relationship and real or perceived infidelity from the female side is an important precipitating factor in H-S killings (Aderibigbe, 1997; Chan et al., 2004*).* Thus, a paradox governs the couple's relationship, meaning that it is permissible for the male to engage in affairs, but the same rule does not apply to the female:

You know we would go out but he was this person if we were out, no men must look at me. I mustn't greet the people that I know especially males and he was just like that… he started an argument out of nowhere. I said to him you know what I know it's a weekend its Friday today so I know you must go see your girlfriend…he went back together with one of his baby mammas… just go with peace, no need to fight. I

know its weekend you must sleep over, just go with peace so every weekend he would start a fight so that he can go, like he is angry he would just leave the house then he doesn't come back (Anna, 32).

Whenever we had fights like argument he would belittle me tell me say maybe he would have another female girlfriend a better one than me… there are those better ladies that he can get that are better than I am... he never had time for me he was always with his mistress (Maria, 30).

The perpetrator's suspicion of perceived infidelity by the female further fuelled his amorous jealousy which led to 'checking for evidence' to confirm her infidelity:

I was not supposed to wash myself after work, I was not supposed to change my clothes, my underwear after work, I was supposed to stay like that and change only when I go to bed… yes, if I wash myself, why was I washing myself ? Which means I was with somebody during the day somebody that he doesn't know. So I stopped taking a bath at night whatsoever just to please him

as well as setting a 'curfew' for his partner:

I went and I always come back home early, 16H00 I must be at home that one I knew... I would always make sure 16h00 when its knock-off time I go straight home, every time. Saturdays I'm at home, Sundays I go to church after church I come straight home (Anna, 32).

A similar curfew pattern was observed from one of the other survivors:

Whenever I was with them [her girlfriends] *he would call me and check where I was and then if I told him I was with them he would come and collect me and drop me off at the house* (Maria, 30).

5.4.2 Financial issues and the patriarchal order.

In some of the international and national H-S studies, financial difficulties were identified as an important precipitating factor in H-S killings (Oliffe et al., 2014; Skead 2010; Jena et al., 2009). More specifically, Bossarte et al. (2006) reported that some of the perpetrators in their study had experienced job or financial difficulties. Job and financial difficulties may have played a role in the current research as highlighted in the following excerpt from one of the interviews:

> *He got a rank at East Rand, so he was traveling to East Rand, so that was also stressful to him because he was using his own car going and petrol and already his salary was not adjusted that much because he was long in the Warrant Officer post. He had too much stress like via rank and finances and he had loans all over he had accounts everywhere... he had personal loans at all the banks, and he had accounts at all the shops like Foschini your Edgars, your Woolworths… I was even helping him to pay some of his accounts that he accumulated while I was not with him but for the peace sake I took that responsibility to myself that ok I'm going to help you with one, two or three (Anna, 32).*

Also in this case, the perpetrator seemed 'paranoid' over monetary issues which was clearly evident in the following excerpt:

> *You think I'm going to sign you as my wife so that you can kill me and then you can eat my money when I'm dead. You will not get my money my mom will eat my money with my kids.*

The male's patriarchal power over the finances of the female survivor is also evident in Maria's (30) life:

> *He asked me to leave where I was working in Jo'burg at MBD and then he asked me to leave work so that we can stay together... I left work, I quitted and then I went to stay with him… So I felt in terms of monetary issues he never gave me any money, although he asked me to quit my job and promised to take care of me, but he never did that. Instead my parents did that… so ja that's how it was.*

In this case, the perpetrator requested the survivor to quit her place of employment in order to live with him. Years later, when the relationship was coming to an end and divorce was imminent, he was not prepared to share his pension fund with her, although she was entitled to it according to law (GEPF, 2012):

> *He said if I want to divorce its fine but I'm not going to get any of his money, his pension money… his money is more so we can never share it…* [I said to him] *it's only fair that we share your pension money and then he said that will never happen… I believed he had those forms* [pension documents] *in the car when he shot me.*

The patriarchal perpetrators also made the decisions 'for the couple' regarding who would be responsible for the different financial expenses:

> *He wanted us to share everything paying rent but when it comes to grocery he would say I am a woman, I should buy the grocery but he never gave me money so we had financial issues.* (Lisa, 39).

The ranking structure in the police services further reinforced the patriarchal order at home, especially if the supposedly junior female member could financially invest more in the home. Anna (32) is a non-commissioned police officer, while her perpetrator spouse was a commissioned officer; this led to conflict in the relationship:

> *I was only a constable, but with my salary I could make a lot of things in the house I made lot of changes. I bought furniture I removed the old furniture he had so he had jealousy of that, that I could do so many things with my small salary... He even said to me I will buy my own furniture, he even didn't want to sit on the couches that I bought because he would feel like a constable bought him couches you know and I was doing that for the family. I was doing that for his sake and my sake, for both of us. He would see that I was doing that for myself, even the car that I bought…, he was driving an old BMW… so I bought a new Yaris car and he was like no your boyfriend bought it. It took him months before he could drive my car, it took him months to accept I bought furniture for the house.*

The experience of Lisa (39), also a police officer, was different from that of Anna (32) with her police boyfriend. Although the couple were both non-commissioned officers, the female survivor held a higher rank than the male perpetrator. In their relationship, he was trying to get everything he could from her in their time together:

> *Another thing that I saw he was also after my money because I was working...*[and] *his wife was not working… I use to tell him he must extend the house… he would say no, you must give me money to do that… even when we were staying together he was forcing me to buy the grocery alone because he used to say he is paying for his car… I use to buy him clothes when I got money but he never bought me anything.*

5.4.3 The death wish ("Thanatos") of the perpetrator.

As previously discussed in section 2.4, different theories exist to explain the H-S phenomenon. In the following paragraphs, a different theoretical approach is used to explain an aspect of the H-S phenomenon. The approach used is a bit eclectic due to the nature of the area in which various different theoretical approaches are used and to situate the discussion within this theoretical context. In psychoanalytical terms, all human beings possess a death drive which is initially directed towards the self, but is soon redirected towards others (Baron & Byrne, 2000). There is a constant conflict between the death wish (Thanatos) and the life instinct (Eros) which results in aggressive and destructive behaviour directed outwards towards other people (Litman & Tabachnick, 1994). Eventually, the Thanatos returns to the original object (the physical body of the individual) and causes death (Meyer et al., 1997). This death wish was observed in the interview with Maria (30) who initially stated that:

> *When we had arguments he threatened to kill me, but himself, never.*

This statement can be seen as the death drive redirected towards his wife. Later, when she left the relationship and filed for divorce, the death drive 'returned' in the following form:

He even threaten to kill himself, but he didn't tell me that he told his sister that he was going to kill himself".

In the following two excerpts, the death wish was already omnipresent in the lives of the perpetrators:

He didn't want to plan anything he was always saying: "What if I die?", so I was always angry with him. "Why do you always think about dying, why you always talk about that", he didn't want to plan any future. If I ask him something about the future he would always say if I'm still alive. Death was always in his mind, I don't know he never talked about it, he never explained why he always think about death but he was always thinking that if I'm still alive, ok. He didn't want to save money because he used to say if I die, I don't want anyone to get my money. So death was always in his mind I don't know why" (Lisa, 39).

The psychologist… just said he was suicidal... Apparently during the session he raised the point he once tried to kill himself at Swaziland somewhere… he tried to hang himself… and I also experienced it he once tried whilst I was living with him… he stayed in the garage and then he started the vehicle and then he put a water pipe in the exhaust to block the exhaust pipe…to gas himself… I could hear the car was running in the garage for too long… I could see he was suicidal (Anna, 32).

As stated in section 1.2, the above mentioned suicidal behaviours can be placed on a continuum varying in severity, ranging from suicidal ideation (suicidal thoughts), to suicide threats, attempting suicide, and lastly, completing the act (Swanepoel, 2003).

5.4.4 H-S survivors as double victims.

This last theme is sub divided into three categories namely: family dynamics between the survivors and their parents-in-law, the physical and psychological aftermath for the survivors, and survivors and their current romantic relationships. These sub sections are further discussed in the following paragraphs:

5.4.4.1 Family dynamics between the survivors and their parents-in-law.

As indicated in section 4.5, one of the respondents (Maria, 30) was at first reluctant to speak to the researcher because she was convinced that her in-laws were behind the phone call. After the researcher explained the scientific purpose of the study and that anonymity is guaranteed, the respondent was more open to participation in the current study. During the interviews, it became evident that although the victims survived an H-S attack, their ordeal was far from over. Anna (32) was firstly blamed for the incident by her in-laws:

> *They still blame me for whatever happened …that I was the one who shot him there were even stories around the location that he found me with a boyfriend… the family was furious they even came back after the funeral they even went to the Investigating Officer, he must show them the photos of what happened in the house whatsoever… they wanted to know who apparently fired six bullets but only four got me, the other two went through the roof. So they said the two bullets in the roof means there was a third person in the house… they didn't understand till today… they didn't even come to see me,*

while Maria (30) has no relationship with her parents-in-law:

> *Since the incident we are not talking to each other, when I was in hospital they never came to visit me and after I was discharged they even never came to visit me… so we not talking to each other. There is no relationship between us*

and her life was further uprooted after the incident:

> *I've moved from my home town to another town because of them.*

In both these cases, the survivors were also threatened, either to be killed by a 'hit man' or other family members:

> *They hired some guys to come and finish me off for whatsoever, but it didn't work because I'm still here* (Anna, 32),
>
> *His cousin tried to run me over with a car* (Maria, 30),

while Lisa (39) was only ignored after the attack:

They never contacted me after the incident

but it is important to realise that this respondent was engaging in an extra marital affair with the perpetrator. Thus, she was probably 'not close' to his parents while the other two respondents were married to their respective spouses.

5.4.4.2 The physical and psychological aftermath for the survivors.

All three survivors were shot multiple times by their partners. One bullet hit Lisa (39), although the perpetrator shot six times in her direction:

I think he shot six times, then I fell on the ground but he was still shooting… that's when I saw that no I've already shot on the head.

The other two survivors were hit numerous times:

Apparently [he] *fired six bullets but only four got me* (Anna, 32),

I had 16 bullet wounds on my body (Maria, 30).

These attacks not only affected the physical well-being of these survivors:

I'm physically challenged, I can't run, I can't walk fast there is a lot of things that I can't do anymore and I'm living in pain, like I haven't recovered 100%" (Anna, 32),

I cannot do things that I used to do, I cannot carry heavy things, I cannot run… I always have to request help from other people to help me carry things. I cannot stand for too long, it's not like before…" (Maria, 30),

but they also caused psychological injuries*:*

I wanted to kill myself, after I have survived (Lisa, 39).

The other two respondents also reported the following psychological injuries:

I was diagnosed with Post-Traumatic Stress Disorder. So yes I'm supposed to taking my anti-depressives… Sometimes when I feel I'm emotionally because this thing comes and goes so sometimes I just feel emotional so I do take my pills to calm myself down. Almost every night flashbacks comes, they just don't get away. Almost every night something comes like, by the way this thing happened you know almost every night. So I live with that (Anna, 32).

It has affected it [my life] *I don't even know how to put it. I was even scared to get back into my car, to sit in my car and drive. I was ashamed to walk in the street, because I was thinking people are talking about me… I don't enjoy my life anymore* (Maria, 30).

5.4.4.3 Survivors and their current romantic relationships.

Although all three of the respondents are involved in a current romantic relationship, the H-S attack experiences still exert a significant influence on their lives*:*

The guy doesn't have to shout at me, we don't have to fight. I must always be right, he must always leave me to talk he mustn't talk, he must just listen to me and then he must not be jealous even if he feels sometimes. You know jealous is sometimes natural but he mustn't tell such things (Anna, 32).

In the case of Maria (30), normal conflict within the relationship can be seen as a possible first step towards an H-S attack:

Every time we have an argument I start recalling all those things that use to happen with Peter. I just become somehow, I just become scared what if the same thing happens. What if what happened happens so, it's hard, it's not easy.

In turn, Lisa's (39) relationship with her estranged husband is 'built on her fear of firearms':

I don't trust someone with a firearm because even my husband wanted to have firearm I told him I will divorce him if but he forced. I was so angry and I only heard later that his got a firearm. I even wanted to open a case because I was never

consulted because the procedure is the next of kin has to be consulted because I knew my husband used to assault me before we got divorced so I'm always worried I don't trust anyone with a firearm that's the only thing.

5.4.4.4 Reflections on the qualitative part of the research process

In the qualitative tradition, it is customary to give an account of the researcher's role in the research process (Kelly, 2002). To begin with, I am a white, 42 year old Afrikaans speaking, South African male and I am employed by the SAPS (Psychological Services). Against this background, the following section will not only reflect on the differences between the researcher and the respondents, but also on their shared commonality. Also, the problem that was encountered during the qualitative part of the current study is discussed as well as how this problem was addressed.

It is important to note that the researcher does not have a shared history with the respondents. Both parties stem from different cultural and racial groups and the three respondents are female, while the researcher is male. However, a certain commonality is shared between two of the respondents and the researcher. These two respondents are members of the SAPS and the researcher is also employed by the same organisation. When the two police officers were initially contacted by the researcher to inform them of the research and to request their possible participation in the current study, they reacted positively when they heard that the researcher was from the same organisation. The researcher gained the impression that they were glad that their employer cares enough about them to send a professional to take an interest in their lives and their ordeal.

The other civilian participant did not share this background with the researcher and was initially reluctant to talk openly with the researcher (see section 4.5 of the previous chapter). After explaining the purpose of the research, listening to her fears and by giving her the option to participate or not, she agreed to take part in the current study. Her motivation for taking part in the research process was that she felt that she could: *"Save other people's lives"*.

Lastly, the interviews in the participant's second language posed a particular problem to the current study. English was the second language of all the respondents. While they could speak and understand the language, at times, some of them experienced difficulty expressing themselves, which was particularly evident in the case of Lisa (39) who lives in a remote rural area. Nonetheless, in the current study, the researcher used follow up questions to clarify any uncertainties until both the researcher and the participant felt comfortable that the message had been correctly received and understood.

5.5 Summary

During 2012-2013, 77 individuals died in 38 police H-S cases, while nine individuals survived these attacks. Most attacks took place during 2012 (58%), while the provinces of Gauteng and KZN recorded the highest incidence of H-S attacks. Individuals involved in this type of tragedy usually stem from a black African population group, while a small minority were of coloured descent. Results also showed that intimate partner H-S was the most common H-S subtype for the law enforcement sector. The H-Ss were usually perpetrated by the male gender, while females were often the victims. The majority of the perpetrators were older than the victims and most of these victims did not live at the same residence as their attackers. The most common classification category found between the victims and perpetrators was a couple, spousal, or consortial, and these individuals were usually in a boyfriend-girlfriend type of relationship. By using the Chi-square Test of Independence, significant associations were not only found in the intimate partner H-S and the couple, spousal, or consortial classification category, but also between the boyfriend-girlfriend relationship category. The majority of perpetrators were constables with a Grade 12 level of education, while the victims usually performed clerical work. Available antecedent historical factors indicated that most of the perpetrators had a history of physical violence or had threatened to commit suicide in the past. The most common motive for police H-S attacks was a heated argument or quarrel and the Chi square technique found a significant association between intimate partner H-S and this particular motive. Perpetrators did not have a tendency to leave suicide notes behind, but if they did, they were the authors of their respective notes. The bodies of both the perpetrators and victims were usually located

in the same room, especially the bedroom, and the service pistol was used to commit both H-S killings. Lastly, the available toxicological findings suggested that slightly more perpetrators were not intoxicated before the act, while none of their victims had consumed alcohol before the final incident.

Lastly, four themes were identified after analysing the three interviews with the survivors of a police H-S attack. The following main themes emerged: patriarchal dynamics in H-S relationships, financial issues and the patriarchal order, and the death wish ("Thanatos") of the perpetrator and H-S survivors as double victims. Also, themes one and four had their own sub themes or divisions. Theme one revolved around the amorous jealousy as well as the real or perceived infidelity of the perpetrator, while the other theme included the family dynamics between the survivors and their in-laws, the physical and psychological aftermath of an H-S attack, and current romantic relationships of the survivors. This chapter concluded with the researcher's reflections on the qualitative part of the research process.

Chapter 6
Discussion, Conclusions and Recommendations

6.1 Introduction

The study focused on H-S within a particular occupational setting, namely the SAPS. The common factors that are presumably responsible for these types of killings were identified and light was shed on some of the dynamics that operate in a few abusive relationships that ended in an H-S attack. An H-S incidence rate was calculated for the SAPS as an occupational sector for the 2012-2013 period. Furthermore, a demographic profile was also developed for both perpetrators and victims of these attacks. In this final chapter, the results of the current study are discussed and the socio-cultural and intrapsychic theories on H-S are tested using the macro, meso, and micro levels of analysis. Lastly, recommendations are made for an H-S prevention strategy for the law enforcement sector.

6.2 The Situational Factors in Police H-S Killings

As previously discussed in section 3.5, five research aims guided the current research on police H-S killings. More specifically, the purpose of RA 4 is to compare the situational factors in police H-S killings that were identified in the study with other civilian and law enforcement studies. The purpose of RA 5, is to make certain recommendations for preventative strategies within the SAPS. Both aims are essentially a consequence of the research results obtained. These aims are discussed in the current chapter.

6.2.1 Year of death.

As indicated in the previous chapter, more individuals lost their lives in an H-S attack during 2012 than in 2013. It is noteworthy that the SAPS also recorded their highest individual suicide rate in 2012 (see section 1.2), although the reasons for the increase in the law enforcement sector's suicide figures during 2012 remains unknown. Several public protests turned violent in that particular year and a number of police officers lost their lives in the line of duty, which could have exerted a negative psychological impact on these members.

As previously stated in section 1.2, the most well-known protest during this period was the "Marikana massacre" during August 2012 (Marinovich, 2016).

6.2.2 Province of death.

Although Gauteng and the KZN provinces recorded the highest proportion of H-S killings with a total of twenty cases (52,635%), more SAPS members were allocated to these two provinces (see section 5.2.4). Therefore, more H-S attacks could be expected for these two particular provinces in South- Africa. The local study of Skead (2010) also reported the highest incidence of H-S killings in both the provinces of Gauteng and KZN (29,46%), which falls in line with the findings of the current study. Unfortunately, other local studies focused only on regions or areas (Jena et al., 2009; Townsend, 2003; Roberts et al., 2010), while the national study of Mathews et al. (2008) did not report on the provinces, but rather, the entire country of SA. Thus, the results of the current study could not be compared with most of these previous local studies on H-S.

6.2.3 H-S incidence rates.

The SAPS displayed an H-S incidence rate of 24.27 per 100 000 police officers over a two year period (2012-2013). This rate was calculated by using the following formula: (total number of perpetrators/total population group) X 100 000. This internationally accepted method of calculation is widely used to calculate H-S incidence rates (Felthous & Hempel, 1995; Rosenbaum, 1990).

How does this local law enforcement incidence rate compare with other international H-S rates? Unfortunately, the international studies carried out by Violanti (2007a) and Klinoff et al. (2014), which exclusively focused on H-S within the policing sector, did not calculate an H-S incidence rate for the US law enforcement sector. Thus, the incidence rate of 24.27 per 100 000 police officers in the current study cannot be compared with other international police rates. The next step is to compare the results of the current study with the rates found in other international 'civilian studies' on H-S killings. Unfortunately, the SAPS are

only an occupational sector and therefore this rate in this organisation does not represent the national H-S rate in SA, thus rendering any comparisons problematic.

The limited number of SA studies which have investigated the H-S phenomenon found different incidence rates, depending on the type of study (regional or national). Unfortunately, the incidence rates reported by the different regional studies (Jena et al., 2009; Roberts et al., 2010) do not represent the national H-S incidence rate of SA, making comparisons difficult. Nonetheless, two other local studies provided national incidence rates for the country, thus making comparisons possible. The national study conducted by Mathews et al. (2008) estimated that the H-S rate in South- Africa amounts to 1.7 per 100 000, while the other national study of Skead (2010) found a much lower incident rate of 0.09 per 100 000 SA citizens. However, it should be pointed out that the former SA study included only femicide-suicide cases instead of all the different H-S subtypes found (see section 2.2.4). Nonetheless, intimate partner H-S (86%) was the most common subtype found in the current study, especially femicide-suicide cases (84%). When comparing the SAPS H-S incidence rate with these two local studies, it should be clear that the rate found in the current study greatly exceeded the rates found in both the aforementioned studies.

However, this finding should be interpreted with caution owing to the short period (2012-2013) that was covered. International 'civilian' studies on H-S investigated this phenomenon over different lengths of time, ranging from 5 years (Campanelli & Gilson, 2002), 10 years (Chan et al., 2004) and even as long as 79 years (Coid, 1983), while some of the SA studies used either a 2, 5 or 8 year period respectively (Roberts et al., 2010; Jena et al., 2009; Skead, 2010). A longer period is of the essence to generate a more accurate H-S incidence rate for the SAPS. In this regard, Loo (2003) argued that studies which examine police suicides should make use of longer periods to examine suicide rates in this occupational sector. A short time line such as a 2 or 3 year time period can easily distort the actual suicide rates, because there could be a high suicide rate in one year followed by a lower one or even complete absence of suicides the next year. This is especially true for H-S, which is generally regarded as a rare phenomenon (Eliason, 2009). In order to counter the short research period of the current study, the incidence rate was also calculated for the

2014-2015 timeline. An incidence rate of 20.36 per 100 000 police officials was found for this particular 2 year period which is clearly lower than the 2012-2013 rate, but can still be regarded as high when compared with the other two local national studies on H-S (Mathews et al., 2008; Skead, 2010).

6.2.4 Gender.

In the current study, most H-S killings were perpetrated by males (97,36%) against female victims (84,61%). This result is echoed by numerous international studies which also found that most H-S cases involved a male killing a female (Marzuk et al., 1992; Bossarte et al., 2006; Banks et al., 2008; Eliason, 2009). In the SA context, five local studies reached the same conclusion as their international counterparts (Osborne, 2001; Mathews et al., 2008; Jena et al., 2009; Roberts et al., 2010; Skead, 2010). More specifically, Osborne (2001) reported that 88% of the perpetrators were male compared to only 12% female offenders, while Roberts et al. (2010) found 95% of the perpetrators were male and only 1 offender was female (5%). These local findings were further confirmed by Skead (2010) who reported ratios of 90,8% and 8,3% for male and female perpetrators respectively. In strict contrast, the apartheid era study conducted by Roos et al. (1992), found a more balanced proportion between male (59%) and female (41%) perpetrators.

Another important finding in the current study was that only one female offender (2.63%) committed these attacks compared with 37 male perpetrators (97,36%). The limited number of females who perpetrated this type of killing is clearly evident in the national Swiss study of Panczak et al. (2013), who reported that only three female perpetrators (4.1%) killed their male victims compared to the 55 male perpetrators (75.3%) who killed females. Moreover, the international study of Gartner and McCarthy (2009) specifically found that only 20% of female perpetrators committed suicide after killing their male victims. The local newspaper surveillance study carried out by Skead (2010) reported that female offenders mainly targeted their male children instead of adult males, while Jena et al. (2009) could identify only one female perpetrator compared to 45 male perpetrators in her Pretoria regional study. It should be clear from the earlier discussion that males usually

perpetrated H-Ss, while only a small portion of females were guilty of committing such killings.

In the current study, more female victims (84,61%) were killed, while only 15,38% male victims lost their lives in a police H-S attack. A similar finding was reported by the local study carried out by Skead (2010) with ratios of 72,9% and 20,4% respectively for the male and female genders involved. The converse was true for the survivors in the current study in which slightly more males (55,55%) survived, compared to their female counterparts (44,44%). With regard to children who were involved in police H-S attacks, four boys were killed while only one boy survived the attack. These latter H-S attacks were perpetrated by the fathers of both the young victims and survivors. Regarding the female gender, no girls were attacked in the current research period by their parents. This result is inconsistent with the international findings of Hatters-Friedman et al. (2005) who found that most of the victims in their study were girls (65%) compared to only 35% boys, while Byard et al. (1999) found an equal distribution between the two genders (11 each). The local study of Townsend (2003) reported that only one child lost her life in an H-S attack and this victim was killed by her mother, while Skead (2010) found that more men murdered their children compared to women. These international and national findings are inconsistent with the results of the current study which found that only men perpetrated Filicide-Suicide attacks.

Although both civilian research and the current law enforcement study identified males as the main perpetrators of H-S attacks, the following question remains unanswered: Why do more police men commit H-S than female officers? As previously discussed in section 2.2.4, male patriarchy (Oliffe et al., 2014) is usually coupled with amorous jealousy (Jena et al., 2009; Panczak et al., 2013) which can lead to 'patriarchal terrorism', a form of domestic violence aimed at controlling and subordinating women in a relationship (Johnson, 1995). This patriarchal terrorism is likely to increase in both duration and frequency until it reaches a deadly point (Swatt & He, 2006), in this case, H-S killings. In the current study, amorous jealousy as well as real or perceived infidelity (see section 6.2.17) played an important role in the lives of numerous police perpetrators, while domestic violence in particular was used to control their intimate female partners (see section 6.2.10).

6.2.5 Age of the parties involved in an H-S attack.

In the current study on police H-S killings, a mean age of 35 years was found for the perpetrators, 30 years for their victims, and lastly 37 years for the survivors of these attacks. As previously discussed in the current chapter (see section 6.2.4), most perpetrators belonged to the male sex and their ages ranged from 24 to 50 years, while only one female perpetrated an H-S act; she was 30 years old. In the case of the victims, the youngest was 8 years old while the oldest victim was 46 years of age compared to the ages of the survivors, which ranged from age 5 to age 70 years. Thus, the mean age of the police perpetrators was 5 years older than their victims, but in turn, 2 years younger than the survivors of these attacks.

Various international studies have also found that the perpetrators of H-S attacks are usually older than their victims (Campanelli & Gilson, 2002; Malphurs & Llorente, 2006; Eliason, 2009; Flynn et al., 2009; Adinkrah, 2014). Currently, it is not clear how this effect of age can be theoretically interpreted; it remains an issue that must be resolved. Even the two law enforcement studies reported similar results to those of their civilian counterparts (Violanti, 2007a; Klinoff et al., 2014). In the first of these two police studies, Violanti (2007a) found that the perpetrators had a mean age of 39 years while their victims had a mean age of 33 years. This finding is more or less consistent with the mean ages of 35 and 30 years in the current study, respectively. The other police study reported mean ages of 46 for the perpetrators and 35 for their victims (Klinoff et al., 2014), which is inconsistent with the current results. Local studies on H-S also reported that the perpetrators of these attacks tended to be older than their victims (Skead, 2010; Roberts et al., 2009; Jena et al., 2009; Mathews et al., 2008; Osborne, 2001). More specifically, the perpetrators were either 4 or 5 years older than their respective victims (Roberts et al., 2009; Jena et al., 2009; Mathews et al., 2008), which is consistent with the current research. In contrast, Skead (2010) found a mean age difference of 12 years between the parties involved. The media surveillance study of Osborne (2001) did not report on the mean ages of either assailants or victims. However, the majority of perpetrators in this particular study were under the age of 50.

In other instances, the victims were found to be older than their respective attackers. The current study found that in only eight victim-perpetrator pairs, the victims were older than the perpetrators (10,38%). This finding is consistent with the local study of Townsend (2003) who reported that in only four of the 21 cases, the victims were older than their attackers. In contrast to these findings, Adinkrah (2014) reported that all the perpetrators in his Ghana study were older than their respective victims.

In conclusion, a mean age of 35 years was found for the perpetrators of police H-S killings. This finding is inconsistent with other international studies which reported that the mean age of perpetrators is usually between 40-50 years (Logan et al., 2008; Flynn et al., 2009; Eliason, 2009; Galta et al., 2010; Klinoff et al., 2014). Malphurs and Cohen (2002) reported two different mean ages for both younger and older perpetrators in their study. The older age group had a mean age of 70,5 years, while the younger group of perpetrators had a mean age of 36,6 years, which is more in line with the finding of the current study. Various SA studies have reported that the mean age of the perpetrators ranged between the ages of 32 and 37 years (Roos et al., 1992; Mathews et al., 2008; Roberts et al., 2009; Skead, 2010), which tends to be consistent with the finding of an average age of 35 years in the current study. Therefore, it appears that most perpetrators of both civilian and police H-S attacks are likely to be in their early to late 30s in the SA context.

6.2.6 Racial groups in H-S killings.

The majority of police H-S killings involved individuals from a black African descent. More specifically, 94,73% attacks were perpetrated by black police members, while only two coloured officials committed such killings (5,26%). It should be noted that after the fall of apartheid, the SAPS racial composition changed dramatically from being predominantly white to being predominantly black in order to be representative of the different population groups of SA. Therefore, if most of the police officers are black, it could be expected that a large percentage of the perpetrators who committed H-S would have been black.

In strict contrast to the former finding, several civilian international studies implicated white male perpetrators in H-S killings (Eliason, 2009; Roma, 2012; Logan et al., 2008), and the law

enforcement study of Klinoff et al. (2014) also found that this phenomenon was mainly perpetrated by the non-Hispanic white ethnic group. Unfortunately, the only other international study which focused on H-S within the policing sector did not report on racial distribution (Violanti, 2007a).

The local regional study of Jena et al. (2009) implicated both white and black male perpetrators, with each race being influenced by their own variables (e.g., age and employment status), while the other regional study carried out in Durban identified mostly black African males as being responsible for this type of killing (Roberts et al., 2010). The apartheid era study of Roos et al. (1992) found that the white minority committed most of the H-S killings (65%) followed by black Africans (29%), and lastly, coloured individuals (6%). However, the results of the latter study should be interpreted with caution. During the apartheid era, newsworthy events (e.g., H-S killings) usually reported only on the white minority rather than all the racial groups (Skead, 2010). It is therefore expected that a larger percentage of the perpetrators who would have committed this type of killing would have stemmed from the white population group. Also, at that stage, members of the SAPS were mostly white, whereas the racial distribution is now skewed to reflect black police officers due to the population demographics of the country.

Mixed results were reported by three of the other national studies. Mathews et al. (2008) found that the majority of the perpetrators stemmed from a white racial background, with coloured people being the least likely to commit these killings. In contrast, the two newspaper surveillance studies reported that most H-S attacks in SA were perpetrated by black African citizens, followed by the white and Indian population groups (Skead, 2010; Osborne, 2001).

In the current study, the majority of victims (97,43%) belonged to the black African population group, while only one victim was found to be coloured (2,56%). One interracial relationship was recorded between a coloured male and a black African female. Not all the international studies have reported on the racial background of the parties involved in H-S killings (Bourget et al., 2000; Malphurs & Cohen, 2002; Violanti, 2007a; Eliason, 2009;

Panczak et al., 2013). Other international studies which distinguished between the different racial groups, found that the victims usually belonged to the same race as their respective attackers (Campanelli & Gilson, 2002; Bossarte et al., 2006; Harper & Voigt, 2007; Logan et al., 2008). In these latter studies, most of the victims belonged to the white majority group. In contrast, Hanzlich and Koponen (1994) found that 83% of H-S events involved couples of an African-American descent compared to the interracial 17% (e.g., Oriental and white), while Harper and Voigt (2007) found only one interracial relationship in their study (African American and Hispanic). In the only international policing study which reported on race, the victims were found to be from a non-Hispanic white ethnic group (Klinoff et al., 2014). The findings regarding the victims of police H-S attacks in the current study differ significantly from those of most international studies, especially the policing study conducted by Klinoff et al. (2014). However, it should be kept in mind that the discrepancies found between the different international studies and the current study could be attributed to the different racial majorities found in that particular region or country.

In the SA context, the victims were usually of black African descent (Roberts et al., 2010; Skead, 2010; Osborne, 2001), followed by individuals from the white and Indian population groups (Roberts et al., 2010; Skead, 2010). Coloured individuals were the least represented in most local H-S studies (Roos et al., 1992; Osborne, 2001; Mathews et al., 2008; Skead, 2010), or even not at all (Jena et al., 2009; Roberts et al., 2010). It appears that the coloured population is less likely to be involved in H-S events compared to other population groups.

In the current study, the survivors of police H-S attacks were all of black African descent. However, it should be kept in mind that international and national studies focused only on the victims of H-S attacks rather than the survivors of these attacks (Adinkrah, 2003; Adinkrah, 2014; Harper & Voigt, 2007; Mathews et al., 2008; Jena et al., 2009), making comparisons between the current results regarding survivors and other studies impossible. An exception to this rule applies to the local study of Roberts et al. (2010). In this particular study, a single individual survived her attack, although specific details around this particular case were not provided, in particular, her population group.

Lastly, no other racial groups (victims, perpetrators, or survivors) were represented in the current law enforcement study which probably could be attributed to the small sample size that was used as well as the short research period (2012-2013).

6.2.7 Types of H-S killing within the SAPS.

The most common H-S subtype found within the SAPS was intimate partner H-S with 33 cases (86,84%). More specifically, in the majority of cases (84,21%), males killed their intimate female partners and subsequently committed suicide (femicide-suicide). Although intimate partner H-S usually involves femicide-suicide, this subtype also makes provision for female perpetrators killing male victims. In the remaining case (2,63%), one female police perpetrator killed her intimate male civilian partner and committed suicide thereafter. Other less important H-S subtypes found in the current study were three cases of extra-familial suicide (7,89%), followed by a single case (2,63%) registered under each of the remaining two subtypes of killings, namely familicide-suicide and filicide-suicide. The former subtype involved the killing of the entire family unit and subsequent suicide, while the latter subtype involved killing the children followed by suicide committed by the perpetrator.

Consistent with the findings of the current study, international studies on H-S also implicated intimate partner H-S killings (especially femicide-suicide) as the most common subtype found (Marzuk et al., 1992; Bossarte et al., 2006; Koziol-McLain et al., 2006; Saleva et al., 2007; Liem, 2010). A similar conclusion was reached by the two law enforcement studies conducted by Violanti (2007a) and Klinoff et al. (2014). However, a limited number of studies also identified females as the perpetrators of H-S attacks with males as their victims (Gartner & McCarthy 2009; Panczak et al., 2013). The two police H-S studies of Violanti (2007a) and Klinoff et al. (2014) both reported on female perpetrators killing their male partners. More specifically, the former study identified two female offenders while the latter identified only one perpetrator. These findings from both civilian and police studies are consistent with those of the current study which recorded one H-S case (2,63%) which involved a female perpetrator killing her male victim.

All five local studies reached the same conclusion as their international counterparts regarding femicide-suicide as the most common subtype found (Osborne, 2001; Mathews et al., 2008; Jena et al., 2009; Roberts et al., 2010; Skead, 2010). However, it should be noted that the study undertaken by Mathews et al. (2008), which exclusively focused on femicide-suicide, concluded that the 1.7 per 100 000 rate of femicide-suicide killings within SA greatly exceeded the international rate of 0.2 to 0.3 per 100 000 individuals, as originally reported by Coid (1983) as well as a number of other US studies (Marzuk et al., 1992; Campanelli & Gilson, 2002; Comstock et al., 2005; Bossarte et al., 2006). It is important to point out that this international H-S rate was calculated by including all the different H-S subtypes found in the USA and not only the femicide-suicide category, which was the focus of the local study conducted by Mathews et al. (2008).

The second most common H-S subtype found in the SAPS comprised three cases of extra-familial H-S (7,89%). This finding is in contrast with other international research which lists filicide-suicide as the second most common subtype found in the H-S literature (Marzuk et al., 1992; Hatters-Friedman et al., 2005; Harper & Voigt, 2007; Liem, 2010). Only one filicide-suicide case (2,63%) was registered in the current study. According to international research, familicide-suicide killings are more rare occurrences compared to femicide-suicide and filicide-suicide (Logan et al., 2008; Liem, et al., 2009); this subtype is predominantly committed by males (Marzuk et al., 1992; Byard et al., 1999; Sautter et al., 2014). These latter findings are consistent with the current study, which recorded one familicide-suicide case which was perpetrated by the father of the household who killed the entire family.

6.2.8 The relationship between the perpetrators, the victims, and the survivors.

In the current study, most H-S relationships between the victims and their perpetrators were classified as either couple, spousal, or consortial (64%). Other categories included the familial-intimate (15%), familial-adult (13%), and lastly, familial-pedicide (8%). It appears that the majority of H-S attacks (79%) were perpetrated by individuals who were engaged in a relationship that involved sexual intimacy. The majority of these relationships existed between boyfriend-girlfriend (35,89%) and married couples (23,07%). Other less important

types of relationships were extra marital affairs (15,38%), boyfriend-girlfriend-separated (7,69%), parent-child relationships (5,12%), while the divorced, married-separated, and other relative categories were more evenly distributed with one case each (2,56%). Lastly, the "Other" category was used to categorise love triangles. In these two particular relationships (5,12%), the female victims of perpetrators were also involved with other romantic partners while in a relationship with the perpetrator. However, the other two male romantic partners were not familiar with the perpetrators and were considered total strangers.

Internationally, most H-S killings are committed by spouses or consorts involving male partners who kill their wives, girlfriends, or even ex-girlfriends (Bossarte et al., 2006; Banks et al., 2008; Eliason, 2009; Flynn et al., 2009; Panczak et al., 2013). Similarly, the two law enforcement studies both found that more than 80% of the victims of H-S killings involved the intimate partners of the police officers (Violanti, 2007a, Klinoff et al., 2014). Local research which focused on all types of H-Ss also reported that the majority of H-S killings involved intimate partner relationships which included wives, estranged wives, ex- wives, girlfriends, ex-girlfriends, and lovers (Roos et al., 1992; Osborne, 2001; Roberts et al., 2010; Skead, 2010; Jena et al., 2009). More specifically, Skead (2010) found that almost half of all relationships in her study were intimate (45,5%), while Roberts et al. (2010) reported an even higher percentage of intimate partner relations (75,1%). Similar conclusions regarding intimate relationships were reached by Roos et al. (1992) and Osborne (2001) with 83% and 73% respectively. Lastly, Jena et al. (2009) reported that most couples were either married (47,8%) or romantically involved (30,4%).

Another important finding revolves around strangers. H-S incidents seldom occur between strangers (in less than 5%) when compared with those of current or former intimate partners (58%) (Bossarte et al., 2006). In the current study, 5,12% of the H-S killings occurred between strangers, which tends to fall in line with this international trend. However, research has indicated that this sub category of victims usually included landladies, neighbours, and co-workers with whom the perpetrators were infatuated or who had rejected them in the past (Gartner & McCarthy, 2009). Also, nurses and prostitutes are

included in this sub category with morbid obsession as an impetus in these types of killings (Richards & Weaver, 2009). The findings from these two latter international studies are in strict contrast with the current study which recorded two cases (5,12%) in which the perpetrators and victims were total strangers. Although the two perpetrators were involved in a romantic relationship with their female victims, they were not acquainted with the male victims with whom their female partners were also sexually involved.

In the case of survivors, the majority of H-S relationships were mainly classified under familial-adult (56%) followed by the couple, spousal, or consortial category (22%). Other less important relationships included familial-intimate and familial-pedicide (11% for both categories). The types of relationships between the perpetrators and the survivors were fairly evenly distributed, thus making deductions difficult. Nonetheless, the "Other relative" category displayed a slightly higher proportion of 22,2%. The types of relationships between the survivors and their perpetrators included an acquaintance, boyfriend-girlfriend, extra marital affair, friend, married, parent-child, and other (11% for each type). As previously stated in the current section (6.2.8), the "Other" category was used to classify perpetrators and victims who were considered total strangers. In these instances, a love triangle played an important role in these H-S attacks. More specifically, the perpetrators female victims were also involved with other romantic partners while in a relationship with the perpetrator. A similar trend was observed between one survivor and a perpetrator who had not met prior to the final H-S attack.

6.2.9 The living arrangements between the perpetrators, victims, and survivors.

In the present study, most victims (58,97%) lived separately from the perpetrators, while 41,02% stayed together. A similar trend was observed in the case of the survivors in which 66,6% lived separately from the perpetrator, while only 33,3% stayed with their respective attackers. The results of the current study offer some support for the findings of the limited number of international studies which reported on the domicile of the parties. Campanelli and Gilson (2002) reported that only 31% of the victims had cohabitated with their perpetrators before the killings, while Koziol-McLain et al. (2006) found an even higher

percentage of 49%. More specifically, 39% of the victims had lived with the relevant perpetrator in the past year (although not at the time of the incident), while only 10% had never lived with their attackers in the aforementioned study. In Quebec, Bourget et al. (2000) found that 33% of the victims were either separated or divorced from the perpetrators, while the African study undertaken in Ghana found that most H-S killings (46%) were perpetrated in the "shared dwelling" (Adinkrah, 2014, p.1086) of the couple. In an international police study, Klinoff et al. (2014) reported that couples or spouses had a history of separation in 50% of the cases involved.

In the SA context, Mathews et al. (2008) reported that 40% of the victims lived with their respective perpetrators, while 31% were married to them. These results are mostly consistent with current findings which also reported that 41,01% of the victims resided with their attackers, although a smaller percentage (23,07%) of the victims were married to them. Unfortunately, other local studies did not specifically indicate whether the couples (especially boyfriend-girlfriend) were cohabitating or not, thus making it difficult to align the results of the current study with these local civilian studies. Nonetheless, these SA studies clearly indicated the number of married couples in their particular studies and it is therefore expected that the majority of these married couples stayed together. For instance, Jena et al. (2009) found that almost half of the victims (48%) were married, while the study with the highest percentage of married couples (83%) was reported by Roos et al. (1992). Thus, since most of these couples stayed together in these studies, this aspect is inconsistent with the results of the current study which found that the majority of victims lived separately from their perpetrators.

6.2.10 Information obtained on the perpetrator.

The following section discusses information that is specific to the perpetrators of police H-S killings. The first part addresses the antecedent history of the perpetrators involved, while the second part focuses on their level of education. The last part in this section discusses which ranks held by the perpetrators within the SAPS were more common among those who commit these types of killings.

6.2.10.1 Antecedent history of the perpetrator.

The most important precipitating historical factors found in the current study were: A history of domestic violence (28,94%), suicide threats (23,68%), verbal discord (21,05%), financial stress (18,42%), and outstanding disciplinary cases at the SAPS (15,78%). Other less important factors included alcohol abuse, the death of a colleague, and previous psychological or psychiatric treatment (10,52% for each factor). The remaining factors revolved around talking of suicide, intimate separation (7,89% for each factor), and exposure to violence or aggression in the line of duty, previous suicide attempts, and physical health problems (5,26% for each individual factor). Depression as a mood disorder was identified in only one perpetrator (2,63%) as a precipitating factor in police H-S killings.

The international civilian study of Bossarte et al. (2006) reported that perpetrators had experienced legal problems (25,3%), job or financial difficulties (9,3%), drug or alcohol dependency (9,1%), a history of mental illness (7,2%), physical health issues (6.2%), and previous suicide attempts (2,6%). Bourget et al. (2000) specifically found that domestic violence and substance abuse (alcohol or pharmaceutical drugs) were important precipitating factors in their study, while Hatters-Friedman et al. (2005) found that perpetrators had a history of previous crimes as well as substance abuse, especially alcohol.

Other studies also indicated that many perpetrators of H-S exhibited a history of suicide threats and attempts (Saleva et al., 2007; Liem, Hengeveld & Koenraadt, 2009).

Klinoff et al. (2014) found that 44% of the police perpetrators had been found guilty of domestic violence in the past, 50% were separated from their victims, and 9% had a criminal history or outstanding or disciplinary case against them. The other law enforcement study of Violanti (2007a) found that 70% of police officers were guilty of domestic violence in the past and that exposure to violence and aggression in the line of duty coupled with domestic violence created a breeding ground for police H-S killings. These international findings, especially the two law enforcement studies, are mostly consistent with those of the current study regarding the antecedent history of the perpetrator.

In the SA context, Roos et al. (1992) reported that the stressors experienced by the perpetrators in their study included the following: 83% faced had experienced financial adversity, a large proportion had suffered from mood disorders (83%), 29% had outstanding court cases, job problems were identified in 12%, some had abused drugs and alcohol (12%), 6% had suffered with physical health problems, and one perpetrator (6%) had experienced pregnancy complications. Skead (2010) also found financial adversity (4,57%) as well as psychiatric illnesses (1.22%) amongst the perpetrators, while Townsend (2003) reported on the lack of information regarding certain antecedent historical factors in her study. In particular, information was unavailable regarding physical illnesses, psychopathology (especially depression), and criminal history. Unfortunately, Osborne (2001) and Roberts et al. (2010) did not report on the precipitating factors of the perpetrators involved. Nonetheless, the available local findings on the antecedent history of the perpetrator tend to be consistent with the findings of the current study.

An important antecedent historical factor in H-S killings revolves around mental health. Numerous international studies have reported on the psychopathology of the perpetrators involved and, in most cases, a mood disorder was diagnosed (Cohen et al., 1998; Bourget et al., 2000; Campanelli & Gilson, 2002; Malphurs & Cohen, 2002; Chan et al., 2004; Malphurs & Cohen, 2005; Moskowitz et al., 2006; Bourget et al., 2010; Dogan et al., 2010). Other psychological disorders included substance abuse, for instance, alcohol problems (Koziol-McLain et al., 2006), drug abuse (Bossarte et al., 2006), schizophrenia (Virkunnen, 1974; Campanelli & Gilson, 2002), psychosis (Gudjonsson & Petursson, 1982; Hatters-Friedman et al., 2005), antisocial personality disorder (Dogan et al., 2010), and schizoaffective disorder (Hatters-Friedman et al., 2005). Depression amongst perpetrators were also found in the local study conducted by Roos et al. (1992), while Jena et al. (2009) reported in their regional study that the psychiatric history was available in only seven cases and three of these cases displayed a positive psychiatric history. The authors in the latter SA study concluded that this sort of tragedy usually peaked during autumn and winter, which possibly indicated mood disorders.

Information was mostly unavailable regarding the mental health of the perpetrators in the

current study. Depression was identified in only one perpetrator (2,63%) and previous psychological or psychiatric treatment was indicated in only four perpetrators (10,52%), although their diagnoses were unknown. This lack of information on the mental health of the perpetrators can largely be attributed to the fact that the SAPS do not investigate the psychiatric history of the perpetrator. Such information, which could have been recorded on the SAPS "Suicide Follow-up Questionnaire", is seldom known by the deceased member's commanders or colleagues (section 2.5 for a discussion of this questionnaire). Thus, obtaining the psychiatric history of the perpetrators involved, especially from a reliable source, proved to be one of the limitations of the current study (see section 6.8 in the current chapter).

6.2.10.2 Level of education of the perpetrators.

In the current study, the majority of perpetrators (84,21%) had a secondary school education, while only two offenders (5,26%) had not achieved Grade 12. Other levels of education included two tertiary diplomas held by two of the perpetrators (5,26%), while the highest academic qualification obtained was a single tertiary degree (2.63%). A substantial number of international studies did not include the level of education of the perpetrator (Bourget et al., 2000; Malphurs & Cohen, 2002; Campanelli & Gilson, 2002; Hatters-Friedman et al., 2005; Violanti, 2007a; Logan et al., 2008), while only a small proportion of the studies reported on their education (Bossarte et al., 2006; Panczak et al., 2013). More specifically, Bossarte et al. (2006) reported that some perpetrators of H-S attacks were in possession of a high school diploma, while other offenders had not completed their high school education at all. In a more recent study, Panczak et al. (2013) indicated that offenders of H-S had completed a secondary or tertiary education. The findings of these two international studies tend to be consistent with the findings of the current study.

All five of the local studies have implicated the SAPS as a high risk occupational group for H-S killings (Jena et al., 2009; Mathews et al., 2008; Osborne 2001; Roberts et al., 2010; Skead, 2010). However, these SA studies did not explicitly report on the level of education of the perpetrators. Nonetheless, it can be deduced that the majority of the police perpetrators in

these local studies should have had at least a grade 12 certificate in order to be employed by this particular organisation. As previously discussed in section 4.4.2, Major M. Williams from the SAPS Human Resources Management confirmed that the police service employs entry level constables only if they possess at least a secondary school education (Grade 12). Thus, her comments supports the current results regarding the level of education of the perpetrators.

Other international studies have reported on the socio- economic status of the perpetrators, which can be used as a rough indicator of the level of education of the perpetrators. Harper and Voigt (2007) reported that more than half of the perpetrators in their study were unemployed or in between jobs, while the rest held blue collar or lower middle-class jobs. Adinkrah (2014) indicated that most of the perpetrators in the study conducted in Ghana were of a low socio-economic class which included peasant farmers (48%), unskilled artisans (20%), low level security officers (8%), labourers (6%), and hunters (4%), while 4% were unemployed. In contrast, the civilian study undertaken by Galta et al. (2010) reported that perpetrators usually belonged to the middle or upper socio-economic strata, while the law enforcement study of Klinoff et al. (2014) found that most police H-S perpetrators were of a middle socio-economic status (63%), followed by officers from a high socio-economic stratum (12%). Most of these international findings are inconsistent with those of the current study, although the findings of the police study (Klinoff et al., 2014) regarding the middle socio-economic status of the perpetrators are directly in line with the results of the current study.

6.2.10.3 Ranking structures in police H-S killings.

Most perpetrators in the current study who held the rank of constable (65,79%), followed by 15,79% of warrant officers, 7,89% of sergeants, and only one student constable (2,63%) committed these attacks. Therefore, it appears that the police H-S phenomenon is more common amongst non-commissioned than commissioned officers in the law enforcement sector. The two international law enforcement studies conducted by Violanti (2007a) and Klinoff et al. (2014) reported that most police perpetrators held the rank of patrol officer,

which is consistent with the findings of the current study. Although local studies investigated H-S from a civilian perspective, the police service was nonetheless implicated as a high risk occupational group for this phenomenon (Jena et al., 2009; Mathews et al., 2008; Osborne 2001; Roberts et al., 2010; Skead, 2010).

Although the police service was implicated in numerous SA studies on H-S killings, a key question remains: "Why do police officers often commit H-S?" It is postulated that socialisation within this organisation plays a key role in these attacks. The police milieu encourages aggression, authoritarianism, domination, and control in the line of duty, which correlates with aggressive behaviour when the official is off duty and at home (Pam, 2001). Historically, the law enforcement sector has been male dominated, but females have started to make inroads into this occupation (Loo, 2003). The attributes of aggression, authoritarianism, domination, and control were also evident in the female police officer who perpetrated an H-S act against her male partner in the current study. The international studies of Violanti (2007a) and Klinoff et al. (2014) also reported on female police officers who killed their male victims followed by suicides. In contrast, numerous international and local non-law enforcement studies on H-S reported that female perpetrators were more inclined to kill their children instead of their intimate adult male partners (Byard et al., 1999; Adinkrah, 2003; Chan et al., 2003; Gupta & Singh, 2008; Jena et al., 2009; Skead, 2010). Thus, it appears that police training gives rise to similar attributes found in both male and female police officers.

Lastly, D' Angelo (2000, as cited in Violanti, 2007b) suggested that the police official becomes desensitised to verbal, physical, and emotional violence in their line of work and can even become addicted to violence. This is particularly evident in the SA context in which police officials have to deal with high levels of crime on a daily basis, as well as service delivery protests that become violent (Kopel & Friedman, 2004; van den Heever, 2013; News 24, 2015; Marinovich, 2016). The policemen can become addicted to violence, over which they have little or no control regarding the amount, frequency, or duration thereof. Their expression of anger and rage increases over time which could culminate in H-S killings.

6.2.11 Socio- economic status of the victims and survivors.

In the following section, the occupations of both victims and survivors are discussed. According to Townsend (2003), an individual's level of education, employment, and financial status all exert a direct impact on the emotional stress experienced by them. Unfortunately, the level of education of both victims and survivors was absent from the data sources that were used in the current study.

6.2.11.1 Occupational categories of the victims and survivors.

In the present study, the majority of the victims were employed as clerks (5 or 28,20%) who performed administrative duties in both the private and public sector. Other important occupations included the "Service worker or Market sales category" with four victims from the retail industry, and a police officer (12,82%); the "Unspecified or Other" category, which included both a traditional community worker as well as a student (5,12%); and five victims (12,82%), who were unemployed at the time of the H-S attack. The remaining victims were associated with various occupations, which included two victims (5,12%) who worked either in the mining or railway sectors (the "Craft or Trade" industry); two victims (5,12%) who were employed as cleaners in "Elementary occupations"; and lastly, a telecommunications technician (2,56%). Unfortunately, 20,51% of the victim's occupational statuses were unknown while the 3 child victims (7,69%) were recorded in the "Not Applicable" category. In the case of the survivors, two were under-aged (minors), while one survivor was on pension at the time of the H-S attacks. Furthermore, two survivors (22,22%) were serving police officers while the remaining survivors each belonged to a broad distribution across various occupations which included a headman, a supervisor in an administrative position, and a yard foreman, while one was unemployed.

International research carried out by Adinkrah (2003) only indicated whether the victims were employed or unemployed without discussing their specific type of employment, while other studies did not report on the occupational categories of the victims at all (Logan et al., 2008; Malphurs & Cohen, 2002; Campanelli & Gilson, 2002; Violanti, 2007a; Bourget et al., 2000). Nonetheless, most victims in the study of Harper and Voigt (2007) were also

employed in clerical jobs as well as sales positions, which is consistent with the current findings. More specifically, 11 victims (28,20%) in the present study worked as clerks while four victims (10,25%) were employed by the retail industry (e.g., Edgars). In the study undertaken in Ghana (Adinkrah, 2014), 16% of the victims also performed market sales as petty traders and 4% were unemployed at the time of the killings, which is also consistent with the findings of the current study. However, the majority of victims mentioned in the aforementioned study worked as peasant farmers, which is in contrast to the findings of the current study which implicated clerks as the main victims.

The SA studies followed similar trends as their international counterparts. More specifically, Mathews et al. (2008) indicated only whether the victims were employed or unemployed, while Jena et al. (2009) also reported the findings in a similar fashion. The local regional study of Roberts et al., (2010) found that one of the victims killed in an H-S attack was a female police officer; this finding was consistent with that of the current study which also implicated a female police official. In contrast, Roberts et al. (2010) found that 30% of the victims in this particular study were unemployed compared to only 12,82% in the current law enforcement study. Unfortunately, the two local media surveillance studies did not report on the employment status of the victims (Osborne, 2001; Skead, 2010), and the apartheid era study of Roos et al. (1992) followed a similar trend. It can be concluded that the current research is the first local study to report on the type of occupation of the victim rather than focusing only on the occupation of the perpetrators.

6.2.12 Method of death: The prevalence of firearms.

The results of the current study indicate that the method of choice for committing homicide (victims), attempted homicide (survivors), and suicide (perpetrators) was the firearm (98,70%). This finding was expected since these police officers were issued with a service pistol. However, there were two exceptions to this rule. In one of the police H-S cases, the perpetrator killed his ex-girlfriend and wounded two other individuals (a child and another relative) during the same attack using his service weapon. After being convicted of these crimes, he used another suicide method by hanging himself in prison (1,29%). In another

case, the perpetrator firstly used his service pistol to commit the homicide, but later used his private firearm to commit suicide. In this particular case, the SAPS had confiscated the service firearm that had been issued to the perpetrator pending the murder investigation.

Internationally, most H-Ss were committed using a firearm (Palermo et al., 1997; Bourget et al., 2000; Campanelli & Gilson, 2002; Logan et al., 2008; Oliffe et al., 2014). Campanelli and Gilson (2002) reported that firearms were responsible for 69% of homicides and 75% of suicides, while Bossarte et al. (2006) found that the firearm was used in 82.7% homicides and in 80.4% suicides. Even in filicide-suicide killings, the majority of parents (73%) shot their offspring and both mothers and fathers used firearms to murder their children (Hatters-Friedman et al., 2005). In the law enforcement sector, Violanti (2007a) found the service pistol to be used in 90% of all H-Ss, while Klinoff et al. (2014) echoed this finding by indicating that the official firearm was the number one choice in both homicides (89%) and suicides (98%). Therefore, it can be concluded that there appears to be a strong association between firearms and an increased risk of H-S (Lund & Smorodinsky, 2001; Koziol-McLain et al., 2006). Thus, the results of the current study are consistent with those of numerous international studies, especially the two studies on police H-S killings.

In the SA context, all the local studies drew a similar conclusion to that of their international counterparts (Roos et al., 1992; Osborne, 2001; Mathews et al., 2008; Jena et al., 2009; Skead, 2010; Roberts et al., 2010). In this regard, Jena et al. (2009) reported that perpetrators used firearms to commit both homicides (96%) and suicides (95.7%), while hand guns were used in 93% of these cases. Osborne (2001) found that firearms were used in 78% of the cases, while Skead (2010) reported that guns were used in 72% of the suicides (perpetrators) and in 71% of the homicides (victims). The regional study of Roberts et al. (2010) also found that firearms were used in the majority of cases (84%). Similarly, Mathews et al. (2008) reported that the firearm was the main instrument used in femicide-suicide killings (83%), while Roos et al. (1992) reported that the most common method used was shooting (35%). It can be concluded that having access to either private guns (civilian H-S) or the service firearm (police H-S) can be regarded as a significant risk factor to commit such killings.

6.2.13 Number of wounds.

In the current study, 94,73% of the perpetrators had single wounds that caused their death and none of these offenders had multiple wounds owing to the lethal nature of the method used (firearm). However, as previously discussed in section 6.2.12, only one perpetrator used another suicide method by hanging himself after incarceration. Data on the number of wounds were missing for two of the perpetrators (5,26%), although they also used firearms to commit suicide, thus making it more likely that there was a single gunshot wound to the head. Next, 23,07% of the victims had single wounds on their bodies, while most of the victims (66,66%) displayed multiple wounds during the autopsy. Due to insufficient data, the number of wounds in four of the victims was unknown (10,25%). Lastly, 22,22% of the survivors reported single wounds to their bodies, compared to the 66,66% who obtained multiple gunshot wounds. In only one case (11,11%), an unknown number of wounds was sustained by the survivor.

According to the international study of Harper and Voigt (2007), intimate partner H-S tends to be more violent than other types of homicide. This finding was echoed by Bossarte et al. (2006), who reported that 22% of victims had sustained multiple gunshot wounds to their bodies, while most of the perpetrators usually sustained only a single wound. When perpetrators used another suicide method, for instance hanging, the neck area was implicated during the autopsy (Bossarte et al., 2006; Adinkrah, 2014). The only two H-S studies that focused on the law enforcement sector did not include any data in their particular studies regarding the number of wounds sustained (Violanti, 2007a; Klinoff et al., 2014). The international results in this regard are consistent with the results of the current study. More specifically, the perpetrators in the current study died of single wounds (94,73%), while only a small percentage of the victims sustained single wounds (23,07%). The majority of the victims (66,66%) in the current police study sustained multiple wounds, which is also consistent with international H-S results.

In the SA context, most of the H-S studies did not report on the number of wounds (Roos et al., 1992; Osborne, 2001; Skead, 2010). This can be partially attributed to the data sources

used to garner the information. For instance, newspapers usually do not report on the number of wounds sustained by the victims or perpetrators, but rather, only the method used to commit such killings (Mudzuli, 2014; Makhetha, 2015). Therefore, the two newspaper surveillance studies could not report on the number of wounds that were sustained by the parties involved (Osborne, 2001; Skead, 2010). The number of wounds sustained by the victim, from a phenomenological perspective, appears to be a degradation ritual followed by the demise of the perpetrator (Harper & Voigt 2007). In the remaining local studies which reported on the number of wounds, Townsend (2003) reported that 61% of the victims sustained multiple wounds to their bodies, while the majority of perpetrators (75%) sustained only a single wound. Similar results were reported by Jena et al. (2009), who found that 35% of the victims in her study sustained multiple wounds and most of the perpetrators died of a single head wound (93%). These results are mostly consistent with the current results, although a higher percentage of victims in the current study (66,6%) sustained multiple wounds compared to the 35% in the regional study conducted by Jena et al. (2009). Thus, the number of wounds demonstrates the excessive aggression and violence exhibited during the H-S killings.

Surprisingly, the intimate femicide-suicide study of Mathews et al. (2008) reported that the majority of victim's sustained single injuries (59%) compared with the multiple injury victims (41%). This latter finding is inconsistent with the results of the current study in which multiple wounds were sustained by the victims. Unfortunately, the results regarding the number of wounds sustained by the perpetrators were not discussed in the aforementioned study, although it was reported that the majority of these offenders used firearms to commit H-S killings. It can be deducted that when a firearm was used to commit suicide, these perpetrators probably sustained only a single wound to their heads due to this method being potentially lethal. Therefore, this deduced result is consistent with the results of the current study which indicated that single wounds were sustained by the perpetrators of H-S killings.

6.2.14 Body location and proximity.

The results of the current study regarding the proximity of the victim-perpetrator pairs indicated that half of these pairs (50,0%) were found in the same room followed by 21,05% in the same town or city. Next, 18,42% of the bodies of the victim-perpetrators were discovered on the same property, while 5,26% were found in the same building. Lastly, the location proximity was unknown in only one victim-perpetrator pair (2,63%).

Although the previous paragraph provided information on the proximity of the victim-perpetrator pairs, their exact body locations are unknown. In the current study, the majority of the bodies were mainly discovered in the bedroom (37,66%). Although it is rather difficult to hypothesise why the bedroom was chosen by the perpetrators to commit the H-S act, there may be a personal significance for the offender. According to Malmquist (1995 as cited in Townsend, 2003), the choice of killing both parties in the bedroom may be linked to the perpetrators brooding in deciding how and where to commit such killings. However, during a moment of rage (e.g., a heated argument or quarrel, see section 6.2.17 of the current chapter), the brooding may be transformed into a violent act characterised by a loss of impulse control and these killings may occur wherever the parties find themselves at that particular moment. In the latter instance, there is no significance in the bedroom being the location. Nonetheless, the bedroom is an intimate location in a residence and a logical place for domestic or personal arguments.

Other important locations of the victim-perpetrator bodies were the street or highway (10,38%), kitchen (9,09%), yard or informal settlement areas (7,79% for each area), at work (6,49%), amusement parks (5,19%), living or family room area (3,89%), hallway or passage (2.59%), and retail or bank area (2,59%). Unfortunately, 6,49% of the locations were unknown due to insufficient information listed in the data sources used.

The international results indicated that the majority of H-Ss took place at home (Hanzlick & Koponen, 1994; Byard et al., 1999; Campanelli & Gilson., 2002; Bossarte et al., 2006; Harper & Voigt, 2007; Jensen et al., 2009; Dogan et al., 2010; Klinoff et al., 2014). For instance, in New Hampshire, 88% of the victims were killed at home while 56% of the perpetrators

committed suicide either in their own homes or at the residence of their victims (Campanelli & Gilson, 2002). Klinoff et al. (2014), who focused exclusively on police H-S killings, reported that the majority of homicides (79%) and suicides (72%) occurred inside the place of residence. In the current study, most of the H-S attacks also took place at home, especially at the victim's residence (see section 6.2.9 on the living arrangements between the perpetrators and victims). Unfortunately, most of these studies did not indicate exactly where these bodies were found in the home.

Nonetheless, Harper and Voigt (2007) reported that victims were usually killed at their own residences, particularly inside their bedroom, living room, or kitchen areas. However, the perpetrators usually committed suicide either in another part of the residence or outside the home. Thus, the bodies of the victims and perpetrators were usually found in different locations of the house. This finding is inconsistent with the results of the current study, which indicated that half of the bodies (50%) were found in the same room. Nonetheless, in both studies, the bedroom was implicated as the most important area for H-S killings. According to Harper and Voigt (2007), the living room was the next most common area for victims to be killed. However, in the current study, a street or highway (10,38%) was found to be the next most common area. It is noteworthy that both studies implicated the kitchen as the third most important area in H-S killings.

In the local arena, most studies on H-S did not include the proximity of victim-perpetrator pairs or their body locations (Roos et al., 1992; Osborne, 2001; Mathews et al., 2008; Skead, 2010; Roberts et al., 2010). However, Jena et al. (2009, p.4) indicated that the majority of such killings were perpetrated in "places of residence", while the study of Townsend (2003) reported that most of the bodies were found in the bedroom (14%). These findings are mostly consistent with the results of the current study on police H-S killings, while a higher percentage was found for the bedroom area (37,66%) .

6.2.15 Suicide notes.

As discussed in the previous chapter, only three suicide notes (7,69%) were recorded, while the majority of perpetrators did not leave suicide notes (89,74%). In one of these cases the

perpetrator not only left a suicide note behind, but also made a visual recording on an electronic device (iPad) before the H-S attack was perpetrated.

Most international as well as national studies did not report on suicide notes that were left behind by the parties involved (Campanelli & Gilson, 2002; Gupta & Singh, 2008; Flynn et al., 2009; Klinoff et al., 2014; Jena et al., 2009; Mathews et al., 2008; Osborne 2001; Roberts et al., 2010; Skead, 2010). However, Allen (1983) and Milroy (1995) indicated that there was a tendency for between 10% and 30% of the H-S perpetrators to leave suicide notes. More recent studies found percentages of 16% and 22% respectively in this regard (Bossarte et al., 2006; Saleva et al., 2007), while no notes were left by the perpetrators in the Turkish study of Dogan et al. (2010). In SA, the pilot study of Townsend (2003) reported that no suicide notes had been left by the perpetrators involved. These results from both international and national studies are inconsistent with those of the current study. More specifically, in the current study, the 7,69% of the perpetrators who had left a suicide note is lower than the international percentage of between 10% and 30%, while being higher than the results of the national study of Townsend (2003) who reported that no perpetrators had left a suicide note. It is postulated that due to the easy access of firearms (see section 6.2.12) and a heated argument or quarrel prior to the actual H-S (see section 6.2.17 on the motive for the final act), the enraged perpetrator was left with insufficient self-control to write or record a coherent suicide note.

6.2.16 Toxicological findings (blood alcohol levels).

In the current study, only seven (18,42%) toxicological reports were available for inclusion regarding the perpetrators of H-S killings and only four reports (10,25%) pertaining to the victims. The results indicated that more perpetrators (10,52%) were not intoxicated before the act compared to the 7,89% who were in fact intoxicated. None of the victims (10,25%) were intoxicated before they were killed, while none of the survivors were tested for alcohol after their individual H-S ordeals. Of note, the majority of toxicological reports for the perpetrators (81,57%) and victims (89,74%) were outstanding from the state laboratory or had not been requested at all by the state pathologist who had conducted the post

mortem. It is expected that the blood alcohol levels of the parties involved in the current study are probably an underestimation of true results. As previously mentioned in section 5.3.16, some of the police dockets contained photographic evidence of alcoholic beverages that were present at the scene of the crime. However, it was impossible to determine who was using this substance or who was intoxicated. Nonetheless, it is likely that more individuals (both perpetrators and victims) were using alcohol or were intoxicated before the final H-S act.

According to the international study of Logan et al. (2008), one in five perpetrators were expected to be intoxicated before committing H-S killings. Most of the international studies reported that between 20% and 35% of the perpetrators were intoxicated as revealed by the autopsy (Palermo et al., 1997; Campanelli & Gilson, 2002; Bossarte et al., 2006; Travis et al., 2007), while two other studies each found an even higher percentage (50%) in this regard (Hanzlick & Koponen, 1994; Saleva et al., 2007). These results are inconsistent with the current findings which found a lower percentage of perpetrators (7,89%) who were intoxicated at the time of the incident.

In the case of the victims, 46% tested positive for alcohol or other pharmacological drugs (Bourget et al., 2000), while Bossarte et al. (2006) reported lower alcohol or drug usage by the victims before the incident (21%). In contrast to these findings, only one victim in New Hampshire, although not intoxicated, had used alcohol before the attack (Campanelli & Gilson, 2002). These international findings are inconsistent with the available current results which reported that none of the victims were intoxicated before the H-S attacks.

In the SA context, Jena at al. (2009) found that 15 of the perpetrators (33%) tested positive for alcohol, while only eight of the victims (16%) tested positive for this substance. In another regional study, Roberts et al. (2010) reported that only one perpetrator used alcohol before committing the killings, while none of the victims tested positive. Other local studies did not report on the blood alcohol levels of the parties involved (Roos et al., 1992; Osborne, 2001; Mathews et al., 2008; Skead, 2010), probably due to unavailable data. The local findings of Jena at al. (2009) are mostly inconsistent with the current results, especially

concerning the number of perpetrators and victims who were intoxicated as revealed by the autopsy. Nonetheless, the results of the current study are consistent with those of Roberts et al. (2010) who found that none of the victims in their study were intoxicated. Therefore, it appears that perpetrators are more inclined to use alcohol before committing H-S attacks than their victims are.

6.2.17 Motive for the final act.

In most of the cases, a heated argument or quarrel was the most important precipitating factor (42,10%) in police H-S killings. Two other important motives included amorous jealousy (26,31%) as well as real or perceived infidelity (23,68%). Other factors included the ending of a relationship (18,42%), and marital or relationship conflict (10,52% and 7,89% respectively). In more than half of the H-S cases (52,63%), more than one motive was identified which probably interacted with another and led to these killings. However, it was not possible to establish which motive was more decisive than the other.

Also in the current study, the "Other" category was used to classify two H-S motives that do not fit into one of the existing categories. In the first instance, the perpetrators raped and then killed the victim before committing suicide (probably fearing the consequences of his actions), while in the second instance, the victim's parents refused the perpetrator's "Lobola" (bride price) and forced their daughter to marry another man whom they knew was suffering from HIV. Lastly, in five cases (13,15%), the researcher could not determine the motive that triggered this type of killing.

A significant number of international studies identified amorous jealousy, real or perceived infidelity, the ending of a relationship, and marital or relationship conflict as motives for H-S (Malphurs & Cohen, 2002; Koziol-McLain et al., 2006; Saleva et al., 2007; Harper & Voigt, 2007; Logan et al., 2008; Flynn et al., 2009; Cengija et al., 2012; Adinkrah., 2014). More specifically, the ending of a relationship (e.g., divorce) was listed in Finland as one of the most important precipitating factors in H-S, although a quarrel was also listed as a motive (Saleva et al., 2007). In the US, Koziol-McLain and her colleagues (2006) found that amorous jealousy was the main trigger in this type of killing (51%), while Logan et al. (2008) reported

that intimate partner conflict was the most common factor for perpetrators (53,9%). According to Adinkrah (2014), sexual jealousy, real or perceived infidelity, and the ending of a relationship were the most important precipitating factors in the African country of Ghana. Therefore, it seems that both the homicide and suicide components of H-S killings are a way of dealing with intimate partner conflicts (Manning, 2015). Although the findings from these numerous international studies are mostly consistent with the current results, a heated argument or quarrel as a motive did not play such a dominant role in these civilian studies as in the current study (42,10%).

In both the international law enforcement studies, the ending of a relationship (either through divorce or estrangement), was listed as one of the main motives in western police H-S killings. In the first study, Violanti (2007a) identified divorce or estrangement in 35% of the cases, while the second study (Klinoff et al., 2014) reported an even higher percentage of 46%. Another important motive identified in both studies was marital conflict (7% and 16% of the cases respectively). Therefore, a heated argument or quarrel was not indicated as the most important precipitating factor in international studies on police H-S killings. Nonetheless, the current study also listed the ending of a relationship (18,42%) as well as marital conflict (10,52%) as motives for police H-S killings in SA, which tends to be consistent with these results.

The local study of Skead (2010) found that the most common precipitating factor in civilian H-S was a quarrel or conflict in 18% of these cases followed by marital conflict (15%). In turn, Jena et al. (2009) identified social or financial stressors in the majority of cases (17%) as well as amorous jealousy (14%). The apartheid era study of Roos et al. (1992) also reported on financial adversity (83%) as the main stressor experienced by the family killer, although marital conflict was also identified in 77% of the cases. Mathews et al. (2008) found that H-S usually took place after a heated argument (53.5%) or the ending of the relationship (29.0%) by the female victim. Thus, the types of motive indicated by numerous SA studies tend to be consistent with the results of the current study. More specifically, the national study of Mathews et al. (2008) found that H-S usually took place after a heated argument, while the media surveillance study of Skead (2010) also listed a quarrel or conflict

as the most important precipitating factor in this type of killing. In the remaining SA studies on H-S killings, the motive was not identified (Osborne, 2001; Roberts et al., 2010).

As previously mentioned in the first part of this section, the "Other" category was used to classify two H-S motives that do not fit into the existing categories. In one of these cases, the victim's parents had refused the perpetrator's "lobola" (bride price) and forced their daughter to marry another man who was financially more successful than the police perpetrator. Although these parents knew that the financially successful man was suffering from HIV/AIDS, they still refused to accept the police official's bride price. This specific case indicated most of the elements of a lover's suicide pact in which both parties decide to die together by killing themselves using the same method (see section 2.2.4.1). According to Murthy et al. (2001), this H-S subtype can usually be attributed to the opposition of parents to marry or a situation where one of the individuals in the relationship suffers from a serious chronic disease, especially HIV or AIDS (Jensen et al., 2009). Nonetheless, this particular case was not classified as a suicide pact because the victim did not sign the suicide note together with the perpetrator which is usually seen as an indicator or confirmation that the two parties involved wished to die together (Malmquist, 2006). Lover's suicide pacts are usually more difficult to distinguish from the more common types of H-Ss.

6.3 The Role of Patriarchy in Police H-S Killings

Although these quantitative results led to a better understanding of H-S killings within the law enforcement sector, these statistics do not describe the dynamics of such an abusive relationship. In the following section, the qualitative results of the current study are aligned with other H-S research on patriarchy, especially masculinity.

As previously discussed in section 5.4, four main themes were identified from the transcripts. The first theme called "Patriarchal dynamics in H-S relationships" included two subthemes, namely: "amorous jealousy and the H-S perpetrator and real or perceived infidelity". The second theme involved "financial issues and the patriarchal order", while the third theme included the "death wish (Thanatos) of the perpetrator". The fourth and final theme revolved around "H-S survivors as double victims" with the following

subthemes: “family dynamics between the survivors and their parents-in-law, the physical and psychological aftermath for the survivors, and survivors and their current relationships”.

6.3.1 The link between amorous jealousy and real or perceived infidelity.

In the current study, the relationship between the perpetrators and the survivors were characterised by hegemonic masculinity. This type of masculinity can be described as a “gender practice which embodies the currently accepted answer to the problem of the legitimacy of patriarchy, which guarantees or is taken to guarantee the dominant position of men and the subordination of women” (Connell, 1995, p.77). In the current study, the male’s patriarchal power over the female was also characterised by amorous jealousy (Koziol-McLain et al., 2006; Jena et al., 2009; Panczak et al., 2013) that was further exacerbated by real or perceived infidelity (Aderibigbe, 1997; Chan et al., 2004). Moreover, the perpetrator was convinced that his spouse or consort was cheating on him; for example, “*If there is a new guy at work then he would always accuse me… I saw you talking to that new guy which means you are in a relationship with him”* (Anna 32). In this patriarchal order, every male was seen as a potential threat to the relationship and therefore, as Maria explained in her interview, *“I was to be alone not to associate with anyone but only himself*” (Maria 30).

In the current study, the perpetrators had accused their intimate female partners of an affair with other male partners on numerous occasions. However, herein lies the paradox. It was permissible for the perpetrators to engage in extra marital or relationship affairs, but the female survivor was not even allowed to have a platonic relationship or even talk to any males, as evidenced in the remarks “*I said to him you know what I know it’s a weekend its Friday today so I know you must go see your girlfriend… I know its weekend you must sleep over“* (Anna, 32), while Maria (30) stated that *“He never had time for me, he was always with his mistress”* even though, as the same perpetrator stated, *“If he can’t have me nobody else will”.*

6.3.2 Domestic violence and H-S.

Domestic violence has been well documented by numerous studies on H-S (Bourget et al., 2000; Koziol-McLain et al., 2006; Logan et al., 2008; Klinoff et al., 2014) and such violence was used by the perpetrators in the current study to intimidate the female survivors in order to gain control and mastery. Thus, domestic violence was used as a tool to reinforce the masculinity of the perpetrators over their intimate female partners. Domestic violence escalated over time and led to patriarchal terrorism which is an extreme form of domestic violence aimed at further controlling and subordinating women in the relationship (Johnson, 1995). According to the Power and Control Wheel of Minnesota (see Figure 2.1), certain signs were observed in relationships characterised by domestic violence (Ward & Bradley, 2009, p.67). Some of these signs were identified during the transcripts of the interviews with the survivors of an H-S attack, as discussed below.

6.3.2.1 Using of coercion and threats.

In the current study, the perpetrators of an H-S attack made threats to hurt their female intimate partners, for example, "*Then there came a time I told him I had enough. I'm done with this relationship…he came to my workplace to threaten me… he said if he can't have me nobody else will*". Furthermore, this survivor stated that "*When we had arguments he threatened to kill me*" (Maria, 30). In the case of Lisa (39), the perpetrator also threatened to kill her, although he relayed this message via other parties involved, as she remarked, "*I moved back to my husband he went home told my mother he is going to kill me because he can't live without me. He also phoned my husband as I was already staying with him that no I'm going to kill her you are not going to get her*" (Lisa, 39).

6.3.2.2 Using male privilege.

Perpetrators of domestic violence are inclined to define both the male and female roles in the relationship. This was clearly evident in the following excerpts from one of the interviews: *"He wanted us to share everything paying rent but when it comes to grocery he would say I am a woman, I should buy the grocery… when we were staying together he was forcing me to buy the grocery alone because he used to say he is paying for his car…" (Lisa,*

39). Thus, women are responsible for domestic tasks (food on the table) while men are responsible for more masculine tasks (transport).

6.3.2.3 Use of intimidation

The purpose of intimidation is to make the female partner afraid by using certain actions (e.g., giving her a certain look). Actions used by the perpetrators in the current study involved displaying a weapon: "*Then he grab me cocked the firearm* [and] *said he is going to kill me. I can't remember what we were arguing about so that's when I started to get worried because I saw that this guy is capable of doing anything"* (Lisa, 39) or using physical force to intimidate her in order to keep quiet about his infidelity, as a survivor explained: "*Then I asked him where he was from we started arguing and then he slapped me*" Maria (30).

6.3.2.4 Use of emotional abuse.

Emotional abuse targets the self-esteem of the female survivor by belittling, name calling and/or humiliating her. In the case of Anna (32), the perpetrator not only called her names *"Ja, you are stupid!",* or *"Ja you bitch",* but he also humiliated her: "*Then he started to punch me in front of my friend"* (Anna, 32). The same victim was also subjected to humiliating 'inspections' to see if she had been unfaithful during working hours, as she explained: *"I was not supposed to wash myself after work, I was not supposed to change my clothes, my underwear after work, I was supposed to stay like that… if I wash myself, why was I washing myself ? Which means I was with somebody during the day... So I stopped taking a bath at night… just to please him"* (Anna, 32). Maria (30) was usually belittled by her husband: *"He would belittle me tell me say maybe he would have another female girlfriend a better one than me… there are those better ladies that he can get that are better than I am..."* (Maria, 30).

6.3.2.5 Use of isolation.

Perpetrators of H-S killings usually isolate the female survivors from outside parties by controlling where she goes and with whom she interacts: *"He started choosing friends for*

me that I must not go with who, I must not go home, I must not go visit my mom. If I go home I must just go for a few seconds and come back (Anna, 32). A similar pattern was seen in the life of Maria (30): "*I never had any male friends. There was that I went to school with... he didn't want to see them anywhere near me… I was to be alone not to associate with anyone but only himself".* Thus, the survivors in the current study had to live in a controlled environment that was created by their abusive partners.

6.3.2.6 Use of economic abuse.

Financial difficulties were identified as an important precipitating factor in numerous H-S studies (Oliffe et al., 2014; Skead, 2010; Jena et al., 2009). In the current study, the male's patriarchal power also spilled over into the couple's financial lives by either preventing the survivor from keeping her current employment or made use of her financial resources to deal with his poor financial status:

> *He asked me to leave where I was working in Jo'burg at MBD and then he asked me to leave work so that we can stay together... I left work, I quitted and then I went to stay with him… So I felt in terms of monetary issues he never gave me any money although he asked me to quit my job and promised to take care of me but he never did that* (Maria, 30).

> *He had loans all over he had accounts everywhere... I was even helping him to pay some of his accounts that he accumulated while I was not with him but for the peace sake I took that responsibility to myself* (Anna, 32).

Also in this particular case, the survivor held a lower non-commissioned rank compared to the perpetrator's rank as officer, which led to conflict in the relationship:

> *I was only a Constable, but with my salary I could make a lot of things in the house I made lot of changes. I bought furniture I removed the old furniture he had so he had jealousy of that, that I could do so many things with my small salary... He even said*

to me I will buy my own furniture, he even didn't want to sit on the couches that I bought because he would feel like a Constable bought him couches (Anna, 32).

This probably led to a serious blow to the male perpetrators masculinity.

In Lisa's (39) relationship, the perpetrator was using her for financial gain:

I saw he was also after my money because I was working...[and] *his wife was not working… I use to tell him he must extend the house… he would say no, you must give me money to do that… even when we were staying together he was forcing me to buy the grocery alone because he used to say he is paying for his car… I use to buy him clothes… but he never bought me anything.*

6.3.3 The termination of an abusive relationship.

When the female intimate partners either threatened to leave or left the relationship, this termination could have been viewed "as a violation of the patriarchal order, with interpersonal violence by the man against the women being an understandable, if not legitimate response" (Roberts et al., 2010, p.892). It was observed that when the female threatened to leave the relationship, the perpetrator retaliated by threatening to kill her in return:

In 2013 I asked him to part ways. I asked him for a divorce and he said if he can't have me nobody else will... and for the past years I was actually scared that maybe he might kill me that's why I didn't leave him... then there came a time I told him I had enough. I'm done with this relationship... he even came to my workplace to threaten me (Maria, 30).

Lisa (39) was threatened by the perpetrator via her mother and estranged husband:

I moved back to my husband he went home told my mother he is going to kill me because he can't live without me… he also phoned my husband as I was already staying with him that no I'm going to kill her you are not going to get her (Lisa, 39).

This can be seen as a desperate attempt to command and control his 'prized possession' that is slipping away.

Patriarchal terrorism is likely to increase in both duration and frequency until it reaches a deadly point (Swatt & He, 2006); in this case an H-S attack. All three police H-S cases were perpetrated by males using a service issued firearm after the relationship was either terminated or in the process of being ended. According to Combe and Boyle (2013 as cited in Oliffe et al., 2014), firearms are closely linked to masculine identities, especially in the policing sector.

6.3.4 The perpetrator's "Thanatos".

In the current study, the majority of perpetrators had a death wish (Thanatos) that was initially directed towards the self (either in the form of suicidal ideation, threats, or attempts); for example, *"The psychologist… said he was suicidal... during the session he raised the point he once tried to kill himself at Swaziland…"* (Anna, 32), but was soon redirected towards their intimate female partners (Baron & Byrne, 2000): "*When we had arguments he threatened to kill me…"* (Maria, 30). After the attempted homicide, the Thanatos returned to the perpetrator's physical body causing death by the ensuing suicide (Meyer et al., 1997).

In section 2.2.1.1, a critical question was posed concerning the H-S phenomenon, namely: "Is H-S more closely related to homicide or to suicide?" According Durkheim's social integration theory, H-S is an extreme form of suicidal behaviour caused by social disintegration (Liem, 2010), while Stack (1997) argued that H-S is more homicidal than suicidal due to the perpetrator's inability to live with or without the victim. In the current study, it appears that H-S shares more communalities with suicide than with homicide. The death drive (either in the form of suicidal ideation or previous suicide attempts) was already present in the majority of perpetrators long before their relationships with their current intimate partners (survivors): "*Death was always in his mind I don't know why"* (Lisa, 39), while Anna's (32) spouse attempted suicide in the past: "*He once tried to kill himself at Swaziland"* (Anna, 32). Although the current study found that H-S is probably more related

to suicide than to homicide, it can nonetheless be concluded that H-S is still a complex phenomenon which occupies a "distinct epidemiological domain" (Marzuk et al., 1992, p.3179) and cannot be classified as a homicide or suicide alone (Liem, 2010).

6.3.5 The impact of 'attempted' homicide on the survivors.

After the H-S attack, each survivor had to rebuild her life, even though they suffered numerous aftermath incidents. More specifically, they were blamed by their in-laws for the H-S incident, they suffered from physical as well as emotional scars, and this attack has a profound impact on their subsequent romantic relationships.

Although the literature focused on the impact of suicide on family members (Cerel et al., 2008), no up to date research has focused on the survivors of an H-S attack. For this reason, comparisons are drawn between the aftermath of an individual suicide and H-S attacks. According to the literature, the family dynamics after a suicide are usually characterised by distorted communication patterns. There appears to be a need in the social network to blame the individual who attempted or committed the suicide and to judge them negatively (Range, 1998; Stillion, 1996; both cited in Cerel et al., 2008). In the current study, the survivors rather than the perpetrators were blamed by their parents-in-law for the attacks:

> *They still blame me for whatever happened …that I was the one who shot him there were even stories around the location that he found me with a boyfriend… they didn't understand till today… they didn't even come to see me* (Anna. 32).

In the case of Maria (30), no relationship exists between her and her parents-in-law:

> *Since the incident we are not talking to each other, when I was in hospital they never came to visit me and after I was discharged they even never came to visit me… so we not talking to each other.*

In these two cases, the blame for the incident was either overtly expressed by the parents-in-law of the survivors or by withdrawing from their daughters-in-law (Barlow & Coleman,

2003). Although individual suicide exerts a significant impact on the family members of the deceased individual (Cerel et al., 2008), H-S affects two families at once.

In the current study, the survivors not only have to contend with decreased physical mobility:

> *I'm physically challenged, I can't run, I can't walk fast there is a lot of things that I can't do anymore and I'm living in pain…" (Anna, 32),"I cannot do things that I used to do, I cannot carry heavy things, I cannot run… I always have to request help from other people to help me carry things. I cannot stand for too long, it's not like before* (Maria, 30),

but also with psychological scars after their respective attacks: "*I wanted to kill myself, after I have survived"* (Lisa, 39), and Anna (32) was: *"Diagnosed with Post-Traumatic Stress Disorder… so I live with that"* (Anna, 32). In turn, Maria (30) states that *"It has affected it* [my life]… *I was ashamed to walk in the street, because I was thinking people are talking about me… I don't enjoy my life anymore…"* (Maria, 30). This particular survivor expected to be judged negatively by others leading to the withdrawal from possible supportive social networks which Dunn and Morrish-Vidners (1987, as cited in Cerel et al., 2008) label as 'self-stigmatisation'.

The H-S attacks had exerted a profound impact on the current romantic relationships of the survivors:

> *The guy doesn't have to shout at me, we don't have to fight. I must always be right, he must always leave me to talk he mustn't talk, he must just listen to me…"* (Anna, 32).
>
> Maria (30) on the other hand, fears a second H-S attack:
>
> *Every time we have an argument I start recalling all those things that use to happen with Peter… I just become scared what if the same thing happens.*

Lastly, Lisa's (39) current relationship with her estranged husband is built on her fear of firearms, although she is a functional police officer:

I don't trust someone with a firearm… even my husband… I knew my husband used to assault me before we got divorced so I'm always worried I don't trust anyone with a firearm.

6.4 Demographic Profiles in H-S Killings

Based on this study, one can infer that the perpetrator in H-S killings in the SAPS is likely to be a black African male who is 35 years old with a grade 12 education. He is a constable within the SAPS, has a history of domestic violence and has threatened to commit suicide in the past. Furthermore, his victim is usually a female, an intimate partner, and she is probably younger than he is. The official service pistol would be used to commit both H-S killings. The typical victim of a police H-S attack would be a 30 year old female of black African descent. She is usually the girlfriend of the perpetrator and is employed as an administrative clerk in either the public or private sector. The victim would probably be shot multiple times by her amorous jealous boyfriend, due to a heated argument or quarrel.

International studies have developed different profiles for the perpetrators and victims of H-S killings, depending on their different occupations. From a civilian perspective, the following profiles emerged: This family occurrence is usually perpetrated by a middle-aged white male who is older than his female victim. The perpetrator is usually depressed and recently separated or estranged from his wife or partner. Lastly, the perpetrator has access to a firearm that is used to commit both homicide and suicide (Eliason, 2009; Roma, 2012).

From a law enforcement perspective, a somewhat different profile emerged: H-S killings are usually perpetrated by male police officers who are older (39 years) than the female victims (33 years). Domestic violence was identified as an important precipitating factor in police H-S killings. The victim is usually the spouse or acquaintance of the perpetrator and the service issued pistol is used to commit both the homicide and suicide. Lastly, such killings usually occur at local departmental levels compared to state or federal levels (Violanti, 2007a). In the other police study, the white male perpetrators were also older (46 years)

than their female victims (35 years) of the same race. The victims are usually the wife or ex-wife of the perpetrator and their relationship is characterised by domestic violence (Klinoff et al., 2014).

These findings from the international arena show both the differences and similarities in comparison with the current results. Some of these differences can be explained by the population characteristics or demographics of the countries concerned. In the current study, most perpetrators and victims were from of black African descent and both parties had average ages of 35 or 30 respectively. The victims were usually the girlfriend of the perpetrator involved. In contrast, international studies have found that the perpetrators and victims usually stemmed from a white racial background, perpetrators were usually middle aged (e.g., 46 years old) and their victims were usually older (e.g., 35 years) than their SA counterparts. In these international studies, the victims were usually the wives of the perpetrators, which is inconsistent with the current findings that identified the girlfriends of the offenders.

However, the following results of these international profiles are consistent with results of the current study. In both profiles, the perpetrators are older than their victims, the firearm is used to commit both the homicide and suicide (the official service firearm was used in the case of police families), and domestic violence was identified as an important precipitating factor in the different policing studies.

Two local studies developed the following profiles, depending on the specific region in which the study was conducted. For Pretoria and the surrounding areas, the following two profiles emerged depending on the party's socio- economic status. In the first instance, an unemployed single black male between the ages of 18 and 29 years killed his girlfriend and later committed suicide at his or her place of residence. In the second profile, an older (40+) white male who was employed either by the police, correctional services, or private security company, shoots his spouse and himself at their communal residential home. The mean ages that were calculated for both perpetrators and victims were 31 and 27 years respectively (Jena et al., 2009). In the Durban area, Roberts et al. (2010) reported the

following profile: The majority of black male perpetrators were employed in the security sector (especially the SAPS or Correctional Services) and are usually older (32 years) than their female intimate victims (27 years of age).

Two national profiles emerged from the literature. The intimate femicide-suicide study carried out by Mathews et al. (2008), who reported that the white male perpetrators averaged an age of 30 years while the female victims were 26 years of age on average. Most of the perpetrators were employed either as a professional or white collar worker within the SAPS, National Defence Force, or private security firms, and a legal firearm was the weapon of choice for both homicides and suicides. A heated argument was an important precipitating event in this type of killing. Both the media surveillance studies reported similar profiles (Osborne, 2001; Skead, 2010) which are summarised as follows: The perpetrator is usually a black African male who is 37 years of age and is most likely to be employed in the security sector (e.g., the SAPS). A firearm is used to commit both homicide and suicide killings. The African female victims are usually younger (25 years old) and are likely to be the intimate partners or wives of the perpetrators. The motive for the attack was marital conflict/non-spousal arguments or the perceived loss of an intimate partner.

Similar to the findings of the international results, the findings of these local studies also show differences as well as similarities with the current results. Some of the local studies implicated white males as the most common perpetrators in H-S killings, which is inconsistent with the current findings that black African males are the most common perpetrators of the said killings. However, changes in the distribution of racial groups (from predominantly white to black members) in the SAPS over time is an important factor to bear in mind when interpreting this particular result. During the apartheid era, the SAPS employed people from mainly the white minority population group, thereby mostly excluding other population groups from the organisation, especially the black majority. After the first democratic elections in 1994, more black Africans were now employed by the SAPS in order to be more representative of the demographics of the country. Moreover, the average ages of both perpetrators and victims in these local studies differ from the current results. In most of the cases, the perpetrators and victims in these local studies were

younger than the average ages recorded in the current study. However, certain similarities were also identified between these previous SA studies and the current study. More specifically, black African males were also identified in some of these studies as the perpetrators of H-S killings, most perpetrators worked in the security sector (which included the SAPS), and the firearm was used to perpetrate both the homicide and suicide. Lastly, non-spousal arguments (Skead, 2010) or quarrels (Mathews et al., 2008) were identified as the most important precipitating factor in H-S killings, which is consistent with the current results (see section 6.3.13 of the current chapter).

6.5 Studying the H-S Phenomenon on Three Different Levels

As previously discussed in section 1.3, H-S should be studied using the macro, meso, and micro levels of analysis (Liem, 2009). The macro level examines the socio-demographic data of the H-S events (e.g., the age of the perpetrator), while the meso level focuses on the psychiatric factors and motives for the act. Lastly, the micro level not only investigates the dynamics of an H-S relationship, but also aims to strengthen the validity of both the macro and meso levels of analysis. In the following section, the macro level of analysis is used to test Durkheim's social integration theory of H-S, while the meso and micro levels are used to test the assumptions of the psychodynamic theory.

6.5.1 Macro level of analysis.

As discussed in section 2.4.1, Durkheim postulated that egoistic suicide results from a lack of integration within the larger society. This notion is supported by an empirical research study which has demonstrated that social isolation is an important contributing factor in H-S (Cohen et al., 1998). Thus, a strong integration within the family unit contributes to a collective conscience that strongly discourages suicide, even H-S killings (Ritzer, 2000).

In the SAPS, constables are expected to be stationed at any province within the RSA after completing their basic training. Therefore, most police officials are allocated to the Gauteng and KZN provinces (see figures 5.2 & 5.3). These members probably lacked close ties with this new community, which led to isolation and even alienation from others (Sue et al.,

1997), resulting in high levels of H-S killings within these two respective provinces (see section 6.2.2 in the current chapter). In other instances, already established members had applied for a higher level post in different provinces in order to further their careers. This was clearly reflected by the fact that certain perpetrators committed the homicide in the province where he worked, but committed suicide in his 'home' province. In both cases, these members were living far away from their loved ones and the societies with which they were familiar, thereby contributing to social isolation.

However, egoistic suicide is usually found in elderly citizens after losing contact with their families (Barlow & Durand, 2002), which is in strict contrast with the current findings. In the current study, perpetrators are usually 35 years of age (see section 6.2.5 in the current chapter) and are considered to be much younger than the elderly members of society. Nonetheless, the findings of the current study tend to support the relationship between H-S and social integration.

6.5.2 Meso and micro levels of analysis.

According to Henry and Short (1954), the victims of H-Ss are both a source of frustration and nurturance for their attackers. After the victim is killed, the perpetrator not only loses his or her source of frustration, but also their source of nurturance. The homicide of the partner exacerbates the perpetrator's frustration over the loss of their 'love-hate object', which may lead to suicide. The relationship between the attackers and their victims in H-S killings are often characterised by high levels of interpersonal frustration, which in turn usually lead to acts of domestic violence (Liem, 2009).

This was particularly evident in the current study in which domestic violence was found to be the most important antecedent historical factor amongst the perpetrators of H-S killings (see section 6.2.10 in the current chapter), thereby confirming the premise of the psychodynamic theory of this phenomenon. Thus, H-S is the result of high levels of interpersonal frustration evident in cases of domestic violence.

This finding regarding domestic violence was further confirmed by the micro level of analysis. In the current study, amorous jealousy led to patriarchal terrorism which is a form of domestic violence aimed at controlling and subordinating women in relationships (Johnson, 1995). Patriarchal terrorism increased in both duration and frequency until it reached a deadly point (Swatt & He, 2006). During the three interviews, it became evident that patriarchal terrorism escalated from only yelling and swearing to full blown domestic violence that involved physical altercations. Finally, this patriarchal terrorism reached a deadly point when the perpetrator tried to commit homicide (see section 6.3.2 in the current chapter).

As previously discussed in section 5.4.3, a psychoanalytic interpretation was used to explain a certain aspect of the H-S phenomenon. Liem (2009) argued that quantitative research can explain the occurrence of H-S to a certain extent, but unfortunately this measure cannot shed light on the dynamics underlying these types of killings. Most studies on H-S used a quantitative approach (see Chapter 3 for a full literature review) to investigate this phenomenon, while only a few studies (Goldney, 1977; Meloy, 1997; Schlesinger, 2000, 2006 as cited in Liem, 2009) attempted to investigate H-S on a qualitative level. Therefore, the eclectic approach is deemed necessary due to the nature of the area in which various theoretical approaches are adopted.

In psychoanalytic terms, all human beings possess a death drive (Thanatos) which is initially directed towards the self, but is soon redirected towards others (Baron & Byrne, 2000). The death wish (Thanatos) is in constant conflict with the life instinct (Eros) and this conflict results in aggressive and destructive behaviour directed outwards towards other individuals and objects (Litman & Tabachnick, 1994). Eventually, the Thanatos returns to the original object (the physical body of the person) and causes death. In the current study, and on a meso level, the Thanatos of the perpetrators could be clearly identified by the number of suicide threats, attempts, and even how often he had talked about suicide (see Table 5.14). On a micro level of analysis, the majority of perpetrators had a death wish (Thanatos) that was initially directed towards the self (either in the form of suicidal ideation, threats, or attempts), but was soon redirected towards their intimate female partners. After the

attempted homicide, the Thanatos returned to the perpetrator causing death by the ensuing suicide (Meyer et al., 1997), thereby confirming Freud's notion of intrapsychic conflict.

6.6 Recommendations for Preventative Strategies

This last research aim relates to how the current findings can be used to prevent H-S within the policing sector. It should be noted that the recommendations made to prevent H-S within the SAPS, are only tentative and should be tested in actual scientific research.

After considering both the findings from the current study and two other international studies on police H-S (Violanti, 2007a; Klinoff et al., 2014), the following prevention efforts are proposed for the SA law enforcement sector.

6.6.1 Training of the EHW professionals within the SAPS.

It is important to inform members of the SAPS helping professions (EHW), especially psychologists, registered counsellors, and social workers of the H-S phenomenon within the organisation. These professionals need training in order to identify potential H-S perpetrators, and to accomplish this goal, these EHW personnel have to have knowledge of the common factors that operate in police H-S killings (Connolly, 2007). Special emphasis should be placed on the following factors within the police official's intimate relationship.

Previous or current domestic violence is a key factor, not only in civilian H-S (Koziol-McLain et al., 2006), but also in police H-S killings (Violanti, 2007a; Klinoff et al., 2014). Consistent with these international findings, the most important precipitating historical factor found in the current study was a history of domestic violence (28,94%). Thus, the EHW personnel of the SAPS helping professions should investigate any domestic violence at home and any domestic abuse found should be flagged.

Another important factor is the threat by a female to end the current relationship (e.g., filing for divorce or moving out) coupled with an amorously jealous perpetrator. This type of jealousy can be indicated by either one of the following statements: "*If I can't have you*

nobody else will", or, "*I can't live with her, but I also can't live without her*" (Koziol-McLain, 2006; Maria, 30; Lisa, 39). In these cases, real or perceived infidelity is also an important factor to take into consideration, which could exacerbate the amorous jealousy of the perpetrator. It should be reiterated that not only wives or girlfriends are at risk regarding police H-S killings, but also the ex-wives and girlfriends of these officials. Threats to kill their partners (homicide) should be taken seriously and the firearm of the official should be confiscated with immediate effect and referred to the SAPS Psychological Services or outside service providers. If the mental health care professional learns about domestic violence and that the wife, consort, or girlfriend plans to leave the relationship, the EHW professional should also consult with those parties. Using the Danger Assessment Instrument could assist to determine how dangerous the current relationship is for the intimate partner (Campbell, 2004). Furthermore, this assessment tool is also useful to assist victims of domestic abuse to develop a safety plan (Van Wormer & Roberts, 2009). Lastly, it is also important to supply the helping professions of the SAPS with a current profile of a potential H-S perpetrator. This profile has already been discussed in section 6.4 of the current chapter.

6.6.2 Sensitising employees as well as future police officers about H-S.

It is also important to educate current employees of the organisation as well as students who want to become police officials in future regarding this type of family tragedy. As previously stated in section 2.6, the SAPS already has a suicide prevention programme in place, which also addresses the H-S phenomenon (Module 6). A revamp of this module by including the findings of the current study could be successfully presented to both current employees as well as students from the various training academies throughout the RSA.

6.6.3 Debriefing sessions as indicators of relationship problems.

The US law enforcement study conducted by Violanti (2007a) found that domestic violence coupled with exposure to violence and aggression in the line of duty can trigger an H-S event. In the SA context, police officials are debriefed after a traumatic incident in order to allow them to ventilate their feelings and to enhance their coping skills (SAPS, 2008). It is

proposed that when a police officer uses debriefing services, the psychological practitioner of the EHW should enquire about the quality of the current relationships of the police officers. If domestic abuse is suspected or confirmed, future consultations should involve both the client as well as their significant other.

6.6.4 Firearm regulation during mental illness and domestic violence cases.

According to a SAPS directive, if members are suffering from a psychological disorder their firearms should be confiscated by their respective commanders with immediate effect (SAPS, 2007). However, police officials sometimes obtain another firearm unlawfully by either stealing it from a police safe or by tricking a fellow officer to re-issue them with another service pistol. These guns are then used to commit H-S killings. In both cases of stealing or obtaining another firearm in a deceitful manner, the police officials were in close proximity to service pistols and they had relatively easy access to these weapons. It is proposed that when police officers have a pending domestic violence case against them, these officials should be temporarily transferred to a strictly administrative environment away from any firearm safe holding.

6.7 Conclusion

Homicide-suicide is considered a rare occurrence (Eliason, 2009) and exerts a catastrophic impact on both the families of the perpetrators and the victims as well as their communities (Liem, 2009). Unfortunately, this phenomenon is under researched in both developed and developing countries due to the lack of a reliable H-S database and the rarity of the occurrence (Adinkrah, 2003). However, it appears that research on such a family tragedy is slowly gaining momentum due to the growing number of more recent studies available on this phenomenon (Liem, 2010).

The current study set out to identify the common factors in police H-S killings on the African continent. This national study stretched over a two-year period (2012-2013) and included thirty eight (38) police H-S cases. The results were compared to both international and national results on H-S. It is noteworthy that all of the local studies on H-S implicated the

SAPS as a high risk occupational group for these type of killings (Osborne, 2001; Mathews et al., 2008; Jena et al., 2009; Roberts et al., 2010; Skead, 2010). In the current study, an incident rate of 24.27 per 100 000 police officers is reported, which is significantly higher than that of the two national studies on civilian H-S. Mathews et al. (2008) reported an incidence rate of 1.7 per 100 000, while Skead (2010) reported a lower rate of 0.09 per 100 000 SA citizens (2010). The different incidence rates could probably be attributed to the different methodologies used to garner the data. The former study used mortuary files to identify H-S cases, while the latter study used a newspaper surveillance strategy.

A profile was developed not only for the perpetrators of police H-S killings, but also for the victims of these attacks. The typical perpetrator is likely to be a 35 year old black African male who holds the rank of a constable. His victim is usually a girlfriend from the same population group who is younger than him. The perpetrator has a history of domestic violence and uses the issued service pistol to commit both H-S killings. The typical victim of the police perpetrator is usually 30 years old and employed as an administrative clerk. From a phenomenological perspective, the intimate female partners of the perpetrators are usually subjected to a patriarchal order in their romantic relationship which is characterised by domestic violence. She would probably be shot multiple times by her amorous jealous boyfriend due to a heated argument or quarrel. Thus, the most common H-S subtype found within the SAPS was intimate partner H-S. If the victims of H-S survive these attacks, they are usually blamed for the incident by their parents-in-law and become 'double victims' of these attacks suffering from both emotional and physical scars.

The identified common factors in police H-S killings alongside the findings from other international studies on this phenomenon were used to develop a prevention strategy for the law enforcement sector of SA. Special emphasis was placed on the training of EHW personnel in order to recognise potential H-S perpetrators as well as informing current and future employees of this organisation about this type of tragedy. Other suggested prevention steps involved using debriefing sessions to establish whether domestic violence plays a role in the couple's relationship and stricter firearm regulation during pending domestic violence cases and mental illnesses amongst police officers. In conclusion, the

purpose of the current epidemiological study was to gain a better understanding of police H-S killings and to use these findings to develop a prevention effort in order to save the lives of police families.

6.8 Limitations of the Study and Recommendations

As discussed in the previous chapter, only two population groups were included in the current study, namely black and coloured individuals, thereby excluding other racial groups. The extent to which the sample in this study represents this population group can be criticised. Although the research did not compare the characteristics of H-S perpetrators with perpetrators who committed only homicide or only suicide, it is recommended that future studies should attempt to draw such a comparison. This will not only further increase understanding of this rare phenomenon, but also lead to the development of better prevention efforts for such a family tragedy (Logan et al., 2008; Flynn et al., 2009). Focusing on only one occupational group and the resulting small sample to develop an epidemiological profile, which led to limited statistical analysis, are also considered to be limitations.

Another limitation of the current study revolves around the short research period used (2012-2013) to calculate the SAPS H-S incidence rate. In order to record a more accurate incidence rate for this occupational sector, Loo (2003) suggested that this phenomenon should be examined over a period of 10 years. By covering only a 2 or 3 year period, this short timeline could distort the actual H-S rates, because there can be a high H-S rate in one year followed by a much lower or even an absence of such attacks the following year. It is therefore recommended that the H-S incidence rate of the law enforcement sector should be calculated over a minimum period of 10 years.

Lastly, the current study had limited information regarding the mental health of the perpetrators (see section 6.2.10 of the current chapter) prior to the incident. Depression as a mood disorder amongst perpetrators is well documented by numerous international studies on the H-S phenomenon (Campanelli & Gilson, 2002; Malphurs & Cohen, 2002; Chan et al., 2004; Malphurs & Cohen, 2005; Moskowitz et al., 2006; Bourget et al., 2010; Dogan et

al., 2010). To counter this lack of information on the psychiatric history of the perpetrators, the medical aid scheme for the police, Polmed, was contacted to provide information in this regard. The researcher requested the following information from this medical aid:

- Did any of the deceased members visit a psychiatrist or psychologist in the past 5 years before their death and if applicable, what psychological disorder(s) was diagnosed?
- Had any of these members been admitted to a psychiatric facility (e.g., Denmar psychiatric hospital) in the past 5 years before taking their own lives? What psychological disorder(s) was diagnosed in this instance?
- Was any psychiatric medication (e.g., anti-depressant drugs) prescribed by a general practitioner or psychiatrist in the past 5 years and for what condition?
- Were any of the members admitted to a rehabilitation centre for alcohol or drug abuse in the past 5 years before their death? If applicable, what kind of drugs were they addicted to (e.g., Benzodiazepines)?
- Did any of the members (both victims and perpetrators) suffer from a life-threatening disease (e.g., cancer or HIV or AIDS) in the past 5 years before their death?

Unfortunately, the request was declined by Polmed due to the Protection of Personal Information Act (POPI, 2013). According to this particular act, medical schemes are not allowed to provide medical history of any patient without their written consent. In H-S killings, the perpetrator as well as his significant other died in these killings and therefore no written consent could be obtained. However, it should be noted that information was requested on H-S trends (e.g., what psychological disorders were diagnosed amongst the perpetrators of H-S?) rather than individual information (e.g., what psychological disorder did constable X have?). Therefore, it is recommended that future studies on H-S killings should include information obtained from a reliable source on the psychiatric history of the perpetrators. Lastly, the comorbidity of axis I and axis II disorders should also be considered in these future endeavours.

6.9 Summary

The current study included 38 police H-S cases over a 2 year period (2012-2013). An incidence rate of 24.27 per 100 000 police officers was calculated for this occupational sector which is significantly higher than the national rates of 0.09 to 1.7 per 100 000. However, this finding should be interpreted with caution due to the short research period that was covered. Ten years is the minimum period suggested in order to gain an accurate incident rate for a particular setting.

Most H-Ss were perpetrated in 2012, while the most H-S killings were registered in the Gauteng province. Both perpetrators and victims usually belonged to the black African population group. H-Ss are usually perpetrated by an older male against a younger female victim and the most common type of H-S found within the SAPS was intimate partner killings. Therefore, the majority of H-S relationships were classified as being either a couple, spousal, or consortial, which usually involved a boyfriend-girlfriend. The relationship was characterised by domestic violence, although the couple did not live together most of the time.

Perpetrators had a grade 12 level of education and held the rank of a constable within the SAPS, while the victims were mostly employed as clerks by either the private or public sectors. The final H-S act was usually precipitated by a heated argument or quarrel between the couple involved and their bodies were mostly found in the bedroom. The perpetrators were more inclined to have used alcohol before the incident, while none of the victims had used this substance. The service-issued pistol was used to commit both homicide and suicide and the victims had been shot multiple times by their amorous jealous police boyfriends.

Intimate partner relationships that ended in H-S attacks had been governed by a patriarchal order. This type of order was characterised by amorous jealousy and the perpetrators were usually convinced that their intimate partners were having an affair (real or perceived infidelity), even though the perpetrators themselves were guilty of infidelity. Domestic violence was used to reinforce the masculinity of the perpetrator in this abusive

relationship. When the intimate partner threatened to leave the relationship, the perpetrator retaliated by threatening to commit homicide. Furthermore, perpetrators had a death wish (Thanatos) which was clearly evident in their previous suicide threats or attempts. Although some intimate partners survived their respective H-S attacks, they can become "double victims", firstly by being blamed by their in-laws for the incident, and secondly, trying to come to grips with their physical handicaps and emotional scars that influence their lives.

Next, three levels of analysis were performed to test the socio-cultural and intrapsychic perspectives on H-S. On the macro level, partial support was found for Durkheim's social integration theory, while the meso and micro levels of analysis supported the psychodynamic theory on H-S killings, especially on domestic violence. Lastly, this chapter discussed ways to prevent H-S within the SAPS. Special emphasis was placed on the training of EHW professionals, educating police officials about this phenomenon, the use of debriefing sessions to establish domestic abuse, and stricter fire arm regulation.

Although limitations were identified in the current chapter, the study will hopefully stimulate further research on police H-S killings, not only internationally, but also on the African continent.

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Appendix A

South-African Police Service Suicide Follow-Up Questionnaire

Confidential

SOUTH AFRICAN POLICE SERVICE **SUID AFRIKAANSE POLISIEDIENS**

SUICIDE FOLLOW-UP QUESTIONNAIRE

This form must be completed by an employee of Employee Health and Wellness by means of interviews with family, friends, colleagues and supervisors. No reports from commanders will be accepted.

A: Attempted Suicides/Suicide Threats

B: Suicides

C: Suicide with homicide

To be forwarded to the SAPS Head office within **seven days** of the suicide/attempt

A, B & C	
Biographical particulars	
Persal number	
Rank	
Name	
Province/Division	
Cluster/Component	

Station/Unit/Section					
Date of employment in SAPS					
Previous Employment	*Institution*		*Years of service*		
Unknown					
Date of birth:					
Age:					
Gender:	*Male*		*Female*		
Race:	*African*	*White*	*Indian*	*Coloured*	
Home Language					
Religious denomination					
Marital Status	*Single*	*Married*	*Divorced*	*Separated*	*Widow/er*
	Life partner	*Other (specify)*			
Children	*Name*		*Age*		
Qualifications					
Sports/Hobbies					

A: To be completed in the instance of suicide threats/attempted suicides	
Date of attempt or threat	
To who was the threat communicated?	
Where was the employee at that time?	
Has the employee made previous attempts or threats?	
Has the employee received previous/currently psychiatric medication?	
Has/Is the employee in psychotherapy?	
What was the trigger reason for the threat/attempt?	

Name the underlying stressors that the employee is experiencing such as financial problems, relationships problems, work related problems (specify)	
Has the employee been diagnosed with a psychological disorder? (Specify)	
Has any person committed suicide that is in the employee's environment such as family or colleagues? (Specify)	
What interventions were done for the employee by EHW? (Specify)	
Was the employee taken to a psychiatric hospital?	
What interventions are being done at the station/unit or section in terms of suicide awareness?	
What type of support has been provided to the family of the employee?	
What method was used by the employee in the attempted suicide?	
Did the person hurt anybody else in the attempt? (Specify)	

Provide a summary of the circumstances and information that was not asked above:

B: To be completed in the instance of completed suicide	
Date of suicide	
What general communications around suicide did the employee make towards family/friends or colleagues?	

Where was the employee at that time?	
Has the employee made previous attempts or threats?	
Was the employee being treated by a psychiatrist?	
Did the employee receive psychotherapy?	
What was the trigger reason for the suicide?	
Name the underlying stressors that the employee was experiencing such as financial problems, relationships problems, work related problems (specify)	
Was the employee diagnosed with a psychological disorder? (Specify)	
Has any person committed suicide that is in the employee's environment such as family or colleagues? (Specify)	
What interventions were done for the employee prior to the suicide by EHW? (Specify)	
Was the employee ever admitted to a psychiatric hospital prior to the suicide?	
What interventions are being done at the station/unit or section in terms of suicide awareness/bereavement or trauma counselling?	
What type of support has been provided to the family of the employee?	
What method was used by the employee in the suicide?	

Provide a summary of the circumstances and information that was not asked above:

C: To be completed in the instance of suicide with homicide	
Date of suicide and homicide	
Number of individuals involved	
How were they/he/she related to the employee?	
Where was the employee at that time?	
Has the employee made previous attempts or threats?	
Was the employee being treated by a psychiatrist?	
Did the employee receive psychotherapy?	
What was the trigger reason for the threat/attempt?	
Name the underlying stressors that the employee was experiencing such as financial problems, relationships problems, work related problems (specify)	
Has the employee been diagnosed with a psychological disorder? (Specify)	
Has any person committed suicide that is in the employee's environment such as family or colleagues (specify)?	
What interventions were done for the employee prior to the suicide and homicide by EHW? (Specify)	
Was the employee ever admitted to a psychiatric hospital prior to the suicide/homicide?	
What interventions are being done at the station/unit or section in terms of suicide awareness/bereavement and possibly trauma counselling?	
What type of support has been provided to the family of the employee and the other deceased involved?	
What method was used by the employee in the suicide/homicide?	

Provide a summary of the circumstances and information that was not asked above:

A, B & C General information regarding the employee's health	
Did the employee have any physical disability? Specify	
Did the employee have any chronic illness or life threatening illness? Specify	
Did the employee on regular basis abuse alcohol/drugs? Specify	
Was the employee dependant on any substances? Specify	
Was the employee under the influence of any substance when attempting or committing suicide?	
Was the employee in general good health?	
Did the employee suffer from obesity?	
Did the employee participate in any sport or physical activities? Specify	
Was the employee on chronic medication apart from psychiatric medication? Specify	
Did the employee have good eating habits?	

A, B & C: Interview with colleagues. Please elaborate on all answers	
How was the employee's general mood before the suicide?	
Was the employee communicative?	
What was the general theme of what the employee spoke about?	
What was the employee's productivity before the suicide?	
How were the employee's energy levels at work?	
Was the employee able to concentrate?	
Did the employee participate in social discussions at work?	

Was the employee's behaviour different in the last few weeks than before?	
Did the employee mention suicide/death/making an end to it all?	
Did the employee give away possessions or cleaned up his office/work space?	
Were you aware of the employee's sleeping habits prior to the suicide?	
What were the employee's eating habits before the suicide?	
Did the employee complain of general pain/headaches?	
Were you aware of any trauma that the employee was exposed to prior to the suicide?	
Were you aware of the personal relationships that the employee had? If yes, do you know of any problems with relationships?	
Was the employee happy at work?	
Was the employee on good terms with the command structure?	
Was the employee on good terms with colleagues or subordinates?	

A, B & C: Interview with spouse/life partner. Please elaborate on all answers	
How was the employee's general mood before the suicide?	
Was the employee communicative?	
What was the general theme of what the employee spoke about?	
Was the employee inactive before the suicide?	
How were the employee's energy levels at home?	
Was the employee irritable?	
Was the employee social at home? For example inviting friends over for supper?	
Was the employee's behaviour different in the last few weeks than before?	
Did the employee mention suicide/death/making an end to it all?	
Did the employee give away possessions or cleaned up his room or study?	
What were the employee's sleeping habits prior to the suicide?	
What were the employee's eating habits before the suicide?	

Did the employee complain of general pain/headaches?	
Were you aware of any trauma that the employee was exposed to prior to the suicide?	
How was your relationship at home? (Between spouse and employee)	
Was the employee happy at work?	
Was the employee on good terms with the command structure?	
Was the employee on good terms with colleagues or subordinates?	
Was there any domestic violence present at home?	
How did the employee behave towards his/her children recently?	

A, B & C: Interview with commander/supervisor. Please elaborate on all answers	
How was the employee's general mood before the suicide?	
Was the employee communicative?	
Did the employee take a lot of sick leave?	
What was the employee's productivity before the suicide?	
How were the employee's energy levels at work?	
Was the employee able to concentrate?	
Did the employee participate in social discussions at work?	
Was the employee's behaviour different in the last few weeks than before?	
Did the employee mention suicide/death/making an end to it all?	
Did the employee give away possessions or cleaned up his office/work space?	
Were you aware of the employee's sleeping habits prior to the suicide?	
What were the employee's eating habits before the suicide?	
Did the employee complain of general pain/headaches?	
Were you aware of any trauma that the employee was exposed to prior to the suicide?	
Were you aware of the personal relationships that the employee had? If	

yes, do you know of any problems with relationships?	
Was the employee happy at work?	
Was the employee on good terms with the command structure?	
Was the employee on good terms with colleagues or subordinates?	
Were there any problems in regards with substance abuse?	
Did the employee have any disciplinary cases against him/her?	
Did the employee take vacation leave?	
Did the employee register any grievances?	
Are you aware of any problems that the employee may have had that has not been asked?	

Thank you for your honest participation in this confidential questionnaire. This will assist the South African Police Service in gaining more information in order to prevent more suicides.

EHW employee that completed the questionnaire:

Name and rank in print

Contact details:

Date of completion:

Please attach any relevant documentation.

Appendix B

South African Police Service Homicide-Suicide Incidence Coding Form

Code

1.	**Study:** Homicide and suicide: Common factors in South African Police Service members who kill their spouse/consort/families and themselves.	
2.	**PART 1: INCIDENT INFORMATION** **Name of subject's: Perpetrator……and victim/s** **……**	
3.	**Province:** 01=Gauteng 04=Mpumulanga 07=Northern- Cape 02=Kwazulu- Natal 05=Free State 08=Eastern- Cape 03=Limpopo 06=North- West 09=Western- Cape	
4.	**Date of death- Year (separately for both Perpetrator and Victim, e.g. P02 and V03):** 01=2011 02=2012 03=2013	P V
5.	**Date of death- Month (separately for both Perpetrator and Victim, e.g. P03 and V02):** 01=January 05=May 09=September 02=February 06=June 10=October 03=March 07=July 11=November 04=April 08=August 12=December	P V

6.	**Date of death- Day (separately for both Perpetrator and Victim, e.g. P12 and V11):**	P V
7.	**Type of Homicide-Suicide:** 01=Intimate partner H-S 03=Familicide-suicide 02=Fillicide-suicide 04=Extra-familial suicide	
8.	**Method of death for both Perpetrator and Victim (e.g. P01 and V03):** 01=Handgun 09=Drug overdose 17=Electrocution 02=Slashing- Panga/Axe 10=Bludgeoning/Blunt trauma 18=Hanging 03=Stabbing 11=Carbon monoxide poisoning 19=Exsanguination 04=Strangulation/Asphyxiation 12=Choking/Aspiration 20=Explosive blast 05=Crushing 13=Poisoning/Ingestion 21=Other 06=Motor vehicle driver 14=Drowning/Immersion 22=Unknown 07=Motor vehicle pedestrian 15=Burning/Smoke inhalation 08=Motor vehicle passenger 16=Falls	P V
9.	**Body location (for both Perpetrator and Victim, e.g. P02 and V01):** 01=Bedroom 10=Sea/Lake/River/Dam 19=Hotel 02=Living/Family room 11=Street/Highway 20=Work	

	03=Kitchen	12=Hospital	21=Educational institute	P
	04=Bathroom	13=Informal settlement	22=Beach	
	05=Hallway/Passage	14=Bar/Shebeen/Nightclub	23=Residential-area	V
	06=Garage	15=Parked car	24=Amusement park	
	07=Patio/Porch	16=Construction site	25=Other	
	08=Yard	17=Railway station/Track	26=Unknown	
	09=Pool at home	18=Retail area/Bank		
10.	**Location proximity of bodies of perpetrator and victim:**			
	01=Same room	04=Same town/City	07=Unknown	
	02=Same building	05=Same province		
	03=Same property	06=Other		
11.	**Presence of suicide note, tape or visual recording:**			
	00=No	01=Yes		
12.	**Suicide note authorship (leave blank if no note found):**			
	01=Perpetrator	03=Both parties		
	02=Victim	04=Unknown		

	PART II: BACKGROUND INFORMATION	
13.	**Population group (for both Perpetrator and Victim, e.g. P04 and V03)**:	P
	01=Asian/Indian 03=Coloured 05=Other	
	02=Black 04=White	V
14.	**Classification of relationship between perpetrator and victim:**	
	01=Couple/Spousal/Consort 05=Familial/Infanticide	
	02=Familial/Intimate 06=Extra familial	
	03=Familial/Adult 07=Mass murder	
	04=Familial/Pedicide	
15.	**Type of relationship between the perpetrator and victim:**	
	01=Married 08=Brother- Sister 15=Legal authority	
	02=Married/Separated 09=Other relative 16=Mass murder	
	03=Divorced 10=Lovers-Homosexual 17=Unrelated caregiver	
	04=Boyfriend- Girlfriend 11=Extra marital affair 18=Other	
	05=Boyfriend- Girlfriend/ separated 12=Friend 19=Unknown	

	06=Parent- Child 13=Acquaintance 07=Parent- Stepchild 14=Employer- Employee	
16.	**Living arrangement of subjects (for both Perpetrator and Victim, e.g. P01 and V03):** 01=Home 03=Long term care facility 02=Hospital 04=Other	P V
17.	**Living characteristics for both perpetrator and victim:** 01=Together 02=Separately	
18.	**Antecedent history of the perpetrator:** Physical health problems 00=No 01=Yes General decline in health 00=No 01=Yes Depression 00=No 01=Yes Alcohol abuse 00=No 01=Yes Drug abuse 00=No 01=Yes Other psychiatric problems 00=No 01=Yes Job problems 00=No 01=Yes Outstanding disciplinary cases 00=No 01=Yes Financial stress 00=No 01=Yes Low income 00=No 01=Yes	

		Lawsuit	00=No 01=Yes	
		Child custody	00=No 01=Yes	
		History of physical violence	00=No 01=Yes	
		History of verbal discord	00=No 01=Yes	
		Loneliness and social isolation	00=No 01=Yes	
		Death of a family member	00=No 01=Yes	
		Death of a colleague	00=No 01=Yes	
		Talk of suicide	00=No 01=Yes	
		Suicide threat	00=No 01=Yes	
		Previous suicide attempt	00=No 01=Yes	
		Family history of suicide	00=No 01=Yes	
		Previous psychological/- Psychiatric treatment	00=No 01=Yes	
		Exposure to violence/Aggression- in the line of duty	00=No 01=Yes	
		Intimate separation	00=No 01=Yes	
		Intimate separation due to- institutionalisation	00=No 01=Yes	

		Pain and suffering	00=No 01=Yes	
		Dementia	00=No 01=Yes	
		Criminal activity	00=No 01=Yes	
		Pregnant	00=No 01=Yes	
		Spouse/Girlfriend pregnant	00=No 01=Yes	
19.	**Motive for the act:**			
	01=Marital conflict	05=Altruism	09=Ending of relationship	
	02=Relationship conflict	06=Financial adversity		
	03=Amorous jealousy	07=Infidelity (Real/Perceived)	10=Other	
	04=Mercy killing	08=Heated argument/Quarrel	11=Unknown	
20.	**Level of education (Perpetrator only):**			
	01=Below Grade 12	05=Post graduate degree		
	02=Grade 12	06=N/A		
	03=Tertiary diploma	07=Unknown		
	04=Tertiary degree			
21.	**Occupation (Victim only):**			

	01=Unemployed 06=Skilled agriculture/Fishery workers 11=Senior-officials 02=Unspecified/Other 07=Service worker/Market sales 12=N/A 03=Elementary occupations 08=Clerks 13=Unknown 04=Plant/Machine operators 09=Technicians/Assoc. professionals 05=Craft/Trade workers 10=Professionals	
22.	**Rank of police perpetrator:** 01=Student- Constable 05=Lieutenant 09=Colonel 02=Constable 06=Captain 10=Brigadier 03=Sergeant 07=Major 11=General 04=Warrant- Officer 08=Lieutenant- Colonel	
	PART III: AUTOPSY INFORMATION	P
23.	**Age of subject: (for both Perpetrator and Victim, e.g. P30 and V25).**	V
24.	**Sex of Perpetrator:**	

	01=Female	02=Male		
	Sex of victim:			
	01=Female	02=Male		
25.	**Manner of death (for both Perpetrator and Victim, e.g. Suicide P01 and Murder V01):**			P V
		01=Murder		
		02=Suicide		
26.	**Number of wounds (for both Perpetrator and Victim, e.g. P01 and V04):**			
	01=1	05=5	09=9	P
	02=2	06=6	10=10 or more	V
	03=3	07=7	11=N/A	
	04=4	08=8	12=Unknown	
27.	**Area of wounds (for both Perpetrator and Victim, e.g. P01 and V03):**			
	01=Head	06=Arm	11=Foot	P
	02=Neck	07=Wrist	12=Back	
	03=Chest	08=Hand	13=Other	V
	04=Stomach	09=Genitals	14=N/A	
	05=Breast	10=Leg	15=Unknown	

28.	**Available toxicological findings (blood alcohol levels for both Perpetrator and Victim e.g. P01 and V02):** 01=Yes 02=No	P V
29.	**Intoxication before the act (for both Perpetrator and Victim e.g. P01 and V02):** 01=Yes 02=No 03=Unknown	P V

Appendix C

Informed Consent Form

Title: Homicide-Suicide: Common factors in South African Police Service members who kill their spouse or consort and themselves.

Introduction

Suicide prevention is a priority area for the South African Police Service (SAPS). Previous research focused on individual suicides but not Homicide-Suicide (H-S). H-S refers to: “an incident in which an individual kills another person and then take their own lives”.

In order to gain understanding of these incidents, scientific research is necessary. H-S research involves collecting police dockets as well as conducting interviews with survivors of H-S events. The purpose of the current research is to identify the factors which may lead to these events, draw a profile of possible offenders and to better the SAPS current suicide prevention program. In practical terms this means that families in distress may be identified beforehand and possibly saving their lives.

This document explains the purpose, procedures, risks and discomforts of this research. If there are any words you do not understand please ask the researcher to explain the words or information that you do not understand.

Procedure

Interviews contain questions which will be asked about your relationship and history with the deceased. This interview needs to be voice recorded because the researcher needs to listen to the recording many times to understand the conversation. The duration of the interview will be approximately one and a half hours. The voice recording will be used for research purposes only and will be destroyed after the research is completed. Before you can be interviewed, informed consent is necessary to give the researcher the authority to interview and record your words. Please note that information obtained from the interview

will be used anonymously for scientific purposes. This means that your name/surname, biographical information or any identifying characteristics will not be used to identify you.

Possible harm to participants

The researcher is aware of the fact that talking about the incident may evoke strong emotions. This is a normal reaction, but in order to minimise the emotional intensity a debriefing session (a session to talk about these emotions) will be provided after the interview. This service will be free of charge and provided by the SAPS Employee Health and Wellness (EHW) which consists of professionally trained trauma workers including psychologist, social workers and chaplains. If longer term counselling sessions is needed this will also be offered to you by the EHW, free of charge. The information collected in this interview will be kept confidential and will not be shared with the public. You will be introduced to the EHW professionals after the interview that will be available for the debriefing session.

Voluntary participation and participants' rights

Your decision to participate in this interview or research process is voluntary. You may choose to not participate or you may withdraw from this interview or research process at any time for any reason without any penalty.

If you agree to participate in the study, I would like for you to sign the consent form below:

Informed Consent

By signing below, I agree that I have read and understand the information in this Informed consent form. I understand that I will be asked questions about my relationship and history of the deceased. I agree to participate in this interview or research process.

Participant:

Printed Name **Signature** **Date**

Researcher:

Printed Name **Signature** **Date**

Appendix D

Semi-Structured Interview Schedule

Homicide-Suicide research

My name is Coenraad van den Heever and I am a mental health care professional from the South African Police Service (SAPS). I am currently conducting research on police homicide-suicide killings and am trying to understand what contributes to these tragedies. I am really interested in hearing what you as a survivor have to say about this issue:

- To begin with, please describe your relationship with ……. in the time that you were together (Probe about amorous jealousy, domestic violence, separation or divorce).
- Next, most people have to face financial challenges in their lives. Do you feel that financial issues had an effect on your relationship? Can you tell me more about your financial position as a couple? (Probing sub questions include: debt counselling and micro lending such as loan sharks).
- Have you heard of chronic illnesses like cancer? Did you and/or …….. suffer from a chronic/serious disease? Could you tell me more about that? (Probe about diabetes, chronic back pain, HIV/AIDS and psychiatric disorders).
- Now I would like to talk about substance abuse. What role did substance dependency play in ……. life? (Probe: alcohol abuse, over the counter medication or drugs, been to a rehabilitation facility).
- Let's move on, do you think that he suffered from a mental illness? Can you explain what makes you to think this? (Probe: previous admittance to a psychiatric facility, suicide threats or attempts).
- Please describe the events just before the fatal shooting occurred. (Probe: arguing, intoxication before the act, physical violence and threatened to end the relationship).
- How did this incident affect your life? (Probe: relationship with parents in law and current romantic relationship).

- To conclude, what other things do you think I should know about this issue?

I thanked the participant for his/her time and willingness to participate in the study. Next, I called a trained trauma counsellor to diffuse the individual after sharing his/her traumatic ordeal (This diffusing session as well as possible future counselling was discussed with the participant during informed consent).