

Homicide followed by Suicide. An empirical analysis

Liem, M.C.A.

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An empirical analysis

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# Homicide followed by Suicide. An empirical analysis

Doding gevolgd door zelfdoding. Een empirische analyse  
(met een samenvatting in het Nederlands)

Homicidio seguido de suicidio. Analisis empirico  
(con un resumen en español)

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door

*Marieke Christine Agatha Liem*

geboren op 16 december 1982  
te Goes

Promotores: Prof. Dr. F. Koenraad  
Prof. Dr. P. Nieuwbeerta

## Preamble

The human life cycle typically ends by four types of death: natural, accidental, suicidal or homicidal.<sup>1</sup> This doctorate thesis addresses events in which a combination of two types of death occurs: homicide followed by suicide of the perpetrator. In this event, one person causes the lives of at least two people to end.

On a sunny afternoon several years ago, I asked Frans Koenraadt, by then my supervisor on my Master's thesis in Clinical Psychology, whether he had some ideas for future research. He pointed to a dusty archive cabinet filled with cases on child homicide that needed further investigation. These cases stemmed from the Pieter Baan Centre, a psychiatric observation hospital for forensic mental health assessment in The Netherlands where I was doing an internship at that time. During the study of child homicide cases, I became very much intrigued by specific types of child homicide, such as familicide and homicide-suicide. My interest in homicide-suicide was further fuelled by talking to those directly and indirectly involved in these acts, such as police investigators, surviving family members as well as perpetrators who aimed to end their lives after committing homicide, but somehow failed to do so. Over the years, I continued to study several types of domestic homicide, including intimate partner homicide and other family homicide. I further modified and fine-tuned the topic of homicide-suicide in my MPhil dissertation in Criminological Research at the University of Cambridge, which provided the foundation of the doctorate thesis at hand.

As it is with any written data, specifically large-size datasets, it is a challenge not to become completely detached from the sources the figures were based on. In such settings, people easily become 'numbers': homicides tend to become abstract entities when coded into zeros and ones. While researching the homicide-suicide phenomenon, I have tried not to lose the 'human face' of these events by listening to those involved before, during and after the act.

A number of people have particularly contributed to the preparation of this doctorate thesis. First, I would like to extend my gratitude to Frans Koenraadt, who has introduced me to the field of forensic mental health with dedication, passion, and continuing encouragement. With sensitivity and attention for detail he patiently read and commented on numerous versions of this manuscript. In addition, I am very

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<sup>1</sup> Bhatia, S.C., *et al.*, (1987) High risk suicide factors across cultures *International Journal of Social Psychiatry* 33, 226-236.

## Preamble

grateful for the help of Paul Nieuwbeerta, whose insightfulness and ability to put large amounts of information into a comprehensive perspective prevented me from losing focus while helping me to enhance my thoughts.

I am grateful to Catherine Barber from the Harvard Injury Control Research Center for her critical views and willing support. I would also like to express my gratitude to Jack McDevitt, director of Northeastern University's College of Criminal Justice, whose kindness and professional network assisted me in every way possible. A warm thanks to James Alan Fox and Jack Levin from Northeastern University for their cooperation and helpful attitude.

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In addition, I am indebted to Rutger Vandenberg, Orlaith King, Kim Geene and Paula Stassen, for language correction and proofreading. Their alert editing saved me from cloudy sentences. If some have been overlooked, the responsibility is mine alone.

Finally, I wish to express my gratitude to my parents, my brothers and Jesper, for their constant love, wisdom and understanding.

Boston, MA  
October 2009

# Overview

1	Introduction	1
<b>Part I Background</b>		
2	Review of the Empirical Literature on Homicide-Suicide	31
3	Review of Theories on Homicide-Suicide	67
<b>Part II The Epidemiology of and the Variation in Homicide-Suicide</b>		
4	Nature and Incidence of Homicide-Suicide in the Netherlands	87
5	Homicide-Suicide in Three Countries: The Netherlands, Switzerland and the United States	101
6	Intrafamilial Homicide-Suicide Compared to Extrafamilial Homicide-Suicide	111
<b>Part III Homicide-(Para)Suicide Compared to Homicide and (Para)Suicide</b>		
7	Homicide-Suicide Compared to Homicide and Suicide: A Macro Level Approach	123
8	Homicide-Parasuicide Compared to Homicide and Parasuicide: A Meso Level Approach	135
9	Homicide-Parasuicide Compared to Homicide and Parasuicide: A Micro Level Approach	153
<b>Part IV Integration of Concepts</b>		
10	Conclusion	173



# Table of Contents

Preamble	v
Overview	vii
Table of contents	ix
<i>Chapter 1 Introduction</i>	1
1 Research topic and aims	1
2 What do we (not) know about homicide?	3
2.1 Homicide characteristics	3
2.2 Previous homicide research	4
2.3 Shortcomings in homicide research	5
3 What do we (not) know about suicide?	5
3.1 Suicide characteristics	6
3.2 Previous suicide research	7
3.3 Shortcomings in suicide research	7
4 Empirical knowledge on homicide-suicide	7
4.1 Homicide-suicide characteristics	8
4.2 Previous homicide-suicide research	8
4.3 Shortcomings in empirical homicide-suicide research	9
4.4 Difficulties in studying homicide-suicide	9
5 Theories on homicide-suicide	10
5.1 Shortcomings of the current theories on homicide-suicide	14
6 This study	14
6.1 Research questions	14
6.2 Research strategy and design	16
7 Empirical data used	17
7.1 Data sources used to describe the characteristics of homicide-suicide	17
7.2 Data sources used to compare homicide-suicide with homicide and suicide	20
8 Scientific relevance and contribution of this study	24
9 Societal relevance of this study	25
10 Outline of this study	26

**Part I Background**

<i>Chapter 2 Review of the Empirical Literature on Homicide-Suicide</i>	31
1 Studies describing the variation in homicide-suicide rates	31
2 Studies explaining the variation in homicide-suicide rates	33
3 Studies describing homicide-suicide characteristics	35
4 Studies disaggregating homicide-suicide into various types	38
5 Studies on intimate partner homicide-suicide	40
5.1 General	40
5.2 Amorous jealousy	42
5.3 Declining health	46
6 Studies on child homicide-suicide	47
7 Studies on family homicide-suicide	52
8 Studies on other family homicide-suicide	54
8.1 Parent homicide-suicide	54
8.2 Sibling homicide-suicide	58
9 Studies on extrafamilial homicide-suicide	59
10 Conclusion	64

<i>Chapter 3 Review of Theories on Homicide-Suicide</i>	67
1 Origin of aggression	68
1.1 Neurobiological theories	68
1.2 Strain theories	70
2 Direction of aggression: homicide <i>or</i> suicide	72
2.1 Attribution theory	72
2.2 Stream analogy for lethal violence	73
3 Outcome of aggression: homicide-suicide over homicide or suicide	75
3.1 Psychodynamic theory	75
3.2 Psychopathological perspectives	77
3.3 Psycho-evolutionary theory	81
3.4 Social integration theory	82
4 Conclusion	83

**Part II The Epidemiology of and the Variation in Homicide-Suicide**

<i>Chapter 4 Nature and Incidence of Homicide-Suicide in the Netherlands</i>	87
1 Introduction	87
2 Methodology	87
3 Results	88
3.1 Incidence	88
3.2 Case characteristics	89
3.3 Victims	92

3.4	Perpetrators	95
4	Discussion	95
4.1	Limitations	95
4.2	Findings	95
5	Conclusion	98

*Chapter 5 Homicide-Suicide in Three Countries: The Netherlands, Switzerland and the United States* 101

1	Introduction	101
1.1	Cross-national differences	102
2	Methodology	103
3	Results	104
3.1	Incidence	104
3.2	Case characteristics	105
3.3	Victims	105
3.4	Perpetrators	106
4	Discussion	107
4.1	Limitations	107
4.2	Findings	108
5	Conclusion	110

*Chapter 6 Intrafamilial Homicide-Suicide Compared to Extrafamilial Homicide-Suicide* 111

1	Introduction	111
2	Methodology	111
3	Results	112
3.1	Sample characteristics	112
3.2	Intrafamilial homicide-suicide versus extrafamilial homicide-suicide	114
4	Discussion	116
4.1	Limitations	116
4.2	Findings	117
5	Conclusion	118

**Part III Homicide-(Para)Suicide Compared to Homicide and (Para)Suicide**

*Chapter 7 Homicide-Suicide Compared to Homicide and Suicide: A Macro Level Approach* 123

1	Introduction	123
2	Theoretical background	123
3	Methodology	124
4	Results	125
4.1	Homicide-suicide versus homicide and suicide	125

Table of contents

4.2	Comparing subgroups	129
5	Discussion	130
5.1	Limitations	130
5.2	Findings	130
6	Conclusion	133

*Chapter 8 Homicide-Parasuicide Compared to Homicide and Parasuicide:  
A Meso Level Approach* 135

1	Introduction	135
2	Theoretical background	136
3	Methodology	137
4	Results	140
4.1	Homicide-parasuicide versus homicide and parasuicide	140
4.2	Comparing subgroups	146
5	Discussion	147
5.1	Limitations	147
5.2	Findings	148
6	Conclusion	152

*Chapter 9 Homicide-Parasuicide Compared to Homicide and Parasuicide:  
A Micro Level Approach* 153

1	Introduction	153
2	Theoretical background	154
3	Methodology	155
4	Results	157
4.1	Externalization of blame	157
4.2	Internalization of blame	159
4.3	A total solution	161
5	Discussion	164
5.1	Limitations	164
5.2	Findings	164
6	Conclusion	167
6.1	A new framework of homicide-suicide	167

**Part IV Integration of Concepts**

*Chapter 10 Conclusion* 173

1	Summary of the findings	173
1.1	Review of homicide-suicide	173
1.2	Description of homicide-suicide	174
1.3	Comparing homicide-suicide to homicide and suicide	175
1.4	Assessing theoretical assumptions on homicide-suicide	176

2	Limitations	178
3	Future directions	181
4	Prevention of homicide-suicide	182
4.1	Prevention in the social context and first-line agencies	184
4.2	Prevention in the (mental) health-care system	185
4.3	Prevention in the Criminal Justice System	186
4.4	Prevention by firearms legislation	187
	Appendix 1 – Availability of Variables in Data Sources	189
	Appendix 2 – Definition of Terms	191
	Appendix 3 – Homicide-Suicide Cases in the Netherlands 1992-2006	197
	Appendix 4 – Publication References	205
	Samenvatting (Nederlands)	207
	Resumen (Español)	215
	References	221
	Index	237
	Curriculum Vitæ	243



# Chapter one

## Introduction

*January 6, 2005: Zoetermeer – A 38-year old woman kills her two children in her home. Subsequently, she commits suicide by jumping in front of a train. The family was not known to the police or social services.<sup>2</sup>*

*February 21, 2006: Huissen – The four family members who were found dead in their home last Tuesday were the victims of a homicide. The 38-year old father killed his 37-year old wife and their son and daughter. Thereafter, he killed himself.<sup>3</sup>*

### 1 Research topic and aims

When headlines such as the ones above confront us every now and then our illusion of safety is shattered: the perpetrator is not a stranger, but someone who is well-known to us. Although already considered to be incomprehensible, when in such killings the perpetrator subsequently kills himself, we remain puzzled. The event is even more puzzling given the fact that usually, these perpetrators are older, white men, who do not have a criminal record (Marzuk *et al.*, 1992; Stack, 1997), thereby challenging our idea of the 'conventional' criminal. Some see the perpetrator as a victim of his own acts, whereas others are of the opinion that his suicide is spiteful as he cannot be brought to justice for his<sup>4</sup> cruel acts. Acts in which a homicide is followed by the suicide of the perpetrator are termed homicide-suicides.

So far our knowledge of homicide-suicide is remarkably limited, particularly in the Netherlands. In the first place, this concerns our empirical knowledge of the phenomenon. Given the differences in their very nature, both homicide and suicide have mostly been studied independently, or, as Stack has (1997) has pointed out: "Research on homicide has neglected suicide and research on suicide has neglected homicide" (p. 435). Even though numerous studies have been conducted on both homicide (for an overview, see Nieuwbeerta & Leistra, 2003) and on suicide (e.g. Garssen & Hoogenboezem, 2007; Neeleman, 1998) in the Netherlands and elsewhere, up until now only a limited number of studies have undertaken the endeavor to examine homicide-suicides theoretically and empirically. Compared to the studies carried out on homicide and suicide, research on homicide-suicide is considerably limited.

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<sup>2</sup> "Politie vindt dode kinderen in woning Zoetermeer [Police find deceased children in Zoetermeer home]," ANP, 2005.

<sup>3</sup> "Politie gaat minutieus te werk in Huissen [Police carry out careful investigation in Huissen]," Wegener, 2006.

<sup>4</sup> For the sake of simplicity, unless explicitly mentioned, only the male pronoun is used to denote both male and female pronouns.

A second gap in our knowledge exists regarding theoretical approaches to homicide-suicide. So far, no comprehensive theoretical approach to the homicide-suicide phenomenon has been developed. Rather, from a current theoretical point of view homicide-suicide constitutes a combination of both homicide and suicide, both types of lethal violence resulting from aggressive impulses. These theories, however, do not clarify under which circumstances one chooses to commit one type of lethal violence over another type – and they certainly do not explain the occurrence of a homicide-suicide. Homicide-suicide is typically regarded as a variation of homicidal behaviour, where the subsequent suicide is the result of feelings of guilt or a fear of the judicial consequences, or as a variation of suicidal behavior, in which the victim is ‘taken along’ in the suicide of the perpetrator (Cavan, 1928; Milroy, 1993; West, 1965).

The fact that we hardly have any adequate empirical or theoretical knowledge on homicide-suicide has major implications both from a criminal justice and a public health perspective. Within the criminal justice system, particularly concerning detention facilities, there is a need to distinguish suicidal from non-suicidal homicide perpetrators. DuRand *et al.* (1995), for example, have shown that a charge of murder or manslaughter poses an important risk factor in prison suicide. Various other studies have found that the majority of those committing suicide in prison were accused of murder or manslaughter (Danto, 1989; Salive *et al.*, 1989; Smialek & Spitz, 1978). Yet, none of these studies regarded the suicide as a reaction to the initial homicide. Rather, the homicide is considered as a correlate rather than a cause of prison suicide. Distinguishing suicidal from non-suicidal homicide perpetrators might allow for improvements in the prevention of suicide in detention.

From a public health perspective, considering homicide-suicide as primarily homicidal implies that prevention measures for homicide are parallel with those for homicide-suicide. Similarly, considering homicide-suicide as primarily suicidal infers that similar prevention measures for suicide might contribute to preventing homicide-suicides. However, perceiving of homicide-suicide as a separate phenomenon might require a different approach to prevention altogether.

To sum up, homicide followed by the suicide of the perpetrator constitutes a neglected phenomenon in the scientific realm. This study aims to increase our knowledge of homicide-suicide in at least four ways, namely by:

1. Systematically reviewing previous empirical studies on homicide-suicide as well as previous theoretical notions connected with the homicide-suicide phenomenon;
2. Describing the nature and incidence of homicide-suicide in the Netherlands and putting these findings into an international perspective;
3. Advancing the state of knowledge by not only assessing homicide-suicides in isolation, but by comparing these acts to both homicide and suicide, in that way coming to an understanding of which characteristics explain the occurrence of homicide-suicide relative to other types of lethal violence;
4. Empirically assessing existing theoretical assumptions on homicide-suicide.

Before these issues will be addressed, an overview of our current knowledge – and the shortcomings therein – on homicide, suicide and homicide-suicide will be given.

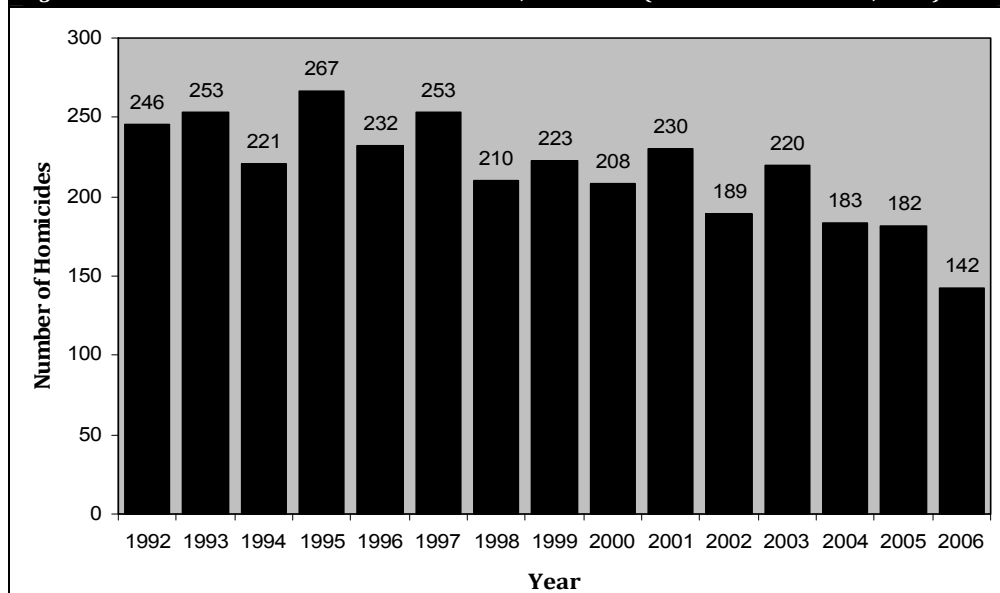
## 2 What do we (not) know about homicide?

Homicide, or causing the death of another human being purposely, knowingly, recklessly, or negligently, appears to be as old as mankind itself. Biblical stories include the murder of Abel by his brother Cain and Abraham's attempt to kill his son Isaac. In addition to being one of the most serious criminal offences throughout the world, homicide constitutes a major public health concern. Other than the tragic loss of homicide victims, every homicide includes at least five surviving relatives who suffer deeply from the consequences of a homicide (Leistra, 2009).

### 2.1 Homicide characteristics

In the Netherlands, on average 232 persons per year die in a homicide (Nieuwbeerta & Leistra, 2007). This constitutes a small part (3.3 per cent) of all annual unnatural deaths (CBS, 2006). The number of homicides per year has declined steadily over the past decade (see figure 1.1). Compared to homicide rates in other Western European countries, the Netherlands is near average. Compared to Eastern-European countries, however, the homicide rate in the Netherlands is low (WHO, 2009).

**Figure 1.1** Number of homicides in the Netherlands, 1992-2006 (Nieuwbeerta & Leistra, 2007)



The most predominant type of homicide constitutes homicide in the context of an argument or altercation, followed by intimate partner homicides. Other predominant categories are 'other' homicides and criminal homicides. Child homicides, parent homicides and sexual homicides occur less frequently (see table 1.1). Altogether,

approximately thirtyfive per cent of all solved homicides in the Netherlands occur within the family.

Type of homicide	% All victims	% All solved homicides
Family related		
Intimate partner	17	20
Child	4	4
Parent	2	3
Other family	7	8
Non-family related		
Argument / altercation	21	23
Criminal	13	15
Robbery	7	8
Sexual	3	3
Other	14	16
Not solved	13	-

Like other types of criminal behaviour, homicide mainly occurs between men. Approximately 80 per cent of all victims and 90 per cent of all perpetrators are male (Nieuwbeerta & Leistra, 2007). For both genders, the likelihood of becoming a victim of homicide peaks around the age of 25; the likelihood of becoming a perpetrator of homicide is highest between the ages of 20 and 25.

## 2.2 Previous homicide research

Previous research on homicide in the Netherlands tends to focus on one of three main areas: the epidemiology of homicide, their victims and perpetrators; homicide subtypes according to the relationship between the victim and the perpetrator; and finally, homicide subtypes according to motive. It should be noted that the study of homicide in the Netherlands has a fairly short history; as opposed to other Western countries such as Australia, England & Wales and the United States, the Netherlands does not have a tradition of monitoring homicide. Up until the 1990s, epidemiological homicide research was virtually non-existent, as official databases were either inaccurate or did not allow for the matching of victim, perpetrator and incident characteristics (Leistra & Nieuwbeerta, 2003).

The first area of research is mainly based on national homicide data and involves a description of the incident, perpetrator and victim characteristics of a particular year (Bijleveld & Smit, 2006; Smit *et al.*, 2001) or multiple years combined (Leistra & Nieuwbeerta, 2003; Nieuwbeerta & Leistra, 2007). Due to the use of national data, the amount of detail available on individual homicides is rather small.

The second area of research involves homicide subtypes according to the relationship between the victim and the perpetrator. Recent studies include intimate partner homicide (De Boer, 1990; Fuldauer, 1994; Liem *et al.*, 2007), child homicide (Brants & Koenraadt, 1998; Liem & Koenraadt, 2008b; Verheugt, 2007) and multiple family homicide (Liem & Koenraadt, 2008a), the killing of parents (Koenraadt, 1996),

the murder of prostitutes (Van Gemert, 1994b) and the killing of older homosexual men (Van Gemert, 1994a). The majority of these studies have relied on data from selected sources (forensic psychiatric reports, police records) rather than on national data. Even though some of these studies have included homicides that ended in a suicide attempt by the perpetrator, no specific (empirical or theoretical) attention has been devoted to this topic.

The third area of homicide research focuses on specific homicide subtypes according to motive, including honour-related homicides (Nauta & Werdmölder, 2002; Van Eck, 2001), criminal liquidations (Van de Port, 2001) and sexual homicides (Hoekstra, 1969). Similar to other areas of homicide research, this area is void of homicides followed by suicide.

### **2.3 Shortcomings in homicide research**

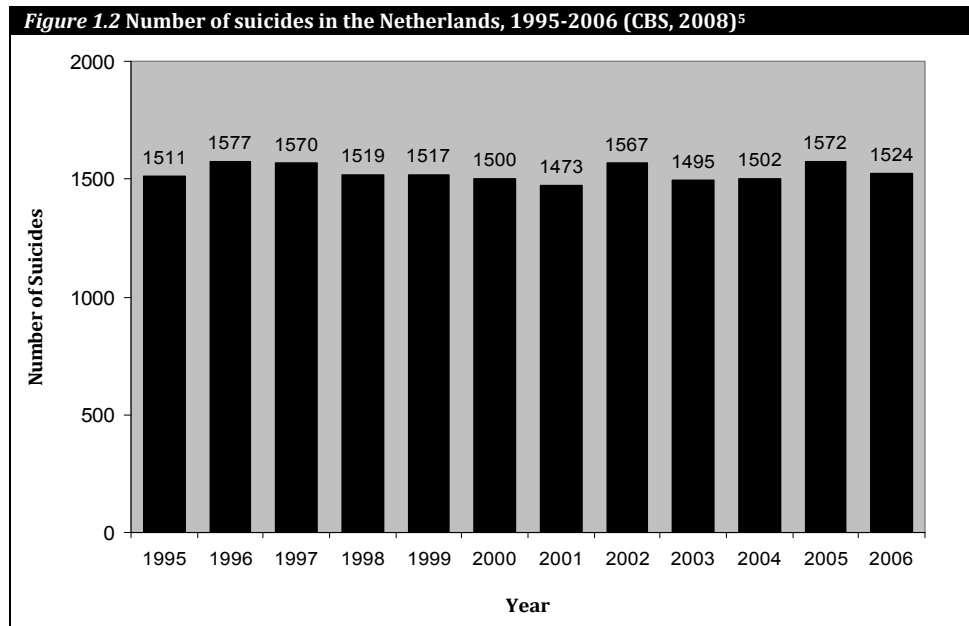
In sum, previous epidemiological homicide research in the Netherlands (Leistra & Nieuwbeerta, 2003; Nieuwbeerta & Leistra, 2007) has failed to address the nature and incidence of homicides ending in a suicide. Other studies focusing on homicide subgroups, either by relationship or motive, have not paid specific attention to homicide followed by suicide. This is mostly attributable to the unit of analysis in these studies, which mainly focus on surviving perpetrators of homicides (Brants & Koenraadt, 1998; De Boer, 1990; Liem & Koenraadt, 2008a; Liem & Koenraadt, 2008b; Nauta & Werdmölder, 2002; Van Eck, 2001; Verheugt, 2007) rather than on victims or incidents, and hence do not include homicides which are followed by a successful suicide.

### **3 What do we (not) know about suicide?**

Even though the study of homicide has a relatively long history, the academic interest in suicide is relatively new. Suicide was first considered to be a criminal act – in some jurisdictions in the Middle Ages a suicide attempt was (paradoxically) punished by death. Subsequently, by emphasizing the gravity of the act, the bodies of the deceased were dishonoured and their families disgraced. The reasons for such severe punishments were found in the ruling Church, which – according to Augustinian thought – considered suicide as a crime against God and more specifically as a violation of the Sixth Commandment: ‘Thou shalt not murder’ (Diekstra, 1981). In this light, God is viewed as both ‘giving’ and ‘taking’ human life: hence, taking one’s own life is a most grievous act against Him (Szasz, 1989). Suicide, in this view, precluded the possibility of repentance (Shneidman, 1989). Throughout time, the locus of blame for suicide was transferred from suicide being a personal sin to suicide becoming a sin of society under the influence of Rousseau. Hume tried to secularize and decriminalize suicide entirely. Eventually, with the decriminalization of suicide the sovereign testified to the individual the private right to die (Foucault, 1978). In this way, the duty to live was replaced by a right to die. With its legalization, the interest in suicide as a social phenomenon grew. Accordingly, suicide has entered into the sphere of scientific analysis relatively recently.

### 3.1 Suicide characteristics

Suicidal behaviour constitutes a major public and mental health problem. In the Netherlands, annually approximately 1500 persons take their own lives (see figure 1.2). Amongst individuals under the age of 35, suicide is one of the leading causes of death (Neeleman, 1997). Suicidal behaviour is not limited to successful suicides, but also involves suicide attempts and other forms of self-destructive acts. Each year in the Netherlands close to 94,000 adults attempt suicide; 14,000 require hospital care after a suicide attempt (Boel *et al.*, 2007), which represents a significant burden for the individuals affected, their families and the health services (Arensman *et al.*, 1995). Compared to suicide rates in other Western European countries such as France, Germany, Switzerland and the Scandinavian countries, the suicide rate in the Netherlands is relatively low (WHO, 2009).



Worldwide, the suicide rate among men tends to be higher than suicide rates among women. Among women, suicide rates remain relatively constant beginning in the mid teenage years, whereas among men, suicide rates increase substantially, particularly when they reach their late 70s (Mann, 2002). Individuals committing suicide and/or engaging in suicidal behaviour are typically confronted with multiple problems, including relationship problems, unemployment, social isolation, and problems related to housing (Kerkhof, 2007). Over 90 per cent of suicide victims or suicide attempters have a diagnosable psychiatric illness, most commonly a mood disorder. Other psychiatric conditions, including schizophrenia, alcoholism, substance abuse

<sup>5</sup> These figures include both Dutch and non-Dutch citizens.

and personality disorders are also found to be associated with suicidal behaviour (Mann, 2003). The close relationship between intrapersonal and interpersonal problems complicates the identification of risk factors for suicide.

### **3.2 Previous suicide research**

Similar to research conducted in the area of homicide, previous studies on suicide in the Netherlands have taken on an epidemiological approach, mapping the incidence of suicide and suicidal behaviour based on self-report questionnaires (Bijl *et al.*, 1998), reports from general practitioners (Marquet *et al.*, 2005) and official figures (Garssen & Hoogenboezem, 2007). At an epidemiological level, a fair amount of research has been devoted to the relationship between religion and suicidal behaviour (Neeleman, 1998). Other research areas include suicidal behaviour among groups who are vulnerable to suicide, including ex-detainees (Blaauw & Kerkhof, 1998), immigrants (Garssen *et al.*, 2006; Garssen *et al.*, 2007) and the elderly (Kerkhof *et al.*, 1991). Currently, the majority of the suicide research in the Netherlands focuses on the epidemiology of suicide and suicidal behaviour. Another main branch of research focuses on the relationship between mental health care and suicidal behaviour (De Groot *et al.*, 2009).

### **3.3 Shortcomings in suicide research**

A number of studies have been conducted that assessed aggressive behaviour among suicidal individuals (Weinacker, 1999) as well as among those having completed suicide (McGirr *et al.*, 2007). Studies of suicide completers, for example, have found a high comorbidity of impulsive-aggressive traits and suicidal behaviour (Kim *et al.*, 2003). Studies on suicide attempters have reported similar results (Keilp *et al.*, 2006). Other studies have focused on subgroups of suicidal individuals in assessing the role of aggressive behaviour, such as suicide attempters with a history of alcoholism (Sher *et al.*, 2005) or those suffering from other types of mental disorder (Michaelis *et al.*, 2004). Virtually all of these studies, however, have assessed personality traits related to aggressive behaviour rather than measuring actual behaviour or types of aggressive acts (e.g. homicide).

## **4 Empirical knowledge on homicide-suicide**

Although today the media coverage of homicide-suicide cases suggests that we are dealing with a new phenomenon that is increasing over time, the reality is that homicide-suicide has existed since mankind. Historical examples of homicide-suicide found in the literature reach as far back as the Ming dynasty (Rin, 1975). More 'recently', the Old Testament covers the story of Samson, who destroyed the Philistine temple at Gaza: his own death became the means to destroy the lives of others. It can be argued that the indirect killing of Jesus by Judas, as described in the New Testament, also constitutes a homicide-suicide: after betraying Jesus, Judas committed suicide out of spite for what he had done (Van Tol, 1977). Later in history, Shakespeare tells us of Othello, who commits suicide after having killed his lover, who

he (mistakenly) thought had betrayed him. Later, at the end of the Second World War, several homicide-suicides took place among high-ranking German officials, including Hitler himself, who first shot his wife Eva Braun before committing suicide with the same gun.

Although homicide and suicide share the common component that a death occurs because of the purposeful actions of a human agent, they are perceived as fundamentally different in nature. As outlined above, existing theoretical approaches to homicide-suicides are considerably restricted. Given the dichotomous background in lethal violence, studies either tend to view homicide-suicide as a variation of homicidal *or* suicidal behaviour.

#### **4.1 Homicide-suicide characteristics**

Although apparently of all ages, the homicide-suicide phenomenon remains an understudied phenomenon. Rather, throughout history, homicide and suicide have been studied as separate entities. Empirical studies show that even though homicide-suicide make up a relatively small proportion of homicides, certain types of homicide – notably men who kill an intimate partner with a firearm – make up over half of the incidents (Barber *et al.*, 2008; Eastaer, 1993; Liem *et al.*, 2009; Lund & Smorodinsky, 2001; Walsh & Hemenway, 2005). Marzuk *et al.* (1992) placed the homicide-suicide mortality rate in the United States, based on 1,000 to 1,500 deaths per year, on a par with diseases such as tuberculosis (1,467 deaths), viral hepatitis (1,290 deaths), influenza (1,943 deaths) and meningitis (1,156 deaths). International comparisons of homicide-suicide have been relatively hampered because of the broad variations in operational criteria for the homicide-suicide act. In addition, as outlined before, so far virtually no systematic research on homicide-suicide has ever been conducted in the Netherlands. As these acts are not recorded in official crime statistics, not even the yearly number of events and victims is known. Consequently, there is a vast dark number surrounding these cases.

#### **4.2 Previous homicide-suicide research**

A review of the literature shows that, up until now only a limited number of studies have undertaken the endeavour to examine homicide-suicides empirically. As will be outlined in detail in chapter three, most existing studies on homicide-suicide have taken on a descriptive, epidemiological approach and do not focus on determinants and explanatory mechanisms (Allen, 1983; Barraclough & Clare Harris, 2002; Campanelli & Gilson, 2002; Lecomte & Fornes, 1998; Milroy, 1993). The few studies that do examine explanations for homicide-suicide are (qualitatively) descriptive in nature and include only a small number of homicide-suicide cases (Goldney, 1977; Rosenbaum, 1990; Saint-Martin *et al.*, 2007; Saleva *et al.*, 2007). An even smaller number of studies have included a comparison group of homicides not followed by suicide (Carcach & Grabosky, 1998; Palmer & Humphrey, 1980; Stack, 1997; West, 1965) or a comparison group of suicides not preceded by homicide (Barber *et al.*, 2008; Cavan, 1928; Malphurs & Cohen, 2005; Malphurs *et al.*, 2001). Thus far, only

two studies have recently empirically compared homicide-suicides to both homicides *and* suicides. Based on data from 17 US states, Logan *et al.* (2008) found that, compared to homicide perpetrators, homicide-suicide perpetrators were more likely to belong to an older age group and to be Caucasian. Compared to suicides, however, homicide-suicide perpetrators were less likely to be Caucasian. A recent study by Flynn *et al.* (2009) based on findings from England & Wales reported that significantly fewer perpetrators of homicide-suicide compared with homicide or suicide alone had been in contact with mental health services.

### 4.3 Shortcomings in empirical homicide-suicide research

So far most empirical studies on homicide-suicides have relied on United States state-level or city-level data. Many studies are based on coroners' reports as the primary source of information and pertain to relatively small samples. Whereas other European countries pursue and have pursued research in the area of homicide-suicide<sup>6</sup>, in the Netherlands such research is still nonexistent. Consequently, the gap in the knowledge and registration of homicide-suicide events is left to the media, with subjective, speculative and non-scientific explanations as a consequence. As a result, incidents of homicide-suicide events are aggravated and dramatized, leading to major public disturbance. Moreover, to date, relatively few studies have compared homicide-suicide cases to homicides and suicides empirically and simultaneously and none on the basis of nationwide data over a long period of time.

### 4.4 Difficulties in studying homicide-suicide

A possible reason for the relatively low number of empirical studies on homicide-suicide can be found in the relative difficulty of studying this phenomenon. First, analyzing the incidence and rate of homicide-suicide poses significant missing data problems: when the perpetrator dies, data on the incident are not processed through the criminal justice system like other types of homicide, but are referred to the coroner's office. In other cases, where the victims die and the perpetrator commits suicide when imprisoned, the acts are completely separated – the homicide becomes a 'regular' homicide dealt with by the criminal justice system and the suicide becomes a suicide in prison. Accordingly, the number of homicide-suicides is inherently underestimated.

Second, by definition the perpetrator dies in the act and is therefore unable to provide us with any insight into the underlying dynamics of these events. As in most countries, there is a lack of a national monitoring system to record these events, and research consequently tends to rely on different methods of data collection – some

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<sup>6</sup> In the United Kingdom, homicide-suicide research has been conducted by Barraclough & Clare Harris (2002), Coid (1983), Flynn *et al.* (2009), Goldney (1977), Milroy (1993), Morris & Bloom-Cooper, (1967), West (1965) and others. In Finland, a recent study by Saleva *et al.* (2006) has shed light on the nature and incidence of homicide-suicide and in France, Saint-Martin *et al.* (2007) have reported on homicide-suicide. Research on homicide-suicide in other Scandinavian countries such as Denmark has been conducted by Gottlieb *et al.* (1987) and Hart Hansen (1974).

studies resort to coroners' records; others use police files, homicide investigation files or psychiatric assessments. Hence, reports on the nature and dynamics of homicide-suicide tend to vary widely.

Third, as mentioned before, there are broad variations in operational criteria for the homicide-suicide act. Boudouris (1974), in classifying homicide incidents, stated that a homicide-suicide only involves those homicides in which the perpetrator committed suicide immediately following a homicide. Some researchers rely on a time span of some days between the homicide and the suicide of the perpetrator (Cohen *et al.*, 1998; Felthous & Hempel, 1995), others use a week as an inclusion criterion (Campanelli & Gilson, 2002; Chan *et al.*, 2003; Comstock *et al.*, 2005; Marzuk *et al.*, 1992) and still others do not use a timeline at all (Berman, 1979; Dettling *et al.*, 2003; Hata *et al.*, 2001). This lack of uniformity in inclusion criteria is but a fragment of the causes that lead to the uncertain number of homicide-suicides.

Fourth, Stack (1997) points to a rarity in the research on homicide-suicide because relatively large numbers of homicides have to be drawn to uncover an adequate number of homicide-suicides. In contradiction to the United States, Canada, Australia and the United Kingdom, the Netherlands does not have a tradition of studying the trends, different types and underlying characteristics of homicide. As has been outlined in chapter one, recent research mapping the nature and incidence of homicide in the Netherlands stems from the 1990s (Leistra & Nieuwbeerta, 2003; Nieuwbeerta, 2007; Smit *et al.*, 2001). Other empirical studies on homicide have mainly focused on specific types of homicide and have relied on selected samples, such as forensic psychiatric reports (De Boer, 1990; Koenraadt, 1996, 2003; Liem & Koenraadt, 2008a, 2008b; Verheugt, 2007). So far, no systematic research on homicide-suicide has ever been conducted in the Netherlands. Since these acts are not recorded in official crime statistics, not even the yearly number of homicide-suicide events, perpetrators and victims is known.

Fifth and finally, as outlined before, because of the nature of homicide-suicide, both the perpetrator and the victim die in these events. Hence, the data sources used in previous studies typically lack detailed information on the dynamics underlying the event, the motives involved and the role of other precipitating factors. The study at hand overcomes this limitation by answering the calls of researchers by partially relying on homicide-*parasuicides*: homicides followed by the failed suicide of the perpetrator (Berman, 1996; Brett, 2002; Felthous *et al.*, 2001; Hillbrand, 2001). This allows a study of the mental state of the perpetrator as well as the motives underlying the offence. It has been suggested that in homicide-*parasuicides*, the non-lethal outcome of the act may be a matter of chance. Accordingly, this group is likely to have similar characteristics as the homicide-suicide group. Therefore, part of this study will make use of homicide-*parasuicide* data.

## **5 Theories on homicide-suicide**

The literature shows that three relatively recent theoretical studies have made the largest contribution to theory development on homicide suicide: the studies by Henry

& Short (1954), by Whitt *et al.* (1994) and the study by Stack (1997). These and other theories on lethal violence will be discussed to a fuller extent in chapter three.

Henry & Short (1954) presented the first integrated model of both homicide and suicide that has long dominated the literature in this area (Klinger, 2001). According to their theory, homicide and suicide are alternative responses to frustration. The choice between homicide and suicide depends on attributional concerns: in this model, homicide is regarded as the result of violent impulses directed towards others, whereas suicide results from violent impulses directed at the self. The authors held that when behaviour is required to conform rigidly to the demands and expectations of other persons, the probability of homicide as a response to frustration is low and the probability of suicide as a response to frustration is high. When behaviour is freed from the requirement of conformity, the probability of homicide is high and the probability of suicide is low. From this perspective, suicide among higher socio-economic classes is relatively more common compared to the lower classes, for in the former outward aggression is more restricted than in the latter. Their theory holds that homicide-suicide is more likely to occur among those who were restricted in reacting violently towards others. Having failed to conform to the taboo of external aggression, the need for self-punishment following a homicide is higher. In this point of view, homicide-suicide constitutes a two-stage process in which the suicide results is a reaction to the homicide.

The theory on homicide-suicide as developed by Henry & Short (1954) was revived by Whitt *et al.* (1994), who considered lethal violence as a stream with two distinct currents flowing through time, the homicide current and the suicide current. In Whitt *et al.*'s theory, termed the 'stream analogy of lethal violence', the width of each current represents the sum of each type of lethal violence. The combined currents comprise the overall amount of lethal violence. In this model, suicide and homicide are alternate and causal forms of death. The choice for homicide or suicide depends on attributional concerns: a higher tendency of external blame in response to frustration – for example following a divorce – will result in a higher homicide rate relative to the suicide rate (Wu, 2003). Conversely, factors that increase the internal attribution of blame in response to frustration increase the risk of suicide relative to homicide. Although the work of Whitt *et al.* (1994) was built on theoretical approaches by their predecessors, their stream analogy does not explain the conditions under which homicide *and* suicide occur simultaneously in a homicide-suicide.

Stack (1997), in turn, attempted to apply the stream analogy to homicide-suicide in a large-scale study of Chicago homicide-suicides. He concluded that the principal source of frustration in homicide-suicide stems from the perpetrator's inability to live neither *with* nor *without* the victim. He held that the homicide act overcomes a sense of helplessness, but that the ensuing guilt causes suicide. Therefore, Stack suggests viewing homicide-suicide as containing both inward and outward attribution styles: outward attribution resulting in homicide, followed by internal attribution resulting in suicide.

These theories, however, present several problems and shortcomings, which will be addressed in detail in chapter three. In brief, Henry & Short's (1954) theory has been criticized for its lack of empirical support. In several cross-cultural studies, it was found that the suicide rate was often highest for the lower social class, among which external aggression is least constrained, and not lower, as the theory suggests (Bhatia *et al.*, 1987; Lester & Lester, 1971; Lorant *et al.*, 2005).

Second, the theoretical model postulated by Whitt *et al.* (1994) blurs the otherwise clear lines between external attribution and internal attribution. According to their work, homicide is outwardly directed while suicide is inwardly directed. This assumption challenges situations in which individuals first commit a homicide and subsequently proceed to take their own lives. In other words, how does one commit homicide, and then commit suicide? In addition, the validity of the model has been tested on the basis of macro-sociological data, such as official suicide and homicide data to craft various ratios of suicide, homicide, and total deaths. Homicide-suicides constitute a small but important group of lethal violence that have been obscured in these large-scale statistics. The understanding that some violent deaths constitute both homicides and suicides also has important methodological implications for research rooted in this integrated model (Klinger, 2001).

Third, Stack's (1997) theoretical notion that homicide-suicides are to be regarded as primarily homicidal rather than primarily suicidal does not correspond with the findings from empirical studies that reported that homicide-suicide presents features found in suicidal behavior, such as a high rate of depression, suicidal ideations and hopelessness about the future (Marleau, 1999; Messing & Heeren, 2004; Milroy, 1995b; Palmer & Humphrey, 1980; Somander & Rammer, 1991; West, 1965). In addition, this theoretical approach does not explain what distinguishes homicide-suicide perpetrators from those 'only' committing suicide or those only committing homicide.

#### TERMINOLOGY

**Homicide** The killing of one human being by another. In the Netherlands, homicide comprises the categories *murder* and *manslaughter* (Articles 287, 288, 289, 290 and 291 of the Dutch Criminal Code). In the International Classification of Diseases (ICD-10), homicide corresponds to injury codes X8 through Y09 which result in death.

**Suicide** The act of killing oneself. In the ICD-10, suicide corresponds to injury codes X60-X84 resulting in death.

**Parasuicide** A suicidal act aimed at death, but which has a nonfatal outcome.<sup>7</sup> There is a clear intent to die, yet due to certain circumstances, the suicide does not

<sup>7</sup> This definition is based on Brett (2002), which differs from the definition of parasuicide employed by Diekstra (1981) and Kreitman (1977), who stress that a wish to die is by no means the only, or a necessary psychological explanation of parasuicide.

succeed. Here, the individual purposely physically injures himself or takes a substance to a degree that is not a prescribed or generally accepted therapeutic dosage.<sup>8</sup>

**Homicide-suicide** A generic term referring to a homicide and a subsequent suicide by the same actor. While homicide and suicide are two well-defined entities, there is no standard legal description of the homicide-suicide phenomenon<sup>9</sup> because cases typically do not result in a criminal charge or trial (Felthous & Hempel, 1995). Although homicide-suicide is often referred to as *murder-suicide*, the latter denotes the legal aspect of homicide, whereas homicide-suicide includes both murder and manslaughter. Therefore, throughout this study, the term 'homicide-suicide' will be used rather than the term 'murder-suicide'.<sup>10</sup>

**Homicide-parasuicide** A homicide followed by a severe parasuicide. Following Brett (2002), in homicide-parasuicides, both the individuals' intent to kill the victim *and* themselves is assumed, as it may be a matter of chance that they survive their suicide attempt.

<sup>8</sup> This definition excludes self-harmful acts by habitual self-destructive behaviour. Various studies have pointed out that those committing parasuicides do not constitute a homogeneous group (Diekstra, 1981; Kerkhof, 1985): strictly speaking, not in all parasuicides is a suicidal ideation present (Diekstra, 1981). Some parasuicides aim at something different than a lethal outcome, for example attention or manipulation to achieve a certain goal. In order to include only those parasuicides which are near-fatal in character, a standard suicide intention scale is applied. Only those parasuicides which are considered serious to very serious in nature are included in the current study. In chapter four, an overview is given on the specific prerequisites of this inclusion.

<sup>9</sup> Either nationally (Pelser, 1995) or internationally (Palermo, 1994).

<sup>10</sup> It should be noted that cases in which the suicide following one or more homicides is accomplished by law enforcement, also known as 'suicides by cop', are not included in this definition of homicide-suicide. The reasons for this exclusion are threefold. In the first place, there are a variety of inclusion criteria in place as to when to consider officer-involved shooting cases as 'suicides by cop': some studies adhere to very strict inclusion criteria (such as evidence of suicidal intent) (Hutson *et al.*, 1998) whereas others rely on less rigorous criteria (Kennedy *et al.*, 1998; Mohandie *et al.*, 2009; Parent, 1998), hampering the comparison of such cases across time and place. Secondly, the motives for engaging in suicide by cop are very broad and might not be equated with motives for suicidal behaviour in homicide-suicides. Homant *et al.* (2000) pointed to possible motives ranging from the subject's desire to obtain maximum media attention to compensate for feelings of inadequacy, the belief that 'normal' suicide is not socially acceptable or viewed as a serious sin, to cases in which the subject lacks the nerve to pull the trigger on himself. In this regard, Klinger (2001) emphasized that "we cannot know what portion of suicide-by-cop victims select the police to end their lives because they have some sort of inner aversion to killing themselves directly" (p. 215). In other words, we do not know what portion of subjects would have resorted to suicide by their own hands if they were not killed by the police. Thirdly, this observation is supported by the finding that clear evidence for suicidal motive is present in only 16 (Kennedy *et al.*, 1998) to 50 (Best *et al.*, 2004) per cent of all cases, depending on the inclusion criteria applied. These figures are distorted by a large proportion of suicides-by-cop which lack pertinent information on the subject's suicidal ideation or intent. Based on these grounds, suicides-by-cop following a homicide are not included in the present study.

### **5.1 Shortcomings of the current theories on homicide-suicide**

In conclusion, so far no comprehensive theoretical approach which is specific to the homicide-suicide phenomenon has been developed. Chapter three will elaborate on this theoretical vacuum in more detail. By studying homicide-suicide as well as its relation to both homicide and suicide, this research aims to enhance the theoretical understanding of the relationship between homicide and suicide.

## **6 This study**

### **6.1 Research questions**

As has been outlined above, homicide-suicide constitutes a neglected phenomenon: given the difficulty in studying this type of lethal violence, there is a vast dark number surrounding these cases and existing theoretical approaches either lack empirical validation or fail to fully address why an individual would opt for a homicide-suicide compared to a 'solitary' homicide or suicide. These voids translate into the following research questions: research questions related to the description of homicide-suicide and research questions concerning the comparison of homicide-suicide with other types of lethal violence.

#### *Literature review*

This study starts with an overview of the current state of the art of **empirical** research on the homicide-suicide phenomenon. In doing so, this chapter aims to answer the following research question:

1. What are the empirical findings of earlier studies on homicide-suicide? (Chapter 2)

This question is assessed by means of a systematic review of the literature. An extensive search of the literature on homicide-suicide resulted in over 200 empirical articles on homicide-suicide in addition to almost 50 books or part of books devoted to this topic.

Next, this study reviews the current state of knowledge in the **theoretical** literature on homicide-suicide. Through an extensive search of the homicide-suicide literature, studies were retrieved that used specific theoretical approaches to explain the phenomenon under study. This translates into the following research question:

2. What are the theoretical ideas on homicide-suicide? And in particular: Which event, perpetrator and victim characteristics are assumed to explain the occurrence of homicide-suicide relative to homicide or suicide alone? (Chapter 3)

These theoretical approaches can be divided into three parts: theories relating to the origin of aggression, theories related to the direction of aggression and finally, theories relating to the outcome of aggression. By retrieving additional literature,

these theories were examined to a broader extent and their applicability to the homicide-suicide phenomenon was assessed in detail.

*Empirical description of homicide-suicide*

Although in the Netherlands, as outlined above, several studies have been conducted on homicide and on suicide separately, empirical figures on combined homicide-suicides are still lacking. This study aims to fill this lacuna by providing an overview of the incidence, nature and characteristics of homicide-suicide in the Netherlands. In addition, this study advances the current state of knowledge on homicide-suicide by making international comparisons and by examining two distinct subtypes of homicide-suicide.

3. What are the incidence, trends and distribution of subtypes of homicide-suicides in the Netherlands? And: To what extent do subtypes of homicide-suicide differ in their characteristics? (Chapter 4)
4. To what extent do homicide-suicides in the Netherlands differ from those in other countries, especially the United States and Switzerland? (Chapter 5)
5. To what extent do intrafamilial homicide-suicides differ from extrafamilial homicide-suicides? (Chapter 6)

*Comparing homicide-suicide with homicide and suicide*

As mentioned before, with few exceptions, epidemiological studies focusing on homicide-suicide generally lack comparison groups of homicides and suicides alone. This study advances the current state of knowledge by comparing homicide-suicides with both homicides and suicides. In addition to gaining a better insight into the characteristics of such cases, such a comparison enables the testing of the validity of theories on homicide-suicide. As indicated previously, existing theories either tend to view homicide-suicides as primarily homicidal *or* as primarily suicidal in nature. This study aims to come to an understanding as to which homicide-suicide characteristics can explain the occurrence of homicide-suicide relative to homicide or suicide alone. In other words, comparing homicide-suicides to other types of lethal violence provides an insight into the empirical validity of theories.

These aims translate into the following research questions comparing homicide-(para)suicides to both homicides and (para)suicides:

6. To what extent do socio-demographic characteristics of homicide-suicide events, perpetrators and victims explain the occurrence of homicide-suicide relative to a homicide or suicide alone? (Chapter 7)
7. To what extent do individual, contextual and situational characteristics of homicide-parasuicides explain the occurrence of homicide-parasuicide relative to homicide or parasuicide alone? (Chapter 8)

8. To what extent do the dynamics underlying homicide-parasuicide explain the occurrence of homicide-parasuicide relative to homicide or parasuicide alone? (Chapter 9)

## 6.2 Research strategy and design

When addressing the last three research questions and making comparisons between homicide, suicide and homicide-suicide several complications arise. First, because of the nature of homicide-suicide, both perpetrator and victim die in these events. Second, when using large scale quantitative datasets, detailed, qualitative narratives are typically lost. Hence, the data sources used in previous studies on homicide-suicide typically lack detailed information on the motives involved, the role of other precipitating factors and the dynamics underlying the event.

The study at hand overcomes this limitation by answering the calls of researchers in at least two ways. First, by partially relying on homicide-*parasuicides*: homicides followed by the failed suicide of the perpetrator (Berman, 1996; Brett, 2002; Felthous *et al.*, 2001; Hillbrand, 2001). This allows for a study of the mental state of the perpetrator as well as the motives underlying the offence. In order to examine the dynamics underlying these cases, this study resorts to the use of detailed homicide-parasuicide, homicide and parasuicide case files in an attempt to reconstruct the circumstances and processes leading up to the event.

Second, the typical limitations of earlier studies are overcome by conducting analyses at multiple levels, including macro, meso and micro levels of analyses. The macro-level analysis focuses on socio-demographic constructs; the meso-level approach examines individual, contextual and situational characteristics and finally, the micro-level approach analyses the specific dynamics underlying these acts. The meso-approach and micro-approach rely on homicide-*parasuicides*, i.e. homicides followed by the failed suicide of the perpetrator (Berman, 1996; Brett, 2002; Felthous *et al.*, 2001; Hillbrand, 2001). As mentioned above, relying on cases in which the perpetrator survived the suicide attempt allows for the extraction of a great deal of detail. It should be noted that both the meso and micro-level analyses focus on intrafamilial homicide-suicide, given the mainly intrafamilial nature of homicide-(para)suicide and the rare occurrence of extrafamilial homicide-(para) suicide in the Netherlands.

**Table 1.2 Strategy and design used for comparing homicide-(para)suicide, homicide and (para)suicide**

Chapter	Level of Approach			
7	<b>Macro level</b>	Homicide-Suicides	Homicides	Suicides
		1992-2006	1992-2006	1996-2006
8	<b>Meso level</b>	Homicide-Parasuicides	Homicides	Parasuicides
		1953-2004	1953-2004	2000-2004
9	<b>Micro level</b>	Homicide-Parasuicides	Homicides	Parasuicides
		1980-2004	1980-2004	2000-2004

## 7 Empirical data used

### 7.1 Data sources used to describe the characteristics of homicide-suicide

To address the above formulated research questions and to overcome the common data problems when studying homicide-suicide, we use multiple types of data both on homicide-suicide, but also on homicide, and suicide. To begin with, in order to examine the nature, incidence and trends of homicide-suicide in the Netherlands, as well as to assess the different subtypes of homicide-suicide and their individual differences as, data are collected from the *Dutch Homicide Monitor* (Nieuwbeerta, 2007). This database includes homicides in the Netherlands that took place between 1992 and 2006. In order to compare the characteristics of homicide-suicide in the Netherlands to other countries, the Dutch data are enriched by data from the United States and Switzerland. Data from the United States are based on the *National Violent Death Reporting System* (NVDRS). Data from Switzerland are retrieved from the *Swiss Homicide and Suicide Database* that includes information from forensic medicine, police and court files. To address the fifth research question, namely to what extent intrafamilial homicide-suicides differ from extrafamilial homicide-suicides, data from the United States are used, as in the Netherlands, the incidence of extrafamilial homicide-suicides is too low to allow for statistical comparisons. Data from the United States are based on the NVDRS, which are enriched by American news reports. These sources will be discussed in more detail below.

#### *Dutch Homicide Monitor*

The *Dutch Homicide Monitor* was used as the main source to retrieve information on homicide-suicide events. This database is an ongoing monitoring system by the NSCR,<sup>11</sup> which includes all homicides in the Netherlands that took place between 1992

<sup>11</sup> The Netherlands Institute for the Study of Crime and Law Enforcement (NSCR) is one of the research institutes of the Netherlands Organization for Scientific Research (NWO). The NSCR aims at studying - in a fundamental, interdisciplinary manner - the interaction between crime and law enforcement.

and 2006. The year 1992 was used as a cut-off point. Before 1992, no uniform registration system for homicides in the Netherlands was available; accordingly, the homicide incidence and characteristics of homicide cases were not known. This database includes all lethal offences that took place between 1992 and 2006, which have been categorized as either murder (articles 289 and 291 of the Dutch Criminal Code) or manslaughter (articles 287, 288 and 290 of the Dutch Criminal Code), together comprising the category homicide. Although Statistics Netherlands (Central Bureau of Statistics) also publishes data on homicide, the Dutch Homicide Monitor contains more detailed information on incident, perpetrator and victim characteristics.<sup>12</sup> The Dutch Homicide Monitor is comprised of six sources, which partially overlap each other:

- All newspaper articles related to homicide generated by the Netherlands National News Agency (ANP). In the period 1992-2001 the ANP published more than 13.000 newspaper articles related to homicide in the Netherlands. In these articles much information is available on the characteristics of the homicides, the perpetrators and the victims.
- The Elsevier Annual Report. From 1992 onwards, the weekly magazine Elsevier published an annual report on all homicides that have taken place. This report is based on both ANP articles as well as on police files.
- Files from the National Criminal Intelligence Service (NRI). From 1992 onwards, information on homicides in the Netherlands has been collected by the NRI as part of the National Police Service Agency (KLPD). The information available in these files concerns the date and location of the homicide, the homicide method as well as basic demographic characteristics of both the victim and the perpetrator.
- Files from the Public Prosecution Service. This database includes the judicial procedures involved in a homicide.
- Files from the Judicial Information Service and the Ministry of Justice.
- Files from the Research and Documentation Centre (WODC). In addition to files from the KLPD and the Public Prosecution Service, these files contain detailed information stemming from interviews with relevant investigators who were in charge of the homicide investigations.

Cases in which the perpetrator died of suicide (ICD-10 codes X60-X84) were extracted from this database and were included in a sub-database *Homicide-Suicide in the Netherlands, 1992-2006* (Postulart & Nieuwbeerta, 2007). Basic demographic details such as the age, gender and ethnicity of the perpetrator as well as the relationship between the victim and the perpetrator can be extracted from this data source. In some cases, details on the offence are included as well. Additional information on homicide-suicide events was gathered through a newspaper analysis. The newspaper articles were used to enrich the data of the homicide-suicide database (Liem & Koenraadt, 2007). In the Netherlands, all articles from six national newspapers from

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<sup>12</sup> For a discussion on this topic, see Leistra & Nieuwbeerta (2003).

1992 onwards are indexed in the online computer database LexisNexis. Given the fact that homicide-suicides are not always reported at a national level, a regional newspaper database, the Wegener Archive, was included as well. This archive contains seven regional newspapers. In both databases keyword searches were applied to obtain articles describing homicide-suicide events. Due to the multifocal nature of the database, all successful homicide-suicides in the Netherlands between 1992 and 2006 are likely to be included.

#### *National Violent Death Reporting System*

The *National Violent Death Reporting System* (NVDRS) is an incident-based, violent death surveillance system that combines data from multiple sources. Data are based on coroners' and medical examiners' reports, toxicology reports, various law enforcement records, supplemental homicide reports, and death certificates are linked in a single data repository. The NVDRS is a census of all incidents involving suicide, homicide, and combined homicide-suicide events, in addition to selected other death types that occur within participating states (CDC, 2004; Paulozzi *et al.*, 2004). The NVDRS is coordinated by the U.S. Centers for Disease Control and Prevention (CDC), and data collection occurs at the state level. From this data source, homicide-suicide cases are extracted. Additional information on the relationship between victim and perpetrator was obtained from the narratives of the law enforcement, coroners' and medical examiners' reports. In general, these narratives are based on information gathered from the victims' neighbours, friends, family members, and other acquaintances. The NVDRS has been described in further detail elsewhere (CDC, 2004; Paulozzi *et al.*, 2004).

Data collection for the NVDRS began in 2003 in 7 states. For the international comparison study described in chapter six, data on deaths were used for the years 2004 to 2006 reported by thirteen US states that participated in NVDRS throughout that period (Alaska, Colorado, Georgia, Maryland, Massachusetts, New Jersey, North Carolina, Oklahoma, Oregon, Rhode Island, South Carolina, Virginia and Wisconsin).

For the study described in chapter seven, data on deaths were used for a longer period of time, namely from 2003 to 2006 and included three more states (Kentucky, New Mexico and Utah) and 4 Californian counties (Los Angeles, Riverside, San Francisco, and Santa Clara).

Case selection was based on the state in which the incident occurred, not the descendant's state of residence; if the incident state was unknown, it was assumed to be the state reporting the incident. Data abstractors follow a detailed NVDRS coding manual to ensure consistency. For cases that have inconsistencies in the underlying cause and the manner of death, abstractors review all source documents and assign the type of death following a protocol. To improve uniformity in coding, CDC staff review 10 per cent of the narratives and provide feedback to the reporting sites when coding is not supported by the narrative.

*American newspaper data*

News reports used to enrich data from the NVDRS were retrieved by searching the LexisNexis Academic database. This database offers a large number of news sources, including major newspapers as well as newspapers with smaller circulations that are more regional in coverage, and articles from newswires such as the Associated Press (AP) and United Press International (UPI) (Duwe, 2000). Newspapers from the 16 NVDRS states were included in the search. Similar keyword searches were applied as previously used elsewhere, including “homicide-suicide”, “murder-suicide”, “murder AND suicide” and “homicide AND suicide” (Malphurs & Cohen, 2002). Articles were screened to ensure that they matched the NVDRS inclusion criteria and the appropriate context (i.e. occurring in one of the participating 16 states during the appropriate time period). Cases were excluded if they did not meet the NVDRS inclusion criteria for homicide-suicide or if the news report expressed uncertainty as to the fatal outcome of either the homicide or suicide. To ensure anonymity, results from both data sources were studied independently. News reports were specifically searched for details regarding suicidal intent prior to the event.

*Swiss Homicide and Suicide Database*

Homicide as well as suicide data from Switzerland were retrieved from the *Swiss Homicide and Suicide Database* covering the period 1980-2004 (Killias *et al.*, 2009). This database includes all homicide and 10 percent of all suicide cases that occurred in Switzerland between 1980 and 2004. Data were retrieved from legal medicine, police and court files. Homicide cases were selected if they fell within any of the categories of intentional homicide (articles 111-116 of the Swiss Criminal Code). Based on this homicide sample, all cases of homicide followed by the suicide of the offender were filed in a new database. In order to adjust the time line to the data available in the Netherlands, only cases that took place between 1992 and 2004 were included in the analysis. However, only homicide cases where an autopsy had been ordered could be considered. In obvious cases of homicide followed by the suicide of the offender (e.g. the homicide-suicide takes place in a locked apartment), an autopsy is not always ordered. Therefore, the homicide-suicide rates presented for Switzerland may suffer from some undercounting.<sup>13</sup>

**7.2 Data sources used to compare homicide-suicide with homicide and suicide**

Similar to Part II, Part III of this study also makes use of multiple data sources. In Part III, empirical research serves to answer the fifth, sixth and seventh research question, namely which event, perpetrator and victim characteristics can explain the occurrence of homicide-suicide relative to a homicide or suicide alone? As has been outlined in the first chapter, this question will be approached at three levels of analyses: a macro level, meso level and micro level of approach (see table 1.2). The structure of part III of this study is similar to the structured principles of forensic mental health

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<sup>13</sup> Checks with alternative sources revealed that undercounting may be in the order of 16 percent.

assessment, in which nomothetic data (derived from groups) can increase our understanding of the individual under study (Heilbrun *et al.*, 2002).

First, in the macro-level analyses, homicide-suicide and homicide data are retrieved from the *Dutch Homicide Monitor* as described before. Suicide data are retrieved from the dataset *Causes of Death Statistics* from the Dutch Central Bureau of Statistics, Statistics Netherlands (CBS). For purposes of the meso-level analysis, data on homicide-parasuicides and homicides are retrieved from the Pieter Baan Centre archive, a forensic observation hospital in the Netherlands. Data on parasuicides stem from psychiatric reports from the Erasmus Medical Centre, a large academic medical centre in Rotterdam, the Netherlands. Thirdly, the micro-level approach will focus in more detail on the dynamics underlying intrafamilial homicide, parasuicides and homicide-parasuicides. Information on the dynamics of intrafamilial homicide, parasuicide and homicide-parasuicide cases will be retrieved from the same data sources used for the meso-level approach: the Pieter Baan Centre archive and the Erasmus Medical Centre archive.

#### *Causes of Death Statistics*

In order to compare the socio-demographic characteristics of homicide-suicide with suicides at a macro level, suicide data was collected from the dataset *Causes of Death Statistics* from the Dutch Central Bureau of Statistics, Statistics Netherlands (CBS). Causes of death are coded according to the International Statistical Classification of Diseases and Related Health Problems (ICD) of the World Health Organization (WHO). Since 1996 the tenth version of the ICD is used and hence, data used in this study ranged from the period 1996 to 2006. Cases were classified as suicides based on the cause of death given in the certificates from the doctor or forensic pathologist (ICD codes X60-X84). Such officially reported mortality data are considered reasonably sound (Móscicki, 1997). Basic demographic details such as the age, gender and ethnicity of the perpetrator as well as the characteristics of the suicide event are extracted from this data source.

#### *Pieter Baan Centre archive*

For the meso level and micro level analyses, data on homicide-parasuicides and homicides are retrieved from the Pieter Baan Centre, a forensic psychiatric observation hospital. In the Netherlands, people who are accused of having committed serious crimes and whose criminal acts are thought to be related to a mental disorder or illness are incarcerated at the centre for a period of seven weeks. The centre has a national function. Here, court-ordered pre-trial multidisciplinary assessments take place in order to determine the degree of accountability at the time of the offence. The assessment consists of an investigation into the social environment of the accused person, a report on behaviour on the ward, a short medical examination, and a psychological and psychiatric assessment (Koenraadt, 1992; Koenraadt *et al.*, 2007).

Given the extreme nature of homicide events, especially if they are followed by a suicide attempt by the perpetrator, the suspect is very likely to be admitted to the

Pieter Baan Centre. Hence, there is a high likelihood that the great majority of suspects in homicide-parasuicide cases in the Netherlands have been admitted to this centre. Since 1953, over 10,000 suspects have gone through this procedure, which has remained internally consistent over time. Given the partial absence of electronic databases coding older cases, several thousand cases were manually searched. As outlined before, for the meso and micro level analyses only intrafamilial homicides were considered. A homicide was identified as an intrafamilial homicide if the perpetrator and victim were or had been related to the family or household by blood ties or intimate relationships. Over 700 cases involved a domestic homicide – these cases were extracted, analysed and manually coded according to a great number of items, ranging from socio-demographic factors to situational characteristics and individual psychopathology. Cases involving an attempted homicide were excluded from the analysis. The majority of the domestic homicide cases included in the present sample stem from the period 1980-2006.

Cases were regarded as involving a homicide-parasuicide when the perpetrator committed a parasuicide within one week of the offence. In the study of suicidal behaviour, a strict division is made between individuals attempting suicide and between those succeeding in taking their own lives. Adam (1994) has argued that the variations in suicidal behaviour including suicide ideation, suicide attempts and completed suicide may well represent a continuum. At one end of this continuum are predominantly interpersonal and ‘manipulative’ suicidal actions, which appear to be primarily motivated by an urgent and more hopeful appeal to a threatened relationship; at the other end are more despairing and potentially lethal communications, with a deeply disappointing and strongly negative affect. In order to standardize and validate the use of parasuicides, the severity of such acts was assessed using the Pierce Suicide Intent Scale (Pierce, 1977). This scale consists of twelve items ranging from timing, intent and premeditation to lethality. Cases were coded as involving a parasuicide if the risk for a suicidal outcome was considered serious to very serious.<sup>14</sup> Here, factors that were not under the control of the perpetrator played a prominent role in determining whether the victim(s) and perpetrator survived. These include the unexpected presence of witnesses who summon help, the promptness and quality of the emergency medical response, weapon ‘failure’ and so on (Hillbrand, 2001).

*Erasmus Medical Centre archive*

Finally, at the meso level and micro level of the analyses homicide-parasuicides are compared to parasuicides not preceded by homicidal behaviour. Parasuicides that did not go accompanied with previous homicidal behaviour have been collected from the department of psychiatry from the Erasmus Medical Centre.

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<sup>14</sup> The Pierce Suicide Intent Scale has a maximum value of 25. According to this scale, the risk of suicide was considered low if they scored less than 4; the risk was regarded as medium if their score ranged from 4 to 10 and the risk was high if the total score was higher than 10.

It should be noted that this was not the intention at first. Rather, the aim was to use existing data on parasuicide cases. Therefore, a search for existing databases including detailed information on parasuicides in the Netherlands was conducted. This was done by a literature search of studies on suicidal behaviour conducted in the Netherlands and by inquiring with keynote suicide researchers about ongoing research and existing datasets. The results of this search are displayed in Appendix 1. Unfortunately, although a great deal of research in the Netherlands has been conducted in the area of suicide and suicidal behaviour, existing records on serious parasuicides are virtually unavailable. Existing datasets that include parasuicides are either large in size, but lack specific details on individual characteristics such as psychopathology, or include much detail, but are small in size and hence, hamper the application of statistical comparisons. Parasuicide datasets that did not contain enough detail impeded the determination of the severity of the parasuicide. The use of *serious* parasuicides is highly relevant, since the aim was to create a reliable control group for homicide-parasuicides in order to make the findings generalizable to *fatal* homicide-suicides.

Therefore, in order to create such a control group of individuals who had committed a serious parasuicide, for this study a new dataset was created based on psychiatric consultation files from the Erasmus Medical Centre, a large academic medical centre in Rotterdam, the Netherlands. Individuals having committed a serious parasuicide requiring medical care are admitted to the hospital. Here, a psychiatric consultation follows. The reports of these consultations include information on socio-demographic and psychopathological characteristics as well as on the motives involved in the parasuicide.

Parasuicides were matched to homicide-parasuicide cases according to gender and the family situation. In order to control for within-subjects variance and to improve the ability to find important differences, the ratio of control to cases (i.e. the ratio of parasuicide-only cases to homicide-parasuicide cases) was raised by two – in other words, this study aimed to include two parasuicide control cases for each homicide-parasuicide case. Given the fact that parasuicide constitutes a more frequent phenomenon than homicide-parasuicides, the period from which parasuicide data is drawn is relatively short, ranging from 2000 to 2004. All files were manually searched and included in the study if – in a similar fashion as described above – the risk of a suicidal outcome was considered serious to very serious according to the Pierce Suicide Intent Scale and if the patient matched the characteristics required for the control group. The individual, contextual and situational characteristics of these cases were retrieved, analysed and compared to cases involving a homicide-parasuicide. Appendix 2 represents an overview of the variables used in this study.<sup>15</sup>

By making use of multiple data sources and by conducting analyses at multiple levels, this study makes both theoretical and empirical progress. The study at hand

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<sup>15</sup> It has to be emphasized that the cases analysed on each level of analysis have been omitted from personal details and possible recognizable traits in order to avoid recognition and to safeguard the ethical and privacy considerations of these suspects. The confidentiality of these data is regulated by law.

differs from earlier studies that relied on a single data source or a single level of analysis. The use of demographic criminal justice data and national statistics data allows for a large-scale analysis and increases the external validity of the findings. The use of (forensic) psychiatric reports, on the other hand, provides an insight into individual, contextual and situational characteristics that are often lost in large-scale datasets. By combining these data sources and levels of analysis, this study aims to acquire a more precise insight into the epidemiological (macro), psychopathological (meso) and individual (micro) mechanisms underlying the homicide-suicide phenomenon.

### **8 Scientific relevance and contribution of this study**

The aim of this study is to increase our knowledge of homicide-suicide and thereby to make progress in at least four ways. First of all, this study reviews the existing literature on homicide-suicide. The first review deals with the empirical literature on homicide-suicide. The second review pertains to theories on homicide-suicides explaining why people commit homicides-suicides and why there are differences in the characteristics of incidents, perpetrators, and victims of homicide-suicide relative to homicide and suicide alone. Previous reviews on homicide-suicide were conducted over a decade ago (Felthous & Hempel, 1995; Nock & Marzuk, 1999). In these reviews, overviews were provided of the different types of homicide-suicide and their characteristics. Theoretical approaches were not discussed. Given the fair amount of recently published articles on homicide-suicide, as well as the completion of several large-scale epidemiological studies examining the prevalence of homicide-suicide in different countries, an updated review of this topic is especially warranted.

Second, this study aims to give an overview of the nature and incidence of homicide-suicide in the Netherlands during the past few decades. In order to put these findings in an international context, Dutch homicide-suicide characteristics are compared to homicide-suicides in Switzerland and the United States. As opposed to the Netherlands, these countries have a high degree of private firearms ownership. Although many studies have been published describing the characteristics of homicide-suicide events in different cities, regions and countries, until now no study has directly compared rates and characteristics across countries. International comparisons have been hampered by the lack of uniform inclusion criteria, the use of different homicide-suicide classification schemes and incongruity in the time periods studied. By making use of uniform classification schemes and sizeable datasets, this study is the first to directly compare homicide-suicide between countries.

Third, this study advances the state of knowledge by examining not only homicide-suicide cases in isolation, as is usually done in the literature, but by comparing these cases to other homicides and suicides. Thus far, as mentioned before, only two studies have recently empirically compared homicide-suicides with both types of lethal violence (Flynn *et al.*, 2009; Logan *et al.*, 2008). Based on nationwide data from the Netherlands, this study will compare all homicide-suicides with homicides and

suicides in an aim to come to an understanding as to homicide-suicide characteristics can explain the occurrence of homicide-suicide relative to homicide or suicide alone.

Fourth, this study makes progress by empirically testing existing theoretical assumptions on homicide-suicide. This is done by combining datasets from multiple sources, using several levels of aggregations. Data stem from demographic criminal justice, national statistics, and (forensic) psychiatric sources. Data used in a macro level analysis include all homicides, suicides and homicide-suicides in the Netherlands in the period 1992-2006. These data include demographic criminal justice and national statistics data. Data used in a meso level analysis include forensic psychiatric reports collected from a forensic observation hospital as well as psychiatric reports collected from a major academic hospital. The third approach takes on a micro level approach and focuses on individual cases in order to examine the dynamics underlying these acts.

### **9 Societal relevance of this study**

In addition to being of theoretical interest, the answers to the research questions are also of potential importance to the area of prevention. On the one hand, (mental) health-care institutions can isolate those individuals at risk not only of self-harm, but also of endangering others. Conversely, when the differences between homicides and homicide-suicides are uncovered, possible factors may be outlined that can help prevent suicidal behaviour among individuals prone to homicide.

As is known from other studies, homicide-suicides predominantly occur within the family. Gelles & Straus (1979) previously pointed out that after the police and the military, the family is the most dangerous social unit. On the one hand, factors specific and unique to family life such as intense interaction, extensive knowledge of each other's lives and the private nature of relationships have the potential for making the family a warm, supportive and intimate environment; on the other hand, within the family these factors contribute to an organisation which enhances the likelihood that violence will break out and escalate unchecked (Straus & Hotaling, 1980). As outlined before, in the Netherlands approximately one third of all solved homicides take place in a domestic context (Nieuwbeerta & Leistra, 2007). Arguably, domestic homicide can be regarded as the most severe outcome on a continuum of domestic violence. Within the family, violence is passed on through generations. Studies indicate that those who have witnessed domestic violence or have been the victims of domestic violence are more likely to become a perpetrator of violence later in life (Carrol, 1977; Crimmins, 1993; Haapasalo & Petäjä, 1999; Hotaling & Sugarman, 1986). Figures show that approximately 12 per cent of the Dutch population reported having experienced physical violence by their intimate (ex)partner. These high percentages also account for children: an estimated 4 to 11 per cent of all children are reported to have been victims of physical abuse (Van Dijk *et al.*, 1997). Whereas until fairly recently, domestic violence was perceived as a private issue that should remain within the sacred place of the home, now it has attracted widespread attention. With the emergence of spousal abuse as a public issue in the 1970s, family violence has become

an important focus of research in psychology and sociology and a major social issue for the women's movement (Huff-Corzine *et al.*, 1994). Newly-founded governmental and non-governmental organisations aim to address, diminish and prevent domestic violence.

Yet, in spite of these efforts, the most violent form of domestic violence – domestic homicide – and, more specifically, domestic homicide-suicide has remained an area deprived of consideration and awareness. When vulnerable groups such as women and children become the victims of a homicide, society responds with feelings of shock and incomprehension. The same, if not an increased unrest arises when the public is confronted with a homicide followed by a suicide. This accounts for homicides taking place both within and outside the family. The range of victimization is very large when dealing with a solitary homicide, but when a homicide involves multiple victims or includes the suicide of the perpetrator, the range of secondary victimization spreads drastically. Paradoxically, although such cases lead to major societal disturbance, virtually no attention has been paid to homicide-suicide by governmental and non-governmental organisations.

### **10 Outline of this study**

This study consists of four parts and ten chapters (see table 1.3).

The **first part** of this study consists of two literature reviews. Chapter two provides an overview of the background to the homicide-suicide phenomenon through a review of the empirical literature. Chapter three gives a review of the theoretical literature on homicide suicide. Based on theoretical notions, this chapter also specifies several expectations concerning possible differences between homicide-suicide, homicide and suicide.

The **second part** of this study is empirical and descriptive in nature. This part provides an overview of the epidemiology of homicide-suicide as well as an empirical analysis of the different subtypes of homicide-suicide. Chapter four aims to answer the first research question regarding the incidence, trends and distribution of subtypes of homicide-suicide in the Netherlands. In addition, this chapter aims to assess to what extent these subtypes differ in their characteristics. Chapter five addresses the second research question, examining to what extent homicide-suicide characteristics in the Netherlands differ from those in other countries, specifically the United States and Switzerland. Chapter six compares two types of homicide-suicide: homicide-suicides taking place within the family (so-called intrafamilial homicide-suicides) and homicide-suicides taking place outside the family (so-called extrafamilial homicide-suicides). Given the rare occurrence of extrafamilial homicide-suicide in the Netherlands, data is drawn from the United States, where this type of homicide-suicide occurs more frequently and can therefore be used for statistical analyses.

**Table 1.3 Structure of this study**

Chapter	Topic / Question	Method	Data
1	Introduction, research questions, research design and data		
<b>Part I</b>	2	What are the empirical findings of earlier studies on homicide-suicide?	Literature analysis - Empirical research literature
	3	What are the theoretical ideas on homicide-suicide? And in particular: Which event, perpetrator and victim characteristics are assumed to explain the occurrence of homicide-suicide relative to homicide or suicide alone?	Theoretical analysis - Theoretical literature
<b>Part II</b>	4	What are the incidence, trends and distribution of subtypes of homicide-suicides in the Netherlands? And: To what extent do subtypes of homicide-suicide differ in their characteristics?	Empirical quantitative analysis - DHM - Newspaper data (NL)
	5	To what extent do homicide-suicides in the Netherlands differ from those in other countries, especially the United States and Switzerland?	Empirical quantitative analysis - DHM - NVDRS - SNHD
	6	To what extent do intrafamilial homicide-suicides differ from extrafamilial homicide-suicides?	Empirical quantitative analysis - NVDRS - Newspaper data (US)
<b>Part III</b>	7	At a macro level, to what extent do the socio-demographic characteristics of homicide-suicide events, perpetrators and victims explain the occurrence of homicide-suicide relative to a homicide or suicide alone?	Empirical quantitative analysis - DHM - CDS
	8	At a meso level, to what extent do individual, contextual and situational characteristics of homicide-parasuicides explain the occurrence of homicide-parasuicide relative to homicide or parasuicide alone?	Empirical quantitative analysis - PBC - EMC
	9	At a micro level, to what extent do the dynamics underlying homicide-parasuicide explain the occurrence of homicide-parasuicide relative to homicide or parasuicide alone?	Empirical qualitative analysis - PBC - EMC
<b>Part IV</b>	10	Conclusions and discussion	

**DHM:** Dutch Homicide Monitor; **CDS:** Causes of Death Statistics; **NVDRS:** National Violent Death Reporting System (US); **SNHD:** Swiss National Homicide Database (CH); **PBC:** Pieter Baan Centre case files; **EMC:** Erasmus Medical Centre psychiatric consultation files.

The **third part** is also empirical and aims to determine which event, perpetrator and victim characteristics can explain the occurrence of homicide-suicide relative to a homicide or suicide alone by means of empirical research. This part is based on three different levels: a macro level analysis, a meso level analysis and a micro level

analysis. The macro level analysis focuses on socio-demographic constructs; the meso-level approach examines individual, contextual and situational characteristics and finally, the micro level approach analyses the specific dynamics underlying these acts. In chapter seven, a macro level approach to the homicide-suicide phenomenon is employed, where homicide-suicides are compared to both homicides and suicides based on Dutch national data. In chapter eight, a meso level approach will be employed through which the individual, contextual and situational characteristics of homicide-parasuicides are compared to both homicides that did not involve a serious parasuicide and to serious parasuicides that did not involve a preceding homicide. Chapter nine presents the micro analysis. Rather than conducting quantitative analyses, this chapter qualitatively compares homicide-parasuicides to both homicides and parasuicides. Examining homicide-parasuicides on a detailed level not only enhances our understanding of the characteristic components of these cases, but also strengthens the validity of the analyses conducted at both the meso and the macro level.

Finally, the **fourth part** of this study, consisting of chapter ten, provides a summary of the findings as well as a discussion, integrating the findings obtained by the literature analysis, theoretical analysis and empirical research in an attempt to come to a comprehensive understanding of the homicide-suicide phenomenon. Recommendations for (clinical) practice will be provided as well as opportunities for future research.

**PART I**  
**Background**



## Chapter two

# Review of the Empirical Literature on Homicide-Suicide<sup>16</sup>

This chapter provides an overview of the current state of the art concerning empirical research into the homicide-suicide phenomenon. In doing so, this chapter aims to answer the following research question:

*What are the empirical findings of earlier studies on homicide-suicide?*

This question is assessed by means of a systematic review of the literature as described in the previous chapter. An extensive search of the literature on homicide-suicide resulted in over 200 empirical articles on homicide-suicide in addition to almost 50 books or parts of books devoted to this topic. These contributions centre on five areas related to the homicide-suicide phenomenon: the first involves the incidence of homicide-suicide in a particular region or time period; the second focuses on macro-level explanations of variations in homicide-suicide rates. The third includes empirical studies on the characteristics of all homicide-suicide cases encountered in a population; the fourth involves the development of a classification of homicide-suicide. The fifth area involves empirical studies on the characteristics of subtypes of homicide-suicide. In this literature review, these five areas of research will be addressed accordingly. In doing so, this chapter aims to provide a broader understanding of the homicide-suicide phenomenon.

### **1 Studies describing the variation in homicide-suicide rates**

A review of recent international epidemiological studies reveals that overall, homicide-suicide is a relatively rare event, but also that substantial cross-national differences exist. Table 2.1 reflects both the proportion of homicides ending in a suicide as well as the homicide-suicide rate per 100,000.

While homicide-suicide incidents make up a relatively small proportion of homicides overall, certain subtypes of homicide – notably men who kill an intimate partner with a firearm – make up over half of all incidents (Barber *et al.*, 2008; Eastal, 1993; Liem *et al.*, 2009; Lund & Smorodinsky, 2001; Walsh & Hemenway, 2005). In recent years, the rate of homicide-suicides has ranged from as low as 0.76 per 100,000 persons per year in England & Wales (Taylor & Gunn, 1999) to 0.38 per 100,000 in the Toyama region in Japan (Hata *et al.*, 2001). In comparison to England & Wales, the United States has a relatively high homicide-suicide rate: recent accounts report the

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<sup>16</sup> Parts of this chapter have been submitted as:

- Liem, M. 'Homicide followed by Suicide: A Review' *Aggression and Violent Behavior* (forthcoming).

homicide-suicide rate to vary from 0.27 per 100,000 every year in Kentucky (Walsh & Hemenway, 2005) to 0.38 per 100,000 persons per year in central Virginia (Hannah *et al.*, 1998). In Australia and New Zealand, the homicide-suicide rate ranges from 0.07 (Moskowitz *et al.*, 2006) to 0.11 (Carcach & Grabosky, 1998).

**Table 2.1 Comparative frequencies and rates of homicide-suicides**

Country	Study	Period	Homicide-Suicide (%)	Rate per 100,000
Australia	West (1965)	1959-1960	22.0	0.36
Australia	Milroy (1995a)	1985-1989	NA	0.19
Australia	Carcach & Grabosky (1998)	1989-1996	5.5	0.22
Bermuda	Coid (1982)	1920-1979	5.5	0.13
Canada	Schloss & Gierbrecht (1972)	1961-1966	15.6	0.21
Canada	Greenland (1971)	1968	18.0	0.27
Canada	Silverman & Mukherjee (1987)	1976-1982	10	NA
Denmark	West (1965)	1959-1960	42	0.22
Denmark	Hart Hansen (1974)	1946-1970	30	0.20
Denmark	Gottlieb <i>et al.</i> (1987)	1968-1983	8	0.08
England & Wales	Morris & Blom-Cooper (1967)	1900-1949	29.1	0.11
England & Wales	Morris & Blom-Cooper (1967)	1950-1959	33.3	0.12
England & Wales	Home Office (1980)	1969-1979	8.2	0.07
England & Wales	Home Office (1993)	1980-1990	7.2	0.07
England (Yorkshire & Humberside)	Milroy (1993)	1975-1992	4.6	0.07
England & Wales	Taylor & Gunn (1999)	1957-1995	NA	0.07
England & Wales	Barraclough & Harris (2002)	1988-1992	1.0	NA
Finland	Virkkunen (1974)	1955-1970	8	0.18
Finland	Kivivouri & Lethi (2003)	1960-2000	8	0.17
Finland	Saleva <i>et al.</i> (2007)	1987-1988	NA	0.20
France	Saint-Martin <i>et al.</i> (2007)	2000-2005	11	1.55
Hong Kong	Wong & Singer (1973)	1961-1971	5.0	0.07
Hong Kong	Chan <i>et al.</i> (2003)	1989-1997	6.0	0.09
Hong Kong	Chan (2007)	1989-2003	NA	0.18
Iceland	Gudjonsson & Petursson (1982)	1940-1979	8.5	0.06
Israel (non-Jews)	Landau (1975)	1950-1964	6.6	0.26
Israel (oriental Jews)	Landau (1975)	1950-1964	25.6	0.27
Israel (western Jews)	Landau (1975)	1950-1964	67.8	0.40
Japan, Toyama	Hata <i>et al.</i> (2001)	1986-1995	25.3	0.15
Japan, Sapporo	Hata <i>et al.</i> (2001)	1986-1995	20.6	0.06
New Zealand	Christiansen <i>et al.</i> (1993)	1976-1989	3.4	0.05
New Zealand	Moskowitz <i>et al.</i> (2006)	1991-2000	NA	0.08
Scotland	Gibson & Klein (1969)	1957-1968	9.2	0.04
Scotland	Scottish Office (1991)	1986-1990	3	0.05
Sweden	Lundqvist (1985)	1970-1981	15.6	0.09

**Table 2.1 Comparative frequencies and rates of homicide-suicides (continued)**

Country	Study	Period	Homicide-Suicide (%)	Rate per 100,000
<b>United States</b>				
Overall	West (1965)	1959-1960	4.0	0.18
17 states	Logan <i>et al.</i> (2008)	2003-2005	6.6	NA
Albuquerque, NM	Rosenbaum (1990)	1978-1987	4	0.25
Chicago, IL	Stack (1997)	1965-1990	1.64	NA
Chicago, IL	Adler (1999)	1875-1910	9.6	0.56
Connecticut, Maine, Utah, Wisconsin	Barber <i>et al.</i> (2008)	2001-2002	4.9	0.19
Florida	Cohen <i>et al.</i> (1998)	1988-1994	2.5-12	0.5-0.7
Georgia	Hanzlick & Koponen (1994)	1988-1991	1.4	0.46
Houston, TX	Lundgaard (1977)	1969	1.8	0.42
Kentucky	Currens <i>et al.</i> (1991)	1985-1990	6	0.30
Los Angeles, CA	Allen (1983)	1970-1979	2.1	0.36
Miami, FL	Copeland (1985)	1977-1985	2.27	0.55
New Hampshire	Campanelli & Gilson (2002)	1995-2000	14.7	0.26
North Carolina	Palmer & Humphrey (1980)	1972-1977	1-2	0.19
Oklahoma	Comstock <i>et al.</i> (2005)	1994-2001	4	0.30
Philadelphia, PA	Wolfgang (1958)	1948-1952	3.6	0.21
Washington, DC; Baltimore, MD; Philadelphia, PA	Berman (1979)	1974-1975	1.5	0.43
NA: Not available				

## 2 Studies explaining the variation in homicide-suicide rates

When comparing the overall rate of homicide-suicides within and between countries, Coid (1983) proposed several epidemiological 'laws' to explain why homicides followed by suicide follow different patterns than homicides committed by 'normal' perpetrators. Coid's first law states that the higher the rate of homicide in a population, the lower the percentage of perpetrators who are found to commit suicide (Coid, 1983). In countries with an already high homicide rate, the proportion committed by those who kill themselves is small. In contrast, countries with a low frequency of homicide have a relatively greater percentage of homicide-suicides and other types of what he termed 'abnormal homicides'. Coid (1983) argues that an increase in the homicide rate mainly includes the proportion of 'normal' offenders. Similarly, when the homicide rate decreases the reduction also primarily affects the proportion of 'normal' offenders.

Coid's second law holds that the rates at which homicide offenders commit suicide appear to be "the same in different countries, despite considerable differences in the overall rates of homicide" (p. 857). Coid's third law determines that the rate of homicide-suicide remains the same despite a fluctuation in the overall homicide rate over time.

Several researchers have tested Coid's laws, finding support for the first law: the higher the homicide rate the smaller the proportion of offenders who subsequently commit suicide. This observation has been attributed to the so-called survivor effect. This means that as the homicide rate increases above a certain point, the homicide-suicide rates increase less rapidly because the number of potential offenders is exhausted (Large *et al.*, 2009a).

Later studies do not support for Coid's second law, finding a substantial difference in homicide-suicide rates between countries. Milroy (1995a), for example, held that countries with higher rates of homicide-suicide are those in which the homicide rate is high. Based on an analysis of homicide-suicide trends in England (Yorkshire and Humberside) in the period 1946-1996, Milroy also found that a high percentage of homicide-suicides were committed with firearms. He therefore suggested that the availability of weapons may be a contributing factor. This assumption is further supported by a recent systematic review of population-based studies of homicide-suicides by Large *et al.* (2009a), which showed that in studies from the United States the rates of homicide-suicide appeared to be positively associated with the rate of homicides by firearms. In areas outside the United States with lower homicide rates there appeared to be a modest positive association between the suicide rate and the homicide-suicide rate over time.

Some empirical studies support Coid's third law, others find the opposite. The findings from Felthous & Hempel's (1995) study supported Coid's observation regarding the stability of the homicide-suicide rate over time. They held that since homicide-suicides involve predominantly intimate (family) victims, and the rates of these killings do not fluctuate as much as the suicide and homicide rate do independently, homicide-suicide rates are subject to similar influences and are of a comparable stability as the rate of intimate homicide. Although the rates of homicide-suicide appear to be relatively stable across nations, sociocultural influences lead to varying characteristics. For example, as Nock & Marzuk (1999) pointed out, most homicide-suicides in the United States are perpetrated by men against their (estranged) intimate partners, whereas in Japan the majority of homicide-suicides take place between mothers and their children. In his study of homicide-suicide in England, Yorkshire & Humberside, Milroy (1995), on the other hand, found a decline in the proportion of homicide offenders who committed suicide. A similar decline was found by Kivivouri & Lethi (2003), who analysed homicide-suicide figures in Finland between 1960 and 2000 and by Gartner & McCarthy (2008), who studied homicide-suicide trends in four North American cities between 1900 and 1990. The latter research ascribed the decline in homicide-suicide trends in the course of the twentieth century to an overall decline in homicides involving intimate partners and children. This is believed to be due to the growing availability of contraceptives, smaller families, greater access to and the social acceptance of divorce, increased social and economic support for single-parent families, improved access to counselling, and advances in diagnosing and treating mental health problems. Ascribing the decline in homicide-suicide to improved social conditions has been supported by others as well

(Large *et al.*, 2009a). In addition, Gartner & McCarthy (2008) proposed that a decrease in suicides after spouse and child killings reflects an increasing individualisation over time, whereby people are able to more easily separate themselves – psychologically and emotionally – from other family members. From this perspective, the family's power as a “master status” or cornerstone of identity has diminished over time – resulting in a decline in homicide-suicides.

### **3 Studies describing homicide-suicide characteristics**

A review of the literature on homicide-suicide shows several studies that have described the characteristics of homicide-suicide events, victims and perpetrators. As can be derived from table 2.2, the majority of these empirical studies relied on city-level or regional data. Data periods vary from one year to several decades. Even though differences exist, there is a large uniformity in the use of data to study homicide-suicide: most studies rely on police data or medical examiner data to retrieve information on the characteristics of homicide-suicide perpetrators and their victims. As has been mentioned before, few studies make use of a comparison group of homicides or suicides alone.

Overall, these studies show that worldwide, homicide-suicides are most prevalent in the domestic sphere: examining homicide-suicide in England & Wales, Barraclough & Clare Harris (2002) found that homicide-suicide is mainly committed by men of all ages who kill family members, chiefly their current or past partners and their young children. In a very small proportion younger men were found to kill strangers, usually while committing a crime, and then themselves. Matching a sample of homicide-suicide events with a homicide-only sample, West (1965) found ‘an overwhelming’ domestic nature of homicide-suicide in almost every comparison made. Australian data point in the same direction: the majority of homicide-suicide cases analysed by Carcach & Grabosky (1998) involved (ex)partners; the second most common were homicide-suicides concerning parents killing their children. Lecomte & Fornes (1998), examining homicide-suicides in Paris, also found that the most common type involved those taking place within the family. Data from other parts of the world, from East Asia (Chan, 2007; Hata *et al.*, 2001; Yip *et al.*, 2009) to the United States (Barber *et al.*, 2008; Berman, 1979; Campanelli & Gilson, 2002; Cohen *et al.*, 1998; Harper & Voigt, 2007; Logan *et al.*, 2008; Malphurs & Cohen, 2002; Selkin, 1976; Stack, 1997; Wolfgang, 1958) also suggest that the majority of homicide-suicide victims involve spouses and children. Based on an analysis of over 16,000 homicide cases in Chicago, Stack (1997) postulated that a homicide is more likely to end in a suicide when the relational distance between victim and perpetrator is smaller.

**Table 2.2 Studies in homicide-suicide**

Study	Type	Homicide-Suicides (N)	Homicides (N)	Suicides (N)	Geographic location	Period	Method
Adler (1999)	I&E	257	2676	0	Chicago, IL	1875-1910	Police files
Allen (1983)	I&E	104	0	0	Los Angeles, CA	1970-1979	NA
Barber <i>et al.</i> (2008)	I&E	74	1429	2584	Connecticut, Maine, Utah & Wisconsin and four counties	2001-2002	Police files; ME files
Barnes (2000)	I&E	188	0	0	Australia	1973-1992	ME files
Barraclough & Harris (2002)	I&E	144	0	0	England and Wales	1988-1992	Police files; ME files
Berman (1979)	I&E	20	0	972	Philadelphia, Baltimore and Washington, D.C.	1974-1975	Police files; ME files
Brett (2002)	I	6	0	0	Perth	1993-2000	Psychiatric reports
Boudouris (1974)	I&E	219	6170	0	Detroit, MI	1926-1968	Police files
Bossarte <i>et al.</i> (2006)	I&E	209	0	0	United States	2003-2004	Police files; ME files
Campanelli & Gilson (2002)	I&E	16	0	0	New Hampshire	1995-2000	ME files
Carcach & Grabosky (1998)	I&E	144	0	0	Australia	1989-1996	Police files
Cavan (1928)	I&E	18	0	21	Chicago, IL	1923	ME files
Chan <i>et al.</i> (2003)	I&E	49	0	0	Hong Kong	1989-1997	Police files; ME files
Chan (2007)	I&E	88	0	0	Hong Kong	1989-2003	Police files; psychological reports; ME files
Cohen <i>et al.</i> (1998)	I&E	171	0	0	Florida	1988-1994	ME files
Comstock <i>et al.</i> (2005)	I&E	73	0	0	Oklahoma	1994-2001	ME files
Cooper & Eaves (1996)	I	124	0	0	British Columbia	1984-1992	ME files
Copeland (1985)	I&E	62	0	0	Dade County, FL	1977-1983	ME files
Currens <i>et al.</i> (1991)	I&E	67	0	0	Kentucky	1985-1990	ME files
Felthous <i>et al.</i> (2001)	I&E	20	0	0	Galveston County, TX	1992-2000	ME files
Flynn, S. <i>et al.</i> (2009)	I&E	203	5096	46,358	England & Wales	1996-2005	National Data
Gartner & McCarthy (2008)	I&E	451	5733	0	Toronto, Vancouver, Buffalo & Seattle, Canada	1900-1990	Police files; ME files; court files; newspaper reports

**Table 2.2 Studies in homicide-suicide (continued)**

Study	Type	Homicide-Suicides (N)	Homicides (N)	Suicides (N)	Geographic location	Period	Method
Haanel & Elsässer (2000)	I&E	14	0	0	Basel, Switzerland	1971-1990	Police files; ME files
Hannah <i>et al.</i> (1998)	I&E	53	0	0	Virginia	1980-1684 1990-1994	ME files
Hanzlick & Koponen (1994)	I&E	12	0	0	Fulton County, GA	1988-1991	ME files
Harper & Voigt (2007)	I&E	42	0	0	New Orleans, LA	1989-2001	Police files; newspaper articles; interviews
Jena <i>et al.</i> (2009)	I&E	46	0	0	Pretoria, South Africa	1997-2001	Police files; ME files
Jensen <i>et al.</i> (2009)	I	8	0	7	South Australia	1996-2007	ME files
Kivivouri & Lethi (2003)	I&E	166	0	0	Finland	1960-2000	Police files; national data
Lecomte & Fornes (1998)	I&E	56	0	0	Paris	1991-1996	Forensic Science Centre
Logan <i>et al.</i> (2008)	I&E	408	5089	20,183	United States	2003-2005	National data
Malphurs & Cohen (2002)	I&E	673	0	0	United States	1997-1999	Newspaper Articles
Milroy (1995)	I&E	52	0	0	Yorkshire & Humberside (England)	1975-1992	Police files; ME files

**I:** Intrafamilial only; **E:** Extrafamilial only; **I&E:** Intrafamilial and extrafamilial; **ME** files: Medical Examiner files.

#### 4 Studies disaggregating homicide-suicide into various types

A review of the literature on homicide-suicide further reveals that several authors have made attempts to develop homicide-suicide classification schemes (table 2.3).

**Table 2.3 Homicide-suicide classification schemes**

Study	Classification based on
Berman (1979)	Motive
Wallace (1986)	Motive; conflict; altruism; mental abnormality
Marzuk <i>et al.</i> (1992)	Victim-perpetrator relationship
Hanzlick & Koponen (1994)	Victim-perpetrator relationship; method; stressors
Felthous & Hempel (1995)	Victim-perpetrator relationship; psychopathology
Palermo <i>et al.</i> (1997)	Motive
Harper & Voigt (2007)	Victim-perpetrator relationship; motive

Marzuk, Tardiff and Hirsch (1992) were the first to develop a classification system that categorized homicide-suicides by the type of victim-perpetrator relationships. The four most common types of homicide-suicide according to this classification were intimate partner homicide-suicide, filicide-suicide, familicide-suicide and extrafamilial homicide-suicide. The first category is also referred to as *uxoricide-suicide*: the killing of an intimate partner and a subsequent killing of oneself. Within this category a distinction is made between uxoricide-suicides motivated by 'amorous jealousy' and those motivated by the ill health of one of the partners. The first involves beliefs, real or delusional, of the partner's infidelity, often accompanied by verbal abuse and sublethal physical violence. The triggering event is often the female's rejection of her lover and her immediate threat of withdrawal and estrangement. The second type of uxoricide-suicide typically constitutes a husband killing his ailing spouse before committing suicide to relieve the spouse of pain associated with a chronic illness. *Filicide-suicide* involves cases in which the perpetrator not only takes his or her own life, but that of his or her child(ren) as well. *Familicide-suicide* constitutes an overlap of both uxoricide-suicide and filicide-suicide: the killing of both the spouse and child(ren), whose perpetrators are also referred to as 'family annihilators'. The fourth category consists of *extrafamilial homicide-suicides* that involve victims outside the family realm.

Felthous & Hempel (1995) proposed to connect Marzuk *et al.*'s (1992) classification to one based on psychopathology, together constructing a more encompassing classification system. Wallace (1986), on the other hand generated four aetiological models of homicide-suicide based on motive, conflict, altruism and mental abnormality. Although these two typologies can be helpful in some retrospective analyses of homicide-suicide cases, they are deemed too specific to apply to cases in which the contribution to the offence is initially not known. Since the perpetrator of a homicide-suicide typically dies, classifying a case based on systems of assumed psychopathology or motives is particularly prone to speculation.

Berman (1979) labelled homicide-suicides 'dyadic deaths' to indicate that the role of both victim and perpetrator are being played by the same actor. In contradiction to Marzuk *et al.* (1992) and Felthous & Hempel (1995), who mainly focused on the intrafamilial aspect of homicide-suicide, Berman (1979) included subclasses of suicide pacts and so-called 'exhibitionistic suicides' such as assassination followed by suicide and terrorist suicide missions.

Hanzlick & Koponen (1994) adapted Marzuk *et al.*'s (1992) classification system by delineating variables such as gender, race and the perpetrator's type of household. In addition, they added several co-factors, including the method employed in the offence as well as precipitating stressors. This typology also includes several 'special' classifications, including the 'family annihilator' (he or she who kills the entire family), 'dyadic death' (the killing of others and oneself), 'triadic death' (the killing of one's (estranged) partner, a rival lover and oneself) and finally a 'suicide following a mass murder or serial murders committed by the perpetrator'. This classification system can be criticized for its abundance of information on stressors, methods and other types of details, together hampering the processing of research material.

Similar to Berman (1979), Palermo *et al.* (1997) also incorporated terrorist acts in their classification scheme. He and his colleagues distinguished three forms of homicide-suicide, the first type consisting of homicide combined with a self-destructive act arising out of anger or paranoia. Their second type of homicide-suicide includes perpetrators who commit suicide motivated by fear of detection and exposure. For the third type, the authors distinguished 'kamikaze'-like terrorist acts where the perpetrator dies as a by-product of the homicidal act. It can be argued that this type of classification is somewhat over-simplistic, as it does not incorporate child homicide-suicide – one of the most frequent types of homicide-suicide – and other types of homicide-suicide in which the victim is killed for reasons other than anger, paranoia or a fear of detection.

On the basis of 42 homicide-suicides Harper & Voigt (2007) recently applied a classification system involving 'intimate or domestic lethal violence-suicide', 'family annihilation-suicide', 'mercy killing-suicide', 'public killing-spree-suicide' and a category consisting of 'mistaken or accidental homicide-suicide'. Whereas other studies clearly distinguish 'family annihilation' from child homicide-suicide, Harper & Voigt (2007) group together child homicide victims in the family annihilation category, even when the event does not involve adult victims. The category 'mercy killing-suicide' also involves suicide pacts, although the authors acknowledge that there is no way to confirm the victim's agreement with the pact. Their classification partially incorporates motive as a determining factor and is difficult to apply to data in which the motive underlying the offence is not known.

In further reviewing earlier empirical studies and their results, Marzuk *et al.*'s (1992) classification scheme will be used as a taxonomy, as this system has been used by many others throughout the years in both the presentation of case-study material as well as in further analyses of homicide-suicide acts (Felthous & Hempel, 1995;

Hanzlick & Koponen, 1994; Logan *et al.*, 2008). Other classification systems such as the ones outlined above are often merely theoretical, not supported by empirical data or too extensive to be used as a basic taxonomy. Previous studies using Marzuk *et al.*'s typology, however, found a lack of a category for adult children killing their parent(s) before killing themselves (Moskowitz *et al.*, 2006). In order to complete this typology, then, the category 'killing of other family members followed by suicide' is added, including parricide-suicide (the killing of parents followed by suicide) and siblicide-suicide (the killing of siblings followed by suicide). Together, this comprises a classification system including intimate partner homicide-suicide, child homicide-suicide, familicide-suicide, the killing of other family members followed by suicide and extrafamilial homicide-suicide (see table 2.4) – these phenomena will be addressed and further examined in order to come to a broader understanding of the homicide-suicide phenomenon. The findings from the reported studies, particularly those relying on large datasets, should be interpreted with caution, since many did not report the effect size of statistically significant relationships.

**Table 2.4 Types of homicide-suicide**

<b>Intrafamilial homicide-suicide</b>	Intimate partner homicide-suicide	<i>Uxoricide-suicide</i>
	Amorous jealousy	
	Declining health	
	Child homicide-suicide	<i>Filicide-suicide</i>
	Familicide-suicide	
	Other family homicide-suicide	
<b>Extrafamilial homicide-suicide</b>	Parent homicide-suicide	<i>Parricide-suicide</i>
	Sibling homicide-suicide	<i>Siblicide-suicide</i>

## 5 Studies on intimate partner homicide-suicide

### 5.1 General

*Uxoricide-suicide* is a term used to denote the killing of an intimate partner followed by suicide. Although strictly speaking, the term 'uxoricide' is only applicable to female victims, this term is commonly applied to both the killing of intimate male as well as female partners. The term 'femicide' has a strong feministic character and refers to different types of murder in which the victims are female (Caputi & Russell, 1992). Following Carcach & James (1998), those referred to as 'intimate partners' entail spouses, ex-spouses, persons in current or former de facto relationships, boyfriends, girlfriends or partners in same-sex relationships. The killing of an intimate partner is not only the most common type of domestic homicide, but is also the most prevalent in cases of homicide-suicide (Barber *et al.*, 2008; Bossarte *et al.*, 2006; Bourget *et al.*, 2000; Comstock *et al.*, 2005; Dutton & Kerry, 1999; Jena *et al.*, 2009; Malphurs & Cohen, 2002; Marzuk *et al.*, 1992; Saleva *et al.*, 2007). A search of the literature on homicide-suicide involving intimate partners yielded a number of studies which are schematically displayed in table 2.5.

**Table 2.5 Studies on intimate partner homicide-suicide**

Study	Type	Intimate partner homicide-suicides (N)	Intimate partner homicides (N)	Suicides (N)	Geographic location	Period	Method
Adinkrah (2007)	M	13	47	0	Ghana	1990-2005	Newspaper reports
Banks <i>et al.</i> (2008)		46	78	0	New Mexico	1993-2002	Police files; court files; child protective services records
Block & Christakos (1995)	M&F	179	2,377	0	Chicago, IL	1991-1993	Police files
Bourget <i>et al.</i> (2000)	M&F	58	87	0	Québec, Canada	1991-1998	ME files
Campbell (1992)	M	2	116	0	Dayton, OH	1975-1979	Police files; newspaper reports
Dawson (2005)	M	194	703	0	Ontario, Canada	1974-1994	Police files; ME files
Dettling <i>et al.</i> (2003)	M&F	6	0	0	Essen & Heidelberg, Germany	1991-2001	Forensic Science Centre
Dutton & Kerry (1999)	M	30	60	0	Canada	NA	Prison files
Eastal (1994)	M&F	47	522	0	Australia	1989-1991	Police files; court files
Koziol-McLain <i>et al.</i> (2006)	M	67	152	0	United States	1994-2001	Police files; ME files
Lund & Smorodinsky (2001)	M&F	74	112	0	California	1996	Police files; newspaper reports; interviews
Malphurs <i>et al.</i> (2001)	M	27	0	36	Central Florida	1988-1994	ME files
Mathews <i>et al.</i> (2008)	M	261	1,088	0	South Africa	1999	ME files
Morton <i>et al.</i> (1998)	M	28	88	0	North Carolina	1988-1992	ME files
Muller (2001)	F	2	33	0	Victoria, Australia	1993-1999	ME files
Swatt & He (2006)	M&F	13	72	0	Chicago, IL	1995-1996	Police files
Rosenbaum (1990)	M&F	12	24	0	Albuquerque, NM	1978-1987	Police files
Salari (2007)	M&F	225	0	0	United States	1999-2005	Police files; newspaper reports
West (1965)	M&F	64	48	0	London, UK	1954-1961	Police files; ME files

**M:** Male perpetrated; **F:** Female perpetrated; **M&F:** Male and female perpetrated

As outlined before, the literature reports a twofold division in cases of intimate partner homicide-suicide: the first centring on a pathological type of possessiveness and the latter clustered around a theme of old age and ill-health. Although some empirical research equates the latter type with suicide pacts between spouses, research has shown that coercion to participate is a central characteristic in these cases. Moreover, as Jensen *et al.* (2009) have pointed out, cases in which one partner has killed the other and committed suicide afterwards are by definition homicide-suicides, irrespective of a mutual agreement between the two. This specific type will be addressed shortly.

## **5.2 Amorous jealousy**

Although Marzuk *et al.* (1992) made a clear distinction between intimate partner homicide-suicides motivated by amorous jealousy and declining health, a review of the literature shows that few empirical studies apply such a dichotomy. In these studies, intimate partner homicide-suicide is rather described as a homogeneous group. This lack of distinction should be kept in mind when interpreting the results of the literature review described below.

### *Demographics*

As the perpetrator in intimate partner homicide cases is predominantly male, so is the perpetrator in intimate partner homicide-suicide cases. In an Australian study on homicide between partners, Easteal (1993) found that it was only men who committed suicide after the offence – women who murdered their partner hardly ever killed themselves afterwards. Studies conducted in other parts of the world come to the same conclusion (Banks *et al.*, 2008; Belfrage & Rying, 2004; Bourget *et al.*, 2000; Dawson, 2005; Hanzlick & Koponen, 1994; Harper & Voigt, 2007; Stack, 1997). Swatt & He (2006) suggested that the lack of suicidal behaviour can be explained by the liberation that women feel after having killed their tormentor, rather than a feeling of guilt and a wish to be reunited with the victim.

Intimate partner homicide perpetrators committing suicide are found to be older compared to those not committing suicide (Banks *et al.*, 2008; Belfrage & Rying, 2004; LaFree, 1999; Lund & Smorodinsky, 2001). Reasoning that homicide-suicides involve a high proportion of mental disorders, Felthous & Hempel (1995) argued that an older age may be a function of mental disorders, depressive and paranoid conditions increasing with age. Second, they stated that an older perpetrator will have had time to establish an intimate relationship lasting long enough for bonding, dependence, turmoil, and instability to develop. A prevalence of previous (physical) abuse by the perpetrator has been reported by others as being cross-cultural (Harper & Voigt, 2007; Koziol-McLain *et al.*, 2006; Lindqvist & Gustafsson, 1995; Malphurs & Cohen, 2005; Morton *et al.*, 1998; Palermo, 1994; Rosenbaum, 1990; Salari, 2007; Stack, 1997; Starzomski & Nussbaum, 2000).

The method employed in the offence is typically a violent one. Also in countries other than the United States shooting is the most frequent method for both intimate

partner homicide and the subsequent suicide (Barraclough & Clare Harris, 2002; Bourget *et al.*, 2000; Easteal, 1993; Koziol-McLain *et al.*, 2006; Lecomte & Fornes, 1998; Milroy, 1993; Saleva *et al.*, 2007).

#### *Motives*

In a study based on approximately 700 coroners' files in Ontario, Canada, Dawson (2005) compared uxoricide-suicides with 'simple' uxoricides and found that perpetrators motivated by jealousy, ill-health and other life stresses were more likely to kill themselves after killing their spouse than those prompted by other factors. Jealousy is a recurrent theme in intimate partner homicide-suicide cases, often described as paranoid jealousy, morbid jealousy or 'the Othello syndrome' (Sokya, 1995; Sukru *et al.*, 2004), the latter referring to Shakespeare's play in which *an evil villain hath put the thoughts into Othello's head*, causing him to kill his lover Desdemona while under the delusion that she had betrayed him with someone else. When realising her death was unjust, he killed himself out of shame and regret.

Some regard the suicide following an intimate partner homicide to be premeditated: in her early study on Chicago homicide-suicides Cavan (1928) found that the majority of her sample of uxoricide-suicides involved a premeditative component. Later research, such as that conducted in Canada by Dawson (2005) and in various American regions by Koziol-McLain *et al.* (2006) found that uxoricide-suicides were more likely to involve a premeditative component compared to uxoricides not followed by a suicide, often expressed in previous suicide threats. Banks *et al.* (2008) found that uxoricide-suicide perpetrators were less likely to be under the influence of alcohol at the time of the event compared to uxoricide perpetrators. These results suggest that perpetrators who had been drinking may have been more likely to commit impulsive acts of violence versus premeditated acts of suicide. Others believe that the suicide is reactive rather than premeditated, as it arises out of remorse for a primary homicidal act (Guttmacher, 1960; Henry & Short, 1954; Lester & Lester, 1971; Stack, 1997).

#### *Underlying characteristics*

Uxoricide-suicide perpetrators are often found to suffer from mental illness; depression is the most commonly cited disorder in relation to spousal homicide-suicide (Bourget *et al.*, 2000; Rosenbaum, 1990), followed by morbid jealousy and paranoid ideation (Felthous & Hempel, 1995; Milroy, 1995a). Again, it should be noted that studies reporting on the psychopathological background of uxoricide-suicide perpetrators typically do not distinguish between uxoricide-suicides motivated by amorous jealousy and those motivated by ill-health. A review of empirical studies shows that with regard to personality characteristics, men who commit uxoricide-suicide are found to be over-controlling and dependent. What these men seem to have in common is a profound emotional dependency on their intimate partner, regarding her as inherent to their existence. When the continuation of the relationship is threatened, a breakthrough of aggression takes the shape of a homicide-suicide

(Dutton & Kerry, 1999; Koenraadt, 1999; Palermo, 1994). This finding challenges Marzuk *et al.*'s definition of this subgroup of intimate partner homicide-suicides, emphasizing jealous beliefs to constitute the underlying reason for the intimate partner homicide-suicide, rather than acknowledging additional factors such as interpersonal dependency. What both the 'jealous' perpetrator in Marzuk *et al.*'s classification scheme and the 'dependent' perpetrator in empirical studies have in common is the trigger leading up to the event: rejection, an immediate threat of withdrawal or estrangement.

#### *Cultural Dynamics*

To the best of my knowledge, no culturally distinct types of intimate partner homicide-suicide are known. There are, however, cultural phenomena in which the concepts of death by suicide and the loss of an intimate partner are intimately linked. One of these phenomena is *sati*, also known as *widow burning*. Once a widely practised event, it still occurs occasionally, mostly in rural areas such as in Rajasthan, India. The 'authentic *sati*' was supposed to be voluntary: the aim of the widow was to accompany her husband, through the flames, on the imagined journey to another world in which they would both live together. Poverty after her husband's passing, being past child-bearing age and religious ideologies have been put forward to explain the woman's wish to join her husband in death. Involuntary *sati*, however, is characterized by social and/or physical pressure to force the widow to join her husband in the fire – thereby resembling murder, rather than suicide. In *sati*, the concept of togetherness is emphasized – if the husband dies and is to be cremated, his wife must have herself cremated with him to uphold the togetherness of their marriage (Menski, 1998).

**Table 2.6 Studies on suicide pacts**

Study	Type	Suicide Pacts (N)	Suicides (N)	Geographic location	Period	Method
Brown <i>et al.</i> (1995)	S	9	0	Southampton, United Kingdom	1974-1993	Mental hospital files; ME files
Brown & BarracloUGH (1997; 1999)	I	62	0	England & Wales	1988-1992	Death certificates; ME files
Cavan (1928)	I&E	1	391	Chicago, IL	1923	ME files
Cohen (1961)	I&E	58	0	England & Wales	1955-1958	ME files
Copeland (1985)	I&E	3	0	Dade County, FL	1977-1983	ME files
Fishbain <i>et al.</i> (1984)	I	20	120	Dade County, FL	1957-1981	ME files
Jensen <i>et al.</i> (2009)	I	7	0	South Australia	1996-2007	ME files
Lee (2005)	E	22	0	Hong Kong	2002-2003	ME files
Rosenbaum (1983)	I&E	60	0	West Virginia	1970-1982	Mental hospital files; cases from literature
Rajagopal (2005)	E	2	0	Japan	2004	NA
Young (1984)	S	4	0	San Diego county	1981-1982	Mental hospital files

**I:** Intrafamilial only; **E:** Extrafamilial only; **S:** Spousal; **I&E:** Intrafamilial and extrafamilial

### 5.3 Declining health

As outlined above, the literature reports a twofold division in cases of spousal homicide-suicide. Now that we have discussed the most prevalent type, centring on a pathological type of possessiveness, control and dependency, let us turn to a less common type of intimate partner homicide-suicide characterized by ill-health. This type of intimate partner homicide-suicide has been closely associated with the suicide pact between spouses. Cohen (1961) defined a suicide pact as “a mutual arrangement between two people who resolve to die at the same time and, nearly always, in the same place” (p. 145). The psychiatrist and criminologist West (1965) was one of the first to point out that death in a suicide pact may be difficult or even impossible to distinguish from homicide followed by suicide or even an accident. Other, more recent studies support this claim, pointing out that in a suicide pact one person coerces the other to join in the suicide rather than the pact consisting of two voluntary co-operators (Fishbain, 1985; Hemphill & Thornley, 1969; Rosenbaum, 1983, 1990; Young *et al.*, 1984), thereby constituting a homicide followed by suicide rather than a pact. Based on a total of 15 cases, Jensen *et al.* (2009) examined the differences between homicide-suicide and a suicide pact and found that suicide pact victims used much less violent methods than the perpetrators of homicide-suicide and often had histories of chronic debilitating disease.

The death of spouses close in time and location has also been termed a ‘Philemon and Baucis death’ (Ciesiolka *et al.*, 2007), referring to the Greek myth of the elderly couple who requested Zeus to die together if the time came for one of them to die. In the majority of suicide ‘pacts’, however, it is believed that the death of the intimate partner is advanced rather than awaited. When homicide-suicides as such are considered a rare event, suicide pacts are even considered more uncommon (Lecomte & Fornes, 1998). In England and Wales, its incidence ranges from 0.28 (Cohen, 1961) to 2.5 per cent (Brown *et al.*, 1995) of all deaths by suicide. In the United States, figures ranging from 0.36 to 3.09 per cent (Copeland, 1985) are reported. The results from the literature search for this type of lethal violence are reported in table 2.6.

#### *Demographics*

The literature shows that the majority of uxoricide-suicides involving ailing spouses are perpetrated by older men. With regard to the overrepresentation of male perpetrators, Polk (1994) has argued that there is an element of masculine control in these pacts, in the view that the couple should ‘both go together.’ These males, according to him, are not primarily focused on the destruction of their partner, but reach the point of insisting, after they have concluded that their own lives must end, that their partner should be a part of this decision as well. This reminds us of the ancient Egyptian kings who took their relatives with them in death in the hope of retaining in death what they held most dear in life (Danto, 1978) – a concept closely related to sati, as described earlier.

*Motives*

Reports on uxoricide-suicides involving ailing spouses stress the fact that the couples are socially isolated and suffer from real or perceived health problems. Typically, one of the partners – usually the male – acts as a caregiver for the other, not infrequently creating a special, inseparable unit. The uxoricide-suicide occurs when this unit is threatened with dissolution (Rosen, 1981; Rosenbaum, 1983). Financial stress has also been mentioned as a main contributor to homicide-suicide, particularly in older couples (Milroy, 1995b). Cohen (2000) has pointed out that the risk of uxoricide-suicide among this group is particularly high when – after a long marriage – the health of one or both is changing, and the wife is hospitalized or institutionalisation is imminent. Some researchers have termed the homicide-suicides of ailing spouses as ‘mercy killings’, as the stated intent is to end perceived suffering (Canetto & Hollenshead, 2000; Marzuk *et al.*, 1992). In this view, these intimate partner homicide-suicides can be regarded as so-called ‘rational suicides’, ‘balance suicides’ or ‘Epicurean suicides’ – resulting when the advantages of death outweigh those of life. Goodwin (1991) argued however, that mercy killing should not be considered as an altruistic act, since the perpetrator does not kill in order to relieve the victim of further suffering – rather, his/her own suffering is ended by the killing. He regarded mercy killing “like all killing, an ultimate selfish act” (p. 326). Cohen (2000) further emphasizes the difference between mercy killing and homicide-suicide among older persons in that these acts are “not acts of love and altruism. They are acts of desperation and depression” (p. 197).

*Underlying characteristics*

Empirical studies show that depression is the most common disorder found in this type of intimate partner homicide-suicides (Rosenbaum, 1990; Rosenbaum & Bennet, 1986), accompanied by real or perceived medical problems. In a study based on homicide-suicide in older persons in the United States, Cohen *et al.* (1998) found that at least half of the perpetrators had psychiatric problems that were undetected and untreated. These psychiatric problems consisted of depression and alcohol abuse. In the resulting autopsies, however, none of these perpetrators tested positive for antidepressants or antipsychotic drugs.

**6 Studies on child homicide-suicide**

In English language as well as in French literature, a special vocabulary is used to refer to the killing of children by parents, generally under the notion of *infanticide* or *filicide*. Strictly speaking, the term *infanticide* refers to a child victim aged between 1 day and 1 year. *Filicide*, also used to denote the entire category of killing one's child, officially includes both child victims aged 1 to 12, and a late type of filicide, which includes children older than 13. Those not surviving the first 24 hours of their lives are referred to as victims of *neonaticide* (Resnick, 1970). The latter has appeared to be clearly distinct from the other two in terms of psychological processes underlying the killing as well as socio-demographic characteristics. For the sake of clarity, ‘filicide’

will be referred to as an overlapping term to include neonaticide, infanticide and filicide.

The results from West's (1965) early study showed that the domestic nature of homicide-suicide was particularly noticeable in the high proportion of female perpetrators and child victims. In a total sample of 148 homicide-suicide perpetrators, 53 women and 15 men were accused of killing their children, sometimes in combination with the killing of a partner. Later studies in other areas in the world also report child homicide-suicide to be the second most common type of homicide-suicide after intimate partner homicide-suicide (Barber *et al.*, 2008; Barraclough & Clare Harris, 2002; Harper & Voigt, 2007; Logan *et al.*, 2008; Malphurs & Cohen, 2002; Marzuk *et al.*, 1992; Milroy, 1993; Stack, 1997; Wolfgang, 1958). A search of the filicide literature resulted in several studies that included filicides followed by a suicide (attempt) by the perpetrator. The results are displayed in table 2.7.

### *Demographics*

The German researchers Rohde *et al.* (1998) researched child homicide based on a sample taken from a forensic institute. They compared women accused of child homicide-suicide to battering mothers and found that the first group originated mainly from the middle or upper social classes and had a higher educational level compared to the latter. The authors also found that women were more likely to kill their children in an extended suicide compared to men, who were more likely to be involved in child abuse. This overrepresentation of women in child homicide-suicide has also been reported by others (Brown *et al.*, 1995; Goldney, 1977; Logan *et al.*, 2008; Palmer & Humphrey, 1980; West, 1965), although some studies indicate that fathers are just as likely or even more likely to be involved in cases of child homicide-suicide (Byard *et al.*, 1999; Cooper & Eaves, 1996). Shackelford *et al.* (2005) have argued that this might be a by-product of the fact that men are more likely to commit suicide than women. In a sample of 53 persons accused of child homicide, the Dutch psychologist Verheugt (2007) found 17 per cent to have attempted suicide at the time of the offence; another 9 per cent attempted suicide after the offence.

With regard to age, parents committing a child homicide-suicide are found to be older than those not engaging in suicidal behaviour afterwards. The victims, accordingly, tend to be older as well (Haapasalo & Petäjä, 1999; Hatters Friedman *et al.*, 2008; Krischer *et al.*, 2007; Shackelford *et al.*, 2005; Shackelford *et al.*, 2008). Suicide is uncommon when mothers kill a child under the age of one (Felthous & Hempel, 1995; Krischer *et al.*, 2007). Comparing filicidal genetic parents with filicidal step-parents at a national level, Daly & Wilson (1998) found that the former are more likely to commit suicide compared to the latter. In studies based on child homicide data in Chicago going back to 1870, Shackelford *et al.* (2005; 2008) found that child homicides including multiple victims were more likely to end in the perpetrator's suicide than were child homicides that include a single victim. They attributed this difference to the role of more severe psychopathology present in the perpetrator.

**Table 2.7 Studies on child homicide-suicide**

Study	Type	Child homicide-suicides (N)	Child homicides (N)	Suicides (N)	Geographic location	Period	Method
Bourget & Gagné (2005)	M	36	24	0	Québec, Canada	1991-2001	ME files
Bourget & Gagné (2002)	F	15	27	0	Québec, Canada	1991-1998	ME files
Byard <i>et al.</i> (1999)	M&F	13	0	0	Adelaide, Australia	1969-1998	Forensic Science Centre
Dubé <i>et al.</i> (2004)	M&F	6	68	0	Québec, Canada	1986-1994	ME files
Haapsalo & Petäjä (1999)	F	13	33	0	Finland	1970-1996	Mental state examination files
Harder (1967)	M&F	8	11	0	Denmark	1936-1964	Forensic mental health hospital
Hatters Friedman <i>et al.</i> (2005)	M&F	30	0	0	Cleveland, OH	1958-2002	ME files
Holden <i>et al.</i> (1996)	F	11	17	0	Michigan	1976-1989	Forensic psychiatry centre
Léveillé <i>et al.</i> (2007)	M&F	38	37	0	Québec, Canada	1986-1994	ME files
Lewis & Bunce (2003)	F	24	31	0	Michigan	1974-1996	Forensic psychiatry centre
Lucas <i>et al.</i> (2002)	M&F	7	25	0	United States	1985-1997	ME files; police files; Air Force files
Messing & Heeren (2004)	F	11	21	0	United States	1993-2001	Newspaper articles
Meszáros & Fisher-Danzinger (2000)	F	9	0	0	Austria	NA	Forensic mental health hospital
Nielsen <i>et al.</i> (2009)	M&F	7	158	0	New South Wales, Australia	1991-2005	ME files; court files; newspaper reports
Okumura & Kraus (1996)	F	12	0	0	Germany	1954-1992	Psychiatric hospital and clinic files
D'Orban (1979)	F	18	71	0	United Kingdom	1970-1975	Prison files
Rohde (1988)	M&F	13	47	0	Bonn, Germany	1970-1993	Institute of Forensic Medicine
Rodenburg (1971)	M&F	33	43	0	Canada	1964-1968	National data
Shackelford <i>et al.</i> (2005)	M&F	28	431	0	Chicago, IL	1965-1994	Police files
Silverman & Kennedy (1988)	F	43	187	0	Canada	1961-1983	National data
Somander & Rammer (1991)	M&F	43	22	0	Sweden	1971-1980	Police files
Tuteur & Glotzer (1959)	F	4	1	0	Elgin, IL	NA	Mental state examination files
West (1965)	M&F	70	24	0	London, UK	1954-1961	Police files; ME files

**M:** Male perpetrated; **F:** Female perpetrated; **M&F:** Male and female perpetrated

In a German study on modi operandi in child homicide-suicides, Dettling *et al.* (2003) found that the victim's injury presented patterns usually found only in suicides. Others have pointed out that women used relatively non-violent methods compared to men, as they tend to poison or smother their children rather than killing them with firearms or other weapons (Byard *et al.*, 1999; Milroy, 1993), which is consistent with the general tendency of men using more violent suicide methods compared to women (Denning *et al.*, 2000).

### *Motives*

The main intention of parents killing themselves and their children is reported to be their own self-destruction, with the children being killed as part of an 'extended suicide'. Näcke (1908) was the first to describe this type of homicide as *Erweiterter Selbsttötung*. This term encapsulates the perception of the perpetrator who considers the victim as an extended part of the self that needs to be taken along in death.<sup>17</sup> In ancient times, the ruling 'patria potestas' granted the father of the Roman family the right to dispose of the life of his children and his slaves: just as he had given them life, so he could take it away. Nowadays, the motive for killing is considered as pseudo-altruistic: a parent decides that there would be no one else to care for the child(ren) after having committed suicide (Marleau, 1999; Messing & Heeren, 2004; Milroy, 1995b; Somander & Rammer, 1991; West, 1965). The self is, as it were, integrated with the other (Collins *et al.*, 2001; Dettling *et al.*, 2003; Haapasalo & Petäjä, 1999; Harder, 1967; McDermid & Winkler, 1995). Based on case files from the Institute of Forensic Medicine in Copenhagen, Harder (1967) argued that suicidal parents do not invariably regard death as annihilation, but as a doorway to another life: the individuals in his sample felt the urge to take with them into the beyond what they love most dearly. From this view, child homicide-suicides are considered to be primarily suicidal rather than primarily homicidal.

Other researchers point out that a child might be in danger of becoming a part of a child homicide-suicide when the perpetrator's primary aggression is directed towards the (estranged) spouse – in these cases, children could become part of the so-called 'Medea Complex' (Holden *et al.*, 1996; Wilson *et al.*, 1995). This term refers to the ancient myth in which Medea kills her two children in order to punish her ex-husband Jason for leaving her for another woman. On the basis of material extracted from forensic psychiatric clinics in Germany, Okumura & Kraus (1996) have described a narcissistic feeling of being hurt as a main feature underlying extended suicides. Here, the child is killed in order to hurt the (estranged) intimate partner. From this perspective, child homicide-suicides are primarily homicidal: the perpetrator's

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<sup>17</sup> Palermo (1994) understands 'extended suicide' to involve a perpetrator killing himself after taking the life of his partner, who he considers to be 'his extended self', in that way preventing her from having a relationship with anyone else but him and thereby upholding his 'human dignity'. This dynamic is believed to diverge from its original, filicidal, context and hence to blur its actual connotation to such an extent that this interpretation will be kept in mind, but not applied.

egocentric motives stand in stark contrast to the abovementioned pseudo-altruistic motivations which are central to primarily suicidal child homicides.

Another main motive put forward in the literature is that of 'parental overidentification' (Stanton, 2000): parents feel that the child is a part of themselves and that aggression is projected onto the child as an extension of aggression towards the self. Bender (1934) postulated that maternal filicide represents a suicidal act resulting from the processes of identification. Symptoms in the mother are projected on to the children so that the child becomes in a sense the hypochondriacal organ. What may be a suicidal drive at first can be converted into the killing of oneself and the child, or the killing of the child alone which thus allows the mother to destroy those symptoms she has projected onto the child. According to Tuteur & Glotzer (1959), killing oneself and ones child(ren) can be understood as an attempt to remove the 'total-all', so that nothing of the self remains. The aforementioned observation by Daly & Wilson (1998) concerning the absence of stepparents among homicide-suicide perpetrators can be explained by a lack of parental overidentification: as the genetic link between victim and perpetrator is missing, the necessary identification of the child as a part of the self is missing as well. Conversely, stepparents are reported to be overrepresented among the perpetrators of fatal child abuse (Daly & Wilson, 1988; Shackelford *et al.*, 2005; Shackelford *et al.*, 2008). The same dynamic is found in female perpetrators: in an Australian sample, Alder & Polk (2001) found that filicidal mothers who killed their child as a results of physical abuse were less likely to commit suicide following the offence than mothers who killed due to other reasons.

#### *Underlying characteristics*

Several researchers have pointed out the role of mental illness in cases of child homicide-suicide. At an international level, depression (with and without psychotic features) is the most prevalent disorder found in these perpetrators (Chan *et al.*, 2003; Hatters Friedman *et al.*, 2008; Léveillé *et al.*, 2007; Lewis & Bunce, 2003; Okumura & Kraus, 1996; Polk, 1994; Rohde, 1998). Others find a large proportion of perpetrators with a history of psychiatric treatment (Malphurs & Cohen, 2002). Resnick (1969), one of the first to assess the role of psychopathology in cases of child homicide, examined 131 case reports from the world literature and found that female-perpetrated child homicide-suicides were more commonly linked to a severe mental disorder compared to those perpetrated by men. Lewis & Bunce (2003) collected forensic psychiatric evaluations in Michigan, the United States, and found that psychotic women were more likely to kill multiple victims and to attempt suicide at the time of the offence than non-psychotic women who killed their children. Similarly, in a study on maternal filicide based on forensic psychiatric reports in Michigan, Holden *et al.* (1996) found that the majority of mentally ill mothers made a suicide attempt following the offence.

With regard to event-related characteristics, Bourget & Gagné (2002) found that the majority of the 15 filicide-suicide mothers in their sample premeditated the offence, as opposed to those 'only' committing the filicide.

### *Cultural dynamics*

In Japan child homicide-suicide is also known as 'oyako shinju', or a parent-child suicide; thereby emphasizing the suicidal component of the act rather than its homicidal qualities (Takahashi & Berger, 1996). What makes this phenomenon culturally distinct is its emphasis on communal guilt. It has been argued that in Western society guilt is personal and internalised, whereas in Japanese society guilt is shared by the whole group. When a parent is unable to provide for the child emotionally or financially, he or she experiences shame and the consequent severance of the connection to the larger group of belonging (Doi, 1973). Iga (1978) argued that Japanese suicide differs from Western suicide in that it occurs out of coexistence between separation anxiety and strongly held values, rather than the anomic loss of behavioural standards. In the case of boshi-shinju (mother-perpetrated oyako shinju) emotional reasons impel a woman to kill herself and the child when she is not able to maintain the prescribed type of bond between herself and her child. Fushi-shinju (father-perpetrated oyako shinju), on the other hand, is reported to be motivated by financial problems and physical illness, which make him unable to support his family. In order to restore his own and his family's honour, he does not only kill himself, but also those for whom he is (financially) responsible.

### **7 Studies on family homicide-suicide**

The term 'familicide' refers to the killing of multiple family members, most commonly including a(n) (estranged) intimate partner and child(ren). Although strictly speaking, two child victims also constitute a killing involving multiple family members, such cases are usually not reported as amounting to a familicide. In some contributions, its perpetrators are also referred to as 'family annihilators' (Hanzlick & Koponen, 1994) – since they typically end the lives of all family members. Familicide-suicides are believed to share many characteristics with both child homicide-suicide and intimate partner homicide-suicide (Liem & Koenraadt, 2008a). Another form of multiple domestic homicide constitutes a combined parricide and siblicide: the killing of one's parents in combination with the killing of one's sibling(s). Due to its different nature, the latter type of familicide will be discussed in more detail in section 8.2.

### *Demographics*

Probably because of its rare occurrence, the literature generally does not distinguish between familicides that end in suicide and familicides that do not. This should be taken into account when considering the findings below.

Familicide-suicides are almost exclusively committed by men (Adelson, 1961; Byard *et al.*, 1999; Harder, 1967; Marleau, 1999; Somander & Rammer, 1991). Within the research literature, no specific distinction is made between familicide perpetrators and familicide-suicide perpetrators. American research by Ewing (1997) points out that the typical familicide perpetrator is a white male in his 30s or 40s. With regard to age, the Australian researchers Alder & Polk (2001) compared familicidal fathers with filicidal fathers and found that the first tended to be older than the latter. Accordingly,

the child victims tended to be older as well. Previous research in Canada and England & Wales has shown that stepchildren are more likely to become a victim of familicide than biological children (Wilson *et al.*, 1995). Drawing from over 300 American case studies of intrafamilial homicides, Websdale (1999) found that compared to single intimate homicides, those who commit familicides have more economic resources and fewer criminal records. Other studies conducted in the United States report the contrary, pointing towards the perpetrator's loss of employment, continuous unemployment and the subsequent inability to support his family (Levin & Fox, 1985; Palermo, 1997).

#### *Motives*

Most research on familicide points out that perpetrators are motivated by a loss of control, most commonly associated with loss of control over the intimate partner. In this light, familicide-suicides seem to resemble intimate partner homicide-suicides, in that the primary object of the man's actions is the spouse rather than the children. Dietz (1986) and others (Levin & Fox, 1985) point out that anger and revenge resulting from paranoid thoughts can motivate one to 'get even' with his wife by killing her and all of 'her' children. When she threatens to leave and/or to 'take away' the children, he responds with lethal violence. In this view, familicide-suicides are primarily homicidal in nature. Secondly, financial factors seem to be of great influence in these events: several researchers report that, when trapped by the breakdown of economic dreams, the familicidal man does not see any other option than to 'protect' his family from the fate that would befall them without his support (Ewing, 1997; Fox & Levin 2005; Goldney, 1977; Polk, 1994). From this perspective, familicides are altruistically motivated, as the perpetrator aims to protect his loved ones from a catastrophic future. Paranoid thinking, according to Dietz (1986) and Palermo (1997), can trigger such altruistic motives to arise. From this perspective, familicide-suicides are mainly suicidal in nature.

Ewing (1997) reports that the typical familicide perpetrator can be characterized by a desire to feel in control, by romanticizing family life and by perceiving his family as an extension of himself. Marzuk *et al.* (1992) emphasize that the familicidal perpetrator commands a relationship in which he perceives that only he can satisfy the needs of his victims. Faced with such overwhelming threats to their roles as providers, controllers, and central figures in the lives of their families, these men become desperate, homicidal and suicidal.

In sum, the literature points out that there seem to be two main types of familicidal perpetrators; Frazier (1975) describes these as the 'murder by proxy' type and as the 'suicide by proxy' type. 'Murder by proxy' applies to cases in which victims are chosen because they are identified with a primary target against which revenge is sought. A man might slaughter all of his children because he regards them as an extension of his wife, and he seeks to get even with her. A fear of the consequences, guilt or shame may cause him to subsequently end his own life. 'Suicide by proxy' refers to a husband and father who feels despondent over the fate of the family unit and does not only take his

own life but also that of his child(ren) and spouse, in order to protect them from perceived future pain and suffering.

#### *Underlying characteristics*

Given the extremity of this type of homicide, many researchers point towards psychopathological factors underlying these acts. In most case studies, the role of depression is particularly pronounced (Goldney, 1977; Polk, 1994; Schlesinger, 2000), sometimes evolving into a psychosis directly preceding the killing (Malmquist, 1996) or in other cases accompanied by morbid jealousy (Goldney, 1977). The latter is reported to be expressed by paranoid ideas, suspiciousness and the blaming of others (Dietz, 1986; Levin & Fox, 1985) and seems to resemble cases of intimate partner homicide-suicide. On the basis of coroners' and police files in British Columbia (Canada), Cooper & Eaves (1996) compared familicidal perpetrators who committed suicide to those not committing suicide and found that the first suffered from more severe psychopathology than the latter. Those not suffering from psychopathology were not only considered to be dangerous as far as family members were concerned but also towards others outside of the family.

With regard to the modus operandi in familicide-suicides, studies conducted in Canada, England & Wales, United States and in Switzerland have found that the killings as well as the subsequent suicide are committed with a firearm that belongs to the perpetrator and has been present in the home for some time (Barber *et al.*, 2008; Ewing, 1997; Killias *et al.*, 2006; Killias, Walser *et al.*, 2007; Wilson *et al.*, 1995).

### **8 Studies on other family homicide-suicide**

Even though Marzuk *et al.* (1992) did not denote a special category for the killing of other family members followed by suicide, this category was added in order to complete this classification system based on the relationship between victim and perpetrator. In this category, two types of homicide-suicide are discerned: parricide-suicide and siblicide-suicide, which will be discussed below.

#### **8.1 Parent homicide-suicide**

The term 'parricide' refers to the killing of a parent and consists of 'matricide' (the killing of the mother) and 'patricide' (the killing of the father). For the killing of one's (great)grandparents, the term 'aviolicide' is used. 'Double parricide' refers to the killing of both parents.<sup>18</sup>

While parricide is a rare type of intrafamilial homicide, parricide followed by suicide is even more uncommon. A review of the literature shows that in empirical studies on parent homicide, none or very few perpetrators commit or attempt to commit suicide after the parent homicide (see table 2.8). In a recent overview of homicides in the Netherlands in the period 1992-2006, Nieuwbeerta & Leistra (2007) show that one

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<sup>18</sup> For a detailed discussion on parricide nomenclature, see Koenraadt (1996).

parent homicide occurring in this period was followed by the suicide of the perpetrator.

#### *Demographics*

Studies indicate that patricide committed by sons is the most frequent form of parent homicide (Boots & Heide, 2006; Bourget, Gagné *et al.*, 2007; Daly & Wilson, 1988; Green, 1981; Marleau *et al.*, 2006). In other empirical studies, matricide and patricide are more evenly distributed (Koenraadt, 1996). Nevertheless, parent homicide by daughters is very rare. In the Netherlands, parent homicide occurs approximately 5 times per year; in the period 1992-2006, 77 parents were killed by their children (Nieuwbeerta & Leistra, 2007). International studies reporting samples of parent homicide offenders report that those having attempted suicide following the offence are all male (Bourget, Gagné *et al.*, 2007; Campion *et al.*, 1985)

#### *Motives*

In the literature several reasons have been put forward to explain the low prevalence of suicidal behaviour in parricidal perpetrators. In a study based on forensic psychiatric evaluation files, Corder *et al.* (1976) pointed to the perpetrators' over-attachment to their mothers. In the families in their study both the adolescent perpetrator and his mother were physically abused by the father, the future victim. Sargent (1962) argued that within such a family system, the child may act out covert commands and wishes from the mother or from others in the environment. In such cases, the child gets rid of not only his own, but also his mother's torturer. Fear and anger are portrayed onto the victim rather than internalized and aimed towards the self. Reasoning from this perspective, suicide following parricide seldom occurs.

Other researchers argue that suicidal ideations in adolescents can be transformed into homicidal ideations against the parent: either the parent must die, or the adolescent commits suicide. Suicide, in these cases, emerges as a desire to escape from an intolerable situation characterized by abuse (Dutton & Yamini, 1995). This dynamic can be observed in a Canadian study based on forensic psychiatric files by Millaud *et al.* (1996): although none of the 12 perpetrators in their sample attempted to commit suicide after the offence, two attempted suicide *before* the homicide took place. Meloy (1992) summarizes this dynamic as "either he or I must die, something has to give" (p. 58). He argues that a polarisation takes place between the "all bad" parent and the "all good" perception of the self. As a reason for the low number of suicides that occur after a parent homicide and the relatively high number of suicides following intimate partner homicide, he points towards the power differential between parent and child: this makes the parent a clearer focus of negative affect compared to, for example, a spouse. Meloy points out that the suicide following a parent homicide depends on the point of the impulse cycle reached during the aggression on removing the perceived cause of the negative affect. If the aggressive impulses are not significantly diminished after killing the tormentor, aggression may rebound towards the self. As a result of the

ambivalent choice whether to attack oneself or the parent, feelings of ambivalence in the perpetrator typically remain until after the parent homicide.

In a treatise on parricide, Crimmins (1993) also puts forward the “them *or* me” dilemma. Unlike Meloy (1992), who explains this dilemma by a polarisation between good and bad, Crimmins (1993) argues that the removal of the self *or* the object is the only way to separate successfully from the primary love object. In this process, the conflict stems from the separation-individuation phase of development and can only be resolved by annihilating the self *or* the other, rather than a combination thereof.

#### *Underlying characteristics*

Although studies report on the role of psychopathology in parent homicide perpetrators in general, virtually no studies have assessed psychopathological differences between parent homicide-suicide and parent homicide perpetrators. This is most probably due to the rare occurrence of parent homicide and even a more infrequent occurrence of parent homicide-suicide. From an American sample of 15 matricidal male patients admitted to a forensic psychiatric hospital, Campion *et al.* (1985) described three cases in which the perpetrator attempted to commit suicide following the offence – all three perpetrators were found to be psychotic at the time of the homicide and the subsequent suicide attempt. A more recent Canadian study by Bourget *et al.* (2007), based on coroners’ files, reported that individuals attempting suicide following the parent homicide suffered from severe psychopathology, including schizophrenia and depression.

#### *Cultural dynamics*

In his article on parent homicide in Japan, Takemura (1965) mentioned altruism as one of the main motives for parent homicide. In Japanese society, it is not uncommon for parents and children to live together for a long time. The child is typically male and responsible for the well-being of his parent(s). When he fails to fulfil this duty due to personal or financial circumstances, he should end the lives of his parent(s) in addition to his own life – in order to save them from pain and suffering as a result of problems related to health or finances. Parent homicide, in this sense, is altruistic in nature. The victim is most often the mother of the perpetrator. Takemura (1965) further argued that there might also be cases in which the parent asks to be killed, so as not to have to live after the suicide of his/her child. Such altruistic parricides have also been reported in Bourget *et al.*'s (2007) study based on forensic psychiatric files – in more than one-quarter of parricides involving elderly victims, the perpetrators were significantly depressed and wanted to commit suicide but did not want to abandon their victims. With the exception of this study, no such altruistic parricides have been reported – to the best of my knowledge – in Western literature.

**Table 2.8 Studies on parent homicide-suicide**

Study	Type	Parricide-Suicides (N)	Parricides (N)	Suicides (N)	Geographic location	Period	Method
Bourget <i>et al.</i> (2007)	M&F	8	48	0	Québec, Canada	1990-2005	Forensic mental health hospital
Campion <i>et al.</i> (1985)	M	3	12	0	New York City, NY	1970-1982	Forensic mental health hospital
Marleau <i>et al.</i> (2003)	M&F	9	30	0	Montreal, Canada	1976-1999	Forensic mental health hospital
Mouzos & Rushforth (2003)	M&F	14	136	0	Australia	1989-2002	National data

**M:** Male perpetrated; **M&F:** Male and female perpetrated

## 8.2 Sibling homicide-suicide

The term 'siblicide' denotes the killing of one's sibling and can be divided into 'fratricide' (the killing of a brother) and 'sororicide' (the killing of a sister).<sup>19</sup> In addition, the term *Cain Complex* has been used in the literature to refer to the oldest homicide recorded in history – the murder of Abel by his brother Cain (Sulloway, 1996). While sibling homicide is an uncommon type of intrafamilial homicide, sibling homicide-suicide is even rarer. Suicidal perpetrators are not mentioned in any of the empirical studies on sibling homicide retrieved by the literature search.

### *Demographics*

The vast majority of sibling homicides are perpetrated by men – the majority of the victims are also predominantly men. Sibling homicides perpetrated by women seldom occur, so that consequently one can speak of a crime mainly taking place between brothers (Daly *et al.*, 2001; Dawson & Langan, 1994; Gebo, 2002; Marleau, 2003; Marleau & Saucier, 1998). Homicide between siblings is a rare offence: in the Netherlands, sibling homicide occurs less frequently than parent homicide.<sup>20</sup> International research indicates that most sibling homicides involve adults rather than adolescents (Gebo, 2002; Underwood & Patch, 1999). Also, it has been found that older siblings are more likely to be homicidal towards their brothers and/or sisters than younger siblings (Marleau, 2005).

### *Motives*

In many ways, the reasons for the absence of suicidal behaviour in sibling homicide resemble those in parent homicide, since the aggression is primarily aimed at the other rather than at the self. Bourget & Gagné (2006) pointed out that sibling homicide may not be associated with suicide as other family-related homicides seem to be. As outlined before, depression is a significant finding in other family-related homicide-suicides such as child homicide-suicide, intimate partner homicide-suicide and familicide-suicide. Among studies on sibling homicide very few perpetrators have been found to suffer from depression. Corresponding with this empirical studies find virtually no perpetrators engaging in suicidal behaviour following a sibling homicide. Medicott (1970) ascribed the absence of suicidal behaviour among siblicide perpetrators to the symbolic destruction of part of the self in the killing of a brother and/or sister.

The combination of both parent homicide and sibling homicide constitutes a second type of familicide. In this type of multiple family homicide, siblings are often secondary victims who are injured or killed either because they attempt to intervene

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<sup>19</sup> The term *fratricide* originally stems from the Latin word *fratricidium* – consisting of the terms *frater* (brother) and *caedere* (to kill). *Sororicide* is of a more recent nature – some researchers (Adam & Livingston, 1993) started to use this connotation in line with the term *siblicide* (Underwood & Patch, 1999).

<sup>20</sup> No specific rates on siblicide rates are known; in a national homicide overview, Nieuwebeerta & Leistra (2007) have grouped siblicides together with other family homicides, including aunts, uncles and rivals. Overall, this category encompassed 7 per cent of all homicides in the Netherlands in the period 1992-2006.

in the parent homicide or because they are perceived as accomplices of the parents, towards whom the aggression is primarily aimed (Marleau, 2003). In his research on American case studies of children who had murdered their parents, Leyton (1990) argues that these families are characterized by a strong patriarchal structure, in which siblings are regarded as henchmen of a dominant, hostile father. The perpetrator perceives these siblings as equally responsible for the father's abuse and suppression. In these cases, the aim of the perpetrator is not necessarily altruistic in that he aims to save other family members from the tyranny exercised by the father, but mostly selfish in that he wishes to restore his own identity. This type of familicide is usually committed by adolescent perpetrators, since they have the most desired need for expansion – a need obstructed by their parents. Given its resemblance to parent homicide, one could argue that the same reasons for a lack of suicidal behaviour following the parent homicide could be applied to familicide. As outlined above, the adolescent perpetrator chooses between a homicide *or* a suicide, rather than a combination thereof (Dutton & Yamini, 1995; Meloy, 1992).

#### *Cultural dynamics*

To the best of my knowledge, no culturally specific types of sibling homicide-suicide are known. There are, however, specific cultural variations of non-suicidal sibling homicide. In Arab Muslim culture, for example, a specific type of sibling homicide occurs, which is primarily motivated by restoring the honour of the group. Here, the honour of the patrilineal group is bound up with the sex organs of its female members. Maintaining of group honour means supervision over these female members – especially with regard to young girls, supervision is pivotal since the test of their virginity upon marriage is decisive. When their virginity has been lost or their chastity is otherwise damaged by allegations of incorrect behaviour, the honour of her family is damaged accordingly. The most drastic way to restore this honour is to kill the deviant. Not infrequently, this act is carried out by siblings. (Inter)national research reports that almost all perpetrators of such acts are male, the great majority of the victims being female (Gezik, 2003; Van Eck, 2001). These perpetrators typically do not commit suicide following the sibling homicide, conceivably because they are not subject to punishment from their environment, but rather supported and praised, thereby removing feelings of guilt or shame following the homicide.

#### **9 Studies on extrafamilial homicide-suicide**

Extrafamilial homicides-suicide are the least common of all homicide-suicide subtypes, yet they receive the most media attention, possibly because they elicit the most fear in the general public (Andersen *et al.*, 2001; Hillbrand, 2001). Probably the most well-known type of extrafamilial homicide-suicide involves mass homicide followed by suicide taking place within the context of school violence or work-related violence. Definitions of mass homicide differ according to the number of victims killed or injured as well as the time interval between the killings. Some use the definition of 'an offence in which multiple victims are intentionally killed in a single incident,

usually by one individual' (Palermo, 1997), while others adhere to a more precise definition, such as 'the killing of at least four victims within a 24-hour period' (Duwe, 2004). Table 2.9 presents the results from the literature review on extrafamilial homicides ending in the suicide of the perpetrator. These results suggest that mass homicide-suicide does not only receive most attention from a media perspective, but also elicits most attention from a scientific point of view: other types of extrafamilial homicide-suicides *not* involving mass homicide seem to have been neglected in the literature to date.

A widely used classification system of mass homicide is that proposed by Fox & Levin (2005), who distinguished five main types of mass murderers based on motivation. The first, most prevalent category concerns those expressing a theme of power and control. This category includes the so-called pseudo-commando killers, who act like soldiers and are motivated by furthering a cause. Through killing, he claims to rid the world of filth and evil (Fox & Levin 2005). The second category entails mass murderers who kill out of revenge, against either specific individuals, particular categories or groups of individuals, or society at large. This category also includes adolescent perpetrators, who kill in so-called school shootings. This type of perpetrator has also been termed as 'the classroom avenger' (McGee & DeBernardo, 1999), who targets students and teachers at random in an attack against the institution. The third category in this typology consists of individuals who commit the homicide out of loyalty – this category mainly includes familicides as discussed in section 7. The fourth category includes individuals who kill for profit. Specifically, they kill to eliminate victims and witnesses of a crime, often a robbery. The final category consists of those who kill out of terrorist aims (with the exception of those killing in the context of suicide attacks), who aim to 'send a message' by committing homicides. Those killing for profit or out of terroristic motivations as well as individuals killing due to other reasons, such as political motives, hardly ever kill themselves following the act (Petee *et al.*, 1997).

Arguably, another type of extrafamilial homicide-suicide involves mass suicides such as that occurring in the Peoples Temple at Jonestown in Guyana, in the Branch Davidian Sect at Mount Carmel outside Waco and, more recently, in the Solar Temple in both Switzerland and Canada. Since devotees who do not go along with the planned mass suicide are typically murdered prior to the suicide of the leader, these acts can also be considered as homicide-suicides (Bromley & Melton, 2002) – thereby resembling mass homicide rather than mass suicide. However, given the different dynamics underlying these acts compared to other types of extrafamilial homicide-suicide, this specific type will not be considered here. The background characteristics of mass homicides that are reported to end in suicide will now be addressed and discussed.

**Table 2.9 Studies on extrafamilial homicide-suicide**

Study	Type	Homicide-Suicides (N)		Homicides (N)		Suicides (N)		Geographic location	Period	Method
		Homicide-Suicides (N)	Suicides (N)	Homicides (N)	Suicides (N)					
Anderson <i>et al.</i> (2001)	S	11	0	172	30	0	0	United States	1994-1999	Police reports; newspaper reports; interviews
Cantor <i>et al.</i> (2000)	M	4	0	3	0	0	0	Australia, New Zealand and the United Kingdom	1987-1996	Interviews; ME files; trial documents
Duwe (2000)*	M	104	0	389	0	0	0	United States	1976-1996	Newspaper reports
Duwe (2004)*	M	263	0	646	0	0	0	United States	1900-1999	Police reports; newspaper reports
Fessenden (2000)	M	100	0	0	0	0	0	United States	1949-1999	Newspaper reports; interviews
Hempel <i>et al.</i> (2000)	MV	16	0	14	0	0	0	United States	1949-1998	Newspaper reports; interviews; psychological reports
Hempel <i>et al.</i> (2000)	MV	10	0	8	0	0	0	Laos	1959-1971	Interviews; police reports
Larkin (2009)	S	11	0	12	0	0	0	Worldwide	1999-2007	Literature review; newspaper reports
Lester <i>et al.</i> (2005)	MV	34	0	56	0	0	0	United States	1949-1999	Newspaper reports
Meloy <i>et al.</i> (2004)*	MV	25	0	39	0	0	0	North America	1949-1999	Interviews; psychological reports
Meloy <i>et al.</i> (2001)*	M	3	0	34	0	0	0	United States	1958-1999	Interviews; trial documents; newspaper articles.
Mullen (2004)	MV	5	0	0	0	0	0	Australia	1980-2000	Interviews
Newman & Fox (2009)	M	5	0	4	0	0	0	United States	2002-2008	Literature review; newspaper reports
Petee <i>et al.</i> (1997)	M	27	0	102	0	0	0	United States	1965-1995	Newspaper reports
Preti (2008)	S	25	0	38	0	0	0	Worldwide	1966-2008	Newspaper reports Wikipedia

S: School-associated multiple victim homicide; M: Mass homicide; MV: Multiple victim homicide; \*Also including intrafamilial multiple victim homicide.

### *Demographics*

Previous research on extrafamilial homicide-suicide is mostly based on data from the United States. These studies indicate that extrafamilial homicide-suicide is a domain governed by males, who are mostly Caucasian (Fessenden, 2000; Meloy, 2004; Meloy *et al.*, 2001; Muschert, 2007). Adult perpetrators are reported to be in their thirties (Meloy *et al.*, 2004; Mullen, 2004; Muschert, 2007); adolescents range from as young as 11 to 19 (Anderson *et al.*, 2001; Meloy *et al.*, 2004; Meloy *et al.*, 2001) and are reported to be less likely than adults to commit suicide following the homicide(s) (Fessenden, 2000; Lester *et al.*, 2005). Adult perpetrators have been found to be single or divorced men (Hempel *et al.*, 1999). Both groups typically commit the offence with firearms (Meloy *et al.*, 2004).

### *Motives*

Several researchers point to the idea of 'payback time' as the predominant motivation for most mass killings (Fox & Levin 2005; Hickey, 1991; Mullen, 2004; Palermo & Ross, 1999). Sometimes the victims are specific people whom the perpetrators have a grudge against, such as in the case of workplace homicide. In other cases random people who represent the unjust world at large have to 'pay for the harm caused' (Leary *et al.*, 2003; Meloy, 2004). Feelings of failure and a loss of autonomy create frustration and anger that inevitably overwhelms these perpetrators. Frustration and anger transform into a need to strike back (Dietz, 1986). In the case of adolescent homicide-suicides taking place on school grounds, researchers point to the role of interpersonal rejection: many are reported to have been bullied and are known to have few friends (Andersen *et al.*, 2001; Leary *et al.*, 2003; Meloy *et al.*, 2004; Meloy *et al.*, 2001; Muschert, 2007). Others point to adolescent's inability to cope with the familial situation, leading to a loss of control (Heide, 1992). Cases have been reported in which juvenile mass murderers killed one or both parents prior to the school shootings (Palermo & Ross, 1999).

The perpetrators of workplace homicide-suicides are also reported to kill out of motives of revenge. Here, the middle-aged male displays a feeling of entitlement to a well-paying, meaningful job. His sense of self-worth is embedded in his work – for some, work is the only meaningful part of their lives in a rapidly individualizing society. When he is fired after having devoted a great part of his life to the company, he lashes out to ex-employers at ex-coworkers and former colleagues (Fox & Levin 1994; Kinney & Johnson, 1993). Fox & Levin (1994) have previously described the killing of the supervisor and multiple employees as 'extended homicides'. In this light, multiple victim homicide-suicides show similarities to familicide-suicides: in the same way children are identified as an extension of the partner towards whom revenge is sought, former work colleagues are regarded as extensions of the supervisor responsible for the perceived wrongdoing. Lester *et al.* (2005) examined 98 mass homicides in the United States between 1949 and 1999 and found that suicide following the mass homicide was more likely if there was friction between the

perpetrator and the coworkers or if the killings took place at work. Suicide as an outcome was less likely, however, if the perpetrators were school pupils.

#### *Underlying characteristics*

Studies report depression to be a common feature encountered in extrafamilial homicides followed by suicide (McGee & DeBernardo, 1999; Palermo & Ross, 1999; Verlinden *et al.*, 2000). It has been pointed out that in homicide-suicides by depressed adolescents, the perpetrator enters a stage of hopelessness, convinced that nothing else matters (Leary *et al.*, 2003). They are inhibited in their ability to think about the misery and suffering that will result for many other people from their act or to feel guilt. Malmquist (1996) has argued that at that point, even before the act has occurred, the question of who is to die or who has already been killed is merely theoretical because the decision to kill has already been made. He holds that a suicide may occur when anxiety resulting from the realization that they are going to kill breaks through. Although a substantial number of adult mass homicide perpetrators have been found to suffer from psychotic disorders, including schizophrenia (Hempel *et al.*, 2000; Meloy *et al.*, 2004), psychotic symptoms are rarely diagnosed among adolescent perpetrators (Meloy *et al.*, 2001). Based on the aforementioned study by Lester *et al.* (2005), suicide as an outcome was found to be less likely if the perpetrators were diagnosed as schizophrenic. Personality disorders or – in the case of adolescents – conduct disorders with the possibility to evolve into personality disorders have been found among both adult and adolescent perpetrators of mass homicide (Palermo & Ross, 1999). Other studies point to the role of previous suicidal behaviour in the perpetrator: Vossekul *et al.* (2000) found that three-quarters of the school shooters in their sample of American nationwide school shootings had either threatened or attempted suicide prior to the shooting. Although rampage shootings in high schools and college settings are often equated with one another, Newman & Fox (2009) found that college shooters are older and therefore further along in the development of serious mental illness, and more disconnected from the familial landmarks of adolescent peer group formation – college shooters, according to Newman & Fox (2009), do not seek to impress and join peer groups in the way that high school shooters do. Fox & Savage (2009) further point out that college shooters are often overworked, overstressed graduate students confronting academic failure or disappointment, rather than troubled undergraduates with violent fantasies.

Both groups of adolescent perpetrators have in common a preoccupation with weapons and access to firearms (Fessenden, 2000; Leary *et al.*, 2003; Muschert, 2007) – together with other factors such as military role-play (Gresswell & Hollin, 1994) and training in firearms also termed a ‘warrior mentality’ (Meloy *et al.*, 2004). In addition, a fascination with death has been associated with those engaging in both school shootings and college shootings (Leary *et al.*, 2003; Newman & Fox, 2009). Although these events are sudden and unexpected in nature, analyses of case studies show that a prior threat to kill was recorded in a substantial number of these cases (Fessenden, 2000; Fritzon & Brun, 2005).

### *Cultural dynamics*

In Malaysian culture sudden mass murder – in some cases followed by suicide – by one individual is also known as ‘amok’, ‘mengamok’ or ‘mata galap’. The act is described as an acute outburst of unrestrained violence associated with homicidal attacks preceded by a period of brooding and ending with exhaustion and amnesia (Hempel *et al.*, 2000). In a typical case of amok, a male who has shown no previous sign of anger or any inclination towards violence will acquire a weapon and, in a sudden frenzy, will attempt to kill or seriously injure anyone he encounters. Historically, a similar phenomenon was encountered in Viking culture, where Norse warriors who fought in an uncontrollable rage or trance of fury were known as ‘Berserkers’. Concerning the specific cultural background of amok, some researchers point to the role of spirit possession (Ackerman & Lee, 1981); others hold that amok is a ‘loophole option’ or a culturally sanctioned outlet for dealing with difficult situations where other alternatives are not available (Ackerman & Lee, 1981). Hempel *et al.* (2000) compared 18 Laotian amok perpetrators to 30 American mass murderers and found that the individuals in both groups resembled each other in psychopathological, motivational and background characteristics – thereby concluding that amok is not a culture-bound syndrome, mass homicide being an ubiquitous phenomenon encountered throughout the world.

### **10 Conclusion**

This chapter has provided an overview of the background of the homicide-suicide phenomenon by means of a literature review. The literature shows that, in spite of variations in the homicide and suicide rate independently, the rate of homicide-suicide remains fairly stable throughout time. The findings of this review further revealed that over time, several homicide-suicide classification systems have been put forward, distinguishing homicide-suicides according to subtypes. Many of these systems are only theoretical in nature and lack empirical foundations. An exception to this is Marzuk *et al.*'s (1992) classification scheme, which has been used as a taxonomy in order to compare the different subtypes of homicide-suicide. In these classification schemes, homicide-suicides are categorized according to the relationship between victim(s) and perpetrator, including intimate partner homicide-suicide, child homicide-suicide, familicide-suicide, parent homicide-suicide, sibling homicide-suicide and extrafamilial homicide-suicide. The findings of this review further show that homicide-suicides mainly occur in families. In the categories child homicide-suicide, intimate partner homicide-suicide and familicide-suicide, two types of homicide-suicide perpetrators seem to emerge: one based on primarily suicidal motives – such as in extended suicides and homicide-suicides involving ailing, older persons – and the other primarily homicidal in nature. In the primarily suicidal event, the victim is, as it were “taken along” in the suicide of the perpetrator. In primarily homicidal event, on the other hand, children and/or partners are killed in order to re-establish control over the (family) situation or – in the case of child homicide-suicide – as a means to make the spouse suffer. Suicide following the homicide of parents

and/or siblings rarely occurs. If a suicide takes place, it is mainly reactive. Here, psychotic symptoms seem to prevail. The dynamics underlying extrafamilial homicide-suicide seem to be drastically different from intrafamilial homicide-suicide. Their motives to kill and a willingness to die appear to be based on revenge or rectification for perceived harm. In the following chapter, theoretical strands of homicide-suicide will be examined and discussed. In particular, it will be assessed which event, perpetrator and victim characteristics distinguish and explain the occurrence of homicide-suicide relative to a homicide or suicide alone.



## Chapter three

### Review of Theories on Homicide-Suicide<sup>21</sup>

This chapter reviews the current state of knowledge in the theoretical literature on homicide-suicide. Through an extensive search of the homicide-suicide literature, studies were retrieved that used specific theoretical approaches to explain the phenomenon under study. These theoretical approaches can be divided into three parts: theories relating to the origin of aggression, theories related to the direction of aggression and finally, theories relating the outcome of aggression. By retrieving additional literature, these theories were examined to a broader extent and their applicability to the homicide-suicide phenomenon was assessed in detail. The purpose of this chapter is to answer the following research question:

*What are the theoretical ideas on homicide-suicide? And in particular: Which event, perpetrator and victim characteristics are assumed to explain the occurrence of homicide-suicide relative to homicide or suicide alone?*

Figure 3.1 presents a schematic overview of the scope and degree to which existing theoretical strands have previously been applied to explain the homicide-suicide phenomenon. The assumption underlying this scheme is that homicide-suicide constitutes a combination of both homicide and suicide, both homicide and suicide resulting from aggressive impulses.

The first part of the scheme constitutes the origin of aggression. The idea that homicide and suicide can be explained analogously, stemming from the same type of aggression, can be traced back to Augustinian thought (426 A.D.), when St. Augustine explicitly argued that those who commit suicide ‘murder themselves’. The sense of equivalence between both types of lethal violence is still captured in the German term *Selbstmord* (‘self-murder’) and the Dutch term *zelfmoord*. In modern scientific thought, the similarities between the two types of lethal violence have been explained by referring to a common source of aggression. According to neurobiological theories, both aggression towards the self and aggression towards others can be explained by related neurobiological factors. Similarly, strain theories focus on sociological factors to point to common underpinnings of both types of lethal violence. These theories will be discussed first.

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<sup>21</sup> Parts of this chapter will be published as:  
- Liem, M. ‘Homicide followed by Suicide: A Review’ *Aggression and Violent Behavior* (forthcoming).

The second part of the scheme in figure 3.1 concerns the direction of aggression. According to attribution theory, people attribute aggressive impulses either to the self or to others, depending on attributional concerns. According to the stream analogy of lethal violence theory, the direction of aggressive impulses is determined by social and cultural factors. The second part of this chapter examines these theories further.

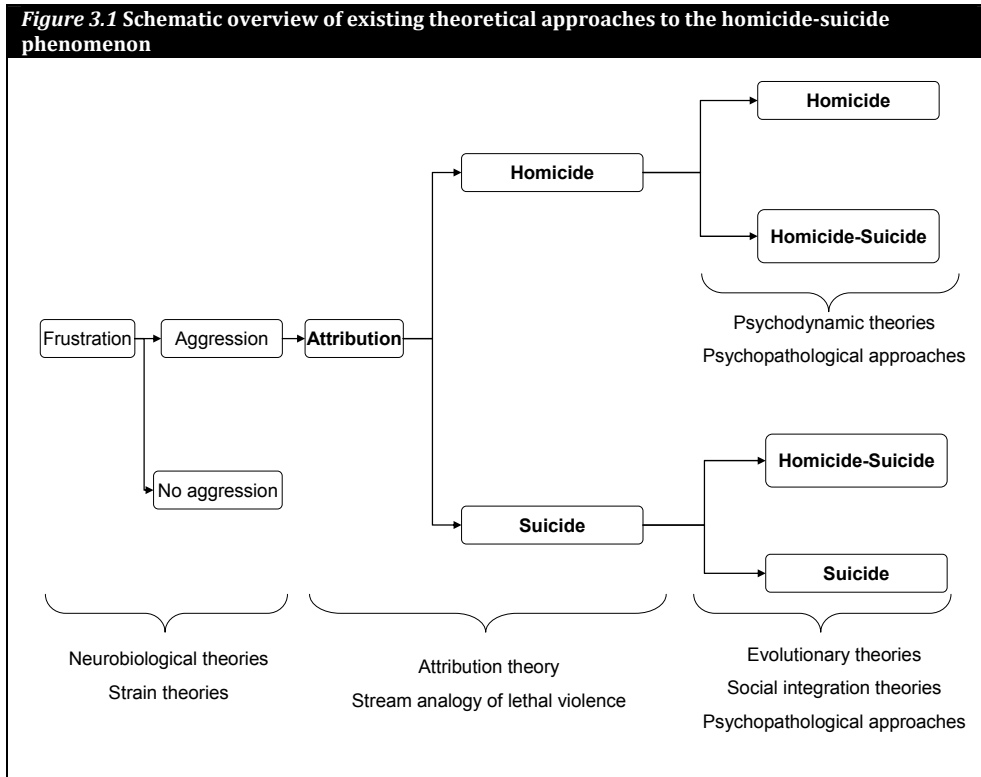
The third part of the scheme outlines theories that explicitly refer to homicide-suicide as the outcome of aggression relative to homicide or suicide. These theories either tend to view homicide-suicide as a variation of homicidal *or* suicidal behaviour. According to the former view, a suicide follows out of feelings of guilt, shame or a fear of the consequences related to the homicide. Psychodynamic theories describe this process as well as several psychopathological approaches. According to the view that homicide-suicide constitutes primarily a suicidal phenomenon, the homicide victim is considered to be 'taken along' in the death of the perpetrator. Theories explaining this dynamic involve psychopathological approaches, evolutionary theories and, finally, social integration theories.

### **1 Origin of aggression**

As has been outlined above, homicide-suicide is considered to constitute a combination of both homicidal and suicidal behaviour, both forms of behaviour stemming from aggressive impulses. The first part of the scheme in figure 3.1 deals with theories concerning the origin of these impulses from a biological point of view (neurobiological theories) as well as from a sociological point of view (strain theories). In other words, even though these two theories apply a different level of analysis, they both consider aggressive behaviour directed towards the self and towards others to stem from the same source.

#### **1.1 Neurobiological theories**

From a biological point of view, both homicidal and suicidal behaviour can be traced back to biological underpinnings, a presumption first postulated in the nineteenth century writings of Cesare Lombroso, who held that criminality was inherited, and that criminals could be identified by physical defects. His followers found the common cause of homicide and suicide in biological factors such as the degeneration, impotence, or decay of the organism. Because of their biological inferiority, both homicide perpetrators and suicide victims find it difficult to compete successfully in life's struggles or to play a useful part in society (Unnithan *et al.*, 1994). Thinking of homicide-suicide as having specific biological underpinnings is supported by the notion that – as has been outlined in the previous chapter – this phenomenon occurs cross-culturally, throughout time.



Since Lombroso, much research has been carried out in the areas of neuropsychiatry, neurobiology and biochemistry. The relationship between these fields and abnormal behaviour is applied in the so-called diathesis-stress model. This model holds that a *diathesis* constitutes a predisposition to violent behaviour towards oneself or towards another that is independent of a main (psychiatric) disorder. The diathesis is influenced by factors such as gender, religion, familial/genetic factors, childhood experiences and various other factors. The literature shows that the diathesis for both homicidal and suicidal behaviour includes components such as pessimism, aggression and impulsivity (Malmquist, 2006; Mann, 2003).

According to the diathesis-stress model, aggression towards the self or towards others may arise following a stressor, such as the acute worsening of a psychiatric disorder, an acute psychosocial crisis or following other external factors. The likelihood of aggressive behaviour being expressed depends on the severity of the stressor as well as the predispositions of the diathesis. Neurobiological correlates of the stressors include malfunctioning of neurotransmitter systems: other-directed and self-directed violence have been shown to be independently associated with decreased serotonergic function (Joiner *et al.*, 2005; Mann, 2003), whereas dopamine activity is found to be inversely correlated with aggressive behaviour (Berman & Coccaro, 1998). Another neurotransmitter being associated with both violent behaviour as well as suicidal behaviour is the cerebrospinal fluid 5-HIAA (5-

hydroxyindoleacetic acid). Researchers have found that lower levels of 5-HIAA prevailed in those with a history of aggressive behaviour as well as among those with a history of suicidal behaviour (Malmquist, 2006). Other neurobiological explanations for suicidal and homicidal behaviour focus on the role of lithium. Schrauzer & Shresta (1990), for example, found that lithium levels in human hair were lower in violent offenders compared to non-violent controls. Lithium has been shown to reduce aggressive and self-destructive behaviour and symptoms of depression and mania (Rappaport & Thomas, 2004) – thereby possibly influencing the most extreme of such behaviours: suicide and homicide.

To sum up, from a neurobiological point of view, both homicidal and suicidal behaviour can be traced back to similar neurobiological factors. This theoretical approach, however, fails to outline which specific perpetrator characteristics can explain the co-occurrence of both homicide and suicide relative to a homicide or suicide alone. According to this theoretical understanding, all three types of behaviour have neurobiological underpinnings in common.

### **1.2 Strain theories**

Similar to neurobiological theory, strain theories also hold that both homicidal and suicidal behaviour originate from a similar source. Among these, Merton's (1968) strain theory is arguably one of the most influential.

In this theory, Durkheim's concept of 'anomie' is borrowed, described as a state of discontent and deregulation. Whereas Durkheim had stressed that anomic states arise from unregulated human desires, Merton pinpointed the importance of the relationship between means and goals. Merton's theory contends that a state of anomie occurs when it is not possible for certain groups to attain a cultural value (such as wealth) through institutionalised means (such as work). In Merton's theory, there are various ways in which an individual can respond to the problem of anomie: by conformity, innovation, ritualism, retreatism or rebellion. The latter two coping mechanisms have been used to explain both suicide and homicide: the retreating individual withdraws, or seeks to isolate himself from the social structure – the most extreme as well as permanent form being suicide. In rebellion, on the other hand, the individual responds to frustrations by striking out against social structures and their participants – the most extreme form constituting homicide (Unnithan *et al.*, 1994). Merton's concept of strain has been applied to an analysis of homicide-suicide in turn of the century Chicago by Adler (1999), who found a disproportionate rate of homicides followed by suicides, primarily committed by working-class individuals. Drawing links with Merton's notion of strain, Adler explained the high frequency of homicide-suicide in this period by the lack of resources and standing of the working class to achieve middle-class status, which gave rise to an anomic state, characterized by feelings of disgrace and helplessness. As outlined in the previous chapter, (acute) financial problems are reported to be a contributing factor in several types of homicide-suicide, ranging from intimate partner homicide-suicides among older persons (Milroy, 1995b) to familicide-suicides (Ewing, 1997; Fox & Levin 2005;

Goldney, 1977; Polk, 1994). In Adler's (1999) analysis, explaining homicide-suicide from a strain perspective was further supported by the fact that the homicide-suicide rate fell in the 1910s, when relatively few workers found themselves at the edge of both the working class and the middle class and their related social and cultural worlds. According to this theoretical approach, homicide-suicide occurs as a result of societal circumstances, giving rise to a state of anomie. This theory, however, does not distinguish which characteristics explain the occurrence of homicide-suicide relative to other forms of lethal violence: homicide and suicide.

Later researchers such as the sociologist Robert Agnew (1992) have interpreted Merton's concept of strain as personal strain, rather than as societal strain. Agnew's theory focuses on relationships in which the person is presented with a 'noxious' situation. These situations range from preventing an individual from achieving positively valued goals, removing or threatening to remove positively valued stimuli, and presenting or threatening to present an individual with noxious or negatively valued stimuli. This condition generates a variety of negative emotions, such as disappointment, depression, fear and anger. Agnew defines these negative emotions as 'strain'. Violent behaviour then becomes a means to cope with frustration and interpersonal problems.

Agnew's theory of social stress and strain has been applied to the homicide-suicide phenomenon by Harper & Voigt (2007). As has been outlined in the previous chapter, factors including the loss of one's job, financial problems, the loss of or rejection by a sexual partner have frequently been cited in relation to various types of homicide-suicide, ranging from child homicide-suicide, intimate partner homicide-suicide and familicide-suicide. From a strain theory perspective, in the context of homicide-suicide the inability to achieve positively valued goals can be applied to masculine status, sex or autonomy. Removing or threatening to remove positively valued stimuli relates to the withdrawal or the threat of withdrawal from an intimate partner and/or children. The presentation of negatively valued stimuli corresponds to interpersonal rejection or abandonment. Levin & Madfis (2009) recently applied Agnew's strain theory to mass murder at school – events which often end in the suicide of the perpetrator. The authors outlined three sequential types of strain, ranging from chronic strain, uncontrolled strain to acute strain. Chronic strain includes long-term frustrations experienced early in life or in adolescence such as bullying, teasing and being humiliated by peers. This stage is followed by uncontrolled strain, which includes social isolation and the resultant lack of prosocial support systems. Acute strain refers to the immediate trigger preceding the event. With school shooters, Levin & Madfis (2009) argue, the catalyst is most often a humiliating loss of face, a rejection by a girlfriend or the loss of academic standing. In their model, acute strain initiates a planning stage wherein a mass killing becomes a solution to regain lost feelings of control.

To summarize, from a strain perspective homicide-suicide occurs when an individual is faced with an inability to achieve positively valued goals combined with the occurrence of negatively valued stimuli. Agnew's theory alone, however, does not

make clear under which circumstances an individual proceeds to a homicide-suicide rather than opting for other types of (lethal) violence.

## **2 Direction of aggression: homicide *or* suicide**

The second part of the scheme presented in figure 3.1 concerns theories related to the direction of aggression. These theories include attribution theory as well as the stream analogy of lethal violence theory; both will be discussed next. According to these theories, aggressive impulses are either directed outward *or* inward, the most extreme forms resulting in either suicidal or homicidal behaviour.

### **2.1 Attribution theory**

The original attribution theory, developed by Heider *et al.* (1958) is lodged primarily in social psychology. In its simplest form, attribution theory is concerned with attempts to understand the factors involved in perceived causation, or the ways in which people attribute outcomes of events.<sup>22</sup> Due to the diversity of different attributional approaches in different fields of psychology, there is no single unified attribution theory in which systematic statements and corollaries constitute a unified theoretical system. However, there are some basic premises that are common to almost all attribution models (Försterling, 1988).

First of all, attribution models assume that attributional search is primarily a response to negative and unexpected events (Eiser, 1983). Attribution models hold that causal thoughts, or more generally, cognitions, play a central role in behaviour, affect, and experiences. Secondly, these approaches assume that individuals are motivated to seek a causal explanation for events in their physical and social environment. Also, nearly all conceptions of attribution – beginning with Heider (1958) – differentiate between internal attribution (i.e. causal factors that lie in the person) and external attribution (i.e. causal factors that lie outside the person).

Further, what attribution theories have in common are roughly two main functions of attribution relevant to our scheme: control and self-esteem. The control function refers to common-sense explanations that provide cognitive control for past and present events, as well as anticipating future occurrences. The self-esteem function of attribution entails that positive self-esteem is essential to protect, validate or enhance people's feelings of personal worth. The motivational perspective means that people protect their self-esteem by making internal attributions for success and external attributions for failure (Hewstone, 1983). In this regard, Försterling (1988) argued that individuals might come to unrealistic causal judgments because they fear that the 'true' attributions might affect their self-esteem negatively and subsequently cause them to experience negative affects. The tendency to blame others thus has an 'ego-

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<sup>22</sup> Although strictly speaking, there is here a division between *attribution* theory – to refer to analyses concerned with the effect of various factors on perceived causation – and the term *attributional* theory (Kelley & Michela, 1980) – to refer to analyses focusing on the consequences of attributions – we will use the term 'attribution theory' to refer to what might be called generic attribution theory (Harvey & Weary, 1984), containing both attribution and attributional theories.

protective' function: to preserve the ego, failures are attributed to others rather than towards the self (Hewstone, 1983). The tendency to blame the self for negative events contradicts this function. Previous studies have shown that internal, stable and global cause attributions for negative events are associated with depression (Abramson *et al.*, 1978).

Explanations as to how individual differences in types of attribution originate vary from heredity factors to environmental factors. In the area of domestic violence, for example, it has been argued that abused wives may be persuaded by their husbands that they are incompetent, hysterical, and frigid (Walker, 1979), increasing the likelihood of attributing violent victimization to themselves rather than to the abuser. Still others go further back in history, to the individual's early youth and the relationship with his parents. Abused children are often told by their parents that they are bad and unlovable, thereby becoming more likely to blame themselves for negative circumstances and hence, to develop an internal attribution style instead of an external attribution style.

Attribution theory, in short, holds that blame for negative circumstances can either be internally attributed or externally attributed, in its most extreme form resulting in either homicidal or suicidal behaviour. In this model, internal and external attributions are considered as antagonistic, thereby not explaining the conditions under which both homicide *and* suicide can occur in a single event. If homicide is the result of external blame attribution and suicide the result of internal blame attribution, how does someone commit homicide and then commit suicide? Unable to provide a satisfactory answer to this question, some have regarded homicide-suicide as a variation of suicidal behaviour, in which the victim is 'taken along' in the suicide of the perpetrator (Cavan, 1928; Milroy, 1993; West, 1965) such as in so-called 'extended suicides (Marleau, 1999; Messing & Heeren, 2004; Milroy, 1995b; Somander & Rammer, 1991) and homicide-suicides involving older spouses (Cohen *et al.*, 1998; Polk, 1994), while others consider homicide-suicide as primarily a homicidal phenomenon (Henry & Short, 1954; Selkin, 1976) such as homicide-suicides involving intimate partners (Guttmacher, 1960; Lester & Lester, 1971), where the subsequent suicide follows out of feelings of guilt or a fear of judicial consequences. Still others, such as Stack (1997) have suggested viewing homicide-suicide as containing both internal and external blame attribution processes, yet he fails to discuss how these operate in the homicide-suicide act.

## **2.2 Stream analogy for lethal violence**

Another theory considering the direction of aggressive impulses resulting in lethal violence concerns the Stream Analogy of Lethal Violence. The underpinnings of this theory can be traced back to Henry & Short (1954), who have developed the notion that both homicide and suicide are alternative aggressive responses to frustration. In brief, as has been outlined earlier, Henry & Short (1954) hold that when behaviour is required to conform rigidly to the demands and expectations of other persons, the probability of homicide as a response to frustration is low and the probability of

suicide as a response to frustration is high. When behaviour is freed from the requirement of conformity, the probability of homicide is high and the probability of suicide is low. This perspective theorizes that suicide among higher socio-economic classes is relatively more common compared to the lower classes as, in the former, outward aggression is more restricted than in the latter. Because the expression of outward aggression among higher socio-economic classes is more restricted than in lower socio-economic classes, one could speculate that higher socio-economic status increases the likelihood of a homicide being followed by a suicide. When one breaks the taboo of external aggression, the need for self-punishment after breaking this taboo is, accordingly, expected to be higher. Accordingly, it can be theorized that homicides occurring in higher socio-economic classes are more likely to be followed by suicide compared to homicides in lower socio-economic classes, where behaving violently is less restricted. This theory has been criticized for its lack of empirical support. In several cross-cultural studies, it was found that the suicide rate was often highest for the lower social class, among which external aggression is least constrained, and not lower, as the theory suggests (Bhatia *et al.*, 1987; Lester & Lester, 1971; Lorant *et al.*, 2005).

Henry & Short's understanding of homicide and suicide constituting two alternative channels of a single stream of violence was revived with the introduction of the stream analogy for lethal violence by Whitt *et al.* (1994). This analogy describes lethal violence as a stream consisting of two distinct currents, the homicide current and the suicide current. The width of each current represents the rate of each type of lethal violence. The combined currents comprise the overall rate of lethal violence. In this model, the suicide and homicide rates are alternate and causal forms of violent death, constituting a function of two sets of causal mechanisms: forces of production and forces of direction. Forces of production refer to social and cultural factors that are responsible for the total *amount* of lethal violence, as expressed in either suicide or homicide. Forces of direction refer to cultural and structural factors that prompt members of society to *direct* their violent drives towards either suicide or homicide.

This model has also been termed the 'stream analogy for lethal violence', in which the total volume of water in the stream represents the total amount of lethal violence in a society. In order to explain the choice between homicide or suicide, the stream analogy for lethal violence uses concepts from attribution theory discussed above. Here, the choice between homicide and suicide depends on attributional concerns: a higher tendency of external blame in response to frustration – for example, following a divorce – will result in a higher homicide rate relative to the suicide rate (Wu, 2003). Conversely, factors that increase the internal attribution of blame in response to frustration increase the risk of suicide relative to homicide. In this model, individuals in both groups have in common a hopeless perspective of their prospects for the future in common.

Similar to later studies, the validity of the model has been tested on the basis of macro-sociological data, rather than on the basis of individual case material, focusing on aggregate-level data, ascribing differences in homicide and suicide rates to the level

of education, the degree of racial segregation and the unemployment rate in a given society (He *et al.*, 2003; Wu, 2003). Another shortcoming in this theoretical approach is that it does not discuss the conditions under which homicide *and* suicide occur simultaneously in a homicide-suicide.

To summarize, both attribution theory as well as the – more recent – stream analogy for lethal violence theory consider homicide and suicide as antagonistic types of lethal violence: one occurs when the other does not, and vice versa. Theoretical approaches as postulated by Henry & Short suggest that homicide-suicide constitutes primarily a homicidal phenomenon, where the likelihood of an ensuing suicide increases as the perpetrator's socio-economic status increases.

### **3 Outcome of aggression: homicide-suicide over homicide or suicide**

In short, the theories examined so far fail to provide an answer to the research question of which characteristics can explain the occurrence of homicide-suicide relative to a homicide or suicide alone. Although the theoretical strands presented above provide explanations regarding the origin and direction of aggressive impulses, they do not offer rationalizations concerning the co-occurrence of two types of aggressive behaviour in a homicide-suicide. We hope to find these answers in the theories presented below. Here, we will take a closer look at the third part of the scheme, outlining theories that explain the occurrence of homicide-suicide relative to a homicide or suicide alone. These theories perceive homicide-suicide as the secondary outcome of aggressive impulses. In this view, homicide-suicide constitutes a variation of homicidal *or* suicidal behaviour. The first variation is explained by psychodynamic theories as well as by psychopathological approaches. These will be discussed first. Thereafter, homicide-suicide as a variation of suicidal behaviour will be examined. Theories explaining this variation also include psychopathological approaches, in addition to psycho-evolutionary theory and social integration theories.

#### **3.1 Psychodynamic theory**

Sigmund Freud, who introduced the original concept of psychodynamics, considered suicide as an impulse to commit murder turned inward upon the self. In this light, suicide is essentially hostility directed toward the introjected hate object. Later writings have adopted this vision, arguing that the killing of an internalized homunculus constituted murder in the 180<sup>th</sup> degree (Shneidman, 1989). In his different theories of aggression, Freud stressed the presumption that suicidal persons fail to express their aggressive impulses outwardly, instead turning them inward upon themselves. Recognizing the similarities between both homicide and suicide, he argued that there is no homicide without suicidal thoughts. This principle has also been termed *the Talion principle* (Buie & Maltzberger, 1989): he who wishes to kill must die.<sup>23</sup> Karl Menninger (1938) incorporated Freud's concepts of the interchangeability of self-directed and other-directed aggression in his work, postulating

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<sup>23</sup> Talion refers to the concept of 'an eye for an eye' and this originates from the Latin *Lex talionis*: the law of retaliation.

that suicide is a wish to kill, a wish to be killed and a wish to die. He postulated that homicide-suicide was a two-stage process in which he described homicide as the angry, aggressive component which comes before a suicide: the wish to kill or to destroy.

Other Freudian elements which are key to the understanding of both homicide and suicide are the concepts of the ego, superego and the id (Freud, 1949). In this psychodynamic model, the ego is battling with the id, the superego and the outside world – concepts later incorporated by theorists such as Henry & Short (1954). In addition to presenting socio-demographic and economic characteristics to explain both homicidal and suicidal behaviour as described earlier, they also incorporated psychodynamic factors in their explanatory model. Henry & Short (1954) postulated that suicide is a function of an excessively strict superego or an internalized restraining mechanism of the personality, which prohibits the outward expression of aggression. They held that people who direct their aggression inward do so because they were psychologically punished as children, as opposed to physically punished. When psychologically punished, the child risks losing the parents' love and nurturance. In order to safeguard the parents' affection, the child's superego becomes more powerful in order to resist the individual from directing his aggression outwards. When having been punished physically, however, other-directed aggression remains intact, as the child can still react physically violently without risking losing the parents' liking. From these theoretical underpinnings it can be deduced that, when a person with a strong superego formation kills, he is more likely to commit suicide after the killing than the person who does not have an internalized prohibition against the outward expression of aggression. Suicide can thus be considered as self-punishment by the superego for having resorted to violence against the other – thereby becoming an act motivated by a sense of guilt and self-blame. The main criticism of this theory, however, is that it does not explain why the individual who is restrained in his outward expression of anger comes to a homicide to begin with.

In addition, the authors hold that the victim in a homicide-suicide not only represents a source of frustration but also a source of nurturance. When the source of frustration (i.e. the victim) is destroyed in a homicide, the source of nurturance is also lost. Hence, the killing of the victim can restore or even increase frustration over the loss of a loved object. The self then becomes a legitimate target of aggression in the form of suicide (Stack, 1997). Previous research supports this presumption, finding a high degree of 'frustrated' relationships characterized by domestic violence among homicide-suicide perpetrators, in particular among those killing their (estranged) intimate partner (Danto, 1978; Morton *et al.*, 1998; Rosenbaum, 1990; Selkin, 1976). From this point of view homicide-suicide is thus considered to be a variation of homicidal behaviour, since suicide following the homicide is perceived as being reactive.

According to psychodynamic theory as developed by Freud and expanded by his followers, homicide is more likely to be followed by a suicide if the perpetrator has a strong superego formation that punishes the ego for having resorted to outward

aggression. Other factors postulated by psychodynamic theory do not differentiate homicide-suicide from 'solitary' homicide: according to this perspective, both have in common a high degree of interpersonal frustration, expressed by domestic violence.

### 3.2 Psychopathological perspectives

Given the extreme nature of both the homicide and the suicide event, many empirical studies have pointed to the contribution of psychopathology in perpetrators of these acts, including the homicide-suicide act. From different psychopathological perspectives, homicide-suicide is considered to be either a variation of homicidal behaviour or a variation of suicidal behaviour.<sup>24</sup> Both variations will be discussed from a psychopathological point of view. Among empirical studies on homicide-suicide, the most frequently cited psychopathological features associated with this act include depression and psychosis, in addition to certain personality features such as narcissism and dependency. These will be examined below.

As has been mentioned in the previous chapter, depression is the most prevalent disorder found in the perpetrators of all categories homicide-suicide (Barber *et al.*, 2008; Bourget *et al.*, 2000; Chan *et al.*, 2003; Goldney, 1977; Hatters Friedman *et al.*, 2008; Logan *et al.*, 2008; Okumura & Kraus, 1996; Palermo & Ross, 1999; Polk, 1994; Rohde, 1998; Rosenbaum, 1990). From a psychodynamic point of view, depression causes the loss of control and a disruption and disorganization of inhibitory functions of the psyche, so that basic repressed conflict and emotion break through the surface (Schlesinger, 2000). The depressive state thus weakens the ego functions, so that aggressive impulses become manifest (McDermaid & Winkler, 1995). Others hold that depression constitutes a reaction to the loss of a loved object and accompanied loss of self-esteem. Here, the onset of depression is typically associated with the break-up of a relationship. Rosenbaum (1990) has argued that depression may be viewed as a defence against the underlying aggressive and murderous impulses. If the 'trigger' incident such as a break-up produces sufficiently intense enough impulses, the depressive defence is breached and the 'murderous impulse' is released. The perpetrator realizes that he cannot live with the loved object, but also not without it. In this view, homicide-suicide is primarily homicidal rather than suicidal: suicide occurs as a result of a return of the depressive defence and feelings of guilt after the perpetrator realizes that he has committed the crime. From this point of view, the presence of depressive illness in the perpetrator increases the likelihood of a homicide ending in a suicide. This finding is corroborated by empirical research

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<sup>24</sup> Although a statistical relationship exists between mental disorders and violence, only a proportion of violent behaviour can be attributed to mentally disordered persons. Moreover, this relationship does not imply that people with a mental illness are generally more likely to commit violent acts than members of the general population (Eronen *et al.*, 1998). The same hold true for the relationship between mental illness and suicidal behavior (Neeleman, 2001). It should not be assumed that mental illness *causes* suicidal behaviour, although suicides hardly ever occur without the presence of a mental illness (Kerkhof, 2007; Móscicki, 1997). Individuals engaging in suicidal behaviour do so for various reasons, which are not necessarily clustered around psychopathological factors.

presented in the previous chapter – among all subcategories of homicide-suicide, depression in the perpetrator is found to be prevalent (Bourget *et al.*, 2000; Chan *et al.*, 2003; Goldney, 1977; Hatters Friedman *et al.*, 2008; McGee & DeBernardo, 1999; Okumura & Kraus, 1996; Palermo & Ross, 1999; Polk, 1994; Rohde, 1998; Rosenbaum, 1990; Schlesinger, 2000; Verlinden *et al.*, 2000).

Conversely, the literature also points to homicide-suicide being primarily of a suicidal nature given the long-established risk factor of depression for suicide and suicidal ideation (Lönnqvist, 2000; Móscicki, 1997). Here, hopelessness seems to be the most important factor indicating suicide vulnerability (Kerkhof, 2007; Kuo *et al.*, 2004). The hopelessness theory of depression holds that a causally defined subtype of clinical depression known as hopelessness depression results when stressful life events are interpreted through the lens of a depressogenic attribution style. Suicidal tendencies are among the symptoms posited as defining hopelessness depression (Whitt, 1994). According to this view, the primary aim of the depressed homicide-suicide perpetrator is suicide rather than homicide. The latter occurs if not only one's own life, but also the lives of the victims are seen through a depressogenic attribution style and, consequently, are perceived to be not worth living or doomed to end.<sup>25</sup> This perspective is supported by recent empirical research by Barber *et al.* (2008), who reported that post-mortem examinations of homicide-suicide perpetrators and individuals having died of suicide revealed a high level of antidepressants in both groups.

Not infrequently, in homicide-suicide depressogenic perceptions are reported to go hand in hand with psychotic thinking (Bourget, Grace *et al.*, 2007; Champion *et al.*, 1985; Dietz, 1986; Levin & Fox, 1985; Lewis & Bunce, 2003). Acts of violence can reach lethal proportions towards the self and towards others when the individual is driven by apparent motives of psychotic self-defence in the face of intense – typically paranoid – feelings. This cognition has been termed the *rationality-within-irrationality principle*: when an individual with mental illness feels threatened, and when his or her internal controls are compromised, violence becomes more likely as an understandable response to harmful actions that the person believes to be directed against him or her. As outlined in the previous chapter, psychotic disorders are often found among perpetrators of child homicide-suicide. The literature reports that here, altruistic motives arise under the influence of delusional thinking. These perpetrators are often female, who might come to believe that children are inherently flawed or at risk; that they, as mothers, had helped the world or remaining family members by killing their children (Lewis & Bunce, 2003). Similarly, among familicide-suicides, a despondent father might resort to the killing of his family in order to save them from a perceived threat induced by psychotic thinking (Dietz, 1986; Levin & Fox, 1985).

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<sup>25</sup> Some reports on filicide, with or without being accompanied by suicidal behaviour, cite the influence of postpartum depression. Although DSM-IV-TR does not mention this type of depression as an independent disorder, but rather as a specified onset related to a mood disorder, some authors stress the importance of perinatal depression and psychosis for filicide (Spinelli, 2005).

Homicide-suicide among psychotic individuals may be attributed to the rationality-within-irrationality principle, in which psychotic symptoms convince the perpetrator of the necessity of 'taking along' their loved ones in death. According to this perspective, the deterioration of cognitive processing whilst under the influence of a psychosis could aggravate the perpetrator's psychological estrangement from his/her family members (Starzomski & Nussbaum, 2000), in some cases disregarding their autonomy altogether by considering the victim as a part of the self that cannot be separated. In this view, homicide-suicide can be differentiated from both homicide and suicide alone according to a high prevalence of psychotic disorders.

Other researchers point to the role of narcissism in homicide-suicides. As cited in the previous chapter, children may be victimized in a so-called 'Medea Complex' in order to hurt the (estranged) partner. Narcissistic impulses lead the perpetrator to rectify being wronged. In psychoanalytic theory, narcissism is understood as a human psychological process through which preserving the self is assured (Rochlin, 1973). The relationship between narcissism and violence rests on the notion that threats to self-esteem generate anger and aggressive behaviour. Having such a wildly favourable self-view, narcissists are more sensitive to criticism than those with low self-esteem (Papps & Carroll, 1998; Stucke & Sporer, 2002). Similarly, as narcissistic self-absorption increases, empathic regard for others lessens, increasing the likelihood of acting violently (Meloy, 1997). Due to these factors, people suffering from narcissistic personality traits are more likely to perceive others as having wronged them or failed to offer support. Such interpretations of other people's behaviour might give rise to a 'narcissistic rage' (Kohut, 1971), involving paranoid rancour and catatonic fury. Such rage aims to rectify an injustice, a narcissistic wound to self-esteem – not infrequently resulting in aggressive behaviour, attacking the person perceived as being responsible for the wrongdoing (Nestor, 2005; Stucke & Sporer, 2002). Thinking of narcissistic outbursts as restoring one's self-esteem, suicide by the narcissistic perpetrator following a homicide seems to contradict this aim. Some attribute suicidal behaviour among narcissistic personalities to a comorbid mood disorder and/or substance abuse disorder (Maltzberger, 1998), whereas others have suggested that impulsivity in narcissistic personality disorder is responsible for suicidal behaviour (Joiner *et al.*, 2005). Conversely, it has been argued that homicide brings about unbearable feelings of shame for what the perpetrator has done. According to Kohut (1971), this may create an insufferable situation, in which the narcissist wishes to 'do away with the one responsible for inflicting this shame: the self'. From this point of view, suicide following the homicide is primarily homicidal, where suicide follows as a reaction to the homicide. Empirical research, however, rarely reports on narcissism in homicide-suicide perpetrators, which can be attributed to the self-preserving function of the narcissism: suicidal behaviour contradicts self-protection. Homicide in the narcissistic personality aims to punish the person who has wronged the perpetrator – from this perspective a homicide-suicide is less likely to be motivated by narcissistic personality traits compared to homicides not ending in the suicide of the perpetrator.

Another personality feature reported to be closely associated with homicide-suicide constitutes dependency, particularly present among men committing intimate partner homicide-suicides (Cohen, 2000; Cohen *et al.*, 1998; Dutton & Kerry, 1999; Koenraadt, 1999; Palermo, 1994). A core conflict in a dependent personality disorder is the individual's belief that his well-being is necessarily contingent on others; typically a particular person such as an intimate partner. The absence of or betrayal by that person first engenders feelings of helplessness mixed with frustration. When an individual is unable to cope with the (threatened) loss, his self-esteem remains under threat – in order to restore his self-esteem, the object is destroyed. This mechanism resembles the *narcissistic rage* as described above. A fear of abandonment lies at the heart of violent behaviour in a dependent personality disorder (Buie & Maltzberger, 1989). For the dependent personality, suicidal behaviour following a homicide may follow as a reaction to the destruction of the loved object. Individuals with a dependent personality disorder typically feel that they cannot survive without the person with whom they have chosen to have a relationship. Paradoxically, the homicide occurs to prevent the loved object from leaving. Accordingly, the only way in which unification with the loved object can be accomplished, is by committing suicide. From this point of view, dependent personality features in the perpetrator increase the likelihood of a homicide-suicide relative to a 'solitary' homicide.

Conversely, dependency has also been found to play a major role in homicide-suicides that are primarily suicidal in nature. Here, the perpetrator's suicidal ideations are extended to those he feels dependent upon. In the previous chapter, this dynamic has been observed in child homicide-suicides as well as intimate partner homicide-suicides among ailing spouses, both being motivated by a dependent-protective motive. Not infrequently, the breakdown of or a seeming threat to the parent-child or intimate partner relationship precedes and initiates the suicidal process (Berman, 1996). The dependent suicidal perpetrator perceives the threat of separation from the other party by 'only' committing suicide as a fate worse than death: the conjoint death of both perpetrator and victim is seen as preferable (Berman, 1996). In this light, the homicide-suicide arises out of suicidal, rather than homicidal, ideations. Homicide-suicide is more likely to occur relative to a 'solitary' suicide if the suicidal perpetrator feels dependent on and/or responsible for his child(ren) and/or intimate partner.

In conclusion, the literature reports homicide-suicide to be closely associated with specific types of psychopathology, ranging from severe depression to psychoses and certain personality features. According to the view of each of the psychopathological factors discussed above, homicide-suicide is considered to be either homicidal in nature – where the suicide follows as a reaction to the homicide – or suicidal in nature – where the victim is 'taken along' in the suicide of the perpetrator. From a psychopathological approach, homicide-suicide is more likely to occur relative to a homicide alone when the perpetrator suffers from a depressive disorder. Homicide-suicide and suicide, however, are thought to have in common a high degree of depression. With regard to the role of psychosis in aggressive behaviour, homicide-

suicide is more likely to occur compared to homicide or suicide alone when the perpetrator suffers from a psychotic disorder. Conversely, homicide is thought to be less likely to be followed by a suicide when narcissistic factors are involved. In the narcissistic personality, homicide aims to protect the self; suicide seems to contradict this aim. From this perspective, homicides are less likely to be followed by a suicide when the act is committed under the influence of narcissistic personality traits. Finally, assessing the role of dependent personality traits, this theoretical analysis shows that homicide-suicide is more likely to occur relative to a 'solitary' homicide or suicide if the perpetrator shows (far-reaching) signs of dependency on others. Other theoretical approaches explaining the occurrence of homicide-suicide relative to a homicide or suicide alone include psycho-evolutionary theory and social integration theories, which will be discussed next.

### 3.3 Psycho-evolutionary theory

According to the psycho-evolutionary theory of lethal violence, certain types of homicide, in particular domestic homicides like intimate partner homicide and child homicide are explained by Darwinist concepts such as reproductive fitness and natural selection. According to this view, women are considered to be a reproductive capacity that can be owned and exchanged by men. The latter exercise control over women's reproductive capacity in order to make sure that the child she is bearing is his, and not his rival's. When control over the woman's sexuality is threatened, for example by a threat of withdrawal, the cuckold responds with (lethal) violence (Daly & Wilson, 1988; Wilson & Daly, 1992; Wilson *et al.*, 1995). Violence, and particularly intimate partner violence, is considered to be an instrument to exercise control. According to this evolutionary approach, mainly postulated by the Canadian researchers Daly & Wilson, the homicide of an intimate partner is an unintended 'by-product' of violence. According to the the psycho-evolutionary perspective, homicide of a child by the mother occurs when mothers are young with much time left to reproduce. Paternal filicide, on the other hand, occurs when the child's father has doubts about his paternity. Daly & Wilson point to the fact that children with stepparents have an increased risk of becoming lethally assaulted compared to children with biological parents. This does not only apply to child homicide cases involving one victim, but also, as has been shown in the previous chapter, to familicide cases. Previous research in Canada and England & Wales has shown that stepchildren are more likely to become a victim of familicide than biological children, especially in the context of a threatened estrangement of the intimate partner (Wilson *et al.*, 1995). An alternative approach to homicide, in particular intimate partner homicide, by Shackelford *et al.* (2003), regards homicide not as an unintended 'by-product' of (intimate partner) violence, but rather as a planned outcome. Homicide, in this view, is an adaptive mechanism enhancing the odds for individual survival.

From a Darwinist perspective, opposed to the killing of stepchildren, the killing of one's own, biological children is 'spiteful' as evolutionists use the concept of spite: the actor carries out a course of action that is devastating to his own progenerating

interests. This applies both to the killing of multiple children as well as to a suicide following a homicide. In general, the authors argue that the more a homicide opposes evolutionary interests, the more likely it is followed by suicide or to incorporate a mental illness. Failing to explain homicide followed by suicide by evolutionary constructs, Daly & Wilson (1988) propose that psychopathological rather than evolutionary factors play a key role in domestic homicide-suicide.

To put it succinctly, from an evolutionary point of view suicide is counter-productive, as it opposes the advancement of one's genetic pool. Rather, evolutionary theories point to the role of mental illness to explain the homicide-suicide phenomenon. From this point of view, homicide-suicides are primarily suicidal rather than homicidal: whereas homicidal behaviour can increase the odds for the survival of the individual and his gene pool, suicide following a homicide opposes evolutionary interests and is thus 'futile' in terms of procreation. In other words, according to psycho-evolutionary theory a homicide is more likely to result in a suicide when psychopathological factors are involved that obscure his evolutionary pursuits. This presumption is supported by studies on homicide-suicide presented in the previous chapter: the majority of perpetrators suffer from (severe) types of psychopathology (Bourget *et al.*, 2000; Felthous & Hempel, 1995; Holden *et al.*, 1996; Lévée *et al.*, 2007; Lewis & Bunce, 2003; Milroy, 1995b; Rosenbaum, 1990).

### **3.4 Social integration theory**

Finally, other perspectives considering homicide-suicide as a variation of suicidal behaviour include the social integration theory. Social integration theory holds that both homicide and suicide are social facts, which can be explained by other social facts as precipitated by Émile Durkheim (1897(2002)). Durkheim held that extreme forms of behaviour such as homicide and suicide have profoundly sociological rather than biological or psychological causes. In his writings, Durkheim asserted that variations in the suicide rate of any society depend on the type and extent of social organizations and integration. Durkheim's explanation of varying suicide rates hinges on three types of suicide: altruistic, anomic and egoistic suicides.<sup>26</sup> The first type occurs in individuals who are extremely attached to society, believing their death can bring about a benefit to the society. Anomic suicides result from a state of anomie, caused by dramatic changes in economic and/or social circumstances and are characterized by disturbance, agitation and discontent. An individual might choose to commit suicide as a way to escape the norms and laws governing the society if these do not correspond with the individual's life goals. Egoistic suicide contradicts altruistic suicide as it springs from excessive individualism: the attachment between the individual and society is weak. Thus, there are few social ties to keep the individual from taking his or her life. Overall, Durkheim thought that suicide would be more common where social

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<sup>26</sup> Durkheim also mentions a fourth category, namely fatalistic suicide, which he describes as a suicide which is opposite to anomic suicide, derived from excessive regulation of the individual by society. He holds that distinguishing such suicides does not increase our understanding of the phenomenon, but is perhaps valuable to consider in a historical context, as slaves seem to predominate in this category.

integration was weak. Whereas Durkheim was very specific on the causes and types of suicide, his writing on the causes and typology of homicide was vague at best. In addition, Durkheim's ideas cannot distinguish specific sources that cause suicide *or* homicide (Wu, 2003), let alone factors causing a combination of the two in a homicide-suicide. Nevertheless, his ideas and methods had an effect on studies of homicide. Understanding suicide as a proportionality of one's social integration was further championed and expanded to homicide by Henry & Short (1954). According to the authors, aggression is a measure of the level of societal restraint over an individual's actions. Less restraint results in increased homicide and decreased suicide, while more control – forced conformation – would lead to high suicide and low homicide (Bills & Li, 2005). Simply put, according to this theory, homicide occurs when the social circumstances are such that a suicide cannot be executed, and vice versa.

In sum, from a social integration perspective postulated by Durkheim and his followers, suicide is more likely to occur when the attachment between the individual and society is weak: there are few social ties to keep the individual from taking his or her life. From a social integration perspective the likelihood of homicide-suicides over suicide increases as social disintegration increases. Homicide-suicide thereby constitutes an extreme variation of suicidal behaviour, resulting from extreme social disintegration. The findings from empirical research seem to be in line with this finding. This applies particularly to homicide-suicides among older persons, who are reported to live in (extreme) social isolation at the time of the homicide-suicide (Rosen, 1981; Rosenbaum, 1983).

#### **4 Conclusion**

By means of a theoretical analysis, this chapter has outlined several theoretical strands used to explain the occurrence of homicide-suicide relative to homicide or suicide alone. Each of the theories discussed provides an insight into different stages of the homicide-suicide process, from the origin of aggression to the direction of aggression to the outcome of aggression: homicide-suicide, homicide or suicide. Neurobiological theories as well as strain theories recognize the similarities in origin between both homicidal and suicidal behaviour. Subsequently, we have assessed attribution theories and the strain theory of lethal violence, which explicitly outline factors related to the occurrence of both other-directed and self-directed violence. Although general attribution theory does not distinguish homicide-suicide from other types of lethal violence, from part of this theory it can be deduced that homicides occurring in higher socio-economic classes are more likely to be followed by suicide compared to homicides in lower socio-economic classes.

Theories have been analysed that provide explicit, rather than inferred, explanations for the occurrence of homicide-suicide relative to a homicide or suicide alone. These theories perceive homicide-suicide as the secondary outcome of aggressive impulses. In this view, homicide-suicide constitutes a variation of homicidal *or* suicidal behaviour. From a psychodynamic point of view, homicide-suicide is more likely to occur when the homicide perpetrator has a strongly

developed superego, which punishes the ego for having resorted to violent behaviour. From a psychopathological point of view, homicide-suicide is more likely to occur relative to a homicide alone when the perpetrator suffers from a depressive disorder. Homicide-suicide and suicide, however, are thought to have in common a high degree of depression. With regard to the role of psychosis in violent behaviour, homicide-suicide is more likely to occur compared to homicide or suicide alone when the perpetrator suffers from a psychotic disorder. Concerning the role of personality features, narcissism functions as a self-protective mechanism, decreasing the likelihood of a homicide followed by a suicide compared to homicide. Other personality features such as dependency, on the other hand, are thought to increase the likelihood of a homicide-suicide relative to a homicide or suicide alone, given the perpetrator's inability to view himself as separate from the other. Other theories explaining the differences between the three groups of lethal violence concern the psycho-evolutionary theory, postulating that suicide following a homicide is 'spiteful' in an evolutionary context and thus is more likely to be accompanied by mental illness compared to non-suicidal homicides. Finally, the social integration theory holds that homicide-suicide constitutes an extreme type of suicidal behaviour associated with extreme social disintegration.

In the third part of this study, an attempt will be made to *empirically* assess which factors explain the occurrence of homicide-suicide compared to both homicide and suicide. Before doing so, however, the second part of this study provides an overview of the field of study, outlining the nature, incidence, trends and major characteristics of homicide-suicide in the Netherlands and elsewhere.

**PART II**

**The Epidemiology of and  
the Variation in Homicide-Suicide**



## Chapter four

# Nature and Incidence of Homicide-Suicide in the Netherlands<sup>27</sup>

### 1 Introduction

Whereas the first part of this study made use of a literature analysis and theoretical analysis in order to provide an answer to the research questions formulated in chapter one, the second part of this study is empirical in nature. The current chapter provides an overview of the epidemiology of homicide-suicide as well as an empirical analysis of the different subtypes of homicide-suicide. Such an empirical analysis allows the findings generated by the literature review (as described in chapter two) to be put into perspective. So far, no systematic research into the homicide-suicide phenomenon has ever been conducted in the Netherlands. Since these acts are not recorded in official crime statistics, not even the yearly number of events and victims is known. Consequently, there is a vast dark number surrounding these cases. This chapter aims to answer the following research questions:

*What are the incidence, trends and distribution of subtypes of homicide-suicides in the Netherlands? And: To what extent do subtypes of homicide-suicide differ in their characteristics?*

These questions are approached by making use of data stemming from the *Dutch Homicide Monitor*. First, information on this data source will be briefly recapped (for a detailed overview, see chapter one). Following this, the chapter provides information on the incidence of and the trends in homicide-suicide in the Netherlands in the period 1992-2006, followed by a description of the characteristics of homicide-suicide events, victims and perpetrators.

### 2 Methodology

In order to establish the epidemiology of homicide-suicide events in the Netherlands the NSCR database *Dutch Homicide Monitor* was used. This database is an ongoing monitoring system, which includes all homicides in the Netherlands that took place between 1992 and 2006. From this database, all homicide-suicide events were

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<sup>27</sup> Adapted versions of this chapter have been published as:

- Liem, M., M. Postulart & P. Nieuwbeerta (2007) 'Moord-Zelfdoding in Nederland: Een Epidemiologisch Overzicht [Homicide-Suicide in the Netherlands: An Epidemiological Overview]' *Tijdschrift voor Veiligheid*, 6, 16-36.

- Liem, M., M. Postulart & P. Nieuwbeerta (2009) 'Homicide-Suicide in the Netherlands: An Epidemiology' *Homicide Studies*, 13, 99-123.

extracted and together, these events constituted a new dataset entitled *Homicide-Suicide 1992-2006* (Postulart & Nieuwbeerta, 2007). This dataset was supplemented with background information from newspaper articles (Liem & Koenraadt, 2007). Homicide rates were calculated based on data from the *Dutch Homicide Monitor*. Suicide rates were retrieved from the Central Bureau of Statistics, Statistics Netherlands.

#### *Inclusion Criteria*

In order to compare the findings of the study at hand to other international epidemiological studies, similar inclusion criteria are used as reported elsewhere (Campanelli & Gilson, 2002; Chan *et al.*, 2003; Marzuk *et al.*, 1992). The criteria for identifying a homicide-suicide include one or more person(s) who has/have committed a homicide (articles 287-291 Dutch Criminal Code) followed by a suicide (ICD-10 codes X60-X84). The event was included if the suicide took place within one week of the preceding homicide.

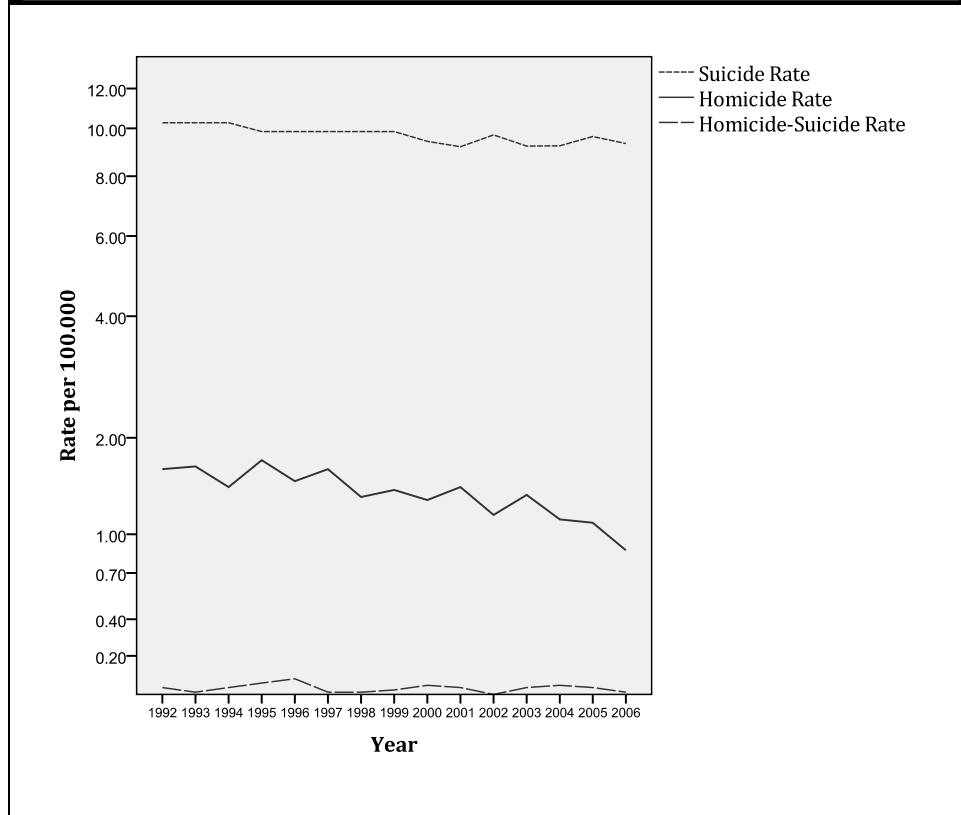
When an incident involved more than one victim, the closest relationship between victim and perpetrator was coded according to the following hierarchy: familicide, intimate partner homicide, child homicide, other family homicide and finally extrafamilial homicide. For example, cases in which a spouse and a stranger were killed were categorized as intimate partner homicide-suicides rather than extrafamilial homicide-suicides.

### **3 Results**

#### **3.1 Incidence**

In the period 1992-2006, 103 homicide-suicide events took place involving 135 lethal victims. In this period, homicide-suicide occurred on average seven times per year, equivalent to approximately 4% of all homicides per year and 0.5% of all suicides per year. On average, nine persons per year died in a homicide-suicide. No seasonal variation could be established. The homicide-suicide incidence was highest in 2000 and 2005 (N=11) and lowest in 1993 and 1999 (N=3). This cannot be ascribed to one specific type of homicide-suicide (table 4.1).

Figure 4.1 represents the homicide, suicide and homicide-suicide rates for the period 1992-2006. In this period, the suicide rate decreased slightly from 10.3 suicides per 100,000 in 1992 to 9.3 suicides per 100,000 in 2006. The suicide rate in this period ranged from 9.5 to 9.92 (95% CI). In the period 1992-2006 the homicide rate per 100,000 remained fairly constant, varying from 1.25 to 1.51 per 100,000 (95% CI), with the exception of 2006, in which there was a clear reduction in the number of homicides (Nieuwbeerta & Leistra, 2007). The same holds true for the number of domestic homicides, which involved approximately 35 per cent of all recorded homicides per year. In the same period, the homicide-suicide rate remained relatively stable, varying from 0.37 to 0.58 per 100,000 persons per year (95% CI).

**Figure 4.1 Homicide, suicide and homicide-suicide rates in the Netherlands per 100,000, 1992-2006**

### 3.2 Case characteristics

The majority of events were classified as intimate partner homicide-suicides (N=52; 50%), followed by homicide-suicides involving children (N=19; 18%). Extrafamilial homicide-suicides occurred in approximately 13 per cent (N=13). In total, 9 cases (9%) were familicide-suicides and 3 cases involved the killing of other family members followed by suicide (3%). Intimate partner homicide-suicides were prevalent in most years of the analysis.

The total of 103 homicide-suicide cases involved 135 victims. All cases involved one perpetrator. In 80 per cent of cases one victim was involved (table 4.2). Cases including multiple victims mainly constituted intimate partner homicides in which a rival or a bystander was killed, child homicides involving multiple child victims and finally familicides, which by definition include multiple victims.

The largest number of events took place in Amsterdam (N=15). The difference in the number of homicide-suicides between this city and other Dutch cities is considerable: other cities with high numbers of homicide-suicide cases are Rotterdam (N=7) and The Hague (N=11).

**Table 4.1 Homicide-suicide cases in the Netherlands according to subtype, 1992-2006**

Year	Intimate partner		Child		Familicide		Other family		Extrafamilial		Total
	homicide	homicide	homicide	homicide	homicide	homicide	homicide	homicide	homicide	Unknown	
1992	3	1	0	0	0	0	1	0	0	0	5
1993	0	1	1	0	1	0	0	1	0	0	3
1994	3	0	1	0	1	0	1	0	1	1	6
1995	6	0	0	1	0	1	2	0	0	0	9
1996	2	4	0	0	0	0	4	0	0	0	10
1997	6	1	0	0	0	0	2	0	1	1	10
1998	0	1	3	0	0	0	1	0	1	1	6
1999	1	2	0	0	0	0	0	0	0	0	3
2000	4	2	0	0	0	0	2	0	3	3	11
2001	5	1	0	0	0	0	0	0	0	0	6
2002	6	0	0	0	0	0	0	0	0	0	6
2003	4	0	0	0	0	0	0	0	0	0	4
2004	5	3	0	0	0	0	0	0	0	0	8
2005	4	2	3	1	1	0	0	1	1	1	11
2006	3	1	1	0	1	0	0	0	0	0	5
Average per year	4	1	1	0	0	0	1	0	1	0	7
<b>Total</b>	<b>52 (50%)</b>	<b>19 (18%)</b>	<b>9 (9%)</b>	<b>3 (3%)</b>	<b>13 (13%)</b>	<b>7 (7%)</b>	<b>103</b>				

**Table 4.2 General characteristics of homicide-suicide cases in the Netherlands, 1992-2006**

	Intimate partner homicide	Child homicide	Familicide	Other family homicide	Extrafamilial homicide	Unknown	Total N	%
<b>Number of victims</b>								
1	47	12	0	2	13	7	81	80
2	3	5	3	1	0	0	12	11
3	2	2	4	0	0	0	8	8
4	0	0	2	0	0	0	2	2
<b>Major cities</b>								
Amsterdam	8	1	1	1	4	0	15	15
Rotterdam	4	1	0	0	1	1	7	7
The Hague	4	2	2	1	1	1	11	11

### 3.3 Victims

In total there were 43 male (32%) and 92 female victims of homicide-suicide (68%) in the Netherlands in the period 1992-2006 (table 4.3).<sup>28</sup> The differences in gender in different types of homicide-suicide are considerable: more than half of the male victims were children who died in a child homicide-suicide or a familicide-suicide. The gender distribution is particularly skewed in intimate partner homicide-suicide, as only 6 victims were male (10%) compared to 52 female victims (90%). In child homicide-suicides more boy (N=15; 54%) than girl (N=13; 46%) victims were observed. In familicide-suicides there were a total of 12 male victims (46%) compared to 14 female victims (54%). In the category of homicide-suicide involving other family members only women became victimized: one mother and one aunt. Among extrafamilial homicide-suicides male victims (N=9; 69%) were overrepresented compared to female victims (N=4; 31%) over all incident types. The age of the victims ranged from a few months to 84 years. The mean age of the victims was 30. The age of the victims depended strongly on the type of homicide-suicide: whereas in intimate partner homicide-suicide cases, the mean age of the victim was 43, in child homicide-suicide the victim was on average 5 years old.

Children who died in a child homicide-suicide were younger than those dying in a familicide-suicide (5.3 years versus 7.1 years respectively). The mean age of adult victims in familicide-suicide was also lower than those dying in an intimate partner homicide-suicide (40 years versus 43 years respectively). Victims of extrafamilial homicide-suicide were the oldest with a mean age of 57 years.

Despite the fact that in the case of many victims their ethnicity could not be traced, it was found that most victims were either Dutch (N=65; 48%) or Surinamese (N=10; 7%). Compared to the general population those with an ethnicity other than Dutch were overrepresented.

#### *Modus operandi*

Most homicide-suicides were committed by firearms (N=54; 40%), followed by sharp instruments such as knives (N=38; 28%) and suffocation (N=22; 16%). In 11 (8%) victims the cause of death could not be determined. The majority of the intimate partner homicide-suicides were committed by firearms (N=28; 48%), followed by sharp instruments (N=19; 33%) and suffocation (N=10; 17%). Child homicide-suicides were committed by less violent modi operandi such as suffocation and/or smothering (N=11; 39%). Other types of homicide-suicide were mainly carried out by firearms.

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<sup>28</sup> In one victim, the gender could not be traced.



**Table 4.4 Homicide-suicide perpetrator characteristics in the Netherlands, 1992-2006**

	Intimate partner homicide	Child homicide	Familicide	Other family homicide	Extrafamilial homicide	Unknown	Total
							N %
<b>Gender</b>							
Male	50	13	9	3	12	6	93 90
Female	2	6	0	0	1	1	10 10
<b>Age</b>							
< 17	0	0	0	0	1	0	1 1
18-25	5	0	0	1	0	3	9 9
36-40	17	11	5	1	9	4	47 46
41-65	25	7	4	1	3	0	40 39
> 65	3	0	0	0	0	0	3 3
<b>Ethnicity</b>							
Dutch	24	11	3	1	2	2	42 42
Surinamese	7	2	1	0	1	0	11 11
European	0	0	0	0	4	0	4 4
Turkish	2	0	0	0	1	0	3 3
North African (incl. Moroccan)	2	0	0	0	0	0	2 2
Other	4	1	2	0	0	0	7 7
Unknown	13	5	3	2	5	5	33 32
	<b>52 (50%)</b>	<b>19 (18%)</b>	<b>9 (9%)</b>	<b>3 (3%)</b>	<b>13 (13%)</b>	<b>7 (7%)</b>	<b>103 100</b>

### 3.4 Perpetrators

The majority of the homicide-suicides were committed by men (table 4.4): 93 cases were male-perpetrated (90%) homicide-suicides and 10 cases were perpetrated by females (10%). Males predominated in all homicide-suicide categories. These gender differences can be clarified by distinguishing the different types of homicide-suicides: intimate partner homicide-suicides were mainly committed by males killing their intimate partners. Child homicide-suicide were predominantly perpetrated by men. Familicide-suicide and the killing of other family members followed by suicide were exclusively committed by males. The majority of the extrafamilial homicide-suicides involved perpetrators who killed someone of the same gender.

The youngest perpetrator was 16 years old, the oldest was aged 85. The mean age of the perpetrators was 44. The mean age was highest for intimate partner homicide perpetrators (48), followed by extrafamilial homicide-suicide perpetrators (45), familicide-suicide perpetrators (40), child homicide-suicide perpetrators (40) and finally, those having killed other family members (38).

Similar to the victims, in many cases the ethnicity of the perpetrator could not be determined (32%). The majority of the perpetrators were Dutch (N=42; 42%) and Surinamese (N=11; 11%). Again, those with an ethnicity other than Dutch were overrepresented. Of those cases in which the ethnicity of both perpetrator and victim was known, the majority of homicide-suicides were intra-ethnic: here, victim and perpetrator were both of the same ethnicity.

Suicide was typically committed with a firearm (N=35; 34%), followed by hanging (N=8; 8%) and sharp instruments (N=6; 6%). In 67% the perpetrator committed suicide by the same method with which he or she had committed the homicide.

## 4 Discussion

### 4.1 Limitations

Although the great majority of homicide-suicide cases that occurred in the Netherlands in the period 1992-2006 has been included in this study, detailed information on the event, victim and perpetrator was often not available. This could be due to the lack of police reports in these cases, as the perpetrator is typically not prosecuted and therefore no file is made. Much information was therefore retrieved from printed media, yet the selection bias in reporting restricted the obtaining of all necessary information.

### 4.2 Findings

By making use of a newly established database *Homicide-Suicide 1992-2006* we were able to give – for the first time – a systematic overview of all homicide-suicide cases in the Netherlands. In contradiction to other recent studies (Campanelli & Gilson, 2002; Harper & Voigt, 2007; Saint-Martin *et al.*, 2007; Saleva *et al.*, 2007), the current study includes a relatively large number of homicide-suicides, which strengthens the reliability of our results.

In total 103 homicide-suicides occurred in the period 1992-2006 which equals approximately 7 homicide-suicides per year and constitutes 4 per cent of all homicides. In the Netherlands, approximately 9 people per year die in a homicide-suicide, a figure comparable to the number of people dying from meningococcal infection (11 deaths) or the number of women dying as a result of complications during pregnancy and childbirth (16 deaths) (CBS, 2008). This number remained fairly constant over time. The Dutch rate of homicide-suicide is comparable to rates found in the same period in other European regions such as England and Wales (Flynn *et al.*, 2009). The European situation, however, seems to be in contrast with current rates in other parts of the Western hemisphere (see chapter two). This could be because of the relatively small sample size of studies finding a high proportion of homicides ending in the suicide of the perpetrator. Another explanation could be sought in relatively lenient gun legislation and more readily available firearms in regions where the proportion of homicide-suicides is high. This aspect will be addressed to a fuller extent in the next chapter, where homicide-suicide in the Netherlands is compared to homicide-suicide in countries with high rates of firearm possession: Switzerland and the United States.

The findings on homicide-suicide trends seem to contradict Coid's (1983) epidemiological laws as discussed in chapter two. Although the homicide rate in the Netherlands is considerably lower than in other countries such as the United States, the homicide-suicide rate is, overall, also lower than in the United States and not, as Coid (1983) argued, higher. The present findings are rather supported by Felthous & Hempel's (1995) assertion: homicide-suicides more closely resemble domestic homicide statistics instead of national homicide figures. Whereas there was a sharp decline in the number of Dutch homicides in 2006, the number of domestic homicides occurring per year has remained relatively constant (Nieuwbeerta & Leistra, 2007). According to this assumption, homicide-suicide rates are subject to similar influences and are of comparable stability as the rate of domestic homicide.

The findings on the main characteristics of homicide-suicides are overall in line with those reported in the international literature as addressed and assessed in chapter two. Almost all the homicide-suicides in the Netherlands took place between (estranged) partners, lovers and children, thereby underlining the domestic nature of such events – a finding which is consistent with other recent international studies (Barber *et al.*, 2008; Barraclough & Clare Harris, 2002; Bossarte *et al.*, 2006; Campanelli & Gilson, 2002; Comstock *et al.*, 2005; Logan *et al.*, 2008; Malphurs & Cohen, 2002; Moskowitz *et al.*, 2006). The majority of the homicide-suicides in the Netherlands were committed by men of Dutch ethnicity in their 30s or 40s. Although in a large number of cases the ethnicity of the perpetrator and victim could not be established, it was found that those from an ethnic minority were overrepresented. This was particularly applicable to Surinamese perpetrators. Previous studies by Garssen *et al.* (2006, 2007) demonstrated that suicide rates among Surinamese immigrants in the Netherlands are high compared to the rates of the native Dutch

population. These rates are particularly elevated among Hindustani and young Creole men. The authors suggested that these increased suicide rates may reflect high levels of mental illness; identity problems; disappointments related to the progress of migration, high expectations with respect to education, work and income and responsibilities for the family. In particular, among Hindustanis, explanations for increased suicidal behaviour can be found in factors such as rigid family traditions, limited independence combined with strict social control, and arranged marriages, the latter increasing the likelihood of marital strife. Explanations for suicidal behaviour among this group could also be applicable to homicide-suicide events.

When we examined the types of homicide-suicide, our findings proved to be consistent with findings from other international studies. Intimate partner homicide-suicides were mainly committed by males who killed both the victim and himself with a firearm (Barber *et al.*, 2008; Belfrage & Rying, 2004; Bourget *et al.*, 2000; Dawson, 2005; Easteal, 1993; Harper & Voigt, 2007). As has been addressed in chapter two, the lack of suicidal behavior among women who killed their intimate partner can be explained by the liberation they feel after having been freed from their tormentor, rather than a feeling of guilt and a wish to be reunited with the victim (Swatt & He, 2006). Similarly, Wolfgang (1958) has suggested that women kill their intimate partners as a self-protective response to violent provocation. Men, on the other hand, do not have such self-exonerative grounds for the killing of a partner and could be overwhelmed with self-loathing. Hence, the representation of women among intimate partner homicide-suicides is considerably small.

The second most common category was child homicide-suicide. Research indicates that filicide is historically a crime which is typically committed by women, although recent research points out that men are just as likely to be accused of killing their children (Alder & Polk, 2001; Bourget & Bradford, 1990; Somander & Rammer, 1991; Vanamo *et al.*, 2001). In the present study it was found that male perpetrators predominated in all categories, including child homicide-suicide. Since men predominate as perpetrators in the killing of intimate partners it could well be that the same reasons that motivate them to kill their partners cause them to hurt their children. Another reason for the overrepresentation of filicidal males could be sought in the suicide method they employ. Men typically commit suicide with more violent means than women and thereby have a higher chance of being successful in the suicide compared to women, who survive the attempt and hence are not included in the current sample.

Corresponding to other studies, familicide-suicides were exclusively committed by men (Adelson, 1961; Byard *et al.*, 1999; Harder, 1967; Liem & Koenraadt, 2008a; Marleau, 1999; Somander & Rammer, 1991). It can be argued that men, as opposed to women, have structurally been regarded as providers for the family. When the husband and father fails to financially support his family members, he 'protects' them from a future that would befall them without his support by killing them. From a psycho-evolutionary point of view such as discussed in chapter three, women do not

regard their children and their intimate partners as 'property' that can either be controlled or taken along in death in the way men do.

The killing of other family members followed by suicide was found to be very rare: on the one hand, this can be attributed to the already low incidence of killing other family members in the Netherlands. On the other hand, the low incidence of a suicidal outcome in this type of homicide can be a reflection of the motives underlying parent homicides and sibling homicides: the first is apparently motivated by instrumental gain or a desire to be freed from abuse or a restricted relationship, the latter typically being induced by sibling rivalry. It can be argued that these motives are primarily centred on doing away with the victim, rather than a wish to be reunited with the victim or to prolong the relationship with the victim in death.

Finally, killing sprees such as school shootings and other types of mass killings followed by the suicide of the perpetrator were not encountered in this study: all extrafamilial homicide-suicides involved one victim besides the perpetrator.

## **5 Conclusion**

This chapter described the nature, incidence and trends of homicide-suicide in the Netherlands in the period 1992-2006. In doing so, this chapter aimed to answer two research questions regarding the characteristics of homicide-suicide in the Netherlands in general as well as, more specifically, the characteristics of different subtypes of homicide-suicide, by making use of empirical data. In total, 135 people – excluding the perpetrator – died in 103 events, accounting for approximately 9 deaths yearly. Whereas the overall suicide rate decreased in the period under study, the homicide rate (including the domestic homicide rate) remained fairly stable. The same holds true for the homicide-suicide rate in the period studied.

The findings of this study mainly correspond to findings presented in the literature review: the great majority of homicide-suicides involved (estranged) partners, lovers and children; its perpetrators were predominantly male, who committed the offence with a firearm. Subtypes of homicide-suicide differed considerably with regard to event, victim and perpetrator characteristics. Intimate partner homicide-suicides were mainly committed by (older) men, who mainly killed their (estranged) intimate partner by means of a firearm. Not infrequently, these men were found to be of non-Dutch ethnicity. Child homicide-suicides, on the other hand, were both perpetrated by men and women, who were overall younger than the perpetrators of intimate partner homicide-suicide. Children were typically killed by suffocation or smothering. Familicide-suicides differed from the other subtypes in the relatively large number of victims per event. In addition, familicide-suicides involved both male and female victims, whereas child homicide-suicides almost exclusively involved male victims. Extrafamilial homicide-suicides were found to be rare. They differed from the other subtypes in being almost exclusively perpetrated by men, who were frequently of non-Dutch ethnicity and who killed someone of the same gender by relatively violent means, such as a firearm or sharp instrument.

In the subsequent chapter, the nature, incidence and trends of homicide-suicide in the Netherlands will be compared to homicide-suicide characteristics in both Switzerland and the United States in order to establish whether the findings presented in the current chapter are unique for the Dutch situation or, in fact, universal throughout the Western world.



## Chapter five

# Homicide-Suicide in Three Countries: The Netherlands, Switzerland and the United States<sup>29</sup>

### 1 Introduction

The aim of this chapter is to compare the nature and incidence of homicide-suicide in the Netherlands to homicide-suicides in the United States and Switzerland. Although numerous studies have been published describing the characteristics of homicide-suicide events in different cities, regions and countries, until now no study has directly compared rates and characteristics across countries. International comparisons have been hampered by the lack of uniform inclusion criteria, the use of different homicide-suicide classification schemes and incongruity in the time periods studied. By making use of uniform classification schemes and sizeable datasets, this study is the first to directly compare homicide-suicide between countries. The aim of this study translates into the following research question:

*To what extent do homicide-suicides in the Netherlands differ from those in other countries, especially the United States and Switzerland?*

When comparing rates and patterns of homicide-suicide across countries, special attention will be paid to the role of firearms in homicide-suicide. As mentioned in chapter two, various previous studies have suggested a relationship between homicide-suicide patterns and the availability of firearms (Killias *et al.*, 2001; Large *et al.*, 2009a; Milroy, 1995a). So far, however, the relationship between homicide-suicide patterns and the availability of firearms has never been studied explicitly.

As has been outlined in chapter two, several explanations have been put forward for regional and international differences in homicide-suicide rates. Coid (1983), for example, proposed three epidemiological 'laws' to explain why homicides followed by suicide follow different patterns than homicides committed by 'normal' perpetrators. Coid's first law states that the higher the rate of homicide in a population, the lower the percentage of perpetrators who are found to commit suicide (Coid, 1983). Coid's second law holds that the rates at which homicide offenders commit suicide appear to be "the same in different countries, despite considerable differences in the overall rates of homicide" (p. 857). Coid's third law asserts that the rate of homicide-suicide remains the same in spite of a fluctuation in the overall homicide rate over time.

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<sup>29</sup> An adapted version of this chapter has been submitted as:

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In order to compare the nature and incidence of homicide-suicide in these three countries, various data sources are used, which will briefly be described below (for a detailed overview, see chapter one). Next, the three countries are compared in terms of the homicide-suicide rates and incidence, case characteristics, victim and perpetrator characteristics.

### 1.1 Cross-national differences

The three countries in our study – the Netherlands, Switzerland and the United States – are similar in many aspects, but they also differ substantially in others. One especially important aspect in which these countries are very distinct and that is especially relevant for the topic of our study is in the availability of firearms. In the Netherlands, firearms legislation is restricted and hence firearms possession is relatively low, averaging around 5 per cent of all households (Van Dijk *et al.*, 2007). In Switzerland, on the other hand, legally held army ordnance weapons are kept at home. This contributes to the high prevalence of households owning at least one firearm (approximately 28 per cent).<sup>30</sup> In the United States, many people keep firearms in the home for personal protection (Kellerman, 1993). Overall, it is estimated that 33 per cent of all households in the United States possess a firearm (Okoro *et al.*, 2005). So, an international comparison of homicide-suicide characteristics focusing on the use of firearms in these and other violent acts might allow for a better understanding of this extreme type of lethal violence.

Concerning other aspects – potentially relevant for cross-national variation in homicide-suicide patterns –, the Netherlands, Switzerland and the United States are rather similar. All three countries are highly developed, stable democracies and have fairly similar demographics. Data for the year 2008 (CIA, 2008), for example, indicates a fairly comparable population structure with respect to age: between 18 and 20 per cent of the population under the age of 14, and approximately 68 per cent between the ages 15 and 64 in all three countries. Also, life expectancy at birth (the Netherlands = 79 years; Switzerland = 80 years; the United States = 75 years), literacy (99 per cent of the total population in all three countries) and the unemployment rate (the Netherlands = 5 per cent, Switzerland = 3 per cent; the United States = 7 per cent) are fairly similar. The lifetime prevalence of mental disorder in the Netherlands is approximately 41 per cent, of which alcohol dependence accounts for 6 per cent and drug dependence for 2 per cent (Bijl *et al.*, 1998). In Switzerland the lifetime prevalence of mental disorder is approximately 49 per cent (Angst *et al.*, 2005), of which 18 per cent is alcohol and 8 per cent drug-related.<sup>31</sup> In the United States, the

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<sup>30</sup> Among the Swiss households with at least one firearm, 63 per cent own an ordnance weapon only, whereas private weapons are kept in 26 per cent among households owning firearms. Private and military firearms are kept in the remaining 10 per cent of households (Killias, Haymoz *et al.*, 2007). In 2007, the Swiss army stopped distributing ammunition to soldiers and started to withdraw ammunition already in possession of members of the military. Nevertheless, the military firearms remain in the possession of soldiers, as long as they serve in the army, and often beyond.

<sup>31</sup> It should be noted that Swiss data have not been collected according to the WHO-CIDI format and are based on a rather small sample.

lifetime prevalence of mental disorder is roughly 46 per cent, of which 5 per cent constitutes alcohol dependence and 3 per cent drug dependence.

## 2 Methodology

Homicide-suicide data from the Netherlands were retrieved from the database *Homicide-Suicide 1992-2006* (Postulart & Nieuwebeerta, 2007). Homicide rates were calculated based on the *Dutch Homicide Monitor*; suicide rates were calculated based on figures from the *Causes of Death Statistics*. These data sources have been described to a fuller extent in chapter one.

Homicide-suicide data from Switzerland were retrieved from the *Swiss Homicide and Suicide Database* covering the period 1980-2004 (Killias *et al.*, 2009). In order to adjust the time line to the data available in the Netherlands, only cases that took place between 1992 and 2004 were included in the analysis. As the Swiss suicide sample consists of a random selection of 10 per cent of suicides in Switzerland, suicide data were taken from the *Causes of Death Statistics* from the Swiss Federal Bureau of Statistics (ICD-10 codes X60-X84) (BFS, 2009).

Data from the U.S. are from the *National Violent Death Reporting System* (NVDRS). For this study data on deaths were used for the years 2004 to 2006 as reported by the thirteen US states that participated in NVDRS throughout that period (Alaska, Colorado, Georgia, Maryland, Massachusetts, New Jersey, North Carolina, Oklahoma, Oregon, Rhode Island, South Carolina, Virginia and Wisconsin). Homicide, suicide and homicide-suicide incident rates (based on the abstractor's assigned type of death) were calculated using the CDC's Web-based Injury Statistics Query and Reporting System's (WISQARS) NVDRS module (CDC, 2008).<sup>32</sup> Population estimates in WISQARS are based on the US Census Bureau. Data on decedent and incident characteristics are from the NVDRS Restricted Access Database which was released by the CDC in January 2009.<sup>33 34</sup>

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<sup>32</sup> The findings and conclusions in this chapter are those of the author and do not necessarily represent the views of the Centers for Disease Control and Prevention or the Agency for Toxic Substances and Disease Registry.

<sup>33</sup> Homicide-suicide incidence, event characteristics, victims and perpetrators were compared across the different countries by calculating frequency distributions and population-based incidence rates. The homicide rates in all three countries are calculated based on homicide-suicide incidents and hence do not include homicide-suicide incidents. Due to the nature of the suicide data, we were not able to filter out homicide-suicide incidents from the suicide rate and hence the suicide rates in all three countries are crude rates. The reported incidence rates are based on 95% Confidence Intervals.

<sup>34</sup> Perpetrators of homicide-suicide incidents were also compared with individuals who committed homicide only and those who committed suicide only. T-Tests, ANOVA's and Yates' Chi-Square tests were conducted to assess the significance of differences in perpetrator, victim and event characteristics. Analyses used SPSS v.17.0 software.

### 3 Results

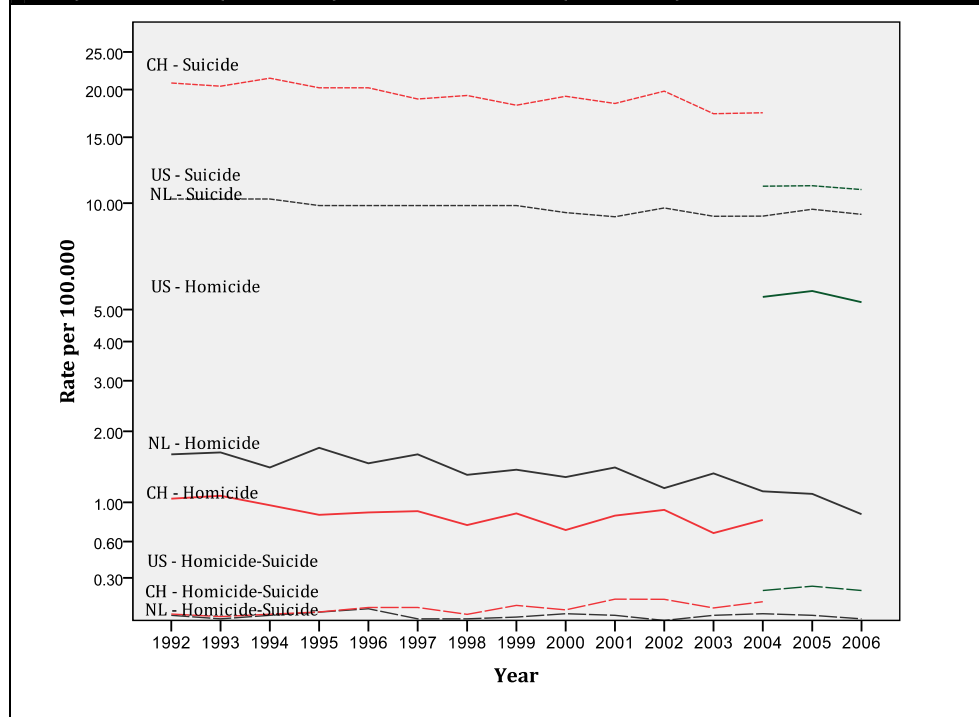
#### 3.1 Incidence

In the time period studied, in the Netherlands approximately 9 persons per year died in a homicide-suicide, constituting 4 per cent of all homicides. In Switzerland, annually 9 persons were victimized in a homicide-suicide, making up 11 per cent of all homicides. In the U.S. states included in this study, a total average of 176 victims died annually in homicide-suicides, making up 4 per cent of all homicides. Both the homicide rate as well as the homicide-suicide incident rate was highest in the United States (table 5.1). Suicide rates, however, were highest in Switzerland.

**Table 5.1 Mean annual homicide-suicide, homicide and suicide incident rates per country (95% C.I.)**

	Netherlands 1992-2006	Switzerland 1992-2004	United States 2004-2006
<b>Homicide rate</b>	1.38 (1.25 - 1.51)	0.87 (0.80 - 0.94)	5.06 (4.70 - 5.43)
<b>Suicide rate</b>	9.71 (9.50 - 9.92)	19.35 (18.58 - 20.12)	10.76 (9.86 - 11.65)
<b>Homicide-suicide rate</b>	0.05 (0.04 - 0.06)	0.09 (0.07- 0.12)	0.22 (0.20 - 0.25)

**Figure 5.1 Homicide, suicide and homicide-suicide rates over time in the Netherlands (1992-2006), Switzerland (1992-2004) and the United States (2004-2006)**



In the Netherlands the suicide rate steadily declined over time (figure 5.1). In Switzerland, both the homicide and the suicide rate declined over time, while the homicide-suicide rate increased slightly. Data from the United States did not cover a long enough period to determine trends in the three types of lethal violence.

### 3.2 Case characteristics

In all countries, homicide-suicide incidents involving intimate partners were most prevalent (table 5.2). In contrast to the other two countries, almost one fifth of cases in the Netherlands involved a child homicide-suicide. The results further showed that homicide-suicides in the Netherlands and Switzerland were more likely to involve multiple victims than homicide-suicides in the United States.

**Table 5.2 Homicide-suicide case characteristics per country**

	Netherlands		Switzerland		United States		P Value
	N	%	N	%	N	%	
<b>Type</b>							.000
Intimate Partner and Child	9	9	7	8	8	2	
Intimate Partner	52	50	60	69	321	70	
Child	19	18	7	8	43	9	
Other family	3	3	2	2	34	7	
Extrafamilial	13	13	11	13	42	9	
Unknown	7	7	0	0	13	3	
<b>Number of homicide victims</b>							.054
1	82	80	71	82	407	88	
2	12	12	10	12	42	9	
3	7	7	4	5	9	2	
4	2	2	1	1	2	0	
5 ≥	0	0	1	1	1	0	
	<b>103</b>	<b>100</b>	<b>87</b>	<b>100</b>	<b>461</b>	<b>100</b>	

### 3.3 Victims

In all three countries, the large majority of the homicide-suicide victims were female (table 5.3). Homicide-suicide victims in Switzerland and the United States were found to be significantly older than victims in the Netherlands. Homicide-suicides in Switzerland and the United States were more likely to be perpetrated with a firearm compared to the Netherlands. In Switzerland, privately owned firearms were involved in 64 per cent of the firearm-perpetrated homicides-suicides, followed by military weapons (18 per cent) and illegal firearms (12 per cent).<sup>35</sup>

<sup>35</sup> The category of private firearms and military firearms is difficult to distinguish, due to the fact that military weapons merge into the private possession of the soldier once he has finished his active duty.

**Table 5.3 Homicide-suicide victim characteristics per country**

	Netherlands		Switzerland		United States		P Value
	N	%	N	%	N	%	
<b>Gender</b>							.000
Male	43	32	41	34	131	25	
Female	92	68	79	66	397	75	
<b>Age</b>							.000
≤ 17	49	36	18	15	64	12	
18-24	9	7	10	8	62	12	
25-39	43	32	31	26	150	29	
40-64	26	19	45	38	180	34	
≥ 65	8	6	14	12	68	13	
Mean	28.2 (±20.5)		39.3 (±19.9)		39.2 (± 20.1)		.000
<b>Homicide Method</b>							.000
Firearm	54	40	100	83	456	86	
Sharp instrument	38	28	5	4	28	5	
Blunt instrument	4	3	3	3	2	0	
Physical violence w/o weapon	1	1	0	0	3	1	
Suffocation	22	16	8	7	22	4	
Other	5	4	4	3	17	3	
Unknown	11	8	0	0	0	0	
Total firearm	54	40	100	83	456	86	.000
Total non-firearm	81	60	20	17	72	14	
Residential location <sup>36</sup>	108	80	88	73	425	81	.266
	<b>135</b>	<b>100</b>	<b>120</b>	<b>100</b>	<b>528</b>	<b>100</b>	

### 3.4 Perpetrators

In all countries, homicide-suicide perpetrators were mostly male, aged between 25 and 64 (table 5.4). Similar to victims' age, perpetrators in Switzerland and the United States were overall older than perpetrators in the Netherlands. The results further showed a significant difference between countries regarding the perpetrator's marital status. In Switzerland, the degree of married perpetrators was considerably higher than in the other two countries.

<sup>36</sup> The offence location is reflected by the location of the victim's death.

**Table 5.4 Homicide-suicide perpetrator characteristics per country**

	Netherlands		Switzerland		United States		P Value
	N	%	N	%	N	%	
<b>Gender</b>							
Male	93	90	80	92	424	92	.931
Female	10	10	7	8	37	8	
<b>Age</b>							.096
≤ 17	1	1	0	0	2	0	
18-24	8	8	5	6	36	8	
25-39	46	46	22	25	145	32	
40-64	41	41	38	44	216	47	
≥ 65	4	4	15	17	61	13	
Mean	40.9 (± 13.5)		49.1 (±17.2)		45.1 (±16.2)		.002
<b>Marital Status</b>							.000
Single	27	26	12	14	99	22	
Married	33	32	54	62	153	33	
Divorced	19	18	15	17	88	19	
Widowed <sup>37</sup>	1	1	1	1	111	24	
Unknown <sup>38</sup>	23	22	5	6	10	2	
	<b>103</b>	<b>100</b>	<b>87</b>	<b>100</b>	<b>461</b>	<b>100</b>	

## 4 Discussion

This is the first study to directly compare homicide-suicide incidence, rates and characteristics to other types of violent death in three developed nations using national data. Although homicide-suicides display many similarities across the different countries, cross-national differences exist regarding age and the use of firearms in the offence. In contrast to other studies on homicide-suicide, the current study applied uniform inclusion criteria, classification schemes and consistency in time periods studied, which strengthens the reliability of our results. In the three countries combined, 724 perpetrators ended the lives of 859 victims – the combined sources constituting the largest collection of homicide-suicide cases to date.

### 4.1 Limitations

This study also has some limitations, however. First, due to the use of nationwide statistics, detailed information on homicide-suicide, homicide and suicide events, the victims and perpetrators were mostly unavailable. Second, although every case was subject to extensive data quality reviews, the coding may not have been uniformly applied across and within countries. The accuracy of the data is limited by the quality of the information collected by the primary sources (ICPSR, 2007).

<sup>37</sup> The high prevalence of widowed perpetrators in the United States might be a result of a discrepancy in coding. Closer analyses revealed that 104 out of 111 widowed perpetrators killed their intimate partner prior to their suicide. Although strictly speaking, these men were widowed at the time of their suicide, the analysis suggests they were married and/or divorced at the time of the homicide.

<sup>38</sup> In the Dutch sample, detailed information on the relationship between victim and perpetrator was often missing. This particularly accounted for marital status.

Third, there were some relevant country-specific limitations. The Swiss dataset, for example, is based on autopsy reports. Not all homicide-suicide cases, especially not the ones that are obvious, lead to an autopsy. Therefore, the Swiss figures presented here are likely to be undercounts. Similarly, the US – NVDRS data might present an underreporting of homicide-suicide cases, as there may be instances in which an undetected perpetrator attempted or completed suicide away from the scene of the homicide incident and thus was not counted as a case (Barber *et al.*, 2008). Furthermore, the US data includes homicide-suicides from a non-random sample of states; findings may not be generalizable to homicide-suicides nationally.

#### **4.2 Findings**

The results indicated that homicide-suicide rates were highest in Switzerland and the United States. In the period studied, the homicide-suicide rate remained fairly stable in the Netherlands, while a slight increase was noted in Switzerland. Overall, the results from the study at hand only provide partial support for Coid's laws as outlined before (Coid, 1983). His first law – stating that the higher the rate of homicide in a population, the lower the percentage of perpetrators who are found to commit suicide – is partially supported by the data. Whereas the United States has a high homicide rate compared to the other two countries, a relatively low percentage of homicides end in a suicide. Switzerland, on the other hand, has a low homicide rate, but a relatively high percentage of homicides followed by suicide. Rates in the Netherlands, however, do not follow this pattern.

Coid's second law which states that the homicide-suicide rate is the same in different countries, in spite of a variation in the homicide rate, is not supported by the data. Rather, the results indicate a considerable variation in the homicide-suicide rate between the three countries. The findings are rather in line with Milroy (1995), who held that countries with higher rates of homicide-suicide are those in which the homicide rate is high. As has been outlined in chapter two, based on an analysis of homicide-suicide trends in England in the period 1946-1996, Milroy (1995) also found that a high percentage of homicides were committed with firearms. He therefore suggested that the availability of weapons might be a contributing factor. The results from the current study support this notion: the use of firearms in violent death, including homicide-suicide, is highest in the United States, followed by Switzerland. This assumption is further supported by a recent systematic review of population-based studies of homicide-suicides by Large *et al.* (2009a), which showed that in studies from the United States the rates of homicide-suicide appeared to be positively associated with the rate of homicides by firearms (Large *et al.*, 2009a).

Coid's third law asserts that the rate of homicide-suicide remains the same over time, despite a fluctuation in the overall homicide rate. The findings only partially supported this law. The homicide-suicide rates in the Netherlands and the United States remained fairly stable, while those in Switzerland slightly increased over time. Switzerland's high rate of homicide-suicide, as well as of suicide in general can be seen

as a direct effect of the wide-spread availability of (often military) firearms in households.

The possible reasons for finding only partial support for Coid's epidemiological laws can be found in the material on which he based these laws. Coid has been criticized for not having incorporated a statistical analysis in his 1983 paper. In addition, not all the available studies on so-called 'abnormal homicides' were included in his paper. It has been argued that more complete and modern methods of data synthesis would not have come to the same conclusions as those by Coid (1983) (Large *et al.*, 2009b).

With regard to the characteristics of homicide-suicide cases, victims and perpetrators across the Netherlands, Switzerland, and the United States, the findings of the study at hand are also mostly in line with other recent international studies: the majority of the homicide-suicides involving males killing their (estranged) intimate female partner by means of a firearm (Barber *et al.*, 2008; Barraclough & Clare Harris, 2002; Bossarte *et al.*, 2006; Comstock *et al.*, 2005; Kivivouri & Lethi, 2003; Malphurs & Cohen, 2002; Moskowitz *et al.*, 2006).

The finding that in all countries homicide-suicides are predominantly committed by men can be attributed to the generally low rate of female homicide compared to male homicide. As outlined in chapter three, previous explanations for this finding have focused on male proprietariness, a pathological possessiveness that deals with power and control. From this perspective, a woman's estrangement constitutes an affront to the male status and feeling of entitlement over her (Koziol-McLain *et al.*, 2006).

Furthermore, in spite of the many similarities, significant differences between the countries were found regarding the relationship between victim and perpetrator. In the Netherlands a relative overrepresentation of child homicide-suicides was found, which is also reflected in an overall lower age of victims and perpetrators in homicide-suicide in the Netherlands. Conversely, homicide-suicides in both Switzerland and the United States present a high prevalence of older perpetrators and victims. Homicide-suicides involving elderly perpetrators are thought to differ from those committed by younger perpetrators by being centred on themes of a decline in health, pain and suffering (Cohen *et al.*, 1998; Marzuk *et al.*, 1992). The low prevalence of elderly homicide-suicide in the Netherlands compared to Switzerland does not seem to be associated with physician-assisted dying<sup>39</sup>, as this type of death is legally permitted in both countries (Chabot & Goedhart, 2009). Rather, this finding could be attributed to an overall lower proportion of homicide-suicides in the Netherlands being committed with a firearm. While the great majority of homicide-suicides in Switzerland and the United States were perpetrated by means of a firearm, in the Netherlands other methods were used. Arguably, it is more difficult to kill both another adult in addition to taking one's own life with other means than a firearm. Lacking physical strength, this might apply especially to elderly perpetrators. The relatively high frequency of homicide-suicide among the elderly in Switzerland could be explained by the fact that

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<sup>39</sup> Physician-assisted dying includes both physician-assisted suicide and euthanasia at the explicit request of the individual.

many Swiss men continue to keep their army equipment after being released from military service (DDPS, 2008).

Finally, homicide-suicide perpetrators in the United States were found to be less likely to leave a suicide note compared to suicide perpetrators, which might be attributed to the impulsive nature of the homicide-suicide. Here, the suicide could be considered as reactive, as it follows the homicide out of a fear of the consequences, guilt or remorse, rather than being a pre-planned act.

## **5 Conclusion**

The aim of this study was to compare the nature and incidence of homicide-suicide in the Netherlands to homicide-suicides in the United States and Switzerland, paying particular attention to the role of firearms in homicide-suicides, since previous studies suggested a relationship between patterns of lethal violence and the availability of firearms (Killias *et al.*, 2001; Large *et al.*, 2009a; Milroy, 1995a). The results indicated that there are considerable similarities in the characteristics of homicide-suicide between the three countries: most homicide-suicides being committed by men who kill their intimate partner before committing suicide. Differences between the three countries include the incidence of homicide-suicide. The homicide-suicide rates in the two other countries were substantially higher than in the Netherlands. One possible explanation for these differences can be found in the availability of firearms in the home. Altercations between intimate partners and family members are likely to take place in the home. A firearm might not only lower the threshold for acting violently, but also increases the lethal nature of such assaults (Shenassa *et al.*, 2003). Homicide-suicides in the Netherlands further differed from both Switzerland and the United States in a relative underrepresentation of elderly homicide-suicides. This difference could be attributed to an overall lower proportion of homicide-suicides in the Netherlands being committed with a firearm. It can be argued that it is more difficult to kill another adult in addition to taking one's own life with other means than a firearm, particularly for elderly perpetrators.

Having assessed the national and international variations in homicide-suicide and its overall characteristics, next we will focus on the specifics of two types of homicide-suicide: those occurring within the family versus those occurring outside the domestic sphere.

## Chapter six

# Intrafamilial Homicide-Suicide Compared to Extrafamilial Homicide-Suicide<sup>40</sup>

### 1 Introduction

As has become clear from the information provided in the previous chapters, homicide-suicides most frequently involve intimate partners and family members ('intrafamilial homicide-suicides'); in some cases, however, the perpetrator's aggression is directed towards those outside the family ('extrafamilial homicide-suicides'). So far, no research has empirically assessed the differences between homicide-suicides taking place within the family and homicide-suicides taking place outside the family, leading to the following research question:

*To what extent do intrafamilial homicide-suicides differ from extrafamilial homicide-suicides?*

This chapter aims to answer this research question by making use of data stemming from the United States. As has been outlined in chapter four, the incidence of extrafamilial homicide-suicide in the Netherlands is very rare. The low incidence of this type of homicide-suicide hampers (statistical) comparisons being made. Therefore, data from the United States are used, where such events occur more frequently. Data were retrieved from the NVDRS, an incident-based reporting system on lethal violence. This data source has been described in detail in chapter one. The information on homicide-suicides is enriched by American news reports. A brief overview of the data sources used for this study is given below.

### 2 Methodology

Data were based on the National Violent Death Reporting System, a unique, incident-based, active surveillance system that integrates data on violent deaths in the United States from multiple sources. This source was also used in the previous chapter in order to determine the international variation in homicide-suicide. In the current chapter, however, a longer period of analysis is used (2003-2006). In total, data from 16 states (Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, New Jersey, New Mexico, North Carolina, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia and Wisconsin) and 4 counties (Los Angeles, Riverside, San Francisco, and

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<sup>40</sup> This chapter is a revised version of:  
- Liem, M. 'Homicide followed by Suicide: Differentiating Intrafamilial and Extrafamilial Murders' *Journal of Interpersonal Violence* (under review).

Santa Clara) that participated in the NVDRS in this time period were included in the analysis. All the data used for this study have been made anonymous.

Because of the relative lack of detail available in the NVDRS data, supplementary information on both types of homicide-suicide was retrieved through a newspaper search. Combining these data sources allows for a thorough, comprehensive analysis. News reports were retrieved by searching the LexisNexis Academic database. Newspapers from the 16 NVDRS states were included in the search. Similar keyword searches were applied as previously used elsewhere (Malphurs & Cohen, 2002). Articles were screened to ensure that they matched the NVDRS inclusion criteria and the appropriate context (i.e. occurring in one of the participating seventeen states in the appropriate time period). Cases were excluded if they did not meet the NVDRS inclusion criteria for homicide-suicide or if the news report expressed uncertainty as to the fatal outcome of either the homicide or suicide. To ensure anonymity, results from both data sources were studied independently. News reports were specifically searched for details regarding suicidal intent prior to the event. A detailed description of these data sources is given in chapter one.

Intrafamilial homicide-suicides include a current or former spouse, girlfriend or boyfriend; biological, step-, adoptive or foster child; parents, stepparents, siblings, in-laws and other family members. Extrafamilial homicide-suicides include friends, acquaintances, (former) colleagues or classmates and strangers. When an incident involved both intrafamilial and extrafamilial victims, the event was coded as an intrafamilial homicide-suicide.<sup>41</sup>

### 3 Results

#### 3.1 Sample characteristics

Table 6.1 shows the total number of cases retrieved from each source. The difference between the types of homicide-suicide in each dataset was found to be significant. Among news reports, extrafamilial homicide-suicides were more prevalent, whereas cases in which the relationship between victim and perpetrator was unknown were less prevalent compared to the NVDRS data.

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<sup>41</sup> In order to explore the factors differentiating the two groups of homicide, discriminant analysis was used. Because discriminant analysis requires strict assumptions regarding the normality of the independent variables and logistic regression requires no such assumptions (Pohar *et al.*, 2004) logistic regression analyses were conducted to further assess the marginal effect of each variable, with the variables that proved significant in the discriminant analysis. Logistic regression has previously been used in homicide research to assess how different two types of homicide are from each other (Swatt & He, 2006).

**Table 6.1 Type of homicide-suicide by data source**

Relationship	NVDRS <sup>42</sup>		News Reports		P Value
	N	%	N	%	
Intimate Partner	381	72	168	69	
Child	48	9	21	9	
Other Family	47	9	14	6	
Total intrafamilial	476	90	203	83	
Total extrafamilial	55	10	37	15	
Unknown	66	-	5	2	
<b>Total</b>	<b>570</b>	<b>100</b>	<b>245</b>	<b>100</b>	<b>.000</b>

Of the total sample of news reports retrieved, 23% ( $n=57$ ) cases of homicide-suicide cases featured three or more articles, and 22 of those featured more than five articles on the same incident. Some notable stories featuring twenty-five articles or more include the 2005 killing of seven church group members in a suburban hotel by a computer technician in Brookfield, WI (37 reports), the 2006 case of a Canadian man who killed two sex offenders before killing himself on a Boston bus as officers approached to question him (25 reports) and the 2006 homicide-suicide involving a Colorado man who took several high school students hostage and killed one of them before killing himself in a standoff (49 reports). Cases received significantly more attention when multiple victims were involved ( $(F=19.676)$   $df=4$ ;  $p=.000$ ) or when individuals outside the family were victimized ( $(F=22.579)$   $df=1$ ;  $p=.000$ ).

Based on the NVDRS data, in the period 2003-2006 a total of 597 homicide-suicide cases were recorded, consisting of 476 intrafamilial homicide-suicides (90%) and 55 extrafamilial homicide-suicides (10%). In 66 cases, the relationship between the victim(s) and perpetrator could not be established. Most intrafamilial homicide-suicides consisted of the killing of an intimate partner followed by suicide ( $N=381$ ; 72%). Among extrafamilial homicide-suicides, the victim was mostly an acquaintance ( $N=15$ ; 3%) or someone who was otherwise known to the perpetrator ( $N=25$ ; 4%). In one of these cases, the perpetrator attacked both his intimate partner and her new boyfriend, but the intimate partner survived and hence the case was coded as an extrafamilial homicide-suicide. Other extrafamilial homicide-suicide categories involved classmates or (former) coworkers ( $N=4$ ; 1%), a roommate ( $N=3$ ; 1%), a law officer in the line of duty ( $N=5$ ; 1%) or a stranger ( $N=4$ ; 1%).

<sup>42</sup> The figures presented in this table are based on all NVDRS states except for California, where only 4 counties were included. In 2005-2006, a total of 17 homicide-suicides occurred in these counties.

### **3.2 Intrafamilial homicide-suicide versus extrafamilial homicide-suicide**

#### *Socio-demographic characteristics*

Perpetrators in both homicide-suicide groups were predominantly male (see table 6.2). The intrafamilial homicide-suicide perpetrators were on average older than the extrafamilial homicide-suicide perpetrators. In addition, intrafamilial homicide-suicide perpetrators were more likely to be married or widowed at the time of the event compared to their extrafamilial counterparts, who were more likely single. Incorporating other factors, multivariate analyses revealed that single status substantially increased the likelihood that the homicide-suicide took place outside the family (see table 6.3).

#### *Individual characteristics*

The results in table 6.2 further show that the perpetrators of extrafamilial homicide-suicide were more likely to suffer from substance abuse or dependence compared to the intrafamilial group. Regression analysis showed that substance abuse or dependence significantly increased the likelihood that the homicide-suicide was extrafamilial. No differences between the two groups were found with regard to other factors related to mental illness. The results further showed that perpetrators in the intrafamilial group were more likely to experience other problems, financial problems in particular.

#### *Incident characteristics*

The results further reveal that a significantly higher number of intrafamilial homicide-suicides took place in a residential setting compared to extrafamilial homicide-suicides. This significant finding was replicated in the multivariate analyses. The results further showed that extrafamilial homicide-suicides were more likely to be perpetrated by a firearm compared to intrafamilial homicide-suicides. Rather, the latter were more frequently committed by a sharp instrument or by strangulation. The use of a firearm in the event increased the likelihood of extrafamilial homicide-suicide more than 10 times compared to intrafamilial homicide-suicide.

<b>Table 6.2 Homicide-suicide characteristics according to subtype</b>					
	<b>Intrafamilial (N=476)</b>		<b>Extrafamilial (N=55)</b>		<b>P Value</b>
	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>	
<b>Socio-demographic characteristics</b>					
<b>Gender</b>					
Male	439	92	53	96	.411
Female	37	8	2	4	
<b>Age</b>					.002
≤ 24	32	7	12	22	
25-34	90	19	9	16	
35-44	121	26	13	24	
45-54	110	23	12	22	
55-64	45	10	7	13	
≥ 65	77	16	2	4	
Mean age	46.7 (± 16.7)		39.8 (± 14.4)		.004
<b>Marital Status</b>					.000
Single	93	20	25	47	
Married	163	35	15	28	
Widowed	125	27	1	2	
Divorced / separated	89	19	12	23	
<b>Individual characteristics</b>					
<b>Any mental problem</b>	109	23	14	26	.739
Current treatment	32	7	3	6	.499
History of treatment	43	9	4	7	.806
Current depressed mood	62	13	6	11	.425
Alcohol abuse or dependence	25	5	4	7	.353
Other substance abuse or dependence	21	4	8	15	.006
<b>Any other problem</b>	91	19	2	4	.002
Job problem	28	6	1	2	.345
Financial problem	46	10	0	0	.009
Physical health problem	42	9	1	2	.111
<b>Incident characteristics</b>					
<b>Location</b>					.001
Residential	366	78	31	56	
Non-residential	106	23	24	44	
Multiple victims involved	54	11	10	18	.185
<b>Method</b>					.284
Firearm	405	85	53	96	
Blunt / sharp instrument	27	5	2	4	
Strangulation	22	5	0	0	
Other	22	5	0	0	
Total firearm	405	85	53	96	.021
Total non-firearm	71	15	2	4	
<b>Behavioural warning signs</b>					
Disclosed intent to commit suicide	63	13	2	4	.048
Left suicide note	89	19	6	11	.194

**Table 6.3** Logistic regression Odds Ratio (OR) predicting the occurrence of intrafamilial homicide-suicide (N=468) relative to extrafamilial homicide-suicide (N=53)<sup>43</sup>

Predictor Variables	Intrafamilial Homicide-Suicide vs Extrafamilial Homicide-Suicide		
	Logistic Coefficient	S.E.	Odds Ratio
Perpetrator is single	1.228*	.316	3.414
Substance abuse or dependence	1.483*	.509	4.405
Residential location	-1.098*	.323	.333
Involving firearm	2.357†	1.036	10.563
Disclosed intent to commit suicide	-1.568†	.750	.209

\* p<.01; † p<.05

*Behavioural warning signs*

Finally, the two groups were found to differ according to their disclosed intent to commit suicide. Intrafamilial homicide-suicide perpetrators were more likely to have disclosed their intent (13%) compared to extrafamilial homicide-suicide perpetrators. This finding was replicated in the multivariate analysis. Based on the information gathered from news reports, homicide-suicides in which prior suicidal intent was established showed a large extent of planning. In such cases, individuals had rewritten their will, called friends or family and in some cases, expressed certain wishes regarding their funeral. Conversely, in other cases the suicide following the homicide appeared to be reactive rather than premeditated. Here, the suicide occurred after a police chase, after the threat of being arrested or after a stand-off with law enforcement officers.

**4 Discussion****4.1 Limitations**

A number of limitations apply to this study. First of all, this study used data on homicide-suicides from a nonrandom sample of states; findings may not be generalizable to homicide-suicides in the United States nationally. In addition, although every case was subject to extensive data quality reviews, the coding may not have been uniformly applied across and within sites. The accuracy of the data is limited by the quality of the information collected by the primary sources. For example, the absence of a report on the mental condition does not necessarily mean that the person did not have a mental illness (ICPSR, 2007). Further, the number of news reports on homicide-suicide retrieved from LexisNexis was relatively low compared to the actual incidence. This could be due to various factors, ranging from the number of keywords listed in the search to the underreporting of homicide-

<sup>43</sup> Although the variable 'financial problem' proved to be important in distinguishing intrafamilial homicide-suicides from extrafamilial homicide-suicides, due to its strong relation with intrafamilial homicide-suicides it violates the assumption of the independence of observations and thereby distorts the model. Therefore, it is left out of this analysis.

suicide incidents due to editorial decisions of the individual newspapers (Liem & Koenraad, 2007). Future research should overcome this limitation by increasing the number of keyword searches and broadening the number of databases to retrieve news reports.

In spite of these limitations, this study was able to empirically distinguish, for the first time, the differences between intrafamilial and extrafamilial homicide-suicides. This study included a relatively large number of homicide-suicide cases, which strengthens the reliability of the results.

#### **4.2 Findings**

This study adds to previous research by having examined factors that differentiate intrafamilial homicide-suicide from extrafamilial homicide-suicide. Intrafamilial homicide-suicide perpetrators were found to be older, more likely to suffer from problems relating to their financial situation and physical health, to commit the offence at a residential location and to have disclosed suicidal intent prior to the homicide-suicide. Extrafamilial homicide-suicide perpetrators, however, were characterized by their younger age, were more likely to be single, suffer from a substance-related disorder and to kill multiple victims. Although in both groups, firearms were used in the majority of cases, extrafamilial homicide-suicide perpetrators were found to be more likely to use a firearm. The finding that the two groups differ substantially according to static and dynamic factors does not imply that extrafamilial homicide-suicide perpetrators constitute a homogenous group – rather, the relationship between victim and perpetrator in this group varied drastically. The majority of extrafamilial homicide-suicides involved victims who were known to the perpetrator, which appears to be in stark contrast with the (American) media representation on extrafamilial homicide-suicides. Although homicide-suicides involving (fellow) students, co-workers or strangers are heavily publicized, these take up a small proportion of the overall number of extrafamilial homicide-suicides and a very small proportion of the total number of all homicide-suicides.

In spite of their differences, perpetrators in both groups were found to experience interpersonal and intrapersonal stress in the period preceding the event, which can be summarized in the concept of strain as discussed in chapter three. Types of stress involve marital problems, financial and work-related problems as well as mental problems. The findings of this study are very much in line with the notion of strain as postulated by Agnew (1992) (see chapter three). Strain theory has previously been applied to homicide-suicide (Harper & Voigt, 2007; Levin & Madfis, 2009) and includes being unable to achieve a positively valued goal, presenting or threatening to present an individual with negatively valued stimuli and removing or threatening to remove positively valued stimuli. In both intrafamilial as well as extrafamilial homicide-suicide such stimuli can be discerned: among the intrafamilial group, the presentation of negative stimuli includes a rejection of an intimate partner, abandonment of significant others and divorce; the removal of positively valued stimuli include the loss of a sexual partner or the loss of identity as a parent by not

being given child custody. Strenuous factors among the extrafamilial group include the inability to achieve a positively valued goal, such as masculine status, autonomy or freedom as well as the presentation of negative stimuli such as the loss of identity and self-worth as an employee (Fox *et al.*, 2007), the loss of face or guilt over the homicide and a fear of arrest. These sources of strain lead to feelings of frustration, hopelessness and failure and, ultimately, to homicide-suicide. Strain theory could also explain the differences between the two groups with regard to previous suicidal intent: perpetrators in the intrafamilial group are more likely to disclose suicidal intent and make suicide preparations compared to perpetrators in the extrafamilial group; among the latter, suicide seems to follow out of fear of imprisonment, guilt or the idea that there is “nothing more to lose”. Based on the findings of this study, the immediate availability of a firearm seems to facilitate the (impulsive) decision to commit suicide. As outlined in chapter three, the strain theory perspective postulated by Levin & Madfis (2009) distinguishes three sequential types of strain, ranging from (long-term) chronic strain, uncontrolled strain to (short-term) acute strain. Chronic strain includes long-term frustrations and seems to be more prevalent among the intrafamilial homicide-suicide group, who experience problems related to divorce, finances and factors associated with old age. The majority of perpetrators in the extrafamilial homicide-suicide group, however, do not seem to be confronted with chronic strenuous situations that lead them to experience suicidal ideations, but rather with acute strain following a homicide, such as arrest or a fear of the consequences relating to the homicide. According to this view, among intrafamilial homicide-suicide perpetrators suicidal ideations may well rise from chronic strenuous circumstances. In such cases, the suicide is premeditated. Among extrafamilial homicide-suicides, however, suicidal ideation seems to arise from acute, rather than chronic, strain. Given the short time span in which the acute strain presents itself, their suicides are more likely to be reactive. In both groups, the homicide-suicide becomes a solution to regain control over the uncontrollable.

## 5 Conclusion

This study examined to what extent intrafamilial homicide-suicides differ from extrafamilial homicide-suicides. Based on data from 16 US States participating in the NVDRS, in total 476 intrafamilial homicide-suicides were compared to 55 extrafamilial homicide-suicides. The majority of intrafamilial homicide-suicides involved (estranged) intimate partners. In contrast to the extensive publication of cases involving students and/or (former) fellow workers, most extrafamilial homicide-suicides involved acquaintances or others known by the perpetrator. The results indicate that the groups differ across both static and dynamic factors – extrafamilial homicide-suicide perpetrators are more likely to be single, to suffer from substance abuse and to commit the offence with a firearm, whereas those killing within the family were more likely to commit the offence in a residence and to disclose suicidal intent prior to the act. Even though the two groups are found to be different according to various characteristics, the findings also indicate perpetrators in both groups to

have experienced a number of strenuous factors. This is in line with the strain theoretical view described in chapter three. Whereas the perpetrators of intrafamilial homicide-suicide seem to be confronted with chronic strenuous circumstances, extrafamilial homicide-suicides are more likely to be motivated by acute strain. The differences between chronic (long-term) and acute (short-term) strain are also reflected in the nature of the suicidal acts.

Now that we have looked extensively at the nature, the incidence, international variation in and the subtypes of the homicide-suicide phenomenon, in part III of this study we will make an attempt to relate homicide-suicide to other types of lethal violence. In the next part, we aim to determine which event, perpetrator and victim characteristics can explain the occurrence of homicide-suicide relative to a homicide or suicide alone.



**PART III**

**Homicide-(Para)Suicide Compared  
to Homicide and (Para)Suicide**



## Chapter seven

# Homicide-Suicide Compared to Homicide and Suicide: A Macro Level Approach<sup>44</sup>

### 1 Introduction

The third part of this study aims to determine which event, perpetrator and victim characteristics can explain the occurrence of homicide-suicide relative to a homicide or suicide alone. This part is based on three different levels: a macro level analysis, a meso level analysis and a micro level analysis. The macro-level analysis focuses on socio-demographic constructs; the meso level approach examines individual, contextual and situational characteristics and finally, the micro-level approach examines the specific dynamics underlying these acts.

In the current chapter, a macro level analysis is employed in an attempt to answer the following working research question:

*At a macro level, to what extent do socio-demographic characteristics of homicide-suicide events, perpetrators and victims explain the occurrence of homicide-suicide relative to a homicide or suicide alone?*

This chapter aims to provide an answer to this question by making use of nationwide empirical data. In addition, the use of such data allows for the assessment of two theoretical perspectives as discussed in chapter three: the psycho-evolutionary approach to homicide and secondly, the Durkheimian perspective on lethal violence and social integration.

### 2 Theoretical background

As has been outlined before, psycho-evolutionary theory holds that homicide, including domestic homicide, can be explained by Darwinist concepts such as natural selection and reproductive fitness, i.e. the likelihood of gene representation in future generations. Homicides involving wives, for example, can best be understood as an outcome of sexual proprietary masculine psychology, which treats wives as valued sexual and reproductive commodities. (Lethal) violence against wives, in this view, serves to deter wives from pursuing alternative relationships that are not in the interest of the husband (Wilson & Daly, 1993). According to evolutionary psychologists the homicide of women by men is a 'by-product' of such controlling violence. From a psycho-evolutionary perspective, women, on the other hand, do not

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<sup>44</sup> An adapted version of this chapter has been published as:  
- Liem, M. & P. Nieuwbeerta (2010) 'Homicide followed by Suicide: A Comparison with Homicide and Suicide' *Suicide and Life-Threatening Behavior* (forthcoming).

have the need to control their men through violence. We will further assess this premise by looking at the distribution of gender among the different perpetrator groups under study.

The Durkheimian perspective on the relationship between lethal violence and social integration focuses particularly on suicide, postulating that suicide is more likely to occur when the attachment between the individual and society is weak: there are few social ties to keep the individual from taking his or her life. From such a social integration perspective, then, homicide-suicide constitutes an extreme variation of suicidal behaviour, associated with extreme social disintegration. In this chapter, this premise will be assessed to a fuller extent by examining sociodemographic factors known to be associated with social integration, such as perpetrator ethnicity and age.

A short overview of the data sources used for this study is given below (for a detailed overview of these data sources, see chapter one). Subsequently, the findings of this empirical study are presented, outlining the characteristics of the homicide-suicide events, victims and perpetrators. In addition, given the largely domestic nature of homicide-suicide, we will compare domestic homicide-suicides with domestic homicides that were not followed by suicide.

As has been outlined in chapter one, to date hardly any studies have compared homicide-suicide cases to homicides and suicides empirically. The few studies that did undertake such a comparison mainly relied on data from Australia, England & Wales or specific regions in the United States, in most cases pertaining to relatively small samples.

### 3 Methodology

Various data sources have been used in this study. First, we used data from the *Dutch Homicide Monitor* to retrieve information on the characteristics of incidents, victims and perpetrators of all homicide cases in the Netherlands from 1992 to 2006 (Nieuwbeerta, 2007). Second, data on the homicide-suicide cases were obtained from the Dutch Homicide Monitor and included in the database *Homicide-Suicide 1992-2006* (Postulart & Nieuwbeerta, 2007). Third, we used the dataset *Causes of Death Statistics* from the Dutch Central Bureau of Statistics, Statistics Netherlands (CBS) in order to retrieve demographic information on suicide descendants.<sup>45 46</sup>

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<sup>45</sup> Fortunately, because data were provided in identified form, we were able to avoid double-counting when statistically comparing homicide-suicides to other homicides. Unfortunately, because of the anonymous nature of the suicide data used, we were unable to extract homicide-suicide cases from the large sample of total suicides. However, due to the large number of suicides compared to the small number of homicide-suicides this is very unlikely to bias our results and conclusions.

<sup>46</sup> In order to determine the differences between the groups, ANOVA and Chi-Square tests were used. In order to estimate the probability that a homicide would result in a homicide-suicide or, conversely, to assess the probability that a suicide would be combined with a homicide and to further assess the marginal effect of each variable, multivariate logistic regression analyses were conducted. Analyses used SPSS software.

## 4 Results

### 4.1 Homicide-suicide versus homicide and suicide

As has been described in chapter four, in the period 1992-2006, 103 homicide-suicides took place in the Netherlands (of which 23 took place before 1996). In this period, homicide-suicide occurred on average 7 times per year, equivalent to approximately 4% of all homicides per year and 0.5% of all suicides per year. These homicide-suicides involved 103 perpetrators and 135 victims. In the same period (1992-2006), 3,203 homicides took place that did not involve a subsequent suicide of the perpetrator. These homicides involved 3,404 victims and 4,074 perpetrators. In the period 1996-2006, a total of 17,751 suicides were recorded (see table 7.1).<sup>47 48</sup>

<b>Table 7.1 Total number of homicide-suicides, homicides and suicides</b>			
	<b>Homicide-Suicide</b>	<b>Homicide</b>	<b>Suicide</b>
<b>Number of incidents</b>	103	3,203	17,751
<b>Number of victims</b>	135	3,404	-
<b>Number of perpetrators</b>	103	4,074	17,751

#### 4.1.1 Incidents

Table 7.2 represents the results of a bivariate comparison of characteristics between homicide-suicide cases (N=103) and homicide cases (N=3,203) as well as between homicide-suicide cases and suicide cases (N=17,751). Table 7.2 shows that homicide-suicides differ significantly in several aspects from both homicides and suicides. Compared to other homicides and other suicides, homicide-suicides are more likely to occur in a residential setting than outside the residence. With regard to the area location of the homicide-suicide event, homicide-suicides are less likely to occur in an urban area than homicides. Compared to suicides, homicide-suicides are more likely to occur in an urban area: 32 per cent of the homicide-suicides occurred in an urban area compared to 22 per cent of the suicides. Further, it was found that homicide-suicides are significantly more likely than other homicides to involve multiple victims. Similar to the majority of the homicides, most homicide-suicides are committed by a firearm or a sharp instrument. In approximately one third of the homicide-suicides, the ensuing suicide is committed by a firearm. This contrasts significantly with suicides, which are mainly committed by suffocation by hanging, poisoning or jumping in front of a moving object.

<sup>47</sup> In all of the subsequent tables, the percentages are based on the number of available cases; i.e. cases in which the information was available. Hence, the percentages displayed here can differ somewhat from percentages displayed elsewhere.

<sup>48</sup> Unfortunately, due to the anonymous nature of the suicide data, we were not able to extract homicide-suicide cases occurring in the period 1996-2006 from the suicide dataset. However, given the large sample size of the suicide dataset, this effect can be neglected.

**Table 7.2 Homicide-suicide cases compared to other homicides and other suicides**

	Homicide-Suicide (N=103)	Homicide (N=3,203)	Suicide (N=17,751)
	%	%	%
<b>Location</b>			
Residential	80	47*	54*
Urban	32	43 <sup>†</sup>	22 <sup>†</sup>
<b>Multiple victims involved</b>	21	5*	-
<b>Homicide method</b>			
Firearm	40	35	-
Sharp instrument	28	31	-
Blunt instrument	3	7	-
Physical violence w/o weapon	1	6	-
Suffocation	16	10	-
Other/ unknown	12	10	-
<b>Suicide method</b>			
Suffocation	8	-	44
Poisoning	2	-	19
Shooting	34	-	3*
Stabbing/cutting	6	-	3
Drowning	1	-	8
Jumping from a height	4	-	9
Jumping in front of moving objects <sup>49</sup>	5	-	12
Driving into something	2	-	1
Burning	3	-	1
Other/ unknown	35	-	1

\* p<.01; † p<.05

#### 4.1.2 Victims

Table 7.3 shows the characteristics of homicide-suicide victims compared to homicide victims. Victims of homicide-suicides are overall younger and are more likely to be a child (i.e. being under the age of 12 years). Also, homicide-suicides are significantly more likely to involve female victims compared to other homicides. In addition, homicide-suicide victims are more likely to be of Dutch ethnicity<sup>50</sup> compared to those killed in a homicide.

<sup>49</sup> In the large majority of cases this involved a train.

<sup>50</sup> Someone was defined as having an ethnicity other than Dutch when either one or both parents originated from another country. The major immigrant groups in the Netherlands constitute other Europeans, and Turkish, Moroccans, Surinamese and Antillean immigrants.

<b>Table 7.3 Homicide-suicide victims compared to homicide victims</b>		
	<b>Homicide-Suicide (N=135)</b>	<b>Homicide (N=3,404)</b>
	<b>%</b>	<b>%</b>
<b>Gender</b>		
Female	68*	29
<b>Age</b>		
< 17	36	7
18-25	9	17
26-40	31	41
41-65	19	27
> 66	5	5
Unknown	0	3
Mean age	28.2 (± 20.5)	36.4 (± 16.3)*
Child (< 12)	33	4*
<b>Ethnicity</b>		
Dutch	65	52*

\* p<.01; † p<.05

#### 4.1.3 Perpetrators

Table 7.4 displays the characteristics of both homicide-suicide perpetrators (N=103), perpetrators of other homicides (N=4,074) and those committing other suicides (N=17,751). Both homicide-suicides and homicides are predominantly committed by men. No significant difference in gender between homicide-suicides and homicides was established. Homicide-suicides are less likely to be committed by female perpetrators compared to solitary suicides.

It was found that perpetrators of homicide-suicide are significantly older than perpetrators of other homicides. Compared to other suicides, however, individuals committing a homicide-suicide are found to be significantly younger.

Finally, the results indicate that homicide-suicide perpetrators are significantly more likely to be of Dutch descent than to have another ethnic background compared to perpetrators of other homicides. Compared to suicide, however, individuals committing a homicide-suicide are more likely to belong to an ethnic minority.

**Table 7.4 Homicide-suicide perpetrators compared to homicide and suicide perpetrators**

	Homicide-Suicide (N=103)	Homicide (N=4,074)	Suicide (N=17,751)
	%	%	%
<b>Gender</b>			
Male	90	90	68*
Female	10	10	32
<b>Age</b>			
< 17	1	3	2
18-25	9	5	8
26-40	46	30	28
41-65	39	46	45
> 66	3	15	17
Unknown	0	1	-
Mean age	40.9 (± 13.5)	30.9 (± 10.7)*	47.8 (± 17.6)*
<b>Ethnicity</b>			
Dutch	42	43	81
Surinamese	11	7	2
Turkish	3	8	1
North African (incl. Moroccan)	2	5	1
Other	11	22	15
Unknown	32	14	0
Total Dutch (Valid)	61	49†	81*

\* p&lt;.01; † p&lt;.05

The bivariate results were mostly confirmed in multivariate analyses (see table 7.5). Homicides that take place in a residential setting raise the odds of a subsequent suicide roughly 4 times; suicides that take place in a residential setting raise the odds of being preceded by a homicide 1.4 times. The logistic regression analyses also reveal that the odds of a homicide-suicide significantly decrease when the event occurs in an urban area compared to a solitary suicide. Furthermore, the multivariate analyses show that a firearm increases the risk of a homicide-suicide relative to suicide 1.6 times. This result, however, is not replicated for homicide-suicides compared to other homicides.

With regard to perpetrator characteristics, the analyses revealed that an older age significantly increases the likelihood of a homicide ending in a suicide relative to 'only' homicide. Compared to suicide, however, an older age decreases the likelihood of a homicide-suicide. Multivariate analyses further showed that events in which the suicide perpetrator is female decrease the odds for a homicide-suicide by one fifth compared to a solitary suicide. Although bivariate analyses revealed significant differences between homicide-suicide and homicide with regard to perpetrator ethnicity, this finding was not replicated in the multivariate analyses. Finally, being of non-Dutch ethnicity increases the risk of a preceding homicide almost 2 times compared to other suicides.

**Table 7.5** Logistic regression Odds Ratio (OR) predicting the risk of homicide-suicide relative to homicide (N=4,177) and suicide (N=17,715) in the Netherlands, 1996-2006

Predictor Variables	Homicide-Suicide vs Homicide			Homicide-Suicide vs Suicide		
	Logistic Coefficient	S.E.	Odds Ratio	Logistic Coefficient	S.E.	Odds Ratio
<b>Incidents</b>						
Residential location	1.380*	.310	3.974	.308*	.115	1.360
Urban location	-.334	.278	.716	-.509†	.254	.601
Involving firearm	.372	.274	1.450	.454*	.031	1.574
<b>Perpetrators</b>						
Age	.067*	.009	1.069	-.026*	.007	.975
Female	-.435	.446	.647	-1.614*	.398	.199
Ethnicity (non-Dutch)	-.155	.266	1.168	.635*	.042	1.887

\* p<.001; † p<.025

#### 4.2 Comparing subgroups

As has been shown in the previous chapters, homicide-suicide mainly involves intimate partners and/or children. Given the largely domestic nature of homicide-suicide, next, we compare domestic homicide-suicides to domestic homicides that were not followed by suicide. The results of this sub-analysis are presented in table 7.6.

**Table 7.6** Domestic homicide-suicides compared to other domestic homicides

	Domestic Homicide-Suicide (N=78)	Domestic Homicide (N=1,056)
	%	%
Residential location	46	75*
Involving firearm	37	25†
Multiple victims	24	5*
Victim female	72	63
Victim child	41	13*
Perpetrator male	90	81

\* p<.01; † p<.05

Comparing domestic homicide-suicides to other domestic homicides, it was found that domestic homicide-suicides are less likely to take place in a residential location, but more likely to be committed by a firearm. Similar to the overall comparison of homicide-suicides versus homicides, in the analysis of a subgroup of domestic cases it was found that domestic homicide-suicides were more likely to involve multiple victims and to involve a child victim. The sub-analysis did not yield significant differences with regard to the gender of the victim or the perpetrator compared to non-suicidal domestic homicides.

## 5 Discussion

So far, no study has empirically compared homicide-suicides to *both* homicides *and* suicides based on nationwide data, which complicates the risk assessment of homicide-suicide relative to the two other types of lethal violence. This is the first study to compare homicide-suicides to both homicides and suicides simultaneously in a European country using national data, involving 103 homicide-suicide events, 3,203 homicides and 17,751 suicides that occurred in the Netherlands over more than a decade.

The findings of the current study are mostly in line with findings reported in the few international studies that conducted a unilateral comparison between homicide-suicide versus homicide, on the one hand and homicide-suicide versus suicide, on the other (Berman, 1979; Carcach & Grabosky, 1998; Selkin, 1976; Stack, 1997; West, 1965), as well as a studies making a bilateral comparison based on data from the United States (Logan *et al.*, 2008) and England & Wales (Flynn *et al.*, 2009), suggesting that – even though the number of incidences vary from region to region – homicide-suicides share universal characteristics.

### 5.1 Limitations

One of the major strengths of this study involves the use of national homicide and suicide data, generating a large sample size. Regional socio-economic variations in the Netherlands are relatively small and death registration procedures are uniform across regions so that these are unlikely to account for regional gradients (Neeleman, 1998) and thus provide a high level of internal validity.

However, the use of nationwide statistics has a backdrop: detailed information on homicide-suicide, homicide and suicide events, their victims and their perpetrators were mostly unavailable. Due to this lack of information, sub-analyses of homicide-suicides compared to other forms of lethal violence by type of relationship were not possible. In the next chapter, we will overcome this limitation by relying on survivors of these acts. This allows the studying of the psychiatric factors as well as the motives underlying the offence. It has been suggested that in homicide-*parasuicides*, the non-lethal outcome of the act may be a matter of chance (Hillbrand, 2001). Hence, this group is likely to have similar characteristics to the homicide-suicide group.

Furthermore, the total number of suicides having occurred in the Netherlands in the period under study might constitute an under-representation of the real figure. In case of doubt, doctors signing the death certificate might be more likely to report a suicide as an accident rather than as a suicide. This could generate a possible underreporting of suicides among certain religious groups (Diekstra, 1981).

### 5.2 Findings

#### *Incidents*

The findings show that homicide-suicides are more likely to take place within a residential setting than both homicides and suicides. This corresponds to findings

reported in previous studies (Berman, 1979; West, 1965) and can be ascribed to the involvement of family members in homicide-suicide, the primary location of congregation being the home. As has been described previously, homicide-suicide is more likely to occur when the relational distance between the perpetrator and the (potential) victim is closer (Stack, 1997): the prime example of such close relationship being the intimate partner and family members.

The finding that homicide-suicides were less likely to occur in urban areas compared to other homicides can be explained by the comparatively high crime rate as well as an elevated homicide rate in inner-city areas, mainly involving criminal homicides (Nieuwbeerta & Leistra, 2007). These homicides typically do not end in a suicide by the perpetrator. Conversely, the lower likelihood of homicide-suicides occurring in non-urban areas compared to suicides can be attributed to a higher degree of elderly people living in non-urban areas (Neeleman, 1998) and associated factors that increase the suicide risk. This finding, however, needs to be interpreted with caution, as 'urban' regions only encapsulated the three major cities of Amsterdam, Rotterdam and The Hague. A continuous scale of population density was not applied.

In contrast to other studies on homicide-suicide, it was found that homicide-suicides are not more likely to involve a firearm compared to other homicides. This could be ascribed to the already high number of criminal homicides being committed by firearms (Nieuwbeerta & Leistra, 2007). Among domestic homicides alone, however, it was found that domestic homicide-suicides were more likely to be committed by a firearm compared to non-suicidal domestic homicides. In addition, it was found that individuals in the homicide-suicide group were more likely to have used a gun in their suicide compared to individuals in the suicide-only group. This could be attributed to the relatively more lethal nature of a firearm suicide combined with the relatively low threshold of using a firearm in a suicide subsequent to having committed a homicide with the same firearm. The lethal nature of firearm violence might also account for the increased likelihood of homicide-suicides involving multiple victims – both among homicide-suicides overall and domestic homicide-suicides in particular. Others have advanced the theory that the killing of multiple victims is more likely to be associated with severe forms of psychopathology in the perpetrator and hence, more likely to end in suicide (Shackelford *et al.*, 2005).

#### *Victims*

Homicide-suicides are found to be more likely to involve child victims compared to other homicides; these results were replicated when only considering domestic homicides. As proposed by others, the killing of children followed by suicide is often perceived as being primarily suicidal: the parent considers the child to be dependent on him or her. From this point of view, there would be no-one else to take care of the child(ren) if the parent commits suicide. The child is therefore 'taken along' in the suicide of the perpetrator.

The results further showed that compared to homicide victims, homicide-suicide victims were more likely to be of Dutch ethnicity. This corresponds to the fact that the majority of the victims and perpetrators of domestic homicides are of Dutch descent. In other types of homicide, such as criminal homicide, both perpetrators and victims of non-Dutch ethnicity are overrepresented (Nieuwbeerta & Leistra, 2007). Again, this type of homicide generally does not result in a homicide-suicide.

#### *Perpetrators*

The finding that overall, both homicides and homicide-suicides are predominantly committed by men can be attributed to the generally low rate of female homicide compared to male homicide, men being more prone to physical aggression than women are (Archer, 2003). The low percentage of female homicide-suicide perpetrators can also be attributed to the fact that they tend to use less violent suicide methods such as shooting and hanging compared to males (Denning *et al.*, 2000; Shenassa *et al.*, 2003), thereby being more likely to survive the suicide attempt following the homicide and being less likely to be included in the homicide-suicide sample.

Homicide-suicide perpetrators were found to be older than homicide perpetrators, but overall younger compared to those committing suicide. This finding replicates findings reported in other studies conducting a unilateral comparative analysis (Carcach & Grabosky, 1998; Selkin, 1976; Stack, 1997; West, 1965). Whereas an older age increases the occurrence of homicide-suicide relative to homicide, it decreases the occurrence of homicide-suicide relative to suicide. This finding can be attributed to the relatively low age of those committing 'solitary' homicides, part of which are criminal homicides and homicides arising from arguments, perpetrated by young men. Arguably, because of the relative absence of feelings of guilt relating to such homicides as well as the relative large relational distance between victim and perpetrator in these acts, these 'solitary' homicides rarely end in suicide.

#### **Reflection on the theoretical background**

The finding that the majority of both domestic homicides and domestic homicide-suicides involved male perpetrators and female victims provides support for the psycho-evolutionary theory as discussed before. From this point of view, men kill their intimate partners in an ultimate attempt to regain control over their sexuality. The ensuing suicide of the male perpetrator, however, seems to contradict these evolutionary interests. In order to solve this conundrum, it might equally be argued that homicide-suicides are primarily suicidal in nature. According to this view, males decide to take with them into death what they considered belonged to them in life. The findings that homicide-suicides are less likely to be committed by women compared to suicides alone provides support for the perspective that feelings of entitlement to one's partner are held by men, but not by women. Conversely, these men might regard themselves as solely responsible for the well-being of those dependent on them as the primary source of income and the head of the household.

When he decides his own life must end, he takes his family members with him out of pseudo-altruistic motivations. As has been outlined before, previous studies have shown that a dependent-protective attachment to the intimate partner and the need to control the relationship play an important role in the chain of events leading up to a homicide-suicide (Berman, 1996; Cohen, 2000; Malphurs & Cohen, 2005; Malphurs *et al.*, 2001). From a psycho-evolutionary perspective, women lack these elements of control and possessiveness. Under similar circumstances, they might opt for 'solitary' suicide rather than homicide-suicide.

Further, the results provided partial support for the Durkheimian point of view on suicide and social integration. Considering homicide-suicide as an extreme type of suicidal behaviour, it would be expected that homicide-suicide perpetrators would suffer from a higher degree of social integration compared to those 'only' committing suicide. However, the age of homicide-suicide perpetrators was found to be lower than those dying of suicide and not higher. The relatively advanced age of individuals dying from suicide can be attributed to factors related to advanced age, such as an increased likelihood of being widowed and having children living outside of the household – together contributing to social isolation. Arguably, the likelihood of victimizing another person in addition to committing suicide is lower among the aged because of the absence of others such as an intimate partner and/or child(ren) living in the same house.

The findings that homicide-suicides were more likely to be committed by individuals with a non-Dutch ethnic background compared to solitary suicides, however, supports the Durkheimian point of view on social integration. It has been well documented that in the Netherlands, individuals belonging to an ethnic minority suffer from a greater degree of socio-economic disadvantage (Vrooman *et al.*, 2007), associated with a restricted participation in the labour market, in social interactions and in education. From this point of view, the 'taking along' of others in homicide-suicide might be understood as an extreme consequence of social disintegration.

## 6 Conclusion

This study examined to what extent the socio-demographic characteristics of homicide-suicide events, perpetrators and victims explain the occurrence of homicide-suicide relative to a homicide or suicide alone, making use of nationwide data from the Netherlands in the period 1992-2006. In total, the characteristics of 103 homicide-suicides were compared to 3,203 homicides and 17,751 suicides.

At an empirical level, the occurrence of homicide-suicide relative to homicide and suicide can be attributed to various factors, including event, victim and perpetrator characteristics. By using socio-demographic data on three types of lethal violence, this study was able to empirically assess two theoretical perspectives on homicide-suicide: the psycho-evolutionary approach to homicide as well as the Durkheim's social integration perspective on suicide.

The results provided support for the psycho-evolutionary approach to homicide: both domestic homicides and domestic homicide-suicides primarily involve male

perpetrators and female victims. From this point of view, men kill their intimate partners in an ultimate attempt to regain control over their wife's sexuality and reproductive capacity. The ensuing suicide of the male perpetrator, however, seems to contradict these evolutionary interests. In order to solve this conundrum, it might equally be argued that homicide-suicides are primarily suicidal in nature. According to a male proprietary view, males decide to take their intimate partners with them when they consider taking their own lives. The finding that women are less likely to involve their male partners in their suicide supports this perspective.

The results provided partial support for the Durkheimian point of view on suicide and social integration. The perpetrators of homicide-suicide were overall younger than those committing suicide and not, as expected from a social integration perspective, older. The finding that being of non-Dutch ethnicity increases the odds of homicide-suicide relative to other suicides is in line with Durkheim's perspective and can be explained by a lower degree of social integration: the likelihood of homicide-suicide increases as social disintegration increases. From this point of view, homicide-suicide constitutes an extreme variation in suicidal behaviour.

The major shortcoming of the study at hand was the relative lack of detail in the available data. In the next chapter, this backdrop will be overcome by examining the characteristics of homicide-parasuicides: individuals having survived their attempt to commit suicide following a homicide.

## Chapter eight

# Homicide-Parasuicide Compared to Homicide and Parasuicide: A Meso Level Approach<sup>51</sup>

### 1 Introduction

As has been outlined previously, the use of national data sources to study phenomena such as homicide-suicide, homicide and suicide is hampered by a considerable lack of detail. Hence, several researchers have called for the study of survivors of homicide-suicide (Berman, 1996; Brett, 2002; Hillbrand, 2001): people who have committed a homicide and afterwards attempted to kill themselves, but somehow failed to do so. These acts are also termed homicide-parasuicides. In the current chapter, a meso-level analysis is employed, examining the characteristics of homicide-parasuicides, homicides and parasuicides.

The data used in this study concern intrafamilial homicide-parasuicides only. As has been pointed out in chapter four, extrafamilial homicide-(para)suicides are very rare, especially in the Netherlands. Moreover – as both literature analyses and empirical analyses have shown – the motives and characteristics underlying extrafamilial homicide-(para)suicide are drastically different from intrafamilial types of homicide-(para)suicide. Therefore, the current study focuses on the most common types of homicide-parasuicide, namely those taking place within the family, involving intimate partner homicides, child homicides, parent homicides and sibling homicides.

Keeping these demarcations in mind, this study aims to answer the following research question:

*At a meso level, to what extent do individual, contextual and situational characteristics of intrafamilial homicide-parasuicides explain the occurrence of homicide-parasuicide relative to intrafamilial homicide or parasuicide alone?*

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<sup>51</sup> Parts of this chapter have been published as:

- Liem, M., M. Hengeveld & F. Koenraadt (2009) 'Domestic Homicide Followed by Parasuicide: A Comparison with Homicide and Parasuicide' *International Journal of Offender Therapy and Comparative Criminology*, 53, 497-51

Parts of this chapter have also appeared in:

- Liem, M., M. Hengeveld & F. Koenraadt (2009) 'Kinderdoding gevolgd door een ernstige poging tot zelfdoding. Drie modaliteiten van geweld [Filicide followed by parasuicide: Three types of lethal violence]' *Tijdschrift voor Criminologie*, 51, 262-276.

- Liem, M. & D. Roberts (2009) 'Intimate partner homicide by presence or absence of a self-destructive act' *Homicide Studies*, 13, 339-354.

- Liem, M., De Vet, R. & Koenraadt, F. 'Filicide followed by Parasuicide: A Comparison of Suicidal and Non-Suicidal Child Homicide' *Child Abuse & Neglect* (forthcoming).

Although previous studies have reported on various characteristics of the perpetrators of these acts (see chapter two for an overview of these studies), these studies have two considerable shortcomings: first of all, previous research has focused on subsamples of (domestic) homicide ending in (para)suicide by the perpetrator, rather than considering a spectrum of different types of homicides. Secondly, none of the previous studies conducted in this field has incorporated a control group of individuals having committed a parasuicide without having engaged in homicidal behaviour. This is the first study to empirically compare homicide-parasuicides to both homicides and parasuicides.

## **2 Theoretical background**

The use of such detailed data allows for an empirical assessment of several theoretical perspectives as outlined in chapter three: Henry & Short's theory on lethal violence, psychodynamic theory and psychopathological approaches.

Henry & Short's (1954) theory on lethal violence, a forerunner of the 'Stream Analogy of Lethal Violence' theory, holds that when behaviour is required to conform rigidly to the demands and expectations of other persons, the probability of homicide as a response to frustration is low and the probability of suicide as a response to frustration is high. When behaviour is freed from the requirement of conformity, the probability of homicide is high and the probability of suicide is low. This perspective theorizes that suicide among higher socio-economic classes is relatively more common compared to the lower classes, as in the first outward aggression is more restricted than in the second. Although Henry & Short provide extensive empirical support for both homicidal and suicidal behaviour, they do not provide any systematic analysis of events in which homicides are followed by suicides. On the basis of their theory on homicide and suicide alone, however, one can formulate hypotheses with regard to the combination of the two events. According to their theory, the expression of outward aggression – in its most extreme form resulting in homicide – among higher socio-economic classes is more restricted than in lower socio-economic classes. When one breaks the taboo of external aggression, the need for self-punishment after breaking this taboo is, accordingly, expected to be higher. To sum up, according to Henry & Short, homicides occurring in higher socio-economic classes are more likely to be followed by suicide compared to homicides in lower socio-economic classes, where behaving violently is less restricted.

Other theoretical perspectives that will be assessed in this chapter include the psychodynamic point of view as discussed in chapter three. In this view, the victim in a homicide-suicide represents a source of frustration, but also a source of nurturance (Henry & Short, 1954). According to this perspective, when the source of frustration is destroyed in a homicide, the source of nurturance is also lost. Hence, the killing of the victim can restore or even increase frustration over the loss of a loved object. The self then becomes a legitimate target of aggression in the form of suicide (Stack, 1997). In this point of view, homicide-(para)suicide constitutes a variation of homicide. Both

homicides and homicide-(para)suicide have in common a high degree of interpersonal frustration, expressed by domestic violence.

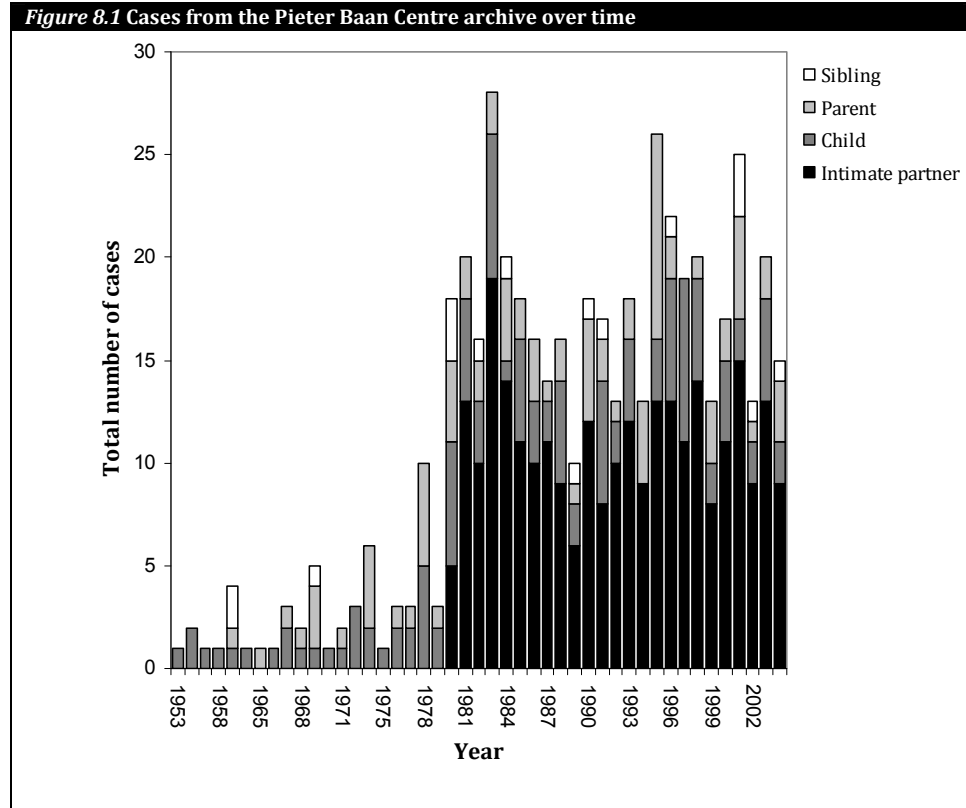
Although in the literature numerous psychopathological features have been connected to aggressive behaviour, the most pronounced features related to homicide-(para)suicide are reported to involve depression and psychotic illness. From a psychopathological point of view, Rosenbaum (1990) has argued that depression may be viewed as a defence against the underlying aggressive and murderous impulses. If an incident such as a break-up produces sufficiently intense impulses, the depressive defence is breached and the 'murderous impulse' is released. After having committed a homicide, the depressive disorder returns, associated with feelings of guilt. From this point of view, the presence of depressive illness in the perpetrator increases the likelihood of a homicide ending in a suicide. Similarly, depression is also associated with suicidal impulses. According to this view, the primary aim of the depressed perpetrator is suicide, rather than homicide. Homicide-suicide occurs when not only one's own life, but also the lives of the victims are seen through a depressogenic lens and not worth living or doomed to end. From this perspective, individuals committing homicide-suicide and those committing suicide have a high degree of depression in common.

The assumption that psychotic disorders are of considerable influence on homicide-suicides has been explained by the rationality-within-irrationality principle, in which psychotic symptoms convince the perpetrator of the necessity of 'taking along' their loved ones in death. According to this perspective, the deterioration of cognitive processing whilst under the influence of a psychosis could aggravate the perpetrator's psychological estrangement from his family members (Starzomski & Nussbaum, 2000), in some cases disregarding their autonomy altogether. In this view, homicide-(para)suicide can be differentiated from both homicide and (para)suicide alone according to a high prevalence of psychotic disorders.

### **3 Methodology**

This empirical research is based on three groups: a study group of homicide-parasuicide perpetrators and two control groups, one consisting of homicide perpetrators who did not engage in suicidal behaviour and the other including individuals who committed a parasuicide without engaging in homicidal behaviour. Both homicide and homicide-parasuicide cases were collected from the Pieter Baan Centre, a forensic psychiatric observation hospital in the Netherlands. The final analysis consisted of 507 individuals who were accused of having committed a domestic homicide. Of these individuals, 77 had committed a serious parasuicide following the offence. Since the general occurrence of filicide, familicide (the killing of the spouse and child(ren)), parricide and siblicide (the killing of one or more sibling(s)) is (very) low and accordingly, the number of suspects admitted to the centre is also very low, the period of data selection is extensive. The offence of intimate partner homicide, however, occurs more often. Therefore, the time period

from which intimate partner homicide cases are selected is relatively shorter than the period adhered to for other types of domestic homicide suspects<sup>52</sup> (see figure 8.1).



With regard to the representativeness of the study sample, the relative occurrence of different types of homicide in the sample was compared to the national occurrence. From table 8.1 it can be deduced that in the period 1992-2001, 28 per cent of intimate partner homicides, 69 per cent of filicides and 70 per cent of parent homicides not ending in the suicide of the perpetrator were included in the current sample. The reasons for non-admission include a completed suicide by the

<sup>52</sup> It has to be emphasized that the perpetrators in the current study were subject to a so-called 'remand' or 'pre-trial' status, as at the time of the forensic mental health assessment they have not yet been found guilty of the crime. A later examination of court files confirmed that all were subsequently convicted. In addition, it needs to be taken into account that individuals sent to the forensic observation hospital for assessment are thought to deviate psychologically from other accused persons who are not sent to the hospital or who are assessed by a psychologist and/or psychiatrist while in prison. Yet, given their consistency and profoundness, these assessment files provide much information on each individual perpetrator, thereby making them a valuable source of comparison between groups of perpetrators. In addition, it should be noted that material from the Pieter Baan Centre is primarily focused on the perpetrator, rather than on the victim(s) involved. Hence, the information available on the victim is relatively limited.

perpetrator or, more commonly, a lack of the presumption of a mental illness being involved in the offence.

**Table 8.1 Study sample in relation to domestic homicide in the Netherlands, 1992-2001**

	Uxoricide	Filicide	Parricide
<b>National occurrence</b>	474	70	44
<b>Died of suicide</b>	30	19	1
<b>Pieter Baan Centre</b>			
N	124	35	30
% of national occurrence	26%	50%	68%
% excluding suicide	28%	69%	70%

Near-lethal parasuicide cases which were used as a control group were retrieved from the department of psychiatry at the Erasmus MC, University Medical Centre Rotterdam. Parasuicides were matched to homicide-parasuicide cases according to gender and the family situation. The available psychiatric consultation files included the period 2000-2004. All files were manually searched and included in the study if the patient had committed a severe parasuicide and if the patient matched the characteristics required for our control group.

**Table 8.2 Total sample of homicide-parasuicides, homicides and parasuicides**

	Homicide-Parasuicide	Homicide only	Parasuicide only
<b>Intimate Partner</b>	39	246	78
<b>Child</b>	30	98	62
<b>Parent</b>	9	81	17
<b>Sibling</b>	2	16	4
<b>Total (cases)</b>	80	441	161
<b>Total (perpetrators)</b>	77	430	161

Table 8.2 represents the total number of cases used for the analyses. The 'homicide-parasuicide' group involved individuals who had killed their intimate partner, child, parent or sibling, and subsequently committed a parasuicide. The 'homicide only' group included individuals who had killed an intimate partner or family member but did not commit an ensuing parasuicide. The 'parasuicide only' group consisted of individuals who had committed a parasuicide without committing a preceding homicide. They were matched to the homicide-parasuicide group according to gender, age and household composition. For example, a woman committing a homicide-parasuicide involving a child was matched to a woman committing a parasuicide who had a child in her care, but did not victimize the child. Similarly, a man killing his intimate partner followed by a parasuicide was matched to a man who committed a parasuicide without victimizing his intimate partner. In order to control for within-subject variance, the ratio of control to cases was raised by two: there were two parasuicide cases for each homicide-parasuicide case.

All data were made anonymous. Data extraction conformed to ethical and judicial guidelines. Details of measures and operationalization of variables used in this study are described in Appendix 2.

The aim of this study is to assess to what extent individual, contextual and situational characteristics of intrafamilial homicide-parasuicides explain the occurrence of intrafamilial homicide-parasuicide relative to intrafamilial homicide or parasuicide alone. A total of 77 homicide-parasuicides are compared to 430 homicides and 161 parasuicides. Additional analyses are conducted on subsamples of intimate partner homicide-parasuicides (uxoricide-parasuicide) and child homicide-parasuicide (filicide-parasuicide).<sup>53</sup>

#### **4 Results**

First, the overall findings from the comparison of the homicide-parasuicide group with the homicide and parasuicide group will be presented, outlining socio-demographic, individual and incident characteristics as well as the motives, behavioural warning signs and finally, legal characteristics. Following this, subanalyses will be presented of the most predominant types of homicide-parasuicide: intimate partner homicide-parasuicide and filicide-parasuicide.

##### **4.1 Homicide-parasuicide versus homicide and parasuicide**

###### *Socio-demographic characteristics*

Table 8.3 presents the results of the comparison. The majority of the perpetrators in all three groups were male. The perpetrators of homicide-parasuicide were older than homicide-only perpetrators. Those committing a homicide-parasuicide were significantly more likely to have been going through a divorce compared to those 'only' committing a homicide. Homicide-parasuicide perpetrators had in common with individuals from the other two groups a relatively low socio-economic status, approximately fifty per cent being unemployed and one third having acquired a low level of education or no education at all. Differences between the groups were found, however, with regard to the ethnicity of the perpetrator. Individuals committing a

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<sup>53</sup> Coding of intimate partner homicide cases was conducted by three researchers, including the author. The interrater reliability was .87. The assessment of indices of behavioural warning signs and the application of the Pierce Suicide Intent Scale were conducted by the author alone. All other homicide, homicide-parasuicide and parasuicide cases were coded by the author alone. Intrarater stability was measured by correlating independent observations and ranged from .88 to .96, averaging at .92.

In order to determine the differences between the study group of homicide-parasuicides and the control groups of homicides and parasuicides, ANOVA and Chi-Square tests were used. To estimate the probability that a homicide would result in a homicide-parasuicide or, conversely, to assess the probability that a parasuicide would be combined with a homicide and to further assess the marginal effect of each variable, multivariate logistic regression analyses were conducted. Controls were introduced for three socio-demographic variables: the perpetrator's gender, age and ethnicity. Analyses used SPSS v.17.0 software. When the numbers in the studied groups are too small to perform any statistical analyses, a hyphen (-) is noted.

homicide-parasuicide were found to be predominantly Dutch, in contrast to the two other groups.

*Individual characteristics*

Homicide-parasuicide perpetrators were significantly less likely to be the victim of abuse in childhood compared to perpetrators of homicides not followed by a parasuicide. The results further showed that homicide-parasuicides resembled parasuicides concerning the prevalence of a history of suicide attempts: in both groups, approximately one third had made one or more suicide attempts preceding the index event.

Homicide-parasuicide perpetrators were found to be significantly more likely than other homicides to suffer from a mood disorder, most notably depression. Incorporating other factors, multivariate analyses revealed that depression in the perpetrator raised the odds for a parasuicide following a homicide more than fifteen times (see table 9.4). These results were not replicated for homicide-parasuicides related to parasuicides: in both groups, depression was common in about one third. The two groups differed, however, concerning the presence of a psychotic disorder: whereas 29 per cent in the homicide-parasuicide group were diagnosed with a psychotic disorder, only 7 per cent of the parasuicide groups suffered from a psychotic disorder.<sup>54</sup> Regression analysis showed that the presence of a psychotic disorder increased the odds for a homicide-parasuicide relative to a parasuicide almost twenty times. Finally, homicide-parasuicide perpetrators were more likely to suffer from a personality disorder compared those 'only' committing a parasuicide. Here, a personality disorder raised the odds for a homicide-parasuicide more than four times.

*Incident characteristics*

Compared to the homicide-only group, those committing a homicide-parasuicide were significantly less likely to use violent methods in the homicide. On the other hand, they were more likely to use violent methods in the parasuicide compared to the parasuicide-only group. The results further showed that homicide-parasuicide perpetrators differed from both homicides and parasuicides in the number of victims included in the offence: whereas 27 per cent of the homicide-parasuicides included multiple victims, in 11 per cent of the homicides multiple victims were involved and in 41 per cent of the parasuicides multiple relatives could potentially be harmed. Multivariate analysis revealed that a homicide involving multiple victims raised the odds for a subsequent parasuicide more than two times. Homicide-parasuicide perpetrators were more likely to have a symbiotic relationship with the victim at the time of the offence compared to both homicide-only perpetrators and parasuicide-only perpetrators.

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<sup>54</sup> All individuals suffering from a psychotic illness were found to be manifestly psychotic at the time of offence.

**Table 8.3 Homicide-parasuicides compared to other homicides and other parasuicides**

	Domestic Homicide (total)		Intimate Partner Homicide		Child Homicide			
	Homicide-Parasuicide (N=77) %	Homicide (N=430) %	Parasuicide (N=161) %	Intimate Partner Homicide (N=246) %	Parasuicide (matched) (N=78) %	Child Homicide - Parasuicide (N=30) %	Child Homicide (N=98) %	Parasuicide (matched) (N=62) %
<b>Socio-demographic characteristics</b>								
Gender								
Male	78	76	73	95	81	92	47	54
Female	22	24	27	5	19 <sup>†</sup>	8	53	46
Age (mean)	37.0	33.1*	38.3	38.7	36.5	41.5	36.1	30.4*
Same household	73	64	73	67	61	65	83	89
Conjugal Separation	36	22*	24	28	24	32	63	26
Unemployed	49	46	58	61	47	49	37	45
Low or no education	33	34	-	33	31	-	31	45
Dutch ethnicity	78	65 <sup>†</sup>	65 <sup>†</sup>	72	59	70	83	70
Stepparent							0	20*
Age of victim (mean)	27.6	32.4	-	33.0	35.5	-	8.2	4.4*
<b>Individual characteristics</b>								
Criminal antecedents	14	19	-	26	20	-	0	16 <sup>†</sup>
Previously violent towards family members	33	35	-	41	40	-	23	38
Victim of abuse in childhood	13	27*	-	3	23*	-	14	29
History of suicide attempts	29	-	32	29	-	36	30	17
Psychiatric hospitalization	20	17	25	26	16	20	7	14
Mood disorder	31	7*	27	28	5*	31	33	14 <sup>†</sup>
Psychotic disorder	29	20	7*	21	13	8	40	27
Psychoactive substance abuse or dependence	20	13	23	21	13	18	17	19
Personality disorder	62	58	30*	59	63	33*	79	57 <sup>†</sup>

	Domestic Homicide (total)		Intimate Partner Homicide			Child Homicide		
	Homicide-Parasuicide (N=77) %	Homicide (N=430) %	Para-suicide (N=161) %	Intimate Partner Homicide - Parasuicide (N=39) %	Intimate Partner Homicide (N=246) %	Parasuicide (matched) (N=78) %	Filicide (N=98) %	Parasuicide (matched) (N=62) %
Violent homicide method	51	73*	-	54	76*	-	63*	-
Violent parasuicide method	25	-	11*	37	-	12*	-	7
Multiple victims	27	11*	41†	18	9	17	21	72
Symbiosis	33	7*	1*	39	8*	3*	3*	0*
<b>Incident characteristics</b>								
<b>Motives</b>								
Homicide motives								
Uxoricide								
Abuse				0	7	-		
Narcissistic rage				33	43	-		
Fear of Abandonment				46	31	-		
Filicide								
Abuse							36*	-
Altruism							10	-
Reprisal							14	-
Parasuicide motives								
Psychiatric illness	15	-	9	7	-	9	-	7†
Domestic problems	3	-	27*	8	-	0	-	37
Relationship problems	41	-	45	47	-	64	-	42*
<b>Behavioural warning signs</b>								
Suicidal threats	35	7*	18*	31	8*	20	50	13
Death threats	9	9	-	3	8	-	17	-
Signs of premeditation	63	43*	23*	53	45	24*	82	25*

	Domestic Homicide (total)			Intimate Partner Homicide			Child Homicide		
	Homicide-Parasuicide (N=77) %	Homicide (N=430) %	Para-suicide (N=161) %	Intimate Partner Homicide - Parasuicide (N=39) %	Intimate Partner Homicide (N=246) %	Parasuicide (matched) (N=78) %	Filicide-Parasuicide (N=30) %	Filicide (N=98) %	Parasuicide (matched) (N=62) %
<b>Legal characteristics</b>									
Degree of responsibility									
Full responsibility	3	7	-	5	10	-	0	5	-
Slightly diminished	4	12	-	8	15	-	0	8	-
Diminished	27	43	-	40	50	-	14	38	-
Severely diminished	33	20	-	26	15	-	39	25	-
No responsibility	33	17	-	21	11	-	46	24	-
Risk of recidivism									
Not likely	33	35	-	33	37	-	33	32	-
Likely	53	46	-	54	44	-	60	57	-
Not able to conclude	14	20	-	13	20	-	7	11	-

\* p<.01; † p<.05.

*Motives*

The homicide-parasuicide group differed significantly from the parasuicide-only group with regard to the parasuicide motive: whereas very few homicide-parasuicide perpetrators committed a parasuicide motivated by domestic problems, roughly one out of four parasuicide-only individuals mentioned domestic problems as the primary reason for the parasuicide. Rather, those committing a homicide-parasuicide attributed the event to relationship problems or a psychiatric illness.

*Behavioural warning signs*

The homicide-parasuicide group differed significantly from both other groups concerning the presence of behavioural warning signs prior to the event: more than one third of the homicide-parasuicide perpetrators threatened suicide prior to the offence compared to 7 per cent of the homicide perpetrators and 18 per cent of those committing a parasuicide. Suicide threats preceding the homicide raised the odds for a subsequent parasuicide roughly four times. Homicide-parasuicide perpetrators were also more likely than individuals in the other two groups to premeditate the event. Premeditation proves to be an important predictor for a homicide-parasuicide relative to both homicide and parasuicide, raising the odds for homicide-parasuicide relative to homicide almost two times and increasing the likelihood of homicide-parasuicide relative to parasuicide almost five times.

**Table 8.4** Logistic regression Odds Ratio (OR) predicting the risk of homicide-parasuicide (N=77) relative to homicide (N=430) and parasuicide (N=161)<sup>55</sup>

	Homicide-Parasuicide vs Homicide			Homicide-Parasuicide vs Parasuicide		
	Logistic Coefficient	S.E.	Odds Ratio	Logistic Coefficient	S.E.	Odds Ratio
<b>Covariates</b>						
Perpetrator is male	.637	.372	1.892	1.026	.545	2.790
Age	.015	.012	1.015	-.014	.019	.986
Perpetrator is Dutch	.487	.331	1.627	.923	.485	2.516
<b>Predictor Variables</b>						
Mood disorder	1.501*	.379	15.686	-.445	.483	.641
Psychotic disorder	.052	.343	1.053	2.988*	.698	19.853
Personality disorder	.188	.299	1.206	1.462*	.429	4.315
Multiple victims	.864‡	.355	2.373	-.740	.457	.477
Suicide threats	1.446*	.364	4.245	.286	.496	1.330
Premeditation	.616‡	.297	1.852	1.557*	.460	4.747

\* p<.001; † p<.025; ‡ p<.05.

<sup>55</sup> Although the variable 'symbiosis' proved to be important in distinguishing homicide-parasuicides from both homicides and parasuicides, due to its strong relation with homicide-parasuicide this variable violates the assumptions of independence of observations and hence, distorts the model. Therefore, it is left out of the multivariate analysis.

*Legal characteristics*

Finally, the results showed that the degree of responsibility among homicide perpetrators is bell-curve shaped, whereas the degree of responsibility among homicide-parasuicide perpetrators is rather skewed, leaning towards a lower degree of responsibility. A likelihood of recidivism was present in 53 per cent of homicide-parasuicide cases, which did not differ significantly from the likelihood of recidivism in other homicide cases.

## **4.2 Comparing Subgroups**

Next, we examined the two most common subgroups of homicide-parasuicides: intimate partner homicide-parasuicides and child homicide-parasuicides. As mentioned before, intimate partner homicide-parasuicides were matched to both intimate partner homicides not involving a parasuicide and to individuals having committed a parasuicide who were or had recently been involved in an intimate partner relationship. Child homicide-parasuicide perpetrators were matched to both non-suicidal child homicide perpetrators and to parasuicide individuals who had at least one child under their care at the time of the parasuicide.

### **4.2.1 Intimate partner homicide-parasuicide versus intimate partner homicide and parasuicide**

The majority of the findings in the sub-analyses of intimate partner homicide-parasuicides resembled the results from the overall analysis (see table 8.3). Whereas no significant gender differences were observed in the total group, intimate partner homicide-parasuicides were significantly more likely to be committed by men. Although age and ethnicity differentiated homicide-parasuicide perpetrators from the other two groups in the overall analysis, among the subsample of intimate partner homicide-parasuicides no such differences were found. Definite separations were prevalent in approximately one fourth of all groups. Among both intimate partner homicide-parasuicides and intimate partner homicides not followed by parasuicide, the killing was typically committed out of a fear of abandonment or narcissistic rage.

In contrast to the results from the overall analysis, a subanalysis of intimate partner homicide-parasuicides did not show significant differences between intimate partner homicide-parasuicides and a matched parasuicide sample with regard to previous suicide threats. In both groups, previous threats were common. In addition, and opposed to the findings from the overall analysis, the killing of a partner in intimate partner homicide-parasuicides was not more likely to be premeditated than uxoricides. Among the premeditated uxoricide-parasuicides, the perpetrator typically staged the event as a suicide pact or decided beforehand that both the victim and he should die. Many of these cases were classified as familicides involving the spouse and child(ren). In the majority of the uxoricide-parasuicides, the parasuicide, however, was not premeditated. Here, the suicidal act resulted from feelings of guilt related to the homicide, a fear of the judicial consequences or a wish to be reunited with the victim in death.

Finally, in contradiction to the findings in the overall analysis, the results of the subanalysis showed that there was no significant difference between the groups regarding the degree of responsibility or the likelihood of recidivism.

#### **4.2.2 Child homicide-parasuicide versus child homicide and parasuicide**

The majority of the findings in the subanalysis of child homicide-parasuicides correspond to the findings in the overall analysis (see table 8.3). All filicidal parents who committed a parasuicide following the offence were the biological parents of the victim. Child homicide-parasuicides were more likely to involve older victims compared to child homicides not followed by a parasuicide.

In contrast to the results from the overall analyses, the subanalysis of child homicide-parasuicides revealed that child homicide-parasuicide perpetrators were significantly less likely to have been convicted of a violent offence previous to the index offence, but more likely to suffer from a personality disorder compared to non-suicidal child homicide perpetrators.

Suicidal parents killed their child(ren) out of different motives compared to non-suicidal parents: whereas in more than one third, the latter killed their child as a result of physical abuse, none of the suicidal parents had done this. In addition, child homicide-parasuicide perpetrators differed from parasuicide-only individuals in the motive for the parasuicide: while the first were primarily motivated to commit parasuicide out of relationship problems and mental illness, the latter typically did so as a result of domestic problems or as a result of conflicts with the children.

Child homicide-parasuicide perpetrators differed from child homicide-only perpetrators in being more likely to have expressed death threats, including threats directly related to the child(ren).

The parasuicides in the child homicide-parasuicide group were typically planned, which stands in contrast with the parasuicides in the uxoricide-parasuicide group. In the latter, a parasuicide was often committed as a means of self-punishment as well as a wish to be reunited with the victim. The wish to be reunited is arguably already anticipated by child homicide-parasuicide individuals: rather than joining the victim in death in order to continue their (dependent) bond, they make sure that the bond between them will never be broken.

Finally, child homicide-parasuicide perpetrators were more likely to be found less responsible for the child homicide compared to non-suicidal perpetrators. The two groups, however, were not found to differ in terms of the likelihood of future violent behaviour towards children and/or others: in both groups, such behaviour was deemed likely to occur in approximately 60 per cent of cases.

## **5 Discussion**

### **5.1 Limitations**

The study at hand has relied on data from a forensic observation hospital. Subjects sent to such an observation hospital are thought to deviate psychologically from other

accused persons (Farooque & Ernst, 2003; Marleau, 1999; McGrath, 1992). This might have caused an overrepresentation of mentally ill perpetrators in our sample, in particular with regard to uxoricide perpetrators: whereas the majority of perpetrators of other types of domestic homicide occurring in the Netherlands were included in our sample, 'only' one third of the intimate partner homicide perpetrators were included, possibly excluding those with less severe psychopathology.

Further, the killing of family members followed by a serious parasuicide constitutes a rare event. Therefore, in order to retrieve enough cases for analysis, we had to draw on cases from a relatively long period of time. The disadvantages of this approach include a different set of societal circumstances causing the nature of these cases to differ.

In addition, the data retrieved from the department of psychiatry at the Erasmus MC typically did not include information on the individuals' level of education, the presence of previous domestic violence and their criminal history. This can be attributed to the different nature of the reports, which were created for mental and physical health purposes as opposed to criminal justice purposes.

Due to the nature of the two sources, the material used for this study mainly includes information that is primarily focused on the homicidal and/or suicidal individual, rather than on the (potential) victim(s). For a large part, information on (potential) victim(s) and other family members is secondary in nature, stemming from sources other than the individuals concerned.

## 5.2 Findings

The demographic characteristics of the homicide-parasuicide perpetrators largely correspond to studies based on successful homicide-suicides nationally (see chapter four) and internationally (see chapter five): the majority of the perpetrators being white males in their thirties. These similarities also suggest that our sample of homicides followed by near-fatal parasuicides resemble homicides followed by a fatal suicide.

Overall, the results indicated that the occurrence of a homicide-parasuicide relative to homicide can be attributed to a range of factors, the most prevalent being mood disorder, the killing of multiple victims, preceding suicide threats and finally, premeditation.

The findings further revealed that a personality disorder increased the likelihood of a homicide-parasuicide relative to a parasuicide. This could be attributed to an overall high degree of psychopathology involved in the homicide-parasuicide perpetrator. Here, dependency seems to play a major role, which is also reflected in the presence of a symbiotic relationship. In such relationship, the victim is considered to be a part of the self that cannot be separated. Such symbiotic relationships are not present among those 'only' attempting to kill themselves or 'only' killing others. Whereas symbiotically attached suicidal individuals feel that they cannot leave behind those they feel inherently connected to, the non-symbiotically attached suicidal individual

does not feel the urge to make others part of their suicidal behaviour. Finally, the results revealed that a premeditative component of the event increased the likelihood of a homicide-parasuicide relative to a parasuicide. Arguably, when the suicidal individual overlooks the consequences of his suicide, he may come to realize that others cannot be 'left behind', choosing to take them along in the suicidal act.

The severe influence of psychopathology in the homicide-parasuicide group is also reflected in the lower likelihood of being held responsible for the homicidal act compared to perpetrators in the homicide-only group.

#### *Intimate partner homicide-parasuicide*

The finding that the majority of the intimate partner homicide-parasuicide perpetrators were male corresponds to other international studies (Belfrage & Rying, 2004; Bourget *et al.*, 2000; Eastal, 1993; Hanzlick & Koponen, 1994; Walsh & Hemenway, 2005), the reasons which could be found in male proprietary attitudes as described previously as well as the role of guilt following the offence. It has been argued that women do not experience such feelings of guilt after killing their intimate partner (Swatt & He, 2006). Rather, they feel relieved after having been 'freed' from their tormentor and are therefore less likely to commit (para)suicide following an intimate partner homicide.

In contradiction to Marzuk *et al.*'s (1992) classification scheme outlined in chapter two, among the present sample of intimate partner homicide-parasuicide perpetrators no dichotomy could be established distinguishing intimate partner homicide-parasuicides motivated by amorous jealousy and those motivated by the ill-health of one of the partners. This challenges the validity of Marzuk's classification system. Rather, a fear of abandonment appeared to be a predominant motive in almost half of the cases. This reflects the role of dependency in intimate partner homicide-parasuicides – sometimes evolving to such an extent that the relationship between victim and perpetrator has symbiotic characteristics. Arguably, when the female victim threatens to leave or rejects the perpetrator, a part of the latter's sense of identity is lost – through the symbiotic nature of their relationship, she has become a part of him. When emotional dependency is not enough to convince her to stay, he may respond with lethal violence. In killing her, a part of the self is killed with it (Palermo, 1994). When joining her in death by committing suicide, he arguably retains the relationship which could not be maintained in life. Other motives for intimate partner homicide-parasuicide constitute a narcissistic feeling of being hurt. From a psychological point of view, narcissism, or the love of the self, aims to protect one's self-esteem. When self-esteem is lowered or threatened by rejection or divorce, aggression arises as an instrument of recovery (Tangney & Dearing, 2002). From this point of view, the victim is killed in order to restore the perpetrator's sense of self. A subsequent suicidal act by the perpetrator can be understood as arising from feelings of shame after the homicide. This time, the perpetrator is humiliated by his actions alone and thus wishes to do away with the one responsible for this humiliation: the self (Kohut, 1971).

The finding that almost one third of the perpetrators of intimate partner homicide-parasuicides suffered from a depressive disorder at the time of the offence replicates the findings reported by others (Bourget *et al.*, 2000; Rosenbaum, 1990) and is in line with the theoretical underpinnings presented before. Klein (1975) has argued that a fear of losing a loved object (i.e. the (estranged) spouse) is the forerunner of depression. An overrepresentation of mood disorders among the intimate partner homicide-parasuicide perpetrators could then be explained by the perpetrator's fear of abandonment and subsequent loss of self-esteem: in the case of spousal abandonment, his psychological self is shattered. Intimate partner homicide-parasuicides and parasuicides have this high rate of depression in common. Whereas the intimate partner homicide-parasuicide perpetrator attempts to restore his sense of self by responding violently towards the cause of his dejection, namely his (estranged) partner, individuals 'only' committing parasuicide arguably do not feel the need to continue the bond with the victim in death. While in both groups, feelings of revenge and anger towards the (estranged) intimate partner are pronounced, the parasuicide-only perpetrator might not have the same type of dependent relationship with his intimate partner that requires him to take her 'along' in his death. Similar to the findings in the overall sample, the prevalence of a symbiotic relationship with the victim among intimate partner homicide-parasuicide perpetrators underlines this argument.

#### *Child homicide-parasuicide*

The results of the subanalysis of child homicide-parasuicides showed that the majority of these acts were committed by women, a finding which is in contrast with national findings on child homicide-suicide as reported in chapter four. This relative overrepresentation of women in the current sample of child homicide-parasuicides could be attributed to relatively less lethal suicide methods employed by women, independent of their level of suicidal intent (Denning *et al.*, 2000). Therefore, they are more likely to survive a suicide attempt and more likely to be included in the sample.

Parents committing a child homicide-parasuicide constitute a subgroup which is different from parents 'only' committing a child homicide and parents 'only' committing a parasuicide. The child homicide-parasuicide group can overall be characterized as consisting of desperate, depressed parents who, in contrast to the non-suicidal group, have not shown previous signs of outward aggression towards their children. Not infrequently, however, they utter warning signs in terms of seriously harming a child. These findings resemble those reported in previous studies on child homicides and child homicide-(para)suicides (Hatters Friedman *et al.*, 2008; Léveillé *et al.*, 2007; Marleau, 1999; Shackelford *et al.*, 2005). This suggests that traditional reliance on previous child abuse as a predictor of risk is of little use concerning a desperate filicidal perpetrator.

Conjugal separation seems to play a large role as far as these perpetrators are concerned- causing desperation on the one hand and anger on the other. Similar to intimate partner homicide-parasuicides, the angry component in child homicide-

parasuicide is typically of a narcissistic nature, also known as the 'Medea Complex'. Here, it is not so much the love of the children that leads the perpetrator to kill them and subsequently kill himself, but vengeance for being humiliated (Rochlin, 1973) by rejection, divorce or disputes over child custody. The perpetrator feels humbled and, driven by narcissistic impulses, proceeds to kill the child(ren) in an act of revenge: only revenge will rectify the feeling of being wronged and abandoned.

### **Reflection on theoretical background**

In addition to answering the research question formulated earlier, the amount of detailed data used for this study also allowed for the assessment of several theoretical perspectives as outlined in chapter three.

First, the finding that homicide-parasuicide perpetrators were overall found to have a low socio-economic status associated with a relatively high degree of unemployment and low education contradicts theoretical assumptions generated by Henry & Short (1954), who postulated that the likelihood of homicide-suicide relative to homicide increases as the perpetrator's socio-economic status increases. Regarding the high frequency of unemployment found among the homicide-parasuicide perpetrators, Starzomski & Nussbaum (2000) have argued that gender roles could play a determining role in explaining why men could see domestic homicide-suicide as an option in the face of economic hardship. Here, the main role of these men as the financial providers for their families is jeopardized, leading them to 'protect' their family members from the fate that would befall them without his support. In this light, Duwe (2004) holds that men are more likely to define their self-worth by their occupations than women. In addition, they are more likely to be ousted from the home following a divorce or separation. The overrepresentation of men among homicide-parasuicides could thus also be interpreted as men having relatively more to "lose" if they become unemployed or if they divorce.

The results further provided support for the psychodynamic perspective holding that both homicide and homicide-suicide arise out of a frustrated personal relationship characterized by domestic violence: both homicide and homicide-parasuicide perpetrators in the current sample were found to have been previously violent towards family members, among which was the victim(s), in approximately one third of the cases.

The findings further showed that homicide-parasuicide perpetrators differed from individuals in the other two groups with regard to a high degree of psychopathology. The results partially supported the psychopathological perspective concerning homicide-(para)suicide: homicide-parasuicide perpetrators were found to have in common with individuals committing parasuicide a high prevalence of mood disorder, but were more likely to suffer from a mood disorder compared to those 'only' committing homicide. Although from a psychopathological point of view it was postulated that homicide-parasuicides would differ from both homicides and suicides with regard to the presence of a psychotic disorder in the perpetrator, differences were only found between the homicide-parasuicide and parasuicide group. The

overall high prevalence of psychotic disorders among both groups can be attributed to the nature of the sample: subjects who are subjected to a court-ordered assessment are thought to deviate psychologically from other accused persons.

## **6 Conclusion**

As both perpetrator and victim die in a homicide-suicide, data sources in previous studies typically lack detailed information on the motives underlying the act, the relationship between the victim and the perpetrator and psychopathological factors involved in the act. This study has overcome this limitation by studying perpetrators who survived these acts. We examined to what extent individual, contextual and situational characteristics of intrafamilial homicide-parasuicides explain the occurrence of intrafamilial homicide-parasuicide relative to an intrafamilial homicide or parasuicide alone. In total, 77 homicide-parasuicides were compared to 430 homicides and 161 parasuicides.

At a meso level, the occurrence of homicide-parasuicide relative to homicide could be attributed to a range of factors, the most prevalent being mood disorder, the killing of multiple victims, preceding suicide threats and finally, premeditation. In addition to answering the research question formulated at the beginning of this chapter, this study has been able to assess several theoretical perspectives on homicide-suicide as outlined in chapter three. The results of this study did not find support for Henry & Short's understanding of homicide-suicide resulting from restrictions to outward aggression in higher socio-economic classes. The results did provide support for psychodynamic perspectives on homicide-suicide: a high degree of domestic violence was found in both homicides and homicide-parasuicides. Psychopathological approaches to lethal violence were partially supported by the data: even though the presence of a mood disorder (most notably depression) was more prevalent among homicide-parasuicide perpetrators than among homicide perpetrators, the same was not found with regard to psychotic disorders. Among homicide and homicide-parasuicide perpetrators, a high degree of psychotic disorders was found, which might be attributable to the nature of the data used in this study.

To sum up, the results show that homicide-parasuicides constitute a different category of lethal violence with regard to demographic, individual and incident characteristics. Subanalyses of intimate partner homicide-parasuicides and child homicide-parasuicides reveal similar differences. Homicide-parasuicide perpetrators were found to differ from the other two groups in the prevalence of mental illness among them, their (symbiotic) attachment to the victim, previously threatening suicide and finally, in premeditating the event.

In the next chapter, the relationship and dynamics between each of these factors will be analysed to a fuller extent.

## Chapter nine

# Homicide-Parasuicide Compared to Homicide and Parasuicide: A Micro Level Approach<sup>56</sup>

### 1 Introduction

The previous chapters have assessed to what extent certain homicide-(para)suicide characteristics can explain the occurrence of homicide-suicide relative to a homicide or (para)suicide by making use of quantitative analyses. These quantitative measures were not, however, able to shed any light on the dynamics underlying homicide-(para)suicides. This leaves a gap in our knowledge on the broader dynamics underlying homicide-suicide events. A qualitative enquiry is often a necessary adjunct to further explore a phenomenon initially identified by quantitative research. Rather than making use of quantitative analyses, then, the current chapter qualitatively compares homicide-parasuicides to both homicides and parasuicides. Examining homicide-parasuicides at a detailed level not only enhances our understanding of the characteristic components of these cases, but also strengthens the validity of the analyses conducted at both the meso and the macro level. Similar to the previous chapter, this study focuses on intrafamilial homicide-parasuicides. In doing so, it aims to answer the following working research question:

*At a micro level, to what extent do the dynamics underlying intrafamilial homicide-parasuicide explain the occurrence of intrafamilial homicide-parasuicide relative to homicide or parasuicide alone?*

Until now, most studies on homicide-suicide have taken on a quantitative approach – many of which have been addressed earlier in chapter two, describing the epidemiology and composition of homicide-suicide events in a particular region. The few qualitative studies that have been conducted in the area of homicide-suicide are based on small data samples, varying from 1 to 4 subjects (Goldney, 1977; Meloy, 1997; Schlesinger, 2000, 2006). Other studies assessing the motives underlying homicide-suicides that relied on larger samples typically lack detailed information (Milroy, 1995b). To date, no qualitative research has been undertaken based on larger samples of individuals engaging in suicidal behaviour following a homicide.

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<sup>56</sup> This chapter is a revised version of:

- Liem, M. (2010) 'Homicide-Parasuicide: A Qualitative Comparison with Homicide and Parasuicide' *Journal of Forensic Psychiatry and Psychology* (forthcoming).

Parts of this chapter have also been published as:

- Liem, M. (2009) 'Homicide followed by Suicide: a unique type of lethal violence' *AIC Reports Research and Public Policy Series*, 104, 25-32.

This study will assess to what extent homicide-parasuicides can be understood through the dichotomy outlined by attribution theory. For the purpose of this study, detailed information on homicides, homicide-parasuicides and parasuicides was retrieved from the same sources employed in the meso-level analysis: namely the Pieter Baan Centre and the Erasmus Medical Centre (for a detailed overview of these sources, see chapter one).

## **2 Theoretical background**

In addition to answering the research question formulated before, this study will empirically assess some of the theoretical notions outlined in chapter three, particularly focussing on the direction of aggressive impulses as outlined by attribution theory. Even though there is a diversity of attributional approaches in different fields of psychology, there are some basic premises that are common to almost all attribution models (Försterling, 1988). First of all, attribution models assume that attributional search is primarily a response to negative and unexpected events (Eiser, 1983). Attribution models hold that cognitions play a central role in behaviour, affect, and experiences. Secondly, these approaches assume that individuals are motivated to seek a causal explanation for events in their physical and social environment. Also, nearly all conceptions of attribution – beginning with Heider (1958) – differentiate between internal attribution (i.e. causal factors that lie in the person) and external attribution (i.e. causal factors that lie outside the person).

Further, what attribution theories have in common are roughly two main functions of attribution: control and self-esteem. The control function refers to common-sense explanations that provide cognitive control for past and present events, as well as anticipating future occurrences. The self-esteem function of attribution entails that positive self-esteem is essential to protect, validate or enhance people's feelings of personal worth. The motivational perspective holds that people protect their self-esteem by making internal attributions for success and external attributions for failure (Hewstone, 1983). In this regard, Försterling (1988) has argued that individuals might come to unrealistic causal judgments because they fear that the 'true' attributions might affect their self-esteem negatively and subsequently cause them to experience negative affects. The tendency to blame others thus has an 'ego-protective' function: to preserve the ego, failures are attributed to others rather than towards oneself (Hewstone, 1983). The tendency to blame oneself for negative events contradicts this function. Previous studies have shown that internal, stable and global cause attributions for negative events are associated with depression (Abramson *et al.*, 1978).

In short, attribution theories assume that individuals are motivated to seek a causal explanation for events in their physical and social environment. Attribution theory differentiates between internal attribution (i.e. causal factors that lie in the person) and external attribution (i.e. causal factors that lie outside the person).

The most extreme form of the internal attribution of negative events results in suicide – the most extreme form of external attribution results in homicide. Because in this model, both types of attribution are considered antagonistic, homicide-suicides are regarded as either homicidal *or* as primarily suicidal (see figure 9.1). In the primarily homicidal event, the perpetrator commits suicide as a reaction to the previous homicide. In the primarily suicidal event, however, the perpetrator incorporates others in his suicidal ideations. This study will examine to what extent homicide-parasuicides can be understood through the dichotomy outlined by attribution theory. In doing so, homicide-parasuicides will be compared to both homicides and parasuicides.

### 3 Methodology

This qualitative study makes use of part of the same data as described in the previous chapter, consisting of three study groups: a homicide-parasuicide group, a homicide group and a parasuicide group. The case studies were selected from two different sources. Both homicide-parasuicide and homicide cases were collected from the Pieter Baan Centre, a forensic psychiatric observation hospital in the Netherlands with a national function. Cases used for this study involved the period 1983-2004. Reports consist of police records, an investigation of the social environment of the accused person, a report on behaviour on the ward, a short medical examination, a psychological and a psychiatric assessment (Koenraadt *et al.*, 2007).

Near-lethal parasuicide cases were retrieved from the department of psychiatry of the Erasmus Medical Centre, Rotterdam. Individuals who commit a serious parasuicide and who require medical care are sent to this hospital. The reports of these consultations include information on socio-demographic, psychopathological and other background characteristics. The reports were drawn from the period 2000-2004. Parasuicides were matched to homicide-parasuicide cases according to gender and family situation.

To select the cases used for this qualitative study, the homicide-parasuicide group was stratified according to the relationship between victim and perpetrator. Subsequently, 10 subjects were selected from the original homicide-parasuicide group using stratified random sampling. The sampling fraction from the homicide-parasuicide group was applied to select subjects from the other two groups to ensure that the distribution in the victim-perpetrator relationship was proportional (table 9.1). The sample of subjects selected for this study reflected the gender, age and ethnicity of individuals in the original cohort (table 9.2).

<b>Table 9.1 Sample of subjects compared to original cohort</b>						
<b>Characteristic</b>	<b>Number (%) in qualitative sample (N=30)</b>			<b>Number (%) in original cohort (N=668)</b>		
	Homicide-Parasuicide	Homicide	Parasuicide	Homicide-Parasuicide	Homicide	Parasuicide
Men	8 (80%)	7 (70%)	7 (70%)	60 (78%)	327 (76%)	118 (73%)
Women	2 (20%)	3 (30%)	3 (30%)	17 (22%)	103 (24%)	43 (27%)
Age > 31	7 (70%)	6 (60%)	7 (70%)	57 (74%)	231 (54%)	119 (74%)
Dutch ethnicity	8 (80%)	8 (80%)	7 (70%)	60 (78%)	278 (65%)	93 (65%)
<b>Total</b>	10	10	10	77	430	161

<b>Table 9.2 Characteristics of the homicide-parasuicide, homicide and parasuicide group</b>			
	<b>Homicide-Parasuicide</b>	<b>Homicide</b>	<b>Parasuicide</b>
Victim(s) <sup>57</sup>	- Partner (3) - Estranged partner (3) - Parent (1) - Child (4)	- Partner (4) - Estranged partner (3) - Parent (1) - Child (3)	- Partner (2) - Estranged partner (4) - Parent (1) - Child (4)
Employment status	- Employed (3) - Unemployed (7)	- Employed (5) - Unemployed (5)	- Employed (5) - Unemployed (3) - Unknown (2)
Mental disorder	- Personality disorder (7) - Depressive disorder (3) - Psychotic disorder (2) - Other (2) - None (0)	- Personality disorder (8) - Depressive disorder (2) - Psychotic disorder (2) - Other (1) - None (0)	- Personality disorder (2) - Depressive disorder (2) - Psychotic disorder (0) - Other (1) - None (5)
<b>Total<sup>58</sup></b>	10	10	10

The information gathered was based on a qualitative assessment of police records and clinical records and was manually analysed. Topic coding was applied to identify recurrent themes across the dataset. Analytical coding (Richards, 2005) was applied with particular attention to blame attribution: cases in each group were qualitatively analysed to assess to what extent either external or internal attribution elements in the *direction of blame* could be identified.

Quantitative and qualitative approaches are complementary, not competitive. First, by means of large-scale quantitative analysis as described in the previous chapter, the existence of important differences between individuals committing a homicide-

<sup>57</sup> In the case of parasuicides, the term 'victims' refers to potential victims, i.e. family members who could potentially be harmed by the parasuicide perpetrator. For example, a woman committing a homicide-parasuicide involving a child was matched to a woman committing a parasuicide who had a child in her care, but did not victimize the child. Similarly, a man killing his intimate partner followed by a parasuicide was matched to a man who had committed a parasuicide without victimizing his intimate partner.

<sup>58</sup> The accumulation of some categories is higher than the total number of 10 subjects in each group, as some individuals were coded several times. For example, some individuals victimized both their partner and the child(ren). Also, some individuals were diagnosed with multiple mental disorders.

parasuicide compared to those 'only' committing a homicide or a parasuicide has been demonstrated. Now, small-scale qualitative analysis will be applied to investigate the detailed processes producing the phenomenon (Philips, 1981).

It has to be noted that the accounts used for this study are based on statements by the individuals concerned. Each person's "truth" in any situation is relative, partial, and dependent on the current context; thus there will always be multiple truths in any situation (Press, 2005).

#### **4 Results**

Below, the dynamics underlying homicide-parasuicide cases will be discussed and compared to both homicides and parasuicides to assess to what extent these cases can be understood through the dichotomy outlined by attribution theory.

##### **4.1 Externalization of blame**

In 2 out of the 10 homicide-parasuicides, the perpetrator blamed the victim for frustrated circumstances. These circumstances typically involved the deterioration of the intimate relationship, the loss of status, the loss of a central position in the household or conflicts over child custody. Homicide-parasuicide perpetrators in this group externalized the blame for these frustrated circumstances, being primarily homicidal in nature. Here, the ensuing (para)suicide followed as a reaction to the preceding homicide, rather than the perpetrator having a premeditated suicide plan. This type of homicide-parasuicide was accompanied by feelings of rejection and anger.

###### *Case A: Homicide-parasuicide involving a man killing his spouse.*

Born and raised in Yugoslavia, Mr. A. moved to the Netherlands when he was 28. He found work as a factory employee but failed to learn Dutch. At the age of 35, he married a girl 16 years his junior in a pre-arranged wedding. In their marriage, three children are born. A. considers himself to be the head of the household, responsible for the well-being of his wife and children. He is authoritarian and expects his family members to adhere to his rules and regulations.

Over time, A.'s health deteriorates. As a consequence, he is on sickness benefit, which he perceives as a failure. Simultaneously, his wife starts to work, speaks Dutch fluently and becomes acquainted with others outside the house. In the meantime, his children become older and less dependent on their father. The independence of his wife and children, his perceived failure as a skilled worker and his wife's social contacts jeopardize his central position as the man of the household. He feels humiliated, rejected and angry. Referring to his wife visiting friends without his consent: "She did not have the right to treat me like that. I did everything for her." He feels powerless and unable to control his wife and children. More and more often, he lashes out violently against his wife, accusing her of adultery.

Mr. A. feels increasingly tensed, afraid that his wife will leave him. One night, she refuses sexual intercourse. He interprets her refusal as evidence of her adulterous behaviour and as soon as she is asleep, he stabs her several times. "For a moment, I felt relieved [...] She shouldn't have rejected me." When he comes to realize that she is dead, he stabs himself: "I did not want to live without her. She was mine and mine alone [...] I wanted to die, too." He is found by the police and remains in a coma for several months.

At the observation hospital, he is diagnosed with a mixed personality disorder with narcissistic and dependent traits.

[Male, Yugoslavian, 53]

In this case, A. primarily identified himself as a husband, father and as the head of the family. This identity became increasingly important to him when he lost his identity as a skilled worker. In this process, he became more and more emotionally dependent on his wife, which he expressed in feelings of entitlement and possession. With regard to the latter two factors: entitlement and possession, homicide-parasuicides resemble homicides not ending in a parasuicide. Among the 10 homicide cases selected for this study, in 4 the perpetrator blamed the victim for having been wronged:

*Case B: Homicide involving a man killing his spouse*

Mr. B. is a 35-year old male. He met his wife, R., the future victim, when he was 24 years old. R. was known to be a quiet, introvert woman. Soon, they move in together and started their own company. R. gives birth to a son. B. considers himself to be the perfect husband and father. Their marriage deteriorates when R. becomes more independent and develops into a self-conscious woman. When R. expresses the wish to divorce, B. has to sell the company they built up together. B feels very humiliated over this loss. These feelings of humiliation increase when he loses custody over his son. He starts to terrorize R., threatening to kill her and damaging her goods, blaming her for "[...] taking my son away from me." He considers her responsible for his public humiliation associated with the loss of 'his' company, the loss of 'his' wife and the loss of 'his' son. After having developed a detailed plan, he kills her and subsequently buries her at a prepared site.

"She lied to me, she was a hypocrite [...] she had to die, because I finally wanted some rest and I wanted my son to come back to me."

He is admitted to the forensic observation hospital, where he is diagnosed with a narcissistic personality disorder.

[Male, Dutch, 35]

Although cases A and B show signs of resemblance concerning the perpetrator's primarily homicidal aim, the perpetrator in case B does not exhibit the same degree of emotional dependency on the victim compared to the perpetrator in case A. Although in this group the perpetrators primarily directed aggressive impulses towards the one

they held responsible for the noxious circumstances, sometimes the locus of blame was shifted to someone closely associated with the one deemed responsible. These cases typically involved the killing of a child in a so-called Medea complex: the perpetrator punished his estranged partner by harming their mutual children. In such cases, the victims were regarded as an instrument to harm the 'real' wrongdoer. Here, the parasuicide was not aimed towards the self, arising out of guilt or remorse, but rather aimed to hurt the (estranged) partner.

*Case C: Homicide-parasuicide involving a father killing his child*

C. is a 40-year old sales manager who was married to P. Together they had an 8-year old daughter. Over time, the relationship deteriorates: C. blames P. for not being accommodating; P., on the other hand, thinks that C. is being stubborn and rigid. C. perceives his parents-in-law to be intervening in their relationship and accuses them of taking away his daughter. As the relationship deteriorates, C. starts to physically abuse P., until she leaves him and starts divorce proceedings. Subsequently, he threatens to kill her, repeatedly calls her, follows her when she leaves her house, observes the office where she works and damages her car.

In the divorce proceedings, child custody over their daughter is assigned to P. The next day, in a narcissistic rage, he kills his daughter to retaliate against P. and his parents-in-law: "They could not have what belongs to me." Subsequently, he attempts to commit suicide by slashing his wrists: "So they would know that it was their entire fault." He survives and ends up in the hospital. Police investigations reveal a suicide note dated one year prior to the offence, in which he dictates what his and his daughter's funeral should look like.

While in the forensic hospital, he speaks of his daughter as if she were an object. He blames the destruction of this 'object' on his ex-wife and his parents-in-law: "They ruined our marriage and tried to take her away from me." He feels angry and wronged. He perceives threatening his ex-wife and his parents-in-law as a logical reaction to "[...] what they did to me." It does not dawn on him that he has hurt others by his actions: "That is their problem, not mine."

He is diagnosed with a narcissistic personality disorder.

[Male, Dutch, 40]

#### **4.2 Internalization of blame**

In 1 out of the 10 homicide-parasuicides the perpetrator internalized the blame for frustrated circumstances to the self. In case D described below, the homicide-parasuicide was accompanied by feelings of depression, hopelessness and helplessness. Here, the homicide-parasuicide was primarily suicidal in nature. The victim was considered as a part of the perpetrator that could not be left behind.

*Case D: Homicide-parasuicide involving a mother killing her child*

D.'s childhood was characterized by sexual abuse by her grandfather, a disturbed relationship with her parents and bullying by her peers. At an early age, she develops an eating disorder. Aged 16, she left the parental home and moved in with her boyfriend. Both became involved in frequent drug and alcohol use. Under the influence of alcohol, her boyfriend abused her repeatedly. They then broke up; D. was admitted to a rehabilitation clinic and succeeded in staying clean until she met a new man, whom she moved in with. In the relationship, he physically abused her. After some time, she starts using drugs once again. This cycle of new relationships, drug use and rehabilitating is repeated several times, until she gives birth to a daughter. The child's father leaves her soon after the child's birth.

For D., her 3-year old daughter encompasses "everything that is good in this world." Meanwhile, she does not succeed in staying clean. Her debts increase and she is forced into prostitution by one of her drug dealers in order to pay off her debt. She confides her suicidal ideations to her mother. When her mother expresses concern over the young child, D. tells her: "She will be safe with me." D.'s relationship with her daughter has a symbiotic character. She perceives her daughter to constitute a part of her: "Me and my daughter, we are one person." The situation deteriorates when she moves to another city and lives isolated from former friends and family. The dependency on her daughter increases as her social isolation increases. Suicidal ideations arise when she is faced with a lack of money combined with increased alcohol and drug use. She cannot bear the thought that her suicide would imply an end to the relationship with her daughter. When the washing machine breaks down and she finds herself unable to replace it, D. kills her daughter and subsequently attempts to commit suicide. In the suicide note found at the scene she writes: "[...] I couldn't cope any more [...] We want to be together."

She is diagnosed as suffering from borderline personality disorder, substance abuse disorder and major depressive disorder.

[Female, Dutch, 34]

This case is characterized by a depressive attributional style, assigning blame for the failure to the self rather than to others or outside factors. These characteristics were also present among parasuicides not being accompanied by homicide. Among the parasuicides, in the majority of cases the parasuicide perpetrator blamed the self for noxious circumstances. What differentiated case D above from other parasuicides, however, are feelings of (extreme) dependency on the victim. In the parasuicides included in this study, the potential victim was not regarded as constituting a part of the perpetrator, but rather as an independent individual.

*Case E: Parasuicide involving a mother with a child*

When E. was 11 years old, she was sexually abused by her mother's boyfriend, as a result of which she spent the remainder of her childhood in a children's home. In adolescence, she was diagnosed with and treated for a major depressive disorder. Aged 15, she attempted suicide for the first time. Several years later, she met K., with whom she started a relationship. Soon after, she gave birth to a daughter. K. engaged in criminal behaviour and is incarcerated. She raises her daughter by herself, making her feel increasingly hopeless and depressed. "It seems that everything I do, fails. I work, but I do not make enough money. I am not a good mother."

When her daughter is diagnosed with a learning disorder and needs additional care and additional schooling, E.'s depression increases. "I do not deserve to have a daughter. I cannot offer her what she really needs [...]", referring to the lack of a father for the child and a lack of money. She attempts suicide when her daughter is at school, leaving behind a suicide note to her parents with instructions as to how to take care of her daughter.

In the hospital, she is diagnosed with recurrent major depressive disorder.

[Female, Dutch, 24]

In this case, the potential victim (i.e. the child) was regarded as an autonomous individual, rather than as an extension of the perpetrator such as observed in case D above. A lack of (extreme) dependency between perpetrator and other family members (most notably children) restricts the perpetrator in taking others along in his/her suicide plans.

**4.3 A total solution**

Although some homicide-(para)suicides can indeed be understood as either primarily homicidal or as primarily suicidal, a part of homicide-(para)suicides did not easily fit into this dichotomous division. In 7 homicide-parasuicide cases the attribution of blame was less clear-cut, blurring the otherwise clear lines between internal and external blame attribution. Among these homicide-parasuicide cases, the perpetrator considers homicide-suicide to be the primary solution to an intolerable situation, rather than opting for *either* homicide *or* suicide. There is no developed suicide plan, but rather a developed homicide-suicide plan. Either committing homicide or suicide is never consciously considered. Feelings of dependency, sometimes evolving to such an extent that one can speak of a so-called symbiotic relationship, are central to these cases:

*Case F: Homicide-parasuicide involving a man killing his ex-partner*

Mr. F. is a 34-year old man, who works as a computer technician. From the moment he meets P., the future victim, he adores her. They enter into a relationship and after a week, he plans to move in with her. The relationship lasts for several months, until P. decides that they are moving too fast and

wishes to end the relationship. F., however, continues to yearn for her, longing for a situation in which they would 'melt' together: "[...] so we could be one being, one soul." In his mind, they had a perfect relationship in which they did everything together. Nothing could destroy this idyllic perception of her, not even P.'s decision to end the relationship.

F. fails to recognize that their relationship is over. He continues to send her flowers and gifts. F. spends his entire day thinking about P., not being in contact with others. He calls in sick to spend his days in her house when she is not at home, where he smells her clothes and lies in her bed. He takes some of her possessions, touching them and cherishing them: "So I could feel her, even if she was not with me."

After she confronts him once more with the fact that their relationship is over, he develops a homicide-suicide plan. Following this plan, he waylays her when she comes home from work, after which he strangles her, puts her on her bed and lies down next to her. "I wanted us to be together in a perfect world." He attempts suicide, but is found unconscious by the police three days later.

In the forensic observation hospital, he is diagnosed with dissociative disorder.

[Male, Dutch, 34]

Here, committing suicide "alone" is not considered to be an option: this would destroy the relationship between the victim and the perpetrator forever. Rather, homicide-suicide is perceived to be the only solution to continue the intimate bond in death. Here, the perpetrator's self-concept is primarily determined by the intimate relationship. In this light, the victim's role is to complete the perpetrator's identity and self-concept. When this self-concept is threatened by a(n) (abrupt) breakdown in the relationship, he attempts to restore his identity by restoring the (symbiotic) relationship with his estranged partner. These attempts include stalking behaviour, aimed to regain proximity to the symbiotic counterpart. Eventually, symbiosis is regained by killing the object that constitutes part of his identity – namely the victim – in a homicide-suicide. In this way, the relationship that cannot be maintained in life can be maintained in death. Related to this self-concept of being first and foremost an intimate partner is the perpetrator's self-concept of a central figure, the cornerstone in his family. When he threatens to lose this position, he kills every one he perceives to be dependent on him.

*Case G: Homicide-parasuicide involving a man killing his spouse and three children*

G. is a 40-year old man married to V. In his adolescence, he attempted suicide on several occasions. In the relationship with V., three children are born. G. is very proud of his family and tends to romanticize his family life: he primarily identifies himself as a husband and father and considers himself to be the focal point of 'his' family and the one responsible for their well-being.

When the family experiences financial problems and the relationship with V. deteriorates, his position as the central figure of the household is challenged; he does not know how to deal with the increasing problems and feels stressed and anxious: "My wife, my family [...] they seemed to slip away from me." As a result of these problems, he temporarily stops working.

When his wife suggests a divorce, he develops a detailed homicide-suicide plan: "I did not see any other way out. In this way, we could all go together [...] still be a family together." He shoots his wife and his children, but survives a suicide attempt with the same gun.

G. is diagnosed with major depressive disorder and coexisting generalized anxiety disorder.

[Male, Dutch, 40]

These types of events have also been termed 'apocalyptic suicides', as these acts are believed to encompass, as Baechler (1975) put forward: "The final solution [...]: the pure and simple suppression of all data, including the subject" (p. 14). According to this view, these acts occur as a result of a rational decision-making continuum such as encountered in case G above. Such a decision-making continuum is also related to what Wertham (1937) originally termed 'the catathymic crisis', beginning with a fixed idea to commit a violent act as the only means to solve the intolerable situation, accompanied by increased emotional tension and a mounting pressure to act (Schlesinger, 2000). From a psychodynamic point of view, the catathymic crisis arises in order to counter mental disorganization. Here, G. carried out the violent act as a defence mechanism to protect his self-concept as the provider of the family and the head of the household. Doing away with the "total-all" allowed him to restore this self-concept.

To sum up, among the 10 homicide-parasuicide reports 2 cases were classified as arising out of external blame attribution. This group was characterized by perpetrators who directed their aggressive impulses towards another person. In these cases, the victim was blamed for noxious circumstances. The homicide-parasuicides in this group were primarily homicidal in nature. Here, the suicide typically followed as a reaction to the preceding homicide. These homicide-parasuicides resembled homicides not followed by a suicide. Among the 10 homicide cases, in 4 the perpetrator blamed the victim for negative events. Among perpetrators in both groups, feelings entitlement and possession were pronounced. Differences between the two groups of perpetrators, however, were found in the degree of emotional dependency on the victim, in which homicide-parasuicide perpetrators were found to exhibit a high degree of dependency.

Among the 10 homicide-parasuicide perpetrators, in 1 case, clear signs of internal blame attribution could be discerned, where the individual primarily blamed herself for frustrated circumstances. Aggressive impulses arising from this frustration were primarily directed towards the self, rather than towards others. Here, the victim was

'taken along' in the suicide of the perpetrator. This homicide-parasuicide resembled non-homicidal parasuicides in which the blame for negative circumstances was typically internalized. This type of attribution was characterized by a depressive attributional style. The two groups were found to differ, however, in the degree of emotional dependency on other family members.

The analyses finally revealed that in 7 out of the 10 homicide-parasuicide cases, there were no clear signs of either internal or external attribution. Rather, the homicide-parasuicides in this group were committed as a 'total solution'. In this group, homicide-parasuicide did not follow out of external or internal attribution of blame, but rather constituted a separate phenomenon. In this group, far-reaching emotional dependency on the victim(s) was pronounced. Profound emotional dependency on the victim was not found among the group of homicides and parasuicides.

## **5 Discussion**

### **5.1 Limitations**

The narratives which people construct to make sense of their thoughts and experiences offer an alternative perspective for researchers and policy makers. One of the major strengths of this study is that it has allowed for the analysis of the dynamics underlying homicide-parasuicides. While quantitative approaches provide important information on the group as a whole, because of the nature of the approaches no "voice" is given to the perpetrators and the situations in which they are involved, thereby obscuring the underlying processes. By analysing the material in a qualitative way, an attempt has been made to overcome this shortcoming.

The design in the study at hand, however, is deductive and relies heavily on the authenticity and quality of the interview situation, which is impossible to replicate. In addition, individuals other than the researcher carried out the interviews. In the forensic hospital, interviews were conducted by forensic psychologists and psychiatrists, whereas police records were compiled by police officials. At the Erasmus Medical Centre, interviews with suicidal individuals were conducted by psychiatrists, but for mental health and physical health purposes rather than for criminal justice purposes. This could have resulted in a particular selection of available information on the individual concerned. The richness of detail included in the reports, however, made a thorough analysis possible.

Further, the study at hand has relied to a great extent on data from a forensic observation hospital. As mentioned before, subjects sent to a psychiatric hospital are thought to deviate psychologically from other accused persons (Farooque & Ernst, 2003; Marleau, 1999; McGrath, 1992). This might have caused an overrepresentation of mentally-ill perpetrators in the sample.

### **5.2 Findings**

The purpose of this study was to assess to what extent homicide-parasuicide could be understood as a dichotomous phenomenon outlined by attribution theory. In pursuing

this aim particular attention was paid to both internal and external blame attribution. Based on an empirical qualitative analysis, the findings showed that homicide-parasuicides can rather be understood as consisting of three groups: one being primarily homicidal resulting from external blame attribution, one being primarily suicidal resulting from internal blame attribution and one constituting homicide-suicide as a 'total' solution. The findings further suggest that interpersonal dependency is a determining factor in explaining why some individuals choose to kill both others and themselves relative to 'only' killing others and 'only' killing themselves.

### **Reflection on the theoretical background**

In the first group of homicide-parasuicides, the blame for frustrated circumstances is put on the victim. Here, external blame attribution serves to rectify an injustice when one's self-esteem is threatened (Nestor, 2005). In the study at hand, perpetrators of this type of homicide-parasuicide were characterized by narcissistic personality features. Having such a wildly favourable self-view, individuals with narcissistic personality features are more sensitive to criticism than those with low self-esteem (Stucke & Sporer, 2002). To preserve self-esteem, causes of frustrations are attributed to others rather than towards the self. Aggression towards others thus aims to rectify an injustice, a perceived wound to self-esteem (Nestor, 2005). In killing the victim, the perpetrator attempts to preserve his self-esteem. These cases may or may not end in a suicide. Homicide-parasuicides in this category are differentiated from homicides not ending in a parasuicide by the presence of dependency on the victim. In case A, for example, suicidal behaviour arose in the perpetrator after realizing that with the hate object, the love object was killed simultaneously. Unable to live without the victim, the perpetrator commits suicide so that unification with the loved object can be accomplished. The finding that dependency plays a determining role in homicide-suicide relative to other homicides is in line with the psychopathological approaches outlined in chapter three. In other cases, such as case C, the perpetrator committed an ensuing parasuicide in order to hurt a third party. Although from a psychopathological point of view, the self-protective mechanism in narcissism contradicts the occurrence of suicidal behaviour, in the study at hand it was shown that homicides motivated by narcissistic drives may well be accompanied by suicidal behaviour. This type of suicidal behaviour can be considered as the displacement of aggression, also termed 'extraggression' (Weinacker, 1999), referring to aggression being primarily aimed at the environment. The parasuicide follows out of aggressive impulses directed toward the other.

In the second group of homicide-parasuicides, the blame for negative circumstances is attributed to the self and is accompanied by depression and suicidal ideation. In suicide literature, these characteristics are also referred to as being symptomatic of hopelessness in depression (Kerkhof, 2007). The primary aim of the depressed homicide-parasuicide perpetrator in this category is suicide rather than homicide. Dependency on the victim differentiates homicide-parasuicides from parasuicides not

preceded by a homicide. Here, the victim is 'taken along' in the suicide of the perpetrator when (s)he comes to realize there is no one else to take care of the victim after (s)he has committed suicide. The victim is, as it were, integrated in the perpetrator's self; the perpetrator and the victim being symbiotically connected to one another. The development and maintenance of the symbiotic relationship is facilitated by (increasing) social isolation. This is consistent with previous international studies on homicide-suicide reporting social isolation as a contributing factor (Cohen *et al.*, 1998; Goldney, 1977; Haenel & Elsässer, 2000). As has been outlined in chapter two, besides homicide-parasuicides involving children, some studies have also mentioned similar feelings of dependency and feelings of responsibility towards the victim in cases of intimate partner homicide-suicides among ailing spouses. Here, the female victim is viewed as dependent on the perpetrator for her very survival, as the perpetrator typically assumes a protective, care-giving role. When the perpetrator's health fails and he feels to unable to provide for the victim, he decides to 'take her along' in his suicide (Berman, 1996; Cohen, 2000).

The third group arising from the research material consisted of homicide-parasuicide cases in which the perpetrator considered homicide-suicide to be a total solution; either 'only' killing the victim or committing suicide 'alone' is never seriously considered. In these cases, the perpetrator's self-concept is strongly determined by those around him, such as an intimate partner and/or children. Feelings of dependency – sometimes evolving to such an extent that there is a symbiotic relationship between the perpetrator and the victim(s) – prevail. Because the perpetrator's self-concept is contingent on others, his self threatens to disintegrate when the (dependent) relationship with others breaks down or when those who provide meaning to his identity threaten to leave him. Stalking behaviour, such as that occurring in case F, serves as a means to regain proximity to the symbiotic counterpart, in addition to providing control when the self threatens to disintegrate (Harris Johnson, 2008). In this light, the final outcome in this process – the homicide-parasuicide – has an ego-protective function, as it serves to preserve the perpetrator's concept of self as an intimate partner and/or the head of the household. In these cases there is no developed suicide plan, but rather a developed homicide-suicide plan through which the symbiotic bond with the victim(s) can be restored or maintained.

Even though, as this study outlines, homicide-parasuicide does not constitute a uniform phenomenon, certain aspects are found to be present in the majority of the analysed cases. These aspects concern both conditional factors as well as triggers preceding the event. Common conditional factors among homicide-parasuicides constitute a deterioration of the intimate relationship, problems relating to child custody following divorce, a deterioration of mental health and/or financial problems. In line with previous research, in all cases there was an increase in stressors in the period preceding the event. This has a negative effect on the individual's mental state. The final 'trigger' leading up to the event ranges from a(n) (abrupt) notification of divorce or separation, judicial decisions related to child custody, the refusal of sexual

intercourse or the acute worsening of the financial situation. Given the diversity and unpredictable nature of these triggers, prevention measures should be focused on the underlying, conditional factors. In the next chapter, more attention will be devoted to the possibility of modifying and controlling these conditional factors.

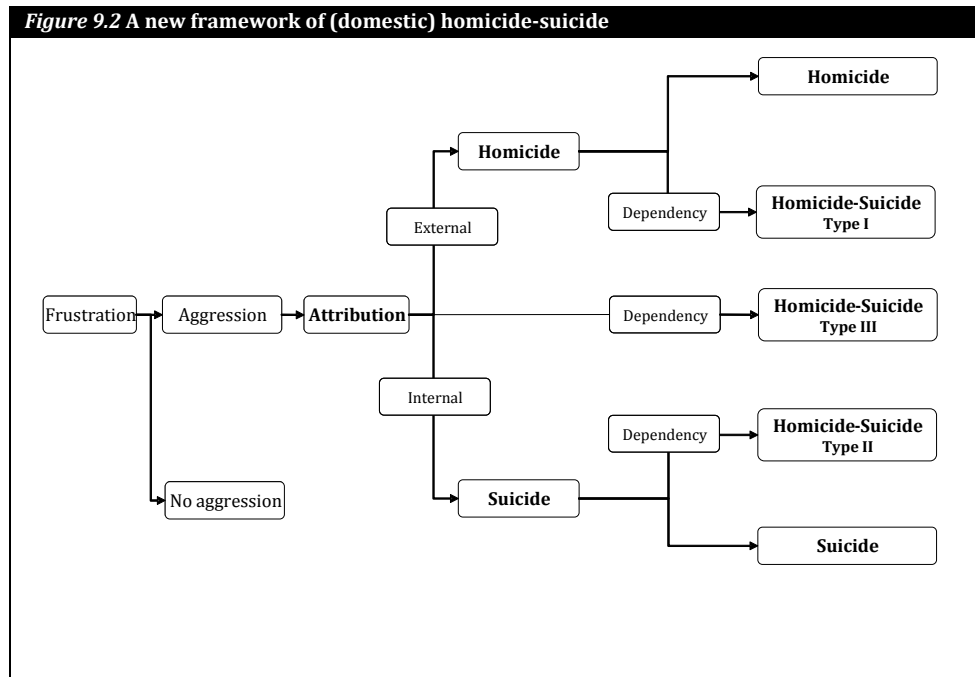
## **6 Conclusion**

This study aimed to qualitatively assess to what extent the dynamics underlying intrafamilial homicide-parasuicide explain the occurrence of these acts relative to homicide or parasuicide alone. In addition, this study sought to assess to what extent homicide-parasuicides could be understood as a dichotomous phenomenon outlined by attribution theory. In total, 10 subjects were retrospectively selected from a homicide-parasuicide cohort, 10 subjects from a homicide-only cohort and 10 subjects were selected from a parasuicide cohort. The gathered information was based on a qualitative assessment of police records and clinical records and was manually analysed.

The findings showed that in all groups, interpersonal dependency on the victim(s) was prevalent. Such a dependent relationship between victim and perpetrator differentiated homicide-parasuicides from homicides and parasuicides alone, which lacked such dependency traits. The results further provided only partial support for the attribution theory approach to homicide-suicide. Even though a proportion of the homicide-parasuicide cases under study could be classified as either primarily homicidal (resulting from external blame attribution) or primarily suicidal (resulting from internal blame attribution), the finding showed that a different subgroup of homicide-parasuicide exists in which the act is regarded as a total solution.

### **6.1 A new framework of homicide-suicide**

Based on the findings from the chapter at hand as well as the findings from the previous empirical chapters, the schema outlined in figure 3.1 can be adapted into the following schema (see figure 9.2). Here, rather than considering homicide-suicide as a variation of homicidal *or* suicidal behaviour, this schema acknowledges the existence of a third group of homicide-suicide.



In this framework frustration arises when the perpetrator is presented with negative stimuli, ranging from the loss of or rejection by a sexual partner, loss of control over the family situation, a deterioration of physical and/or mental health, to the loss of employment or the loss of (masculine) status. These 'noxious' situations correspond to what Robert Agnew (1992) has termed 'personal strain' as discussed in chapter three. The frustrated situation results in emotional arousal, which in turn can lead to aggressive responses or to non-aggressive responses. Consecutively, the individual has the choice between action or inaction. If frustration leads to aggressive responses, according to the original attribution theory, the blame for these negative circumstances can either be externally or internally attributed.

The most extreme form of external blame attribution leads to physically violent behaviour, under severe circumstances resulting in homicide. Here, the victim is blamed for the adverse situation. It has to be noted that the external locus of causality by itself is insufficient to produce anger. The external agent must be a person rather than some impersonal environmental force and the victim's role in causing the bad event must be seen as unjustified. As mentioned before, this type of blame attribution in homicide is also associated with the role of narcissism, resting on the notion that threats to self-esteem generate anger and aggressive behaviour towards others. In its most extreme form, other-directed aggression results in a homicide, which may or may not end in a suicide. Rather than feelings of guilt and shame leading to a subsequent suicide, the findings in this chapter revealed that feelings of dependency constitute the main determining factor in a homicide being followed by suicidal behaviour. As can be derived from the literature (Henry & Short, 1954) and from the

case studies presented in this chapter, suicidal behaviour may arise in the perpetrator after realizing that with the hate object, the love object as been simultaneously killed. Unable to live without the victim, the perpetrator chooses to commit suicide. In this way, unification with the loved object can be accomplished. The suicide thus aims to restore the dependent relationship that could not be maintained in life.

In figure 9.2 this type of homicide-suicide is indicated by *type I*. Suicide is less likely to occur if the relationship between perpetrator and victim was of a non-dependent nature. Type I homicide-suicides most commonly involve (estranged) intimate partners as well as the majority of extrafamilial homicide-suicides. Among the latter type, the homicide is typically committed in the course of a robbery or as a result of a fight between non-family members. The suicide following the homicide is not committed out of dependency, but rather out of fear of the (judicial) consequences. By committing suicide, the perpetrator attempts to regain control over an uncontrollable situation. A third variation of type I homicide-suicides constitutes child homicide-suicides in which the primary target of aggression is the (estranged) partner. Here, suicide is not necessarily a reaction to the preceding homicide, but rather an additional means of revenge towards the perceived harmdoer. Suicide, in this view, constitutes a homicide turned inwards (Rochlin, 1973; Shneidman, 1989). The common component of type I homicide-suicides is the primarily homicidal nature of the act. Suicide follows as a reaction to the preceding homicide.

Conversely, the most extreme form of self-directed aggression leads to suicide. Here, the primary aim of the depressed homicide-suicide perpetrator is suicide rather than homicide. In the case of internal blame attribution, the victim is 'taken along' in the suicide of the perpetrator when he comes to realize that there is no one else to take care of the victim after he has committed suicide. The perpetrator's perception of the victim as being dependent on him is a predominant factor in these cases. In figure 9.2 this type of homicide-suicide is indicated as *type II*, typically involving children in child homicide-suicides as well as ailing spouses in intimate partner homicide-suicides. Not infrequently, the victim is perceived to be integrated in the perpetrator's self, the perpetrator and victim being symbiotically connected to one another. The perpetrator is less likely to take others such as a partner and/or child 'along' in their suicide if the relationship does not have such profound dependency traits.

As has been outlined above, homicide followed by suicide challenges the dichotomous notion of the direction of aggression as outlined by attribution theory. In a considerable proportion of cases, blame for noxious circumstances is neither externally nor internally attributed. Rather, in these cases, the perpetrator considers homicide-suicide to be a total solution; either 'only' killing the victim or committing suicide 'alone' is not considered. This type of homicide-suicide is indicated as *type III* in figure 9.2. Here, feelings of dependency are also prevalent. Intrafamilial homicide-suicide prevails in this category: in familicides-suicide, for example, the perpetrator considers himself to be dependent on his family members, but also perceives himself to be central to and responsible for the well-being of the family – when the family threatens to disintegrate, he resorts to lethal violence. This category also includes

intimate partner homicide-suicide, and child homicide-suicide: there is no developed suicide plan, but rather a developed homicide-suicide plan. A small proportion of extrafamilial homicide-suicides could also be grouped in this category. Rather than dependent-protective aims, the extrafamilial homicide-suicide perpetrator in this group is motivated by revenge. It can be argued that a *willingness* to die, rather than a *wish* to die in the course of rectifying the harm caused lies at the heart of these cases.

In the next chapter, these results as well as the results generated from the literature analysis, the theoretical analysis and previous empirical studies will be put into a broader perspective.

**PART IV**  
**Integration of Concepts**



## Chapter ten

# Conclusion

Homicide followed by the suicide of the perpetrator constitutes a neglected phenomenon in the scientific realm. This study aimed to increase our knowledge of homicide-suicide, thereby making progress in at least four ways. Firstly, reviews were conducted on previous empirical studies of homicide-suicide as well as previous theoretical notions connected with the homicide-suicide phenomenon. Secondly, this study filled the lacuna regarding the nature and incidence of homicide-suicide in the Netherlands and put these findings into an international perspective. Thirdly, this study advanced the state of knowledge by not only assessing homicide-suicide in isolation, but by comparing these acts to both homicide and suicide, in this way coming to an understanding of which characteristics explain the occurrence of homicide-suicide relative to other types of lethal violence. Fourthly, this study made progress by empirically assessing existing theoretical assumptions on homicide-suicide (see p. vii for an overview).

This final chapter will firstly provide a summary of the findings, in this way answering the research questions underlying this study. The summary will then be followed by a discussion of the findings. Subsequently, several implications with regard to the research findings will be presented as well as several directions for future research.

### 1 Summary of the findings

#### 1.1 Review of homicide-suicide

To outline the status quo of research on homicide-suicide both at an empirical and theoretical level, two literature reviews were conducted. The first review focused on the empirical background of the homicide-suicide phenomenon and found that, in spite of variations in the homicide and suicide rate independently, the rate of homicide-suicide has remained fairly stable throughout time. The findings of this review further revealed that over time, several classification systems for homicide-suicide have been put forward, Marzuk *et al.*'s (1992) being the one most commonly used. This schema has been used in further assessing the characteristics of subtypes of homicide-suicide according to the relationship between victim and perpetrator, including intimate partners (uxoricide-suicide), children (filicide-suicide), multiple family members (familicides-suicide), parents (parricide-suicide), siblings (siblicide-suicide) and those outside the family (extrafamilial homicide-suicide). The findings of this review further show that homicide-suicide mainly occurs in families. In the

categories child homicide-suicide, intimate partner homicide-suicide and familicide-suicide, two types of homicide-suicide perpetrator seem to emerge: one based on primarily suicidal motivation, the other being primarily homicidal in nature. In the primarily suicidal event, the victim is, as it were “taken along” in the suicide of the perpetrator. In the primarily homicidal event, on the other hand, children and/or partners are killed in order to re-establish control over the (family) situation or as a means to retaliate against an (estranged) intimate partner. Suicide following the homicide of parents and/or siblings rarely occurs. The motivation underlying extrafamilial homicide-suicide appears to be based on revenge or rectification and seem to be drastically different from intrafamilial homicide-suicide.

A review of the theoretical literature on homicide-suicide showed that there are relatively few studies providing explicit, rather than inferred, explanations for the occurrence of homicide-suicide relative to homicide or suicide alone. Rather, existing theories provide insight into different stages of the homicide-suicide process, from the origin of aggression, the direction of aggression to the outcome of aggression. Neurobiological theories and strain theories recognize the similarities in origin of both homicidal and suicidal behaviour. However, these theories fail to clarify under which circumstances an individual chooses to commit one type of lethal violence over the other, let alone to explain the occurrence of a homicide-suicide. In this review, particular attention has been paid to attribution theories and the strain theory of lethal violence, which explicitly outline factors related to the occurrence of both other-directed and self-directed violence. Following on from this, theories have been analysed that provide explicit, rather than inferred, explanations for the occurrence of homicide-suicide relative to a homicide or suicide alone. These theories perceive homicide-suicide as the secondary outcome of aggressive impulses. From this perspective, homicide-suicide constitutes a variation of homicidal *or* suicidal behaviour. In sum, so far, no comprehensive theoretical approach to the homicide-suicide phenomenon has been developed. Rather, from a current theoretical point of view homicide-suicide constitutes a combination of both homicide and suicide, both types of lethal violence resulting from aggressive drives. Existing theoretical assumptions on homicide-suicide have been assessed by means of empirical research.

## **1.2 Description of homicide-suicide**

The second aim of this study was to provide an overview of the nature and incidence of homicide-suicide in the Netherlands in the past decades, to assess the differences in subtypes of homicide-suicide and to put these findings in an international perspective. Homicide-suicide in the Netherlands was assessed by making use of national data. In the Netherlands, in a period of fifteen years, homicide-suicide accounted for approximately 9 deaths annually. In this period, the homicide-suicide rate remained fairly stable. Homicide-suicide victims mainly involved male perpetrators, who killed their (estranged) partners and/or children, a finding that emphasizes the domestic nature of homicide-suicide. Subtypes of homicide-suicide differed considerably with regard to event, victim and perpetrator characteristics. Homicide-suicide

*characteristics* in the Netherlands resemble homicide-suicide in other countries, notably Switzerland and the United States. The homicide-suicide *rates* in the two other countries, however, were found to be substantially higher than in the Netherlands. One possible explanation for these differences can be found in the availability of firearms in the home. Whereas in the Netherlands, private firearm possession is relatively low, in Switzerland and the United States firearm possession is more widespread. A firearm might not only lower the threshold for acting out violently, but also increases the lethal nature of such assaults. In addition to assessing the national and international variation of homicide-suicide and its overall characteristics, this study also empirically examined two specific types of homicide-suicide: those occurring within the family versus those occurring outside the domestic sphere. Given the rare occurrence of the latter type of homicide-suicide in the Netherlands, data were drawn from the United States, where this type of homicide-suicide occurs more frequently and could thus be used for statistical analyses. Most extrafamilial homicide-suicides involved acquaintances or others known by the perpetrator. In spite of various differences between the two groups, the findings indicate that the perpetrators in both groups have a number of strenuous factors in common, which is in line with the strain theoretical view. Whereas the perpetrators of intrafamilial homicide-suicide seem to be confronted with chronic strenuous circumstances, extrafamilial homicide-suicides are more likely to be motivated by acute strain. The differences between chronic and acute strain are also reflected in the nature of the suicidal acts.

### **1.3 Comparing homicide-suicide to homicide and suicide**

Thirdly, this study aimed to come to an understanding of which homicide-suicide characteristics can explain the occurrence of homicide-suicide relative to homicide or suicide alone. Three levels of analyses were applied, including macro level, meso level and micro level analyses (see table 1.2). In the macro level approach, all homicide-suicide in the Netherlands in the period 1992-2006 were compared to both homicide and suicide based on national statistics. The results showed that homicide-suicide differs significantly from both homicide and suicide with regard to socio-demographic characteristics and event characteristics.

The main limitation of using this type of national statistic is the relative absence of detail which is available on these cases. The meso level of this study overcomes this drawback by making use of homicide-*parasuicide*: homicide followed by the failed suicide of the perpetrator. Making use of homicide followed by a failed suicide allows for the extraction of psychopathological and other background characteristics, including the motivation underlying the event. Both homicide and homicide-*parasuicide* cases were retrieved from the Pieter Baan Centre, a forensic psychiatric observation hospital in the Netherlands. Serious *parasuicides* that were not accompanied by homicidal behaviour were retrieved from the department of psychiatry of the Erasmus Medical Centre. The results show that the occurrence of homicide-*parasuicide* relative to homicide could be attributed to a range of factors,

the most prevalent being mood disorder, the killing of multiple victims, preceding suicide threats and finally, premeditation. Subanalyses of homicide-parasuicide involving women and children revealed similar differences.

Finally, in the micro-level approach the differences in dynamics underlying homicide-parasuicide were assessed and compared to the dynamics involved in both homicide and parasuicide. This was done by making use of the same data sources employed in the meso-level approach. Instead of applying quantitative methods, in the micro-level approach qualitative research methods were used.

Based on empirical qualitative analysis, the findings suggest that interpersonal dependency is a determining factor in explaining why some individuals choose to kill both others and themselves relative to 'only' killing others and 'only' killing themselves. According to these findings, a new framework of homicide-suicide can be proposed. Rather than considering homicide-suicide as a variation of homicidal *or* suicidal behaviour, this schema acknowledges the existence of a third group of homicide-suicide. Homicide followed by suicide challenges the dichotomous notion of the direction of aggression as outlined by attribution theory. The renewed framework (presented in chapter nine) recognizes the existence of a third stratum of homicide-suicide in which the perpetrator considers the act to be a total solution; either 'only' killing the victim or committing suicide 'alone' is not considered. Here, feelings of dependency on the victim prevail. In this framework frustration arises when the perpetrator is presented with negative stimuli. The frustrated situation results in emotional arousal, which in turn can lead to aggressive responses or to non-aggressive responses. If frustration leads to aggressive responses, according to the original attribution theory, the blame for these negative circumstances can either be externally or internally attributed. In its most extreme form, external blame attribution has the potential to lead to homicide, which may or may not be followed by suicide. Rather than feelings of guilt and shame leading to a subsequent suicide (as suggested by previous studies), the findings in this chapter revealed that feelings of dependency constitute the main determining factor in a homicide being followed by suicidal behaviour. Here, the subsequent suicide aims to restore the dependent relationship that could not be maintained in life. Conversely, the most extreme form of self-directed aggression has the potential to lead to suicide. Here, the primary aim of the depressed homicide-suicide perpetrator is suicide rather than homicide. The findings reveal that dependency on the victim constitutes a determining factor in the perpetrator's decision to take others 'along' in his suicide.

#### **1.4 Assessing theoretical assumptions on homicide-suicide**

By combining datasets from multiple sources, using several levels of aggregations, this study has been able to empirically test existing theoretical assumptions on homicide-suicide. As outlined before, a review of theoretical approaches to homicide-suicide revealed that each existing theory focuses on a part of rather than the entire process leading up to homicide-suicide: some theories focus on the origin of aggression, others on the direction of aggression and still others on the outcome of aggression.

Henry & Short's (1954) theory on lethal violence, a forerunner of the stream analogy of lethal violence, for example, focuses on the direction of aggressive impulses. This theory postulates that the expression of outward aggression among higher socio-economic classes is more restricted than among lower socio-economic classes. After having resorted to outward aggression (e.g. homicide), the need for self-punishment is higher than among individuals who are not restrained in the expression of outward aggression. Accordingly, they hold that the likelihood of a suicide following a homicide increases as socio-economic status increases. This assumption is not supported by the empirical findings reported in the meso analysis (chapter eight). Homicide-parasuicide perpetrators were overall found to have a low socio-economic status. In this light, financial difficulties may act as a contributing factor in the homicide-suicide event.

According to psychodynamic theory, the victim in a homicide-suicide represents a source of frustration, but also a source of nurturance. Following this perspective, when the source of frustration is destroyed in a homicide, the source of nurturance is also lost. Hence, the killing of the victim can restore or even increase frustration over the loss of a loved object. The self, then, becomes a legitimate target of aggression in the form of suicide (Stack, 1997). Both homicide and homicide-(para)suicide have in common a high degree of interpersonal frustration, expressed by domestic violence. This presumption was supported by empirical findings in the meso analysis (chapter eight): a high degree of domestic violence was found in both homicide and homicide-parasuicides.

Following psychopathological theories, particularly theoretical assumptions relating to depressive disorder, homicide-suicide is more likely to occur relative to a homicide alone when the perpetrator suffers from a depressive disorder. The same theoretical understanding holds that homicide-suicide and suicide have in common a high degree of depression. The results from the meso analysis (chapter eight) supported these theoretical assumptions. With regard to the role of psychosis in violent behaviour, homicide-suicide was thought to be more likely to occur compared to homicide or suicide alone when the perpetrator suffers from a psychotic disorder. This notion was only partially supported by the empirical analysis: homicide-parasuicide was only more likely to occur relative to parasuicide under the influence of a psychotic disorder; compared to homicide, no such differences were found. The overall high prevalence of psychotic disorders among both homicide-parasuicide and homicide perpetrators can be attributed to the nature of the sample: subjects who are subjected to a court-ordered assessment are thought to deviate psychologically from other accused persons.

Other theories explaining the occurrence of homicide-suicide relative to other types of lethal violence concern the psycho-evolutionary theory, postulating that men kill their intimate partners in an ultimate attempt to regain control over their wife's sexuality and reproductive capacity (Daly & Wilson, 1988). The results in the macro-level analyses (chapter seven) provided support for this theoretical approach. The ensuing suicide of the male perpetrator, however, seems to contradict these

evolutionary explanations. In order to solve this conundrum, it might equally be argued that, according to a male proprietary view, males decide to take their intimate partners with them when they consider ending their own lives. The finding that women are less likely to involve their male partners in their suicide supports this perspective.

Further, Durkeim's social integration perspective holds that homicide-suicide constitutes an extreme type of suicidal behaviour associated with extreme social disintegration. The results from the macro analysis presented in chapter seven supported this perspective, showing that being of non-Dutch ethnicity increases the odds of homicide-suicide relative to other suicides. Individuals from an ethnic minority are found to suffer from an overall higher degree of social disintegration, including a higher degree of socio-economic disadvantage, restricted participation in the labour market, in social interactions and in education (Vrooman *et al.*, 2007). This assumption was further supported by the material analysed in the micro analysis, finding that (extreme) social isolation was a contributing factor among homicide-suicide cases. From this point of view, the likelihood of homicide-suicide relative to suicide increases as social disintegration increases.

Finally, this study assessed to what extent homicide-parasuicide can be understood through internal and external attribution styles as outlined by attribution theory. Even though a proportion of the homicide-parasuicide cases under study could be classified as either primarily homicidal (resulting from external blame attribution) or primarily suicidal (resulting from internal blame attribution), the findings of the micro level analysis presented in chapter nine showed that a different subgroup of homicide-parasuicide exists in which the act is regarded as a total solution. In the first group, the primary aim of the perpetrator was homicide. Here, the perpetrator commits suicide following the homicide out of (extreme) interpersonal dependency on the victim. Homicide perpetrators not engaging in suicidal behaviour lack such feelings of dependency. The second group of homicide-parasuicides is mainly suicidal in nature. The suicide is accompanied by a homicide due to similar feelings of dependency – here the perpetrator takes the victim along in death. Not infrequently, the victim is regarded as a part of the perpetrator that cannot be left behind. In the third group of homicide-parasuicides the perpetrator regards homicide-parasuicide as a total solution. The occurrence of these events can be further understood according to factors such as interpersonal dependency and the threatened loss of the self-concept.

## **2 Limitations**

This study made use of various research methods and various data sources. The strengths of using nationwide statistics allowed for the collection of a large number of cases, in which victim, perpetrator and event characteristics could be linked. The use of nationwide statistics provides a backdrop; however, detailed information on homicide-suicide, homicide and suicide events, their victims and their perpetrators were mostly unavailable. This especially accounted for homicide data available in the Dutch Homicide Monitor, suicide data from the Causes of Death Statistics as well as

data stemming from the NVDRS. The accuracy of the data is limited by the quality of the information collected by the primary sources. For example, the absence of a report on mental illness does not necessarily mean, then, that the person in question was not suffering from a mental illness (ICPSR, 2007). Concerning the data available in the Dutch Homicide Monitor, a relatively large number of missing characteristics hampered the conducting of analyses on specific groups of homicide-suicides by the type of relationship between victim and perpetrator. With regard to the NVDRS, there is variability in the type of data provided between states, e.g. some states have medical examiner systems, others have a coroner system, while still others have a mixed system. In addition, NVDRS data do not contain detailed information on the dynamics involved in homicide-suicide cases. Therefore, similar to what has been done in addition to data in the Dutch Homicide Monitor, in order to collect more specific information on different types of homicide-suicide events data were supplemented with American newspaper articles.

In order to overcome the lack of detail in these large-scale databases, the meso analyses and micro analyses in chapters eight and nine made use of homicide-*parasuicide*: homicides followed by the failed suicide of the perpetrator. The control group consisted of parasuicide not preceded by homicide. The use of these data allowed for the extraction of much detail, such as psychiatric factors, motives underlying the offence and other background characteristics. Using these records, however, has four major limitations.

The first limitation constitutes a selection bias: homicide-*parasuicide* cases were extracted from the archive of a forensic observation hospital. Subjects sent to a psychiatric hospital for assessment are thought to deviate psychologically from other accused persons (Farooque & Ernst, 2003; Marleau, 1999; McGrath, 1992). This might have caused an overrepresentation of mentally ill perpetrators in our sample, in particular with regard to intimate partner homicide perpetrators: whereas the majority of surviving perpetrators of other types of domestic homicide occurring in the Netherlands were included in our sample, 'only' one third of the intimate partner homicide perpetrators were included, possibly excluding those with less severe and less obvious psychopathology.

Secondly, in order to overcome the limitation of using fatal suicides as a control group, the control group for homicide-*parasuicide* consisted of parasuicide cases not preceded by homicide. These cases were retrieved from the Erasmus MC, University Medical Centre in Rotterdam. Those admitted or assessed at this hospital might not be representative of the entire Dutch population, given the high rate of ethnic minorities included in the parasuicide sample. This overrepresentation might reflect the population composition of the city of Rotterdam, involving a high percentage of ethnic minorities (Latten *et al.*, 2005). A previous study by Garssen *et al.* (2006) demonstrated that suicidal behaviour among ethnic minorities differs from suicidal behaviour among those of Dutch descent. Another limitation concerning the use of parasuicide data from a hospital setting concerns the nature of the reports, which were created for mental and physical health purposes as opposed to criminal justice

purposes. Consequently, information on the suicidal individual's family, the presence of a history of violent behaviour and other characteristics such as education and employment were typically not included. This lack of information hampered (statistical) comparisons with the study group of homicide-parasuicides.

Thirdly, in line with the previous limitation, this study might have suffered from a selection bias concerning the information that was made available in the homicide-parasuicide, homicide and parasuicide files. Qualitative research as applied in chapter nine relies heavily on written results from interviews, which were conducted by individuals other than the researcher. This could have caused a particular selection of available information on the individual concerned. Another backdrop of using this type of documentation for analysis involves the lack of possibilities to replicate the interview situation. This shortcoming, in addition to the relatively small sample size used in the qualitative assessment, compromises the external validity of the findings.

The fourth limitation concerns the use of parasuicide data as such. Parasuicides and fatal suicides constitute two different types of behaviour, conducted by different populations (Mann, 2002; Nock & Marzuk, 1999). It has been suggested that suicidal behaviour, from suicidal ideation to parasuicide to suicide may well represent a continuum. At one end of this continuum are predominantly 'manipulative' suicidal actions, which appear primarily motivated by an urgent and more hopeful appeal to a threatened relationship; at the other end are more despairing and potentially lethal communications, with deeply disappointing and strongly negative internal models of self and others (Adam, 1994). Previous studies investigating the motives for attempted suicide repeatedly show that the attempted suicide population consists of at least two major subgroups: those wanting to die or to find relief from an unbearable state of mind or situation and those who do not want to die but want to change something in their interpersonal situation (Chopin *et al.*, 2004). In the studies at hand an attempt has been made to only include failed suicides which had a near-fatal character. The results in chapter eight, however, showed that a relatively low proportion of the parasuicides were committed by violent means, such as firearms. The choice for a specific suicide method may reflect the intensity of suicidal ideation – those employing less lethal means being less determined to die in their suicide attempt compared to those employing violent means.

Further, it should be noted that the author reviewed and coded the data used in chapters eight and nine and hence, was not blind to the purpose of the study. In spite of using standardized coding measures, this might have led to potential variability and bias within the coding procedures. In addition, given the small sample size of some of the subgroups (notably the child homicide-parasuicide subgroup) the number of statistical comparisons that could be conducted was limited. It is plausible that the overall Type I error rate has been inflated, seeing that the significance levels were not adjusted for the number of Pearson's chi-square tests performed.

Finally, the study at hand has mainly focused on the perpetrators of homicide-suicide, rather than on its victims. This can partially be ascribed to the data sources used – most sources relying on available perpetrator data, rather than on victim

characteristics and victim perspectives. It has been estimated that for each homicide victim, at least five people suffer from long-term, severe consequences related to the death, varying from social, mental and physical problems (Leistra, 2009). While grief reactions are often complicated when losing someone by homicide, additional complications arise given the ambivalent attitude towards the perpetrator: on the one hand, the homicide is experienced with anger and disgust. The suicide of the perpetrator brings about a different set of emotions, such as sadness and feelings of powerlessness. Given the complexity of the homicide-suicide phenomenon and the relatively neglected position of secondary victims involved in this event, future research should devote more attention to this topic.

### **3 Future directions**

Based on the limitations from the study at hand, several directions for future research can be outlined. First of all, the data on fatal homicide-suicides used in this study were hampered by a relative lack of detail. On the one hand, this can be attributed to the fact that both perpetrator and the victim die in these events. On the other hand, this can be ascribed to the lack of an adequate monitoring system for these cases. Future research should aim to incorporate multiple methods in order to obtain an even more accurate estimate of the annual incidence and nature of these events. This could be done by a national monitoring centre for homicide-suicide, which could supplement existing sources on violent death with medical examination files as well as police files. The national function of such a centre would facilitate the validation, understanding and, accordingly, prevention of such cases.

Secondly, the selection bias concerning the use of Pieter Baan Centre material could be overcome by also including homicide-parasuicide and homicide perpetrators who were not admitted to the centre, but remained in custody elsewhere.

In addition, the shortcoming regarding the relative overrepresentation of individuals of non-Dutch ethnicity in our parasuicide sample could be reduced in future comparative research by controlling for the possible effect of ethnicity. This could be accomplished by making use of data stemming from multiple centres throughout the country in order to enhance external validity.

As mentioned above, parasuicide and fatal suicide constitute two different types of behaviour by different populations. The same might account for homicide-parasuicide and homicide-suicide, in spite of efforts to include cases in which only a serious parasuicide was committed. Future research should attempt to overcome this limitation by making use of the so-called psychological autopsy method first described by Shneidmann (1981). This method is based upon a combination of interviews with those closest to the deceased and an examination of corroborating evidence from sources such as hospital reports and criminal records. From this information an assessment is made of the suicide victim's mental and physical health, personality, experience of social adversity and social integration (Cavanagh *et al.*, 2003). The psychological autopsy method has been useful in the study of suicide (Conwell *et al.*, 1996; Isometsä, 2001) and could well be applied to those having died in a homicide-

suicide in order to obtain a more extensive view of the psychopathological, motivational and circumstantial characteristics of the perpetrator. Particular caution, however, is needed in applying this method. Wagenaar & Crombag (2005) have warned that it is unrealistic to assume that memories remain fresh and unchanged across a period of many years. Especially the problem of change over time is highly relevant when the events that are remembered were personally significant and have therefore continued to play a role in a person's life. The homicide-suicide of a loved one could be considered as such a relevant event. In these cases it will be difficult to decide what new information was received after the event, which aspects were rehearsed, how often, for what purpose, and how the 'refreshing process' may have changed the details. In order to diminish the influence of such memory loss or alteration, multiple sources of information, both written and oral, should be combined.

Before the findings of some parts of this study, in particular findings related to homicide-parasuicide data, can be generalized to homicides followed by a fatal suicide, empirical research needs to assess to what extent homicide-parasuicide differs from this group. Similarly, future empirical research should attempt to test the proposed framework based on a larger sample of data. Given the paucity of homicide-suicide, collaborative, multi-centre research is needed, with clear operational definitions and aims (Brett, 2002). The nature of future studies should be focused on the prevention of these cases as well as aiming to provide a grounded base on which the criminal justice system can act when it is confronted with such cases. In this regard, given the current 'culture of punishment' (Garland, 2001), characterized by risk prevention policies, pre-emptive law enforcement measures and an overall tendency of over-criminalization, one needs to be careful not to approach these cases in a stigmatizing way and the perpetrators involved in a criminalizing way,<sup>59</sup> but rather to put emphasis on how to treat and prevent these cases from a realistic mental health perspective.

#### **4 Prevention of homicide-suicide**

Feelings of shock and incomprehension that constitute a reaction to homicide-suicide are typically followed by questions on how such an event could have been foreseen and accordingly, prevented. Survivors, relatives, the media and the general public usually look for clues in the area of child protection and mental health services. In the majority of cases, however, no uniform answer can be provided as to why the event happened and how it could have been prevented. In this regard, certain factors that have been found in the studies presented before that might provide some clarification. These factors can best be outlined according to a so-called triangulation schema, distinguishing underlying factors, conditional factors and a trigger: together leading to the homicide-suicide event.

*Underlying factors* refer to unchangeable characteristics, including socio-demographic characteristics. These factors include so-called 'static' factors, such as

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<sup>59</sup> Cheliotis, L. (2006). Personal Communication.

gender, age and ethnicity. Given their unchangeable nature, underlying factors cannot be modified by prevention measures. *Conditional factors*, on the other hand, are of a dynamic character, including individual psychopathological characteristics, a history of violent behaviour towards oneself or towards others as well as situational factors, such as relationship problems and financial difficulties. The *trigger* constitutes the instigation of the event and can be very diverse, varying from various types of rejection or the perception of rejection, to withdrawal due to something the victim said or did or did not do. The trigger leading up to the event is akin to that found in medical nomenclature between chronic and acute illness: whereas chronic illness refers to a persistent and long-standing medical condition, acute symptoms develop rapidly and have a substantially shorter lifespan (Levin & Madfis, 2009). Likewise, whereas conditional factors are persistent and long-term, triggers are short-term events that seem catastrophic to an already frustrated individual who has lost the ability to cope with adversity. Due to their diversity, these triggers are uncontrollable, unpredictable and therefore difficult – if not impossible – to control. Prevention measures should therefore focus on conditional factors associated with homicide-suicide. The reported findings indicate that intrapersonal factors such as depression, psychosis, personality disorder, previous homicide and suicide threats as well as interpersonal factors such as a dependent relationship between victim and perpetrator pose important risk factors to homicide-(para)suicide relative to other types of lethal violence. Interpersonal and intrapersonal strain has been found to be a common denominator in each of the intrafamilial and extrafamilial homicide-(para)suicide cases studied.

As with attempts to predict simple suicide and homicide, any evaluation of homicide-suicide is likely to overpredict mortality (Marzuk *et al.*, 1992; Nock & Marzuk, 1999). Most individuals who fit the ‘stereotypical’ profiles discussed in the previous chapters will never die in a homicide-suicide event – a checklist or homicide-suicide assessment tool is therefore doomed to generate too many false positives (Fox & Savage, 2009). Moreover, as has been outlined in the previous chapters, factors underlying a domestic homicide-suicide are multifactorial and multidimensional. Nonetheless, as Nock & Marzuk (1999) suggested, it is useful to consider both the types of settings where potential perpetrators or victims of homicide-suicide present for evaluation as well as behavioural patterns or life circumstances associated with an elevated risk.

In spite of the caveats mentioned above, some possibilities to modify or control these conditional factors of the triangulation scheme will be discussed in what follows. Some implications will be outlined with regard to the social context, the mental health-care system, the criminal justice system, as well as the role of firearms legislation. It should be emphasized that the areas of prevention outlined below are not meant to be used as a “check-list” for homicide-suicide risk assessment. Nevertheless, it is useful to consider the types of settings, behavioural patterns and life circumstances associated with elevated risk (Nock & Marzuk, 1999).

#### **4.1 Prevention in the social context and first- line agencies**

First, social networks (neighbours, friends, family members) as well as agencies in the first line (practitioners, police officers, et cetera) might act in a preventative fashion by providing assistance in several areas.

First, the results of this study showed that the role of personality disorder differentiated the perpetrators of homicide-parasuicide from individuals 'only' engaging in homicidal or suicidal behaviour. In terms of prevention, the role of narcissism and dependency constitute particular areas of attention. These features may become manifest in aspects such as obsessive jealousy, a history of physical abuse, exhibition of anger, hostility and desperation. Such features may be detected in the area of police contact following a domestic violence event, marital therapy and in the courtroom, where child custody cases are dealt with. Intervention in these cases should be aimed at diffusing the intensity of the victim-perpetrator relationship, focusing on exploring the motives for the aggressive behaviour and restoring the perspective that is frequently lost by individuals who see homicide, suicide or homicide-suicide as the only solution to their problems – the situation, in these cases, is perceived as intolerable. Although diffusing the intensity of the relationship between victim and perpetrator might provide for other types of intervention, such as intensive psychotherapy, given the often immediate threat of aggression, serious consideration should be given to separating a potential perpetrator from a potential victim. Nock & Marzuk (1999) have pointed out that such separation is complicated by the fact that the very act of separation often constitutes the precipitating event in homicide-suicide. In this regard, Block (2008) has argued that cognitive behavioural therapy could play an important role. As the results from this study show, dependency on the victim – sometimes evolving into a symbiotic relationship – provides the perpetrator with an identity which he or she otherwise seems to be lacking. By means of cognitive behavioural therapy, the individual's sense of self-concept and identity can be restored, thereby diffusing the symbiosis and accordingly, diminishing the risk of homicide-suicide.

The findings from this study further showed that the majority of the homicide-parasuicides were of a planned nature; not infrequently, warning signs such as suicide threats were already present. These threats are symptomatic of underlying suicidal ideation. In this regard, clinicians cannot rely on spontaneously uttered homicide threats to detect risk. They should be mindful that individuals reporting suicidal ideation may also be experiencing homicidal ideation that they are unwilling to report. A recent study by Warren *et al.* (2008) revealed that those making threats to kill are at high risk of subsequent violence to themselves as well as to others. Individuals reporting homicidal ideation may also be experiencing suicidal ideation. The latter may increase the homicidal risk because such individuals may feel that they have nothing to lose. In this regard, it should be noted that there is a misconception that asking for suicidal ideation increases the odds for suicide or would inspire the suicidal patient (Hillbrand, 2001). To use the words of Motto (1989): "The most straightforward way to determine how probable it is that a person will commit suicide

is to ask – directly and simply.” Suicide threats or suicidal ideation should be taken seriously at all times. Suicide intent scales as well as suicide risk scales have proved to be useful in the assessment of suicide risk (Diekstra, 1981). In addition, factors such as past suicidal behaviour, social relationships, physical illness, substance abuse, sudden behavioural changes and social disturbances should be taken into account when assessing the risk of suicide, homicide and homicide-suicide. Threats of homicide, suicide and homicide-suicide should be taken seriously and treated with the care that they warrant (Saleva *et al.*, 2007).

When suicidal ideation is extended towards others in homicidal ideation, in particular towards the intimate partner and/or children, adequate prevention measures should be taken, including extensive communication between different (mental health-care) institutions, child protection agencies and other parties (to be) involved. In cases where a potential perpetrator has been identified and evaluated and is considered to be at risk of committing a homicide-suicide, the general principles of treating simple suicide and simple homicidal behaviour are probably most effective. The hospitalization of the perpetrator is indicated if he or she is acutely suicidal, homicidal, or both (Nock & Marzuk, 1999).

#### **4.2 Prevention in the (mental) health-care system**

The results from the study at hand, in particular the results derived from the meso-analysis, have shown that depression – with or without being accompanied by a psychosis – was found to be prevalent in a large proportion of homicide-parasuicides. This finding is of importance in at least three different settings.

First of all, regarding the prevention of child homicide-(para)suicide, paediatricians should be aware of the presence of depression among parents with a history of depressive episodes. The reported findings indicate that such awareness should be particularly pronounced in the case of parental over-identification, in which the child is ‘integrated’ in the parent’s self-view. Here, prevention should not only be limited to lasting psychiatric treatment, but also intensive social counselling while raising a child in the midst of a severe depressive episode (Krischer *et al.*, 2007).

Second, clinicians should be sensitive regarding the presence of depression in mental health-care settings, including marital therapy. When depressive illness is accompanied by real or perceived threats to child and/or intimate relationships, clinicians must incorporate a full assessment of family relationships. In such an assessment special attention should be given to the role of dependency in the relationship between the individual and his/her close family members.

Third, concerning the prevention of intimate partner homicide-suicide motivated by ill-health, medical personnel should be aware of situations in which the physical condition of an older patient deteriorates, especially when one of the partners suffers from a depressive disorder and when the intimate partner relationship is characterized by interpersonal dependency. In such cases, the trigger might constitute the patient being placed in a nursing home, losing a licence to drive or being placed in permanent care (Nock & Marzuk, 1999).

### 4.3 Prevention in the Criminal Justice System

In addition to implications for the area of mental health, various implications are in place in the realm of the criminal justice system. The prevention of homicide-suicide should be focused on, but not limited to, an analysis of the situation preceding the event. DuRand *et al.* (1995), for example, have shown that a charge of murder or manslaughter poses an important risk factor in prison suicide. Various other studies found that the majority of those committing suicide in prison were accused of murder or manslaughter (Danto, 1989; Salive *et al.*, 1989; Smialek & Spitz, 1978). Yet, none of these studies regarded the suicidal event as a reaction to the initial homicide. Rather, the homicide is considered as a correlate rather than a cause of prison suicide. Treatment and prevention programmes should recognize that inmates accused of murder or manslaughter are in a very high-risk category. The findings suggest that this might be particularly relevant if the inmate's charge constitutes the killing of an intimate partner and/or (a) child(ren). Risk assessments of suicide in prison are currently performed carried out relying mostly on the morality shock, chronic despair, substance abuse, previous periods of detention, manipulative personality traits and the tendency to inflict self-punishment (Blaauw & Kerkhof, 1998; Lester & Danto, 1993). Including the precedent offence in analysing suicide risk in detention might be helpful in reducing the number of suicides following a homicide.

Other implications in the area of the criminal justice system constitute the assessment of the accused related to the trial. Whereas in media reporting and in associated public perception homicide-suicides are typically regarded as homogeneous in nature, in this study the heterogeneity of homicide-(para)suicide cases is emphasized. Given the diversity of motives, the diversity of underlying individual characteristics and the diversity of circumstances, surviving homicide-suicide perpetrators should be approached in an individualizing manner that respects the individuality of the person in question. As Mooij (2004) has pointed out, establishing a specific type of diagnosis is not enough for the purposes of forensic psychiatry and psychology, as the presence of mental disorder, as set out in a classifying psychiatric diagnosis, does not determine the connection between the disorder and the criminal act or the degree of any such connection. An individualizing approach, according to Mooij (2004) involves a description of the individual's current behaviour, perception and life history; the second step involves the assessment of the relationship between the individual and the criminal act, examining to what extent the offence can be seen as an expression of the individual's pathology. On the basis of findings reported in this study, one should add to these factors the taking into account of suicidal motives. Factors such as mental disorder alone blur the different proposed categories of homicide-(para)suicide and do not fully reflect the scope of suicidal intentions. In other words, the presence or absence of mental disorder alone does not suffice to grasp the complexity of the offence.

#### 4.4 Prevention by firearms legislation

Finally, prevention measures in the area of homicide-suicide could be sought in firearms legislation and possession. Firearms facilitate a subsequent suicide by the offender in addition to the killing of multiple victims at the same time. The results of the international comparison of homicide-suicide as presented in chapter five suggest that an overall higher proportion of homicide-suicides in Switzerland and the United States might be attributed to a relatively high level of private gun ownership. Arguably, it is more difficult to kill both another adult in addition to taking one's own life with other means than a firearm.

In addition, a population-based case-control study by Kellerman *et al.* (1993) revealed that gun ownership is strongly and independently associated with an increased risk of homicide. Virtually all of this risk involves homicide by a family member or an intimate acquaintance. In addition, homicide attempts (Saltzman *et al.*, 1992) and suicide attempts (Miller & Hemenway, 2008; Shenassa *et al.*, 2003) involving firearms are proven to be more lethal than those involving other methods, thereby not only increasing the lethal nature of homicide and suicide individually, but also the lethal nature of the homicide-suicide event. Further, previous research has shown that in countries with a lower rate of gun ownership, no other means are used to "compensate" for the absence of firearms (Killias, 1993). In this regard, Australia and Great Britain serve as encouraging examples of restrictive gun ownership laws, having managed to reduce the numbers of suicides committed by shooting (Saleva *et al.*, 2007).

Based on findings from previous studies as well as the findings presented in the study at hand, one could argue that reducing firearms availability could be one step in the direction of decreasing the number of tragedies such as homicide-suicides.



## Appendix 1

### Availability of Variables in Data Sources

[+] Characteristic is available in data source  
 [-] Characteristic is unavailable in data source

Homicide Sources		
	Dutch Homicide Monitor	Pieter Baan Centre
	<i>NSCR</i>	<i>NIFP</i>
Characteristics in datasets	Fatal homicides	Fatal homicides
<b>Socio-demographic characteristics</b>		
Gender	+	+
Age	+	+
Household composition	-	+
Employment status	-	+
Level of education	-	+
Ethnicity	-	+
<b>Individual characteristics</b>		
Criminal antecedents	-	+
Conjugal violence	-	+
Child abuse	-	+
Victim of sexual / physical abuse by family members	-	+
Previous suicide attempts	-	+
Psychiatric hospitalization	-	+
Mood disorder	-	+
Psychotic disorder	-	+
Psychoactive substance abuse or dependence	-	+
Personality disorder	-	+
<b>Event-related characteristics</b>		
Conjugal separation	-	+
Symbiotic relationship with victim	-	+
<b>Behavioural warning signs</b>		
Suicidal threats	-	+
Death threats	-	+
Homicidal thoughts	-	+
Signs of premeditation	-	+
Size of data source	L	L
Degree of detail	S	L

Characteristics in datasets	Suicide Sources						
	Cause of Death Statistics	NEMESIS	GP Sentinel Network	LIS	LMR	Health Care Inspectorate	Victimization Survey
	<i>CBS</i>	<i>Trimbos Institute</i>	<i>Nivel</i>	<i>Nivel</i>	<i>Nivel</i>	<i>GGZ</i>	<i>De Groot</i>
	Fatal suicides	Non-fatal suicides	Fatal suicides	Non-fatal suicide	Non-fatal suicide	Fatal suicides	Fatal suicides
<b>Socio-demographic characteristics</b>							
Gender	+	+	+	+	+	+	+
Age	+	+	+	+	+	+	+
Household composition	+	+	-	-	-	+	+
Employment status	+	+	-	-	-	+	+
Level of education	-	+	-	-	-	+	+
Ethnicity	+	+	+	-	-	+	+
<b>Individual characteristics</b>							
Criminal antecedents	-	-	-	-	-	-	+
Conjugal violence	-	-	-	-	-	-	+
Child abuse	-	-	-	-	-	-	-
Victim of sexual / physical abuse by family members	-	+	-	-	-	+	-
Previous suicide attempts	-	+	+	-	-	+	+
Psychiatric hospitalization	-	+	+	-	-	+	+
Mood disorder	-	+	+	-	-	+	+
Psychotic disorder	-	+	-	-	-	+	+
Psychoactive substance abuse or dependence	-	+	-	-	-	+	+
Personality disorder	-	-	-	-	-	+	-
<b>Event-related characteristics</b>							
Conjugal separation	-	+	-	-	-	+	+
Symbiotic relationship with victim	-	-	-	-	-	+	-
<b>Behavioural warning signs</b>							
Suicidal threats	-	-	-	-	-	-	+
Death threats	-	-	-	-	-	-	-
Homicidal thoughts	-	-	-	-	-	-	-
Signs of premeditation	-	-	-	-	-	+	+
Size of data source	L	L	L	L	L	M	S
Degree of detail	S	M	S	S	S	L	L

## Appendix 2

### Definition of Terms

The variables used for the empirical research can be divided into five categories: socio-demographic characteristics, individual characteristics, event-related characteristics, indices of behavioural warning signs and legal characteristics. The table below reflects the types of variables, their definition and the chapters in which they are studied. Whereas national, large-scale data sources such as the Dutch Homicide Monitor (DHM) and the Causes of Death Statistics (CDS) are relatively limited in detail, other sources such as the National Violent Death Reporting System (NVDRS) as well as data from the Pieter Baan Centre (PBC) and the Erasmus Medical Centre (EMC) archives provided more detailed information. Variables were selected on the basis of previous empirical studies on homicide-suicide.<sup>60</sup> Using a similar set of variables as has been used in previous studies allows for the comparison of findings.

Variable	Definition	Used in Chapter	Source
<b>Demographic characteristics</b>			
Same household	Victim and perpetrator sharing (parts of) the house and/or having their meals together for a period of at least three months.	8	PBC, EMC
Conjugal separation <sup>61</sup>	A separation between two intimate partners. In the case of child homicide, separation was defined as being present when involving the parents of the victim(s). The separation had to take place less than one year prior to the offence.	8	PBC, EMC
Unemployed	Not having a paid job, or not having a paid job for more than 12 hours a week.	8	PBC, EMC
Low or no education	No further education than primary education.	8	PBC, EMC
Dutch ethnicity	Both parents born in the Netherlands. Someone was defined as having another ethnicity if one or both parents were born in another country.	8	DHM, CDS PBC, EMC
<b>Individual Characteristics</b>			
Criminal antecedents	Previous convictions regarding <i>violent</i> offences. Other previous convictions for theft, narcotics or traffic violations were not included in this variable, as these were not considered to be primarily indicative of later violence against family members.	8	PBC
Victim of abuse in childhood	Physically and/or sexually abused in childhood by family members or non-family members.	8	PBC

<sup>60</sup> E.g. Berman, 1979; Bourget *et al.*, 2000; Cavan, 1928; Dawson, 2005; Léveillé *et al.*, 2007; Selkin, 1976.

<sup>61</sup> Although strictly speaking, conjugal separation concerns a demographic characteristic, given the importance of this aspect in the current study conjugal separation is described as a contextual characteristic.

## Appendix 2

History of suicide attempts	Perpetrator attempting suicide any time prior to the offence.	8	PBC, EMC
Psychiatric hospitalization	Previous hospitalization in a mental health-care facility or rehabilitation hospital.	8	PBC, EMC
Current treatment for mental illness	Having a current prescription for a psychiatric medication or seeing a mental health professional within the past two months.	6	NVDRS
History of treatment for mental illness	Having received professional treatment for a mental health problem, either at the time of death or in the past.	6	NVDRS
Current depressed mood	Being perceived by oneself or by others as being depressed. The depressed mood may be part of a clinical depression or a short-term sadness.	6	NVDRS
Mood disorder	DSM-IV-TR <sup>62</sup> codes 293.83 (mood disorder due to general medical condition), 296 (major depressive disorder and bipolar disorders), 300.4 (dysthymic disorder), 301.13 (cyclothymic disorder) and 311 (depressive disorder NOS).	8	PBC, EMC
Psychotic disorder	DSM-IV-TR codes 293 (psychotic disorder due to general medical condition), 295 (schizophrenia), 297.1 (delusional disorder), 297.3 (shared psychotic disorder), 298.8 (brief psychotic disorder) and 298.9 (psychotic disorder NOS).	8	PBC, EMC
Psychoactive substance abuse or dependence	DSM-IV-TR codes 304 (substance dependence), 305 (substance abuse) and 292.9 (substance-related disorder NOS).	8	PBC, EMC
Alcohol abuse or dependence	Being perceived by oneself or by others as having a problem with, or being addicted to, alcohol.	6	NVDRS
Substance abuse or dependence	Being perceived by oneself or by others as having a problem with, or being addicted to, substances, which involve heroin, cocaine, abusing prescription medications, or regularly using of inhalants. For marijuana, the use must be noted as chronic, abusive, or problematic.	6	NVDRS
Personality disorder	DSM-IV-TR codes 301.0 – 301.9.	8	PBC, EMC
Job problem	Experiencing a problem at work or having a problem with finding employment.	6	NVDRS
Financial problems	Experiencing a problem such as bankruptcy, overwhelming debts, or the foreclosure of a home or business.	6	NVDRS
Physical health problem	Experiencing physical health problems (e.g., a terminal disease, a debilitating condition, chronic pain) that were relevant to the event.	6	NVDRS
<b>Incident characteristics</b>			
Domestic homicide	One of the homicide victims being a (former) spouse, (former) girlfriend or boyfriend, a biological child, stepchild or a foster child, a parent, stepparent, sibling or another family member.	5,6	DHM, CDS
Residential location	The event taking place at the home of the perpetrator, victim or in adjacent private premises.	5, 6, 7	DHM, CDS, NVDRS

<sup>62</sup> The Diagnostic and Statistical Manual of Mental Disorders is a handbook for mental health professionals that lists different categories of mental disorder and the criteria for diagnosing them, according to the American Psychiatric Association (APA). Although the International Classification of Diseases (ICD), published by the World Health Organization, is an important alternative to the DSM, the latter is still the most widely used concerning the classification of mental disorders. At the time of writing, the most recent issue is the DSM-IV-TR.

Urban location	The event taking place in one of the three major cities in the Netherlands: Amsterdam, Rotterdam or The Hague.	7	DHM, CDS
Violent homicide method	Coded according to the ICD-10 (including codes X85-Y09). For purposes of statistical analyses, in line with previous research (Somander & Rammer, 1991), <i>modi operandi</i> were dichotomized into the categories 'violent' versus 'non-violent'. The method used in the offence was regarded as violent when the victim was killed by a weapon such as a firearm (X93-X95), a sharp instrument (X99) or blunt instrument (Y00), by physical violence such as beating / bodily force (Y04) or by being set on fire (X97-X98). Relatively non-violent homicide methods included suffocation (X91) as well as poisoning (X85-X90).	8	PBC
Violent parasuicide method	Coded according to the ICD-10 (including codes X60-X84). The parasuicide method was regarded as violent if the parasuicide was committed by making use of a firearm (X72-X74), by hanging (X70) or by jumping in front of a moving object (X81) (Denning, 2000).	8	PBC, EMC
Multiple victims	Offence involving more than one lethal victim.	5, 6, 7, 8	PBC, EMC, DHM
Symbiosis	A symbiotic relationship between victim and perpetrator. <i>Symbiosis</i> originally refers to a commensal, or mutually dependent, living arrangement among certain species (De Bary, 1879 cf. Meloy, 1997). Here, the term applies to a far-reaching, mutual dependency between victim and perpetrator. From the individual's point of view, there is hardly any distinction between the self and the other.	8, 9	PBC, EMC
Homicide motives <sup>63</sup>			
Uxoricide		8	PBC
Abuse	Killing as a result of physical abuse.		
Narcissistic rage	Killing out of a feeling of being hurt and/or being wronged in the context of pathological self-love.		
Fear of abandonment	Killing motivated by a fear that the victim(s) might abandon or leave the perpetrator.		
Filicide		8	PBC
Abuse	Killing as a result of physical abuse.		
Altruism	Killing to relieve the child of real or imagined suffering.		
Reprisal	Killing to retaliate against or punish the parent's partner.		
Parasuicide motives <sup>64</sup>		8	PBC, EMC
Psychiatric illness	Suicide motivated by psychiatric illness.		
Domestic problems	Suicide motivated by problems related to housing, the household or other family members.		
Relationship problems	Suicide motivated by problems in the intimate partner relationship.		

<sup>63</sup> These categories are meant to parallel as closely as possible the typologies used in previous research, Liem & Koenraadt, 2008a; 2008b.

<sup>64</sup> Motives for parasuicides were based on previous research on suicidal behaviour, De Groot, 2008.

Indices of behavioural warning signs			
Suicide threats	Verbal signals involving the plan to commit suicide, conveyed to family and friends that presaged the homicide.	8	PBC, EMC
Death threats	Threats directly related to the victim or related to those close to the victim, for example involving the children. Death threats were considered to be present when conveyed to friends, relatives and/or professionals prior to the event.	8	PBC, EMC
Signs of premeditation	The role of premeditation is assessed by making use of a modified version of Wallace's (1986) index of premeditation, consisting of eight indicators (see Dawson, 2005). If at least one of these indicators was present, the offence was coded as premeditated: <i>Indicator 1:</i> The offender waylays the victims as she leaves home/workplace. <i>Indicator 2:</i> The offender breaks into the victim's home. <i>Indicator 3:</i> The victim was sleeping when she was killed. <i>Indicator 4:</i> The offender previously threatened to kill the victim and/or himself. <i>Indicator 5:</i> The offender brought a weapon <sup>65</sup> to the home or location of the victim. <i>Indicator 6:</i> The offender bought a weapon immediately prior to the killing. <i>Indicator 7:</i> Suicide note indicating the intention to kill himself and partner. <i>Indicator 8:</i> Other indicators not including the above that occurred only once or twice, i.e. changing a will, making funeral arrangements, taking out a life insurance policy.	8	PBC, EMC
Disclosed intent to commit suicide	Previously expressed suicidal feelings disclosed to another person in the recent past, whether explicitly or indirectly.	6	NVDRS
Left suicide note	Perpetrator left a note, e-mail, video, or other written communication that (s)he intended to commit suicide.	6	NVDRS
Legal characteristics			
Degree of responsibility	The degree of responsibility implies the question of whether the person concerned, at the time of committing the offence for which he is charged, was suffering from defective development and/or pathological impairment of his mental faculties so that he cannot be held responsible, or can only be held partly responsible, for the offences (if proven) (Koenraadt <i>et al.</i> 2007). This concept is similar to the concept of 'diminished capacity' in Anglo-American law. In the Netherlands, a sliding scale of responsibility is applied, consisting of five degrees.	8	PBC
Full responsibility	The absence of any influence of developmental deficiencies and pathological mental disturbance on the offence.		

<sup>65</sup> Although in Dawson's (2005) contribution, indicator 5 strictly referred to the bringing of a *gun* to the home or location of the victim, due to the relatively limited gun possession in the Netherlands, this indicator is coded as present if a *gun* or *any other weapon* was brought to the victim's home or location.

Slightly diminished	Committing the offence while suffering from developmental deficiencies and/or pathological mental disturbance. The influence of these factors on the offence is present, though limited.		
Diminished	Committing the offence while suffering from developmental deficiencies and/or pathological mental disturbance.		
Severely diminished	Committing the offence while suffering from developmental deficiencies and/or pathological mental disturbance. The influence of these factors on the offence is severe.		
No responsibility	Committing the offence while suffering from developmental deficiencies and/or pathological mental disturbance. The offence is believed to have been caused entirely by the mental condition of the perpetrator (Koenraadt <i>et al.</i> , 2007).		
Risk of recidivism	The likelihood of recidivism is included in the psychological and psychiatric assessment of the perpetrator and is coded as present or absent.	8	PBC
Not likely	No or limited likelihood of recidivism.		
Likely	Substantial likelihood of recidivism.		
Not able to conclude	Not able to determine the likelihood of recidivism based on the available information.		



### Appendix 3

## Homicide-Suicide Cases in the Netherlands 1992-2006<sup>66</sup>

#### Total: 103 Homicide-suicide incidents

<b>1992</b>	
Total: 5	
March 9 <i>Eindhoven</i>	A 50-year old man shot and killed his 57-year old wife and subsequently committed suicide. They were going through a divorce. The victim was staying at a shelter after having been threatened by the perpetrator.
May 8 <i>Utrecht</i>	A 42-year old man stabbed his 34-year old wife to death before hanging himself in their basement.
May 13 <i>Dinteloord</i>	A 31-year old veterinarian poisoned her daughters of 4 months and 5 years prior to committing suicide.
June 5 <i>Ossendrecht</i>	A 39-year old woman shot and killed her 39-year old boyfriend before turning the gun on herself. The gun belonged to the victim, who was a member of a shooting club.
November 17 <i>Scharmer</i>	During a burglary a 42-year old car dealer was killed. One of the gunmen killed himself after being hit by a bullet.
<b>1993</b>	
Total: 3	
February 2 <i>Amsterdam</i>	A 23-year old man shot and killed a 23-year old woman before committing suicide.
November 11 <i>Midwolda</i>	A 54-year old man stabbed his 37-year old ex-wife to death, set the house on fire and subsequently killed himself. Their 12-year old son died in the fire; their 10-year old daughter was able to escape in time.
December 1 <i>Goes</i>	A divorced man killed his 8-year old son prior to taking his own life.
<b>1994</b>	
Total: 6	
January 17 <i>Tilburg</i>	A 6-year old girl found the body of her 26-year old mother in their apartment. She had been stabbed to death by a 34-year old man who subsequently hanged himself.
April 25 <i>Gorinchem</i>	A 43-year old Surinamese man beat his 38-year old ex-wife, their 6-year old daughter and his 72-year old mother-in-law to death before committing suicide later that day. Their two 14 year-old and 17 year-old sons were spared.

<sup>66</sup> These case descriptions are largely based on Leistra & Nieuwbeerta (2003) and Nieuwbeerta & Leistra (2007) and on supplementary media reports on homicide-suicide cases (Liem & Koenraad, 2007).

### Appendix 3

April 25 <i>Rotterdam</i>	During a dispute over child custody, a 33-year old man stabbed and killed his ex-wife and his sister-in-law, who tried to intervene. Subsequently, he committed suicide.
June 18 <i>Rijen</i>	A 32-year old killed a 25-year old woman prior to taking his own life.
July 7 <i>Amsterdam</i>	Police found the body of a 31-year old woman; her husband had killed himself by drowning.
August 24 <i>Heesch</i>	The bodies of a 61-year old woman and her 60-year old neighbour were found. The police believed that he had shot and killed her before committing suicide. The event was reported to be motivated by relationship problems.

#### 1995

Total: 9

January 9 <i>Leeuwarden</i>	A 48-year old man killed his 40-year old South American ex-wife in the kitchen of her home. Her 24-year old son was injured in the incident. The perpetrator committed suicide.
January 16 <i>The Hague</i>	A 26-year old man bludgeoned his 65-year old mother to death and subsequently killed himself.
January 16 <i>Rotterdam</i>	A 39-year old man stabbed his 38-year old wife to death in their home prior to hanging himself.
May 18 <i>Amsterdam</i>	A 30-year old man shot his 24-year old wife to death before committing suicide. The two were going through a divorce.
June 15 <i>Terneuzen</i>	A 35-year old man bludgeoned another 32-year old man to death before taking his own life.
September 19 <i>Eindhoven</i>	A 44-year old man shot and killed his 34-year old ex-girlfriend. He was upset about their breakup. He also wounded a 28-year old man and subsequently committed suicide.
October 30 <i>Enschede</i>	Police found the bodies of a 25-year old man and his 21-year old girlfriend. The police suspected that the man had shot his girlfriend prior to taking his own life with the same gun.
November 8 <i>Bergen</i>	A man killed his ex-wife before turning the gun on himself.
November 24 <i>Amsterdam</i>	In a hotel in Amsterdam a 49-year old Greek man shot and killed another 48-year old Greek man prior to taking his own life.

#### 1996

Total: 10

January 16 <i>Groningen</i>	A 30-year old man shot and killed his 32-year old housemate prior to committing suicide.
March 19 <i>Assen</i>	A 41-year old man strangled his 9-year old and 10-year old daughters before hanging himself. A year prior to this event, his wife had died of a terminal illness.
April 13 <i>Zwijndrecht</i>	A 47-year old man, who had been divorced and was known to suffer from a depressive disorder, stabbed and killed his 8-year old son during his weekly visit.
April 15 <i>Zaandam</i>	A 27-year old man killed his 21-year old girlfriend, hides her body and subsequently committed suicide by jumping in front of a train.
May 16 <i>Helmond</i>	A German man killed a 43-year old man and subsequently committed suicide in his car, where a suicide note was retrieved. The victim had had a brief relationship with the perpetrator's wife.

May 26 <i>Arnhem</i>	A 29-year old woman strangled her 4-year old son. The woman was known to be a psychiatric patient with suicidal ideations. She committed suicide while in custody.
August 8 <i>Enschede</i>	A 35-year old man shot and killed his one-year old daughter in his home before ending his own life.
September 1 <i>Wateringen</i>	A 37-year old man shot and killed a 41-year old man before taking his own life.
September 5 <i>Amsterdam</i>	A 35-year old man shot and killed his 54-year employer before committing suicide.
October 1 <i>Lichtenvoorde</i>	A 29-year old man shot and killed his 26-year old ex-girlfriend prior to committing suicide.

**1997**

Total: 10

January 11 <i>Alblasserdam</i>	A 24-year old man shot and killed a 19-year old woman in the street before committing suicide.
January 17 <i>Vaals</i>	A 65-year old man strangled his 65-year old wife prior to taking his own life.
January 24 <i>Chaam</i>	In a forest, a 43-year old man shot and killed his two sons of 7 and 9 years. Subsequently, he committed suicide. He was reported to be struggling with his divorce.
March 7 <i>Groningen</i>	A 30-year old man stabbed his 31-year old ex-girlfriend to death before committing suicide by jumping in front of a train. He was on a waiting list to be admitted to a psychiatric institution.
March 15 <i>Amsterdam</i>	A 51-year old Surinamese man stabbed a 37-year old Surinamese woman to death prior to committing suicide. Both were known to suffer from drug addiction.
April 7 <i>Heusden</i>	An 85-year old man shot and killed his ailing 84-year old spouse to death before taking his own life.
April 14 <i>Groningen</i>	A 60-year old man strangled his 57-year old wife before jumping out of the window of their high-rise apartment.
July 9 <i>Heino</i>	A depressive 57-year old physician shot and killed his 55-year old wife and subsequently committed suicide. He was a member of a shooting club and had a firearm collection at home.
August 25 <i>Maassluis</i>	A 39-year old Turkish man shot and killed a 35-year old man and wounded four others when they attempted to settle the dispute. The gunman fled and subsequently killed himself.
November 27 <i>Amsterdam</i>	A 41-year old Moroccan police officer shot and killed his 24-year old girlfriend to death with his service weapon before committing suicide.

**1998**

Total: 6

February 14 <i>Dongen</i>	A 43-year old woman stabbed her eighteen-month old son to death before committing suicide. The event occurred around January 18, but their bodies were not found until much later.
June 30 <i>Amsterdam</i>	Police found the bodies of a 29-year old Surinamese woman, her 27-year old boyfriend and her 8-year old and 2-year old sons. The police suspected that one of the parents had killed the others prior to committing suicide.

Appendix 3

July 26 <i>Slochteren</i>	A 17-year old girl was shot and killed by a 21-year old man who then killed himself when he was about to be arrested.
September 18 <i>Overloon</i>	A 51-year old man killed a 35-year old female friend and her 10-year old son before committing suicide. The woman appeared to have suffered from depression related to a muscular disease.
October 26 <i>Amsterdam</i>	Following an argument over money, a 29-year old Swiss man killed another 32-year old man and subsequently committed suicide.
December 25 <i>Wageningen</i>	A 37-year old Egyptian man stabbed his 33-year old wife and their three children to death before setting the house on fire. Thereafter, he took his own life.

**1999**

Total: 3

April 10 <i>Leeuwarden</i>	A 39-year old woman strangled her 9-year old daughter and subsequently took her own life.
May 28 <i>Leidschendam</i>	A 59-year old man shot and killed his 34-year old ex-wife in the street. He subsequently committed suicide while in custody.
June 5 <i>Almelo</i>	A 42-year old father killed his 7-year old son and 10-year old daughter. Following, he ended his own life.

**2000**

Total: 11

February 19 <i>Arnhem</i>	A 32-year old man poisoned both his eighteen-month old son and himself. He was reported to be experiencing relationship problems.
April 7 <i>Utrecht</i>	A 37-year old man shot and killed a 25-year old man – the new boyfriend of his ex-girlfriend – to death before committing suicide.
April 23 <i>Groningen</i>	After an argument, a 16-year old Chinese woman stabbed another Chinese woman of the same age to death before jumping from the fourth floor of a building.
May 31 <i>Ossendrecht</i>	A 39-year old woman killed her 37-year old boyfriend and subsequently committed suicide with the same gun.
June 17 <i>Varsseveld</i>	A 19-year old Turkish man killed his 15-year old Turkish girlfriend in the bathroom of a retail store. He took his own life while in custody.
June 26 <i>Rijswijk</i>	A 60-year old man killed his 68-year old wife before committing suicide in custody.
July 21 <i>Amsterdam</i>	A 24-year old man strangled his 18-year old wife and subsequently committed suicide.
August 4 <i>Arnhem</i>	In woods near Arnhem, the bodies of a 32-year old man and a 24-year old woman were found. Both were known to be homeless drugusers. The police suspected that drug and relationship problems were the underlying cause of the homicide-suicide.
October 29 <i>Amsterdam</i>	A 39-year old man stabbed his child of nine months to death and subsequently ended his life by committing suicide.
December 16 <i>Rotterdam</i>	A 37-year old man killed a 30-year old English woman in her apartment prior to taking his own life.
December 20 <i>Amersfoort</i>	A 27-year old man stabbed a 27-year old woman to death before committing suicide.

**2001**

Total: 6

February 22 <i>Stroe</i>	After a 28-year old man had killed himself by jumping in front of a train, the police discovered the body of his 25-year old girlfriend. They also suspected him of killing a 27-year old woman years before this – he had confessed to the crime in a suicide note, which was accompanied by a bloody knife.
May 11 <i>Amsterdam</i>	A 46-year old Surinamese man killed his 43-year old wife before committing suicide.
June 1 <i>Zwanenburg</i>	A 64-year old man stabbed his 62-year old wife to death. Thereafter, he shot his 53-year old cousin and subsequently took his own life.
August 1 <i>Den Bosch</i>	A 41-year old man killed his 38-year old wife and subsequently killed himself before setting their property on fire.
August 28 <i>Zoetermeer</i>	A 31-year old Surinamese man strangled his daughter of 6 months and subsequently committed suicide. He was going through a divorce.
December 11 <i>Gasselte</i>	A 61-year old refugee from Azerbaijan stabbed his 44-year old wife to death. He committed suicide in police custody.

**2002**

Total: 6

January 21 <i>Den Helder</i>	A 64-year old man killed his 50-year old estranged partner when she was leaving her apartment and subsequently took his own life. The two lived apart.
March 21 <i>Roermond</i>	An 80-year old man strangled his 77-year old wife after which he took an overdose of sleeping pills and stabbed himself. He told a family member on the phone that he had killed his wife and planned to commit suicide. He died in the hospital.
May 27 <i>Rotterdam</i>	A 36-year old man strangled his 36-year old ex-girlfriend and his new 38-year old girlfriend following an argument after which he committed suicide.
July 7 <i>Amstelveen</i>	The body of a 47-year old woman from Amsterdam was shed in a cabin in a park. She had been stabbed to death by her ex-boyfriend, who subsequently killed himself.
September 25 <i>Joure</i>	A 32-year old Sri Lankan man stabbed his 23-year old Sri Lankan wife to death as he could not cope with her having a new relationship. He committed suicide thereafter. He had just arrived in the Netherlands to reunite with his family.
December 18 <i>Zaandam</i>	A 24-year old man killed his 24-year old Iranian ex-girlfriend, seriously wounded her 22-year old brother and subsequently committed suicide.

**2003**

Total: 4

January 6 <i>The Hague</i>	A 41-year old police officer shot his 35-year old girlfriend before he taking his own life.
February 7 <i>Almere</i>	A 23-year old man stabbed his 27-year old girlfriend to death and subsequently killed himself. They had a child together. The victim also had a daughter from a previous relationship.

## Appendix 3

April 3 <i>Lisse</i>	In the presence of her two children, a 41-year old woman was shot and killed by a 40-year old man who killed then himself. The victim and the perpetrator were experiencing relationship problems.
April 16 <i>Nootdorp</i>	A 64-year old man killed his 49-year old wife before committing suicide.

### 2004

Total: 8

April 15 <i>Tiel</i>	A 31-year old man killed his 29-year old ex-girlfriend, her female friend and her new boyfriend in a shopping centre. Subsequently, he took his own life. He was a member of a shooting club.
April 19 <i>Zwolle</i>	Police found the bodies of a 41-year old man and his son of 14 months, who lived with his ex-girlfriend. The man had strangled the child before killing himself.
April 26 <i>Deurne</i>	A 56-year old man strangled his 55-year old wife and subsequently shot himself.
May 16 <i>Almelo</i>	A 41-year old man killed his daughter of nine months before committing suicide. He was experiencing relationship problems with his intimate partner.
May 29 <i>Berghem</i>	A 36-year old woman stabbed her three sons to death before committing suicide. She was involved in a divorce proceedings.
June 25 <i>Nijkerk</i>	A 37-year old man killed his 35-year old wife. After he had surrendered to the police, he committed suicide.
October 28 <i>Landgraaf</i>	A 47-year old man shot and killed his 34-year old wife and her 33-year old boyfriend before turning the weapon on himself. He was a member of a shooting club.
October 29 <i>Vught</i>	A 48-year old man killed his 45-year old ex-girlfriend before committing suicide.

### 2005

Total: 11

January 4 <i>Amsterdam</i>	A 43-year old Surinamese man stabbed and killed his 37-year old Surinamese ex-girlfriend before committing suicide by poisoning.
January 5 <i>Zoetermeer</i>	A 38-year old woman strangled her two children before taking her own life.
April 16 <i>Hilversum</i>	A 46-year old police officer shot and killed his 42-year old wife and their three sons before turning the weapon on himself.
June 6 <i>Rotterdam</i>	A 40-year old man shot his 40-year old wife to death. Subsequently, he shot and killed himself.
July 14 <i>The Hague</i>	A 21-year old woman confessed to the killing of a 28-year old man. She committed suicide afterwards.
September 18 <i>Hoogezand-Sappemeer</i>	The body of an 83-year old woman was found in her home. She had been bludgeoned to death by her 64-year old cousin, who was experiencing financial problems. The victim refused to help him. Soon afterwards, he committed suicide.
October 2 <i>Leidschendam</i>	A 30-year old Afghan man threw his 35-year old girlfriend and her 8-year old son from a 5th-floor balcony. He then jumped himself and died as a result of the fall.
November 18 <i>Oisterwijk</i>	A 55-year old man killed his 55-year old wife before committing suicide. He was known to suffer from mental problems.

November 27 <i>The Hague &amp; Holten</i>	A 36-year old man killed his 38-year old ex-wife. Thereafter, he drove his two children to Holten, where he stabbed them to death and set the vehicle on fire. He died in the event.
December 17 <i>Thorn</i>	A 52-year old man killed his 62-year old ex-girlfriend before committing suicide.
December 25 <i>Middelburg</i>	A 31-year old man strangled his two daughters before hanging himself.

**2006**

Total: 5

February 13 <i>Amsterdam</i>	A 70-year old man stabbed his 68-year old wife to death after which he took his own life.
February 21 <i>Huissen</i>	A 38-year old man killed his 37-year old wife and their two children before committing suicide. At the time of the event, he was under treatment at a forensic clinic.
March 30 <i>Vlaardingen</i>	A 37-year old man killed his 2-year old daughter and subsequently jumped down from the 4 <sup>th</sup> floor. His daughter lived with his ex-wife.
July 18 <i>Ermelo</i>	A 47-year old police officer shot his 46-year old wife with his service weapon and committed suicide afterwards.
August 20 <i>Diemen</i>	An 81-year old former police officer shot his 80-year old wife before committing suicide.



## Appendix 4

### Publication References

**Chapter 2** Review of Empirical Literature on Homicide-Suicide.

**Chapter 3** Review of Theories on Homicide-Suicide.

Parts of these chapters will be published as:

- Liem, M. (2009) 'Homicide followed by Suicide: A Review' *Aggression and Violent Behavior* (forthcoming).

**Chapter 4** Nature and Incidence of Homicide-Suicide in the Netherlands.

This chapter is a revised version of:

- Liem, M., M. Postulart & P. Nieuwbeerta (2009) 'Homicide-Suicide in the Netherlands: An Epidemiology' *Homicide Studies*, 13, 99-123.
- Liem, M., M. Postulart & P. Nieuwbeerta (2007) 'Moord-Zelfdoding in Nederland. Een epidemiologisch overzicht [Homicide-Suicide in the Netherlands. An epidemiological overview].' *Tijdschrift voor Veiligheid*, 2, 16-36.

Parts of this chapter have also appeared in:

- Liem, M. & F. Koenraadt (2007) 'Homicide-Suicide in the Netherlands: A Newspaper Surveillance Study' *Journal of Forensic Psychiatry and Psychology*, 18, 482-493.

**Chapter 5** Homicide-Suicide in Three Countries: The Netherlands, the United States and Switzerland.

This chapter is a revised version of:

- Liem, M., C. Barber, N. Markwalder, M. Killias & P. Nieuwbeerta 'Homicide-Suicide and Other Types of Violent Death in Three Countries' (in review).

**Chapter 6** Intrafamilial Homicide-Suicide compared to Extrafamilial Homicide-Suicide.

This chapter is a revised version of:

- Liem, M. 'Homicide followed by Suicide: Differentiating Intrafamilial and Extrafamilial Murders' *Journal of Interpersonal Violence* (in review).

**Chapter 7** Homicide-Suicide Compared to Homicide and Suicide: A Macro Level Approach

This chapter is a revised version of:

- Liem, M. & P. Nieuwbeerta 'Homicide followed by Suicide: A Comparison with Homicide and Suicide' *Suicide and Life-Threatening Behavior* (forthcoming).

**Chapter 8** Homicide-Parasuicide Compared to Homicide and Parasuicide: A Meso Level Approach.

This chapter is a revised version of:

- Liem, M., M. Hengeveld & F. Koenraadt 'Domestic Homicide Followed by Parasuicide: A Comparison with Homicide and Parasuicide' *International Journal of Offender Therapy and Comparative Criminology*, 53, 497-516.

Parts of this chapter have also appeared in:

- Liem, M. & D. Roberts (2009) 'Intimate Partner Homicide by Presence or Absence of a Self-Destructive Act' *Homicide Studies*, 13, 339-354 .
- Liem, M., M. Hengeveld & F. Koenraadt (2009) 'Kinderdoding gevolgd door een ernstige poging tot zelfdoding: Drie modaliteiten van geweld [Filicide followed by parasuicide: Three types of lethal violence]' *Tijdschrift voor Criminologie*, 51, 262-276.
- Liem, M., R. De Vet & F. Koenraadt 'Filicide followed by Parasuicide: A Comparison of Suicidal and Non-Suicidal Child Homicide' *Child Abuse & Neglect* (forthcoming).

**Chapter 9** Homicide, Suicide and Homicide-Suicide Compared: A Micro Level Approach.

This chapter is a revised version of:

- Liem, M. (2009) 'Homicide-Parasuicide: A Qualitative Comparison with Homicide and Parasuicide' *Journal of Forensic Psychiatry and Psychology* (forthcoming).

Parts of this chapter have also appeared in:

- Liem, M. (2009) 'Homicide followed by Suicide: a unique type of lethal violence' *AIC Reports Research and Public Policy Series*, 104, 25-32.

## Samenvatting

Doding gevolgd door zelfdoding van de dader leidt onvermijdelijk tot ontsteltenis en verdriet in de nabije omgeving van de betrokkenen. Eveneens leidt dit type delict tot gevoelens van onbegrip en verontwaardiging in de samenleving. Vooral als een doding meerdere slachtoffers eist, nemen verbazing en machteloosheid maar ook woede jegens de dader toe. Zulke gevoelens van onmacht worden complexer als de dader eveneens een eind aan zijn eigen leven maakt. Ondanks de commotie die doding gevolgd door zelfdoding (doding-zelfdoding) tot gevolg heeft en ondanks de media-aandacht die aan dit onderwerp wordt gewijd, is tot nu toe in Nederland geen wetenschappelijke aandacht besteed aan dit fenomeen. Dit onderzoek had als doel de kennis omtrent doding-zelfdoding te vergroten.

Dit doel werd nagestreefd op vier verschillende manieren. In de eerste plaats werd zowel de empirische als theoretische literatuur omtrent doding-zelfdoding bestudeerd. Gezien de lacune die er bestaat, werd in de tweede plaats de aard en incidentie van doding-zelfdoding in Nederland in kaart gebracht. Deze bevindingen werden tevens in internationaal perspectief geplaatst door deze te vergelijken met de aard en de incidentie van dit fenomeen in Zwitserland en de Verenigde Staten, waar privébezit van vuurwapens – een belangrijke component in dit type dodelijk geweld – aanzienlijk groter is dan in Nederland. Ten derde werd de huidige kennis omtrent dit fenomeen vergroot door doding-zelfdodingen te vergelijken met zowel dodingen als zelfdodingen om inzicht te krijgen in de factoren die bepalen wanneer deze typen geweld gezamenlijk voorkomen in een doding-zelfdoding. In de vierde plaats werden bestaande theoretische concepten over doding-zelfdoding empirisch geëvalueerd.

### **1 In kaart brengen van bestaande onderzoeksliteratuur**

Om de status quo van onderzoek naar doding-zelfdoding in kaart te brengen werd een literatuuronderzoek uitgevoerd. De uitkomsten hiervan, die in hoofdstuk twee worden besproken, laten zien dat de ratio van doding-zelfdoding in diverse landen door de jaren heen relatief constant blijft, in tegenstelling tot fluctuaties in de ratio van zowel doding als zelfdoding. De bevindingen laten tevens zien dat in de loop der tijd diverse classificatiesystemen van doding-zelfdoding zijn ontwikkeld. Het bekendste en meest frequent gebruikte systeem is ontwikkeld door Marzuk e.a. (1992) en is in dit onderzoek gebruikt om de karakteristieken van diverse typen doding-zelfdoding verder in kaart te brengen, te weten kinderdoding, partnerdoding, doding van meerdere gezinsleden gevolgd door zelfdoding, doding van overige familieleden en ten slotte doding buiten het gezin, alle gevolgd door zelfdoding. De

resultaten uit dit literatuuronderzoek laten bovendien zien dat doding-zelfdodingen voornamelijk binnen het gezin plaatsvinden. In de bestudeerde literatuur over kinderdoding-zelfdoding, partnerdoding-zelfdoding en familiedoding-zelfdoding worden gemakshalve twee typen daders onderscheiden. Het eerste type wordt gedreven door primair homicidale motieven. Dit type dader doodt het slachtoffer in een poging om controle over de (ex)partner of de familiesituatie te herwinnen. Het tweede type dader doodt uit primair suïcidale motieven en neemt zo het slachtoffer "mee" in zijn of haar zelfdoding. Ouderdodingen en broer/zus-dodingen eindigen zelden in een zelfdoding van de dader. Het literatuuronderzoek laat tevens zien dat motieven van diegenen die doden buiten het gezin drastisch verschillen van diegenen die doden binnen het gezin; de eerstgenoemden worden veelal gedreven door wraak of door de wens tot vereffening.

Een analyse van de theoretische onderzoeksliteratuur laat zien dat een overkoepelende theorie, die het in combinatie voorkomen van doding en zelfdoding kan verklaren, tot op heden ontbreekt. Bestaande theorieën geven inzicht in verschillende stadia van het doding-zelfdodingsproces, variërend van de oorsprong van agressieve impulsen en de richting van de (agressieve) impulsen tot de uitkomst van agressie. Hoewel neurobiologische theorieën en straintheorieën verklaringen bieden voor de oorsprong van agressieve impulsen geven zij geen helder beeld over de richting waarin deze impulsen tot uiting komen en over de condities waaronder doding-zelfdoding voorkomt. Attributietheorieën en de straintheorie geven wél inzicht in de factoren die verantwoordelijk zijn voor de richting van agressieve impulsen, maar onderscheiden hierin geen combinatie van naar buiten gericht agressief gedrag (leidend tot een doding) en naar binnen gericht agressief gedrag (leidend tot zelfdoding). Overige theorieën die in dit literatuurhoofdstuk aan bod komen bieden impliciete verklaringen voor doding-zelfdoding in plaats van expliciete verklaringen. Bezien vanuit het perspectief van deze theorieën wordt doding-zelfdoding enerzijds beschouwd als een variatie op moord en doodslag, waarin de dader uit schuld of schaamte met betrekking tot de doding overgaat tot zelfdoding. Anderzijds kan doding gevolgd door zelfdoding worden beschouwd als een variatie op zelfdoding. In dit verband wordt het slachtoffer als het ware 'meegenomen' in de suïcidale plannen van de dader. Als gevolg van het opsplitsen van doding-zelfdoding in doding enerzijds en zelfdoding anderzijds dient men zijn toevlucht te nemen tot specifieke elementen van elke theorie om de combinatie van de twee gedragingen te kunnen verklaren. De in dit hoofdstuk besproken theoretische assumpties zijn mede onderzocht door empirische analyses.

## **2 Beschrijving van doding-zelfdoding**

Vervolgens trachtte dit onderzoek de kennis omtrent doding-zelfdoding te vergroten door middel van empirische analyses. Dit werd in eerste instantie verwezenlijkt door een epidemiologisch overzicht te schetsen van de aard en incidentie van doding-zelfdoding in Nederland. Tot nu toe is er geen systematisch onderzoek verricht naar doding-zelfdoding in Nederland. Omdat officiële statistieken van deze gebeurtenissen

ontbreken, is niet bekend hoe vaak dergelijke doding-zelfdodingen per jaar voorkomen, laat staan hoeveel daders en slachtoffers hierbij zijn betrokken. Dit onderzoek heeft de epidemiologie van doding-zelfdoding in Nederland voor de eerste keer in kaart gebracht, door gebruik te maken van gegevens uit de databank *Moord & Doodslag* (Nieuwbeerta & Leistra, 2007). In hoofdstuk één is deze databron – alsook andere databronnen die in dit onderzoek zijn gebruikt – in detail beschreven. De analyses in hoofdstuk vier laten zien dat doding-zelfdoding in Nederland jaarlijks ongeveer negen slachtoffers maakt. Het merendeel van de dodingen wordt gepleegd met een vuurwapen. De karakteristieken van doding-zelfdoding in Nederland komen overeen met bevindingen in andere landen: vrouwen en kinderen zijn de meest voorkomende slachtoffers in doding-zelfdodingszaken – mannen de meest voorkomende daders. In hoofdstuk vijf werden de karakteristieken van doding-zelfdoding in Nederland vergeleken met die in Zwitserland en de Verenigde Staten, waar privébezit van vuurwapens aanzienlijk groter is dan in Nederland. De resultaten uit dit hoofdstuk laten zien dat de ratio van doding-zelfdoding in beide landen eveneens hoger is dan in Nederland. Verklaringen hiervoor kunnen worden gezocht in de verlaagde drempel om over te gaan tot geweld alsook in een grotere letaliteit geassocieerd met vuurwapengeweld. In hoofdstuk zes werd nader ingegaan op de verschillen tussen twee typen doding-zelfdoding: het type dat plaatsvindt *binnen* het gezin en het type dat plaatsvindt *buiten* het gezin. Gezien de lage frequentie waarmee het laatstgenoemde type in Nederland voorkomt, baseerde dit onderzoek zich deels op data uit de Verenigde Staten, waar dit type vaker voorkomt en data zich beter lenen voor statistische analyses. Ondanks omvangrijke media-aandacht voor doding-zelfdodingen die plaatshebben op scholen en universiteiten, laten de resultaten in hoofdstuk zes zien dat doding-zelfdoding buiten het gezin vooral plaatsvindt tussen bekenden. Ondanks aanzienlijke verschillen tussen de twee groepen ondervinden daders in beide groepen aanzienlijke ‘strain’. Bij diegenen die doden in het gezin is deze ‘strain’ van chronische aard, terwijl ‘strain’ bij diegenen die doden buiten het gezin van kortdurende aard is. Deze verschillen worden eveneens gereflecteerd in het soort zelfdoding; bij intrafamiliale doding-zelfdoding wordt de zelfdoding veelal voorbereid, terwijl deze bij extrafamiliale doding-zelfdoding veelal een impulsief karakter heeft.

### **3 Vergelijken van doding-zelfdoding met doding en zelfdoding**

In tweede instantie trachtte dit onderzoek de kennis omtrent doding gevolgd door zelfdoding te vergroten door empirisch te onderzoeken in hoeverre dit fenomeen kan worden beschouwd als primair een variatie op *doding*, als primair een variatie op *zelfdoding* of als een *apart fenomeen*. Om deze vraag te beantwoorden werden drie analyseniveaus toegepast: macro-analyse, meso-analyse en micro-analyse. Onderstaand schema geeft een overzicht van de verschillende analyseniveaus en de daarbij gebruikte data.

Analyseniveaus en bijbehorende databronnen			
Analyseniveau			
<b>Macro</b>	Dodingen	Zelfdodingen	Doding-zelfdodingen
	<i>Databank 'Moord &amp; Doodslag'</i>	<i>Doodsoorzaken-statistiek</i>	<i>Databank 'Moord &amp; Doodslag'</i>
	1992-2006 N = 4.074	1996-2006 N = 17.751	1992-2006 N = 103
<b>Meso</b>	Dodingen	Ernstige pogingen tot zelfdoding	Doding gevolgd door ernstige poging tot zelfdoding
	<i>Pieter Baan Centrum archief</i>	<i>Erasmus MC archief</i>	<i>Pieter Baan Centrum archief</i>
	1953-2004 N = 430	2000-2004 N = 161	1953-2004 N = 77
<b>Micro</b>	Dodingen	Ernstige pogingen tot zelfdoding	Doding gevolgd door ernstige poging tot zelfdoding
	<i>Pieter Baan Centrum archief</i>	<i>Erasmus MC archief</i>	<i>Pieter Baan Centrum archief</i>
	1980-2004 N = 10	2000-2004 N = 10	1980-2004 N = 10

Op het macro-niveau werden alle doding-zelfdodingen in Nederland in de periode 1992-2006 vergeleken met alle dodingen die in die periode plaatsvonden, maar niet eindigden in een zelfdoding van de dader. De beschikbare gegevens betroffen sociaaldemografische kenmerken van de slachtoffers en de daders alsook informatie over het doding-zelfdodings-, dodings- of zelfdodingsincident. De resultaten van deze vergelijking zijn beschreven in hoofdstuk zeven en laten zien dat doding-zelfdoding op diverse factoren aanzienlijk verschilt van zowel doding als zelfdoding, waarbij aanwijzingen bestaan voor het beschouwen van doding gevolgd door zelfdoding als een apart fenomeen, verschillend van zowel doding als (bijna-)zelfdoding.

De belangrijkste tekortkoming in de analyses die gebruik maken van grootschalige (nationale) datasets betreft het relatieve gebrek aan detail. Gezien het feit dat de dader van de doding gevolgd door zelfdoding komt te overlijden na het delict, is weinig tot geen informatie beschikbaar over de motieven, de omstandigheden en de psychopathologische factoren. Door gebruik te maken van casussen van verdachten die na de doding een serieuze *poging* tot zelfdoding ('bijna-zelfdoding') hebben gedaan, wordt deze tekortkoming in het meso-analyse niveau overwonnen. Bij deze analyses is gebruik gemaakt van gedragskundige rapportages pro Justitia van verdachten die na een doding een serieuze *poging* tot zelfdoding deden. Zowel casussen van verdachten van doding alsook van verdachten van doding gevolgd door bijna-zelfdoding, werden verkregen uit het archief van het Pieter Baan Centrum, de

psychiatrische observatiekliniek van het Nederlands Instituut voor Forensische Psychiatrie en Psychologie (NIFP). Casussen van individuen die overgingen tot een serieuze poging tot zelfdoding ('bijna-zelfdoding') werden verkregen uit het archief van de afdeling psychiatrie van het Erasmus Medisch Centrum. Hoofdstuk acht geeft de resultaten van deze vergelijkende analyse tussen doding gevolgd door bijna-zelfdoding, doding en bijna-zelfdoding weer. De voornaamste verschillen tussen doding gevolgd door bijna-zelfdoding en andere dodingen betreffen de rol van de symbiotische relatie (ofwel extreme afhankelijkheid) tussen dader en slachtoffer, de aanwezigheid van een depressieve stoornis, van eerdere dreigingen tot zelfdoding en van de voorbereiding van het incident. De belangrijkste verschillen tussen doding gevolgd door bijna-zelfdoding en bijna-zelfdoding omvatten eveneens de symbiotische relatie tussen dader en slachtoffer evenals de aanwezigheid van een psychotische stoornis, van een persoonlijkheidsstoornis en van de voorbereiding van het incident. Deze verschillen benadrukken de bevindingen van hoofdstuk zeven.

Ten slotte werden op het micro-analyseniveau de verschillen in dynamiek tussen doding gevolgd door bijna-zelfdoding, doding en bijna-zelfdoding nader onderzocht en vergeleken op basis van de attributietheorie (hoofdstuk negen). Hiertoe werden dezelfde data gebruikt als in hoofdstuk acht. Echter, in plaats van kwantitatieve onderzoeksmethoden toe te passen, werden in hoofdstuk negen kwalitatieve methoden toegepast. De analyse van individuele casussen laat zien dat, hoewel sommige dodingen gevolgd door een bijna-zelfdoding inderdaad kunnen worden beschouwd als dichotoom (dat wil zeggen: ofwel primair voortkomend uit zelfdoding ofwel primair voortkomend uit doding), het merendeel van de casussen een aparte categorie betreft. Deze categorie bestaat uit casussen waarin de doding-zelfdoding als 'totale oplossing' voor een bestaand probleem werd beschouwd. De analyses laten bovendien zien dat behoud van controle en gevoelens van afhankelijkheid van het slachtoffer – in sommige gevallen van dusdanige aard dat er sprake was van een symbiotische binding tussen dader en slachtoffer – doorslaggevend zijn bij het resulteren in een doding gevolgd door een bijna-zelfdoding.

#### **4 Onderzoeken van theoretische assumpties betreffende doding-zelfdoding**

Door datasets van diverse bronnen te combineren en door verschillende aggregatieniveaus te gebruiken, is het mogelijk geweest om bestaande theoretische assumpties omtrent doding-zelfdoding te onderzoeken. Zoals blijkt uit het literatuuronderzoek zijn er tot op heden geen overkoepelende theorieën voorhanden die het in combinatie voorkomen van doding en zelfdoding verklaren. Henry & Short's (1954) theorie over dodelijk geweld, een voorloper van de zogenaamde 'stream analogy of lethal violence', concentreert zich op de richting van agressieve impulsen. Volgens deze theorie is de uiting van agressie onder hogere sociaaleconomische klassen meer aan banden gelegd dan onder lagere sociaaleconomische klassen. Volgens deze redenering is de noodzaak voor zelfbestrafing ná agressief optreden groter onder diegenen die worden beperkt in hun beheersing van agressieve impulsen dan onder diegenen die hier niet in worden beperkt. Hieruit volgt dat de kans op een zelfdoding na een ander te hebben

gedood groter wordt naarmate de sociaaleconomische status hoger wordt. Deze assumptie wordt niet ondersteund door empirische bevindingen zoals weergegeven in de meso-analyse (hoofdstuk acht). Diegenen die overgingen tot doding in combinatie met suïcidaal gedrag hebben over het algemeen een lage sociaaleconomische status. Deze bevinding suggereert dat financiële moeilijkheden mogelijk één van de vele factoren vormen die leiden tot een doding-zelfdoding.

Vanuit psychodynamisch theoretisch oogpunt vertegenwoordigt het slachtoffer in doding-zelfdoding niet alleen een object van frustratie maar tevens een object van geborgenheid. Als het slachtoffer wordt gedood, wordt daarmee niet alleen de bron van frustratie vernietigd, maar tevens de bron van geborgenheid. Vanuit dit perspectief kan het doden van het slachtoffer de eerder bestaande frustratie herstellen of zelfs laten toenemen. De agressie wordt vervolgens gericht naar diegene die verantwoordelijk is voor deze frustratie: de persoon zelf. Volgens de psychodynamische theorie wordt het proces voorafgaand aan zowel doding als zelfdoding gekarakteriseerd door een hoge mate van interpersoonlijke frustratie, geuit in huiselijk geweld. Deze assumptie wordt ondersteund door de resultaten van de meso-analyse (hoofdstuk acht), waaruit blijkt dat in beide groepen (doding en doding gevolgd door bijna-zelfdoding) huiselijk geweld voorafging aan de doding.

Vanuit psychopathologisch perspectief is de kans op een doding-zelfdoding groter vergeleken met andere dodingen als de dader lijdt aan een depressieve stoornis. Omgekeerd kan vanuit dit perspectief worden geredeneerd dat degenen die tot doding-zelfdoding of tot zelfdoding overgaan een hoge mate van depressie met elkaar gemeen hebben. De resultaten van de meso-analyse (hoofdstuk acht) bevestigen deze assumptie. De resultaten laten bovendien zien dat doding-zelfdoding relatief vaker onder invloed van een psychotische stoornis plaatsvindt vergeleken met zelfdoding. Echter, er worden geen verschillen in de prevalentie van psychotische stoornissen gevonden bij de vergelijking met andere dodingen. Dit kan worden verklaard door de aard van de gebruikte data van het Pieter Baan Centrum: diegenen die worden opgenomen in het centrum verschillen van andere verdachten (selection bias).

De psycho-evolutionaire theorie stelt dat mannen hun partners doden in een laatste poging controle te houden over hun seksualiteit en hun voortplantingseigenschappen. De resultaten uit de macro-analyse (hoofdstuk zeven) ondersteunen dit perspectief: zowel doding-zelfdoding als andere dodingen worden voornamelijk door mannen gepleegd. Vrouwen zijn hier de voornaamste slachtoffers. Echter, psycho-evolutionaire perspectieven schieten tekort in hun verklaring van zelfdoding volgend op een doding. Immers: zelfdoding beëindigt alle kans op voortplanting en is dus in tegenspraak met evolutionaire doeleinden. Om deze tegenstrijdigheid te kunnen verklaren, kan worden gesteld dat, volgens mannelijke 'bezitsdrang' over hun seksuele 'eigendom', mannen hun partner meenemen in hun suïcidale ideaties. De bevinding dat vrouwen minder vaak hun mannelijke partners in hun eigen dood betrekken, biedt ondersteuning voor deze theorie.

Tevens onderzocht deze studie Durkheim's (1897 (2002)) theorie over suïcide en sociale integratie. Volgens deze theorie vormt doding-zelfdoding een extreme vorm

van zelfdoding, geassocieerd met extreme sociale desintegratie. De resultaten uit de macro-analyse (hoofdstuk zeven) laten zien dat niet-Nederlandse afkomst de kans op een doding-zelfdoding ten opzichte van andere zelfdodingen vergroot. Personen van niet-Nederlandse afkomst lijden over het algemeen aan een hogere mate van desintegratie, hetgeen zich uit in grotere sociaaleconomische achterstand en in geringere participatie op de arbeidsmarkt, in sociale interacties en in onderwijs. Durkheim's theorie wordt tevens ondersteund door bevindingen uit de micro-analyse (hoofdstuk negen), waar blijkt dat (extreme) sociale isolatie een bijkomende factor is in doding-zelfdodingszaken. Vanuit dit oogpunt neemt de kans op doding-zelfdoding toe naarmate sociale integratie afneemt.

Tot slot werd onderzocht in hoeverre doding-zelfdodingen kunnen worden verklaard door attributietheoretische concepten als interne en externe attributiestijlen. Hoewel sommige doding-zelfdodingen kunnen worden gekwalificeerd als resulterende uit één van deze attributiestijlen, laten de resultaten in de micro-analyse (hoofdstuk negen) zien dat de meeste daders van doding-zelfdodingen de daad beschouwen als een 'totale oplossing' voor het ervaren probleem. De dader gaat niet over tot zelfdoding als reactie op de eerder begane doding, noch neemt hij het slachtoffer 'mee' in de eigen doding. In plaats daarvan gaat de dader over tot doding-zelfdoding uit de overtuiging dat er geen andere alternatieven zijn. *Ofwel* het slachtoffer doden, *ofwel* zichzelf van het leven beroven werd door de individuen in deze categorie niet overwogen. Daarentegen gaat de dader over tot het verwijderen van het "geheel", niet in de laatste plaats om op deze manier de relatie met het slachtoffer tot in de dood – en zo mogelijk tot *na* de dood – te blijven voortzetten. Dit type dodingen kan worden verklaard door factoren als behoud van controle en van interpersoonlijke afhankelijkheid geassocieerd met een dreiging tot verlies van identiteit.

### Conclusies

Dit onderzoek had als doel de kennis omtrent doding-zelfdoding te vergroten. Doding-zelfdoding vindt voornamelijk in het gezin plaats, waarbij mannen de meest voorkomende daders en vrouwen de meest voorkomende slachtoffers zijn. Internationale verschillen in frequentie en aard van doding-zelfdoding zijn mogelijk te verklaren door de beschikbaarheid van vuurwapens. De resultaten uit dit onderzoek laten tevens zien dat doding-zelfdodingen verschillen van zowel dodingen als zelfdodingen. Op basis hiervan kan worden gesuggereerd dat doding-zelfdoding een apart type dodelijk geweld vormt. Tot op heden ontbreekt een overkoepelende theorie die het in combinatie voorkomen van doding en zelfdoding kan verklaren. Op basis van de resultaten van empirische analyses kan een theoretisch raamwerk worden geschetst, waarin drie typen doding-zelfdodingen kunnen worden onderscheiden. De bevindingen suggereren dat doding-zelfdoding niet simpelweg geïnterpreteerd kan worden als een variatie van homicidaal of suïcidaal gedrag. Psychische stoornissen als de depressie en de psychose, behoud van controle en afhankelijkheid van het slachtoffer vormen centrale concepten in de verklaring van dit

## Samenvatting

type doding. Bij het ontwikkelen van mogelijkheden tot preventie dienen risicotaxaties van zowel homicidaal als suïcidaal gedrag en de daarmee geassocieerde factoren samen te gaan.

## Resumen

El homicidio seguido del suicidio constituye una forma severa de violencia letal que sacude y conmociona a la sociedad. Algunos consideran al autor material como una víctima de sus propios actos mientras que otros interpretan al fenómeno un acto de cobardía, ya que el autor no puede ser juzgado por sus crímenes. El acto de matarse posteriormente a un homicidio se denomina homicidio-suicidio. A pesar del alto impacto que esto causa en una comunidad, el tema no ha recibido suficiente interés científico por lo cual este estudio aspira a enriquecer los conocimientos de este fenómeno.

El presente estudio se desarrolló en cuatro etapas. Primero se condujo una revisión sistemática de los estudios previos de homicidio-suicidio y de las nociones teóricas vinculadas a este fenómeno. Seguidamente, se calculó su incidencia en Holanda y se describieron sus características determinantes. Dichos resultados fueron contextualizados en un plano internacional comparando las tasas de incidencia de homicidio-suicidio en Holanda, con las de Suiza y las de Estados Unidos. Contrariamente a lo que ocurre en Holanda, en los dos países arriba mencionados hay una alta frecuencia de portación privada de armas. El tercer avance de conocimiento se generó mediante una comparación entre el homicidio-suicidio con casos de homicidio y de suicidio ocurridos de manera independiente. Finalmente, se evaluaron posturas teóricas contemporáneas en torno al homicidio-suicidio.

### **1 Revisión del homicidio-suicidio**

Se condujeron dos revisiones separadas para contextualizar el estado actual del conocimiento científico en esta área a nivel empírico y teórico. La primera se focalizó en los datos empíricos del fenómeno homicidio-suicidio y halló que a pesar de las variaciones en las tasas de homicidio y suicidio de manera independiente, la tasa del fenómeno homicidio-suicidio se mantiene estable a través del tiempo. Varios sistemas clasificatorios de homicidio-suicidio fueron desarrollados, siendo el de Marzuk *et al.*'s (1992) el más popularmente utilizado. Dicha tipología se utilizó para clasificar subtipos de homicidio-suicidio de acuerdo al vínculo entre la víctima y el victimario incluyendo los conyugales (uxoricidio-homicidio), los filiales (filicidio-suicidio), múltiples miembros de la familia (familicidio-suicidio), los padres (parricidio-suicidio), hermanos (siblicidio-suicidio) y aquellos fuera del círculo familiar (homicidio-suicidio extra-familiar).

Los resultados de la revisión indican que el homicidio-suicidio es un fenómeno primordialmente doméstico. En las categorías de homicidio-suicidio ejecutados a niños, los conyugales y los familiares, dos tipos de victimarios emergen: uno primordialmente basado en la motivación suicida y el otro en la homicida

En el evento suicida, la víctima es aparentemente “llevada consigo” por el victimario en su propio acto suicida. En el evento homicida, los niños y la pareja son ejecutados para que se restaure el orden familiar o como un medio de retaliación contra la pareja.

El suicidio seguido del homicidio de padres y hermanos es un fenómeno poco frecuente. La motivación que acompaña al homicidio-suicidio extra-familiar parecería estar basado en la venganza o la rectificación y se presenta de manera radicalmente diferente al homicidio-suicidio de índole intra-familiar.

La revisión teórica de la literatura sobre homicidio-suicidio indica que pocos estudios proveen clarificación explícita, contrariamente a una inferida, sobre la ocurrencia del homicidio-suicidio en relación al homicidio o al suicidio individualmente. La bibliografía se concentra en la diferenciación de los estadios del proceso de homicidio-suicidio tales como el origen de la agresión, la dirección que esta toma y sus resultados.

Teorías neuro-biológicas reconocen algunas similitudes en los orígenes de la conducta suicida y homicida. Sin embargo, estas teorías no hechan luz sobre las circunstancias bajo las cuales un individuo elige desplegar una forma de violencia y no la otra y a mucho distan de una explicación sobre el fenómeno de homicidio-suicidio.

En esta revisión, se le presta particular atención a las teorías de atribución y a la de la violencia letal, que explícitamente citan factores relacionados con la violencia dirigida hacia uno mismo y hacia los demás. Las teorías analizadas proveen formulaciones explícitas, contrariamente a inferidas, sobre la ocurrencia del homicidio-suicidio en comparación al homicidio o suicidio en singular. Dichas teorías contemplan al homicidio-suicidio como resultado secundario de los impulsos agresivos. Desde esta perspectiva, el homicidio-suicidio constituye una variante de la conducta homicida o suicida. En conclusión, no existe una teoría sólida que ofrezca un modelo explicativo del fenómeno homicidio-suicidio.

## **2 Descripción del homicidio-suicidio**

La siguiente meta de este estudio era la de informar sobre la incidencia y las características del homicidio-suicidio en Holanda en las últimas décadas con el fin de diferenciar sub-tipos y contextualizar los resultados en el plano internacional. Se accedió a un banco de datos nacionales para recolectar información de homicidio-suicidio en Holanda. En un periodo de 15 años, el homicidio-suicidio en Holanda figuró con aproximadamente un promedio de 9 hechos anuales, tasa que se mantuvo relativamente estable. El perfil del homicidio-suicidio, involucra mayoritariamente un victimario masculino que mata a su pareja y/o niños, resultado que enfatiza la naturaleza doméstica del fenómeno. Los sub-tipos de homicidio-suicidio difieren considerablemente en relación al evento singular y las características de las víctimas y

los victimarios. Las características del homicidio-suicidio en Holanda son consistentes con las observadas en Suiza y en los Estados Unidos. La tasa de incidencia en esos dos países, sin embargo, es substancialmente mayor que la de Holanda. La mayor disponibilidad de armas de fuego que existe en Suiza y Estados Unidos podría en parte explicar estas diferencias. La disponibilidad de un arma de fuego en el hogar podría no solo disminuir el umbral de tolerancia hacia el acto de violencia sino que también incrementaría la letalidad de las lesiones. Sumado a la evaluación de incidencia del homicidio-suicidio a nivel nacional e internacional, y a la descripción de sus características, este estudio también examinó empíricamente dos tipos específicos de homicidio-suicidio: los que ocurren dentro de la familia versus los que ocurren fuera de la esfera doméstica. Dada la baja frecuencia de este último en Holanda, los datos para este tipo de homicidio-suicidio se tomaron de Estados Unidos, donde su ocurrencia es mayor posibilitando el análisis estadístico. La mayor parte de los homicidios-suicidios extra-familiares involucran conocidos del victimario. A pesar de las diferencias entre los dos grupos, los resultados indican que en ambos casos los victimarios tienen factores extenuantes comunes. Mientras que en el homicidio-suicidio intra-familiar el victimario parece confrontarse con circunstancias extenuantes crónicas, en el extra familiar prevalecen las agudas. Las diferencias entre extenuantes agudos y crónicos suelen reflejarse en la naturaleza del suicidio.

### 3 Comparación del homicidio-suicidio con hechos aislados de homicidio y desuicidio

En tercer lugar, el estudio apunta a lograr un entendimiento a partir del cual las características del homicidio-suicidio pueden explicar la ocurrencia del homicidio-suicidio en comparación a la del homicidio o el suicidio de forma singular. Se aplicaron tres niveles de análisis, incluyendo el macro-nivel, meso-nivel y micro-nivel. El cuadro inferior da cuenta de los niveles y de las fuentes de datos utilizadas en cada uno de ellos.

<b>Estrategia y diseño utilizado en la comparación de homicidio-(para) suicidio</b>				
<b>Capítulo</b>	<b>Nivel de Enfoque</b>			
7	<b>Macro-nivel</b>	Homicidios-Suicidios 1992-2006	Homicidios 1992-2006	Suicidios 1996-2006
8	<b>Meso-nivel</b>	Homicidios-Parasuicidios 1953-2004	Homicidios 1953-2004	Parasuicidios 2000-2004
9	<b>Micro-nivel</b>	Homicidios-Parasuicidios 1980-2004	Homicidios 1980-2004	Parasuicidios 2000-2004

En el macro-nivel, todos los homicidios-suicidios en Holanda durante el periodo 1992-2006 fueron comparados con los homicidios y los suicidios tomados de las estadísticas nacionales. Los resultados demuestran que el homicidio-suicidio difiere significativamente del homicidio y del suicidio en tanto a sus características singulares y socio-demográficas. La mayor limitación en el uso de estadísticas nacionales es la ausencia de información de la que se dispone en cada caso.

El meso nivel de este estudio restaura el balance de la información perdida haciendo uso de la categoría homicidio-para-suicidio (suicidio fallido del victimario) lo cual permite extraer datos de psicopatología y motivación del acto.

Los casos de homicidio y homicidio-para-suicidio fueron recavados de los archivos del Pieter Baan Centre, que es una unidad hospitalaria de observación psiquiátrica. Los casos de para-suicidio serios que no se presentaron en vinculación a una conducta homicida se recavaron del Erasmus Medical Centre. Los resultados demuestran que la ocurrencia del homicidio-para-suicidio en comparación al homicidio singular puede ser atribuida a una serie de factores, siendo los más prevalentes los trastornos del ánimo, la matanza de múltiples víctimas, las amenazas de suicidio previa y la premeditación del acto. Sub-análisis de casos de homicidio-para-suicidio donde se involucran mujeres y niños revelan perfiles similares.

Finalmente, la dinámica del homicidio-para-suicidio fue evaluada y comparada con la dinámica del homicidio y del para-suicidio individual en el micro-nivel. Para ello se utilizó la misma fuente de datos utilizada en el meso-nivel pero en cambio se aplicó una metodología cualitativa. Los resultados sugieren que la dependencia interpersonal es un factor determinante en la explicación sobre el por qué algunos individuos eligen matar a otros y a sí mismos en lugar de solo matar a otros o solo matarse a sí mismos.

#### **4 Evaluación de modelos teóricos de homicidio-suicidio**

Combinando datos de fuentes múltiples, este estudio ha logrado poner a prueba empíricamente los modelos teóricos de homicidio-suicidio.

Tal como se mencionara anteriormente, la revisión de los modelos teóricos de homicidio-suicidio revelan que los diferentes enfoques elaboran sobre ciertos aspectos del proceso que conlleva al homicidio-suicidio pero no analizan este fenómeno como un acto singular. Algunas teorías se focalizan en el origen de la agresión, otras en la dirección que esta toma y algunas otras sus resultados.

La teoría de la violencia letal de Henry & Short (1954), que se focaliza en la dirección de los impulsos agresivos, postula que su expresión se halla más restringida en las clases de nivel socio-económico elevado que en las de menor status. Cuando los impulsos agresivos se manifiestan dando lugar por ejemplo a un homicidio, la necesidad de auto-castigo se presenta con más frecuencia en aquellos quienes tienen su expresión limitada. De acuerdo a esto, la posibilidad del suicidio seguido al homicidio incrementa proporcionalmente al incremento del nivel socio-económico.

Esto no está corroborado por los hallazgos empíricos presentados en el meso-analysis (capítulo 8) donde los que cometieron homicidio-parasuicidio fueron de bajo estrato socio-económico. En estos casos, dificultades financieras fueron interpretadas como factores contribuyentes del homicidio-suicidio.

De acuerdo a la teoría Psicodinámica, la víctima del homicidio-suicidio representa una fuente de frustración como así también de gratificación. De acuerdo a esta perspectiva, cuando la fuente de frustración se destruye en el acto homicida también se destruye la de gratificación y la muerte de la víctima puede restaurar o incrementar la frustración sobre la pérdida de un objeto amado. Ante esta dinámica, el self del agresor deviene entonces como legítimo blanco de agresión en forma de suicidio (Snack, 1997). Tanto el acto del homicidio como el fenómeno de homicidio-parasuicidio tienen en común un alto nivel de frustración que se expresa a través de la violencia doméstica. Esto fue corroborado en los hallazgos empíricos del mesoanálisis.

Teorías psicopatológicas relacionadas a trastornos depresivos indican que cuando el agresor se encuentra deprimido el homicidio-suicidio es más probable que el homicidio singular. Este enfoque indica que la depresión es un factor común a ambos fenómenos, homicidio y homicidio-suicidio, lo cual fue sustentado empíricamente por el mesoanálisis. Respecto del rol de la psicosis en la conducta violenta, esta se halla presente con más frecuencia en el contexto del homicidio-suicidio que en el de un homicidio o un suicidio separadamente. Esta noción fue parcialmente corroborada en este análisis empírico. La presencia de trastornos psicóticos solo aumentó la posibilidad de ocurrencia del homicidio-para-suicidio en comparación al parasuicidio. Dicha relación no se halló en la comparación con el homicidio. La alta prevalencia de trastornos psicóticos entre los ejecutores del homicidio-suicidio y del homicidio puede ser atribuida a la naturaleza de la población utilizada que estuvo formada por personas sujetas a evaluaciones de salud mental derivadas de la Corte. Esta población específica puede diferenciarse psicológicamente de acusados no derivados para la evaluación.

Otra teoría que intenta explicar la ocurrencia del homicidio-suicidio en relación a otras formas de violencia letal es la de la Psico-evolución. Este enfoque postula que los hombres matan a sus parejas íntimas en un último intento por controlar su capacidad reproductiva (Daly & Wilson, 1988). Esto halló soporte empírico en nuestro análisis de macro-nivel (capítulo 7). El suicidio como acto seguido al homicidio por parte del agresor contradice este modelo. Una formulación alternativa dentro de este enfoque contemplaría que la mentalidad territorial del hombre sería capaz de llevar a su pareja consigo cuando decide ponerle fin a su propia vida. El hecho de que las mujeres son menos proclives a involucrar a sus parejas hombres en la decisión del suicidio no contradice la formulación arriba expuesta.



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# Index

<b>A</b>		<b>C</b>	
Abuse	25, 38, 42, 48, 51, 55, 59, 73, 98, 141, 143, 147, 150, 184	Catathymic crisis	163
Accountability	21	CBS (Statistics Netherlands)	21, 124
Adolescent	55, 58-60, 62, 63, 71	Canada	10, 32, 36, 41, 43, 49, 53, 54, 57, 60, 81
Aggression	11, 12, 14, 43, 50, 51, 55, 58, 59, 67-69, 72- 77, 83, 111	Causes of Death Statistics	21, 27, 103, 124, 178
Alcohol	6, 7, 43, 47, 102, 103, 115, 160	Child custody	118, 151, 157, 159, 166, 184
Altruism	38, 47, 50, 51, 53, 56, 59, 78, 82, 133, 143	Child homicide	3, 4, 39, 40, 47-52, 58, 64, 71, 78, 80, 81, 88-95, 97, 98, 105, 109, 135, 140, 141, 143, 144, 146, 147, 150, 152, 169, 170, 174, 180, 185
Amok	64	Classification	24, 31, 38-40, 44, 54, 60, 64, 107, 149, 173
Amorous jealousy	38, 40, 42, 43, 149	Criminal antecedents	142
Anxiety	52, 63, 163	Criminal justice system	2, 9, 182, 183, 186
Attempt		Criminal homicide	3, 131, 132
- Homicide	187	Cross-national	31, 102, 107
- Suicide	5, 6, 7, 13, 16, 21, 22, 51, 56, 132, 141, 142, 150, 163, 180, 187	Culture	12, 34, 44, 52, 56, 59, 64, 68, 70, 71, 74
Attribution theory	68, 72-75, 83, 154, 155, 157, 164, 167-169, 174, 176, 178		
Australia	5, 20, 32, 35- 37, 41, 42, 45, 51, 52, 57, 61, 124, 187	<b>D</b>	
Aviolicide	54	Daly, Martin	48, 51, 81, 82
<b>B</b>		Dark number	8, 14, 87
Behavioural warning signs	115, 116, 140, 143, 145	Declining health	40, 42, 46
		Denmark	32, 49
		Dependency	43, 44, 46, 77, 80, 81, 84, 148, 149, 158, 160, 161, 163-169, 176, 178, 184, 185

Index

Depression	12, 42, 43, 47, 51, 54, 56, 58, 53, 70, 71, 73, 77, 78, 80, 84, 137, 141, 150, 152, 154, 156, 159-161, 163, 163-165, 177, 183, 185	129, 132, 134, 140, 142, 146, 155, 156, 178, 181, 183
Detention	2, 186	Euthanasia 109
Disintegration	83, 84, 124, 133, 134, 178	Extended suicide 48, 50, 64, 73
Diathesis-stress model	69	Externalization 157
Divorce	11, 34, 62, 74, 107, 115, 117, 118, 140, 149, 151, 158, 159, 163, 166	Extrafamilial homicide- suicide 15, 17, 26, 27, 30, 40, 59-62, 64, 65, 88, 89, 92, 95, 98, 111-119, 169, 170, 173-175
Domestic homicide	22, 25, 26, 50, 52, 81, 82, 88, 96, 98, 123, 124, 129, 131- 133, 137-139, 142, 143, 148, 151, 179, 183	<b>F</b>
Domestic violence	25, 26, 73, 76, 77, 136, 148, 151, 152, 177, 184	Familicide 38, 40, 52, 53, 58-60, 62, 64, 70, 71, 78, 81, 88-95, 97, 98, 137, 146, 169, 173, 174
Dopamine	69	Family annihilators 38, 52
Double parricide	54	Fear 2, 39, 53, 55, 59, 68, 71-73, 80, 110, 118, 143, 146, 149, 150, 154, 169
Drugs	47, 160	Femicide 40
Durkheim, Émile	70, 82, 83, 123, 124, 133, 134	Filicide 38, 40, 47, 48, 51, 81, 97, 137-140, 143, 144, 173
Dutch Homicide Monitor	17, 18, 21, 27, 87, 88, 103, 124, 178, 179	Filicide-suicide 38, 40, 51, 173
Dyadic death	39	Financial problem 52, 70, 71, 114, 115, 163, 166
<b>E</b>		Finland 32, 34, 37, 49
England & Wales	4, 9, 31, 32, 35, 36, 45, 53, 54, 81, 124, 130	Firearm 8, 24, 31, 34, 50, 54, 62, 63, 92, 93, 95-98, 101, 102, 150- 110, 114-118, 125, 126, 128, 129, 131, 175, 183, 187
Epidemiology		France 6, 32
- Laws	33, 96, 109	Fratricide 58
Erasmus Medical Centre	21, 22, 23, 27, 139, 148, 154, 155, 164, 175, 179	Freud, Sigmund 75, 76
Ethnicity	18, 21, 92-96, 98, 124, 126-	<b>G</b>
		Gender 4, 18, 21, 23, 24, 39, 69, 80,

- 92-95, 98,  
106, 107, 115,  
124, 127-129,  
139, 142, 146,  
151, 155, 183
- Grandparents 54  
Grief 181  
Guilt 2, 11, 42, 52,  
53, 59, 63, 68,  
73, 76, 77, 79,  
97, 110, 118,  
132, 137, 146,  
149, 159, 168,  
176
- H**  
Helplessness 11, 70, 80,  
159  
Henry & Short 11, 12, 73-77,  
136, 151, 152,  
177  
Hindustani 97  
Homicide  
- Method 93, 106, 126,  
143  
- Rates 3, 11, 33, 34,  
74, 88, 96, 98,  
101, 103, 104,  
108, 131  
- Trends 97  
Hong Kong 32, 36, 45  
Honour 5, 52, 59  
Household 22, 133, 139,  
157, 163
- I**  
Iceland 32  
Implication 2, 12, 173,  
183, 186  
Incidence  
- Homicide 10, 18, 98  
- Suicide 7  
- Homicide-suicide 2, 5, 9, 15, 17,  
24, 26, 27, 31,  
46, 84, 87, 88,  
98, 99, 101,  
102, 104, 107,  
110, 111, 116,  
119, 130, 173,  
174, 181  
Infanticide 47, 48  
Instrumental motive 98  
Integration 68, 75, 81-84,
- 123, 124, 133,  
134, 178, 181  
159  
Internalization  
Intimate partner  
  homicide 3, 4, 38, 40-  
44, 46-48, 52-  
55, 58, 64, 70,  
71, 80, 81, 88-  
92, 95, 97, 98,  
135, 137, 138,  
140, 142-144,  
146, 148-150,  
152, 166-170,  
174, 179, 185  
Intrafamilial homicide-  
  suicide 15-17, 26, 27,  
40, 65, 111-  
114, 116-119,  
169, 174, 175  
Isolation 6, 71, 83, 133,  
160, 166, 173,  
178  
Israel 32
- J**  
Japan 31, 32, 34, 45,  
52, 56  
Job problem 115
- K**  
Kohut, Heinz 79
- L**  
Legal characteristics 140, 145, 146  
LexisNexis 19, 20, 112,  
116  
Location 18, 46, 106,  
115-117, 125,  
126, 129, 131  
Lombroso 68, 69
- M**  
Male proprietariness 109  
Manipulative suicide 22, 180, 186  
Marital status 106, 107, 115  
Mass  
- Murder 39, 60, 62, 64,  
71  
- Suicide 60  
Matricide 54, 55  
Medea complex 50, 79, 151,  
159  
Media 7, 9, 59, 60,  
95, 117, 118,  
182, 186

## Index

- Method 64, 98, 135, 138
- Homicide 18, 93, 106, 126, 141, 143
  - Suicide 97, 126, 132, 143, 150, 180
  - Homicide-suicide 38, 39, 42, 46, 50, 95, 109, 115
- Motive 4, 5, 10, 16, 23, 38, 39, 43, 47, 50, 51, 53, 55, 56, 58, 60, 62, 64, 65, 78, 80, 98, 130, 135, 140, 143, 145, 147, 149, 152, 153, 179, 180, 184, 186
- Mythology 46, 50
- N**
- Narcissim 50, 77, 79-81, 84, 143, 146, 149, 151, 158, 159, 165, 184
- Neonaticide 47, 48
- Netherlands 1-10, 12, 15-27, 54, 55, 84, 87-99, 101-111, 124, 125, 129, 130, 133, 135, 137, 139, 148, 155, 157, 173, 174, 175, 179
- Neurobiological theories 67-70, 83, 174
- Newspaper 18, 19, 20, 27, 36, 37, 41, 49, 61, 88, 112, 117, 179
- New Zealand 32, 61
- National Violent Death Reporting System (NVDRS) 17, 19, 20, 103, 108, 111-113, 118, 179
- O**
- Othello 7, 43
- Oyako Shinju 52
- P**
- Paranoia 39, 79
- Parent homicide 3, 40, 54-59, 64, 98, 135, 138
- Parricide 40, 52, 54-56, 137, 139, 173
- Patria potestas 50
- Patricide 54, 55
- Personality disorder 7, 63, 79, 80, 141, 142, 145, 147, 148, 156, 158-160, 183, 184
- Philemon & Baucis death 46
- Physical health problem 115, 117
- Pieter Baan Centre 21, 22, 27, 137-139, 154, 155, 175, 181
- Poisoning 125, 126
- Police 5, 10, 17, 18, 20, 35, 54, 116, 155, 156, 159, 162, 164, 167, 181, 184
- Premeditation 22, 143, 145, 148, 152, 176
- Prevention 2, 19, 25, 167, 181-187
- Prison 2, 9, 118, 186
- Psychodynamic theory 75, 76, 136, 177
- Psycho-evolutionary theory 68, 75, 81, 82, 84, 97, 123, 132, 133, 134, 177, 178
- Psychological autopsy 181
- Psychotic disorder 63, 78, 79, 81, 84, 137, 141, 142, 145, 151, 152, 156, 177
- R**
- Recidivism 144, 146, 147
- Reactive suicide 43, 65, 76, 110, 116, 118, 143
- Reprisal 143
- Revenge 53, 60, 62, 65, 150, 151, 169, 170, 174
- S**
- Sati 44, 46
- Schizophrenia 6, 56, 63

- School shooting 60, 62, 63, 98  
 Scotland 32  
 Sectarian suicides 60  
 Self-destructive act 6, 39  
 Serial killing 39  
 Shame 43, 52, 53, 59, 68, 79, 149, 168, 176  
 Siblicide 40, 52, 54, 58, 137, 173  
 Sibling homicide 40, 58, 59, 64, 98, 135  
 Socio-economic status 74, 75, 140, 151, 177  
 Sororicide 58  
 Strain theory 70, 71, 83, 117, 118, 174  
 Stream analogy of lethal violence 11, 68, 72-75, 136, 177  
 Substance abuse or dependence 6, 13, 79, 114-118, 142, 160, 185, 186, 189  
 Surinam 92-96, 128  
 Suicide  
 - Attempt 5, 6, 7, 13, 16, 21, 22, 51, 56, 132, 141, 142, 150, 163, 180, 187  
 - By cop 13  
 - Characteristics 6  
 - Ideation 12, 55, 78, 80, 118, 155, 160, 165, 180, 184, 185  
 - Intent 20, 112, 116-118, 150, 186  
 - Method 97, 126, 132, 143, 150, 180  
 - Note 110, 115, 159, 160, 161  
 - Pact 39, 42, 45, 46, 146  
 - Rates 6, 11, 12, 34, 64, 74, 82, 88, 96-98, 103-105, 173  
 - Risk 131, 185, 186  
 - Threat 43, 145, 146, 148, 152, 176, 183-185  
 Sweden 32, 50  
 Switzerland 6, 15, 17, 20, 24, 26, 27, 37, 54, 60, 96, 99, 101-110, 175, 187  
 Symbiosis 141, 143, 148-150, 152, 160-162, 166, 169, 184  
**T**  
 Talion principle 75  
 Terminology 12  
 Terrorism 39, 60  
 Therapy 184, 185  
 Threat  
 - Homicide 142, 147, 184  
 - Suicide 43, 145, 146, 148, 152, 176, 183-185  
 Total solution 161, 164, 166, 167, 169, 176, 178  
 Trends  
 - Homicide 97  
 - Homicide-suicide 34, 96, 108  
 Treatment 51, 115, 185, 186  
 Trigger 38, 44, 53, 71, 77, 166, 167, 182, 183, 185  
 Triangulation 182, 183  
**U**  
 Unemployment 6, 53, 75, 102, 140, 151, 156  
 United Kingdom 9, 10, 45, 49, 61  
 United States 4, 8-10, 15, 17, 24, 26, 27, 31, 33-37, 41, 42, 46, 47, 49, 51, 53, 54, 61-63, 96, 99, 101-111, 116, 124, 130, 175, 187  
 Uxoricide 38, 40, 43, 46, 47, 139, 140, 143, 146, 147, 173

<b>W</b>	
Weapon	22, 34, 50, 63, 64, 93, 102, 105, 106, 108, 126
Wilson, Margo	48, 51, 81, 82

## Curriculum Vitae

Marieke Liem was born on December 16, 1982 in Goes, The Netherlands. In 2004 she obtained her Bachelor's degree in Social Science (cum laude) at University College Utrecht. Following, in 2005 she obtained a Master of Science degree in Clinical Psychology (cum laude) at Utrecht University. During her studies she paid particular attention to domestic homicide. In 2006 she graduated from Cambridge University as a Master of Philosophy in Criminological Research. From September 2006 to June 2007 she was employed as a researcher at the Willem Pompe Institute for Criminal Law and Criminology at Utrecht University, conducting research in the field of intimate partner homicide. From June 2007 onwards she worked as a PhD researcher at the Willem Pompe Institute. She conducted part of her PhD research in Boston, MA, in collaboration with the Harvard Injury Control Research Center and Northeastern University College of Criminal Justice. She continues to work within the area of homicide research.

Marieke Liem werd op 16 december 1982 in Goes geboren. In 2004 behaalde zij haar Bachelor of Arts in sociale wetenschappen (cum laude) aan het University College Utrecht. Hieropvolgend startte zij de studie Klinische Psychologie, die zij in 2005 afrondde met een Master of Science (cum laude). Tijdens haar studie richtte zij zich specifiek op onderzoek naar doding in gezinsverband. In 2006 behaalde zij haar Master of Philosophy in Criminologie aan de Universiteit van Cambridge. Vanaf september 2006 tot juni 2007 was zij als onderzoeker werkzaam bij het Willem Pompe Instituut voor Strafrechtswetenschappen en Criminologie van de Universiteit Utrecht, waar zij zich bezig hield met onderzoek naar partnerdoding. Vanaf juni 2007 was zij als promovenda werkzaam aan het Willem Pompe Instituut. Een deel van haar promotieonderzoek heeft zij in Boston, MA, uitgevoerd in samenwerking met het Harvard Injury Control Research Center en het Northeastern University College of Criminal Justice. Zij blijft zich bezig houden met onderzoek naar moord en doodslag.