MURDER–SUICIDE

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Introduction

Murder-suicide, more correctly termed homicide-suicide, is the phenomenon of an unlawful killing or killings together with the suicide of the assailant. These episodes are also referred to as dyadic death, from the Greek meaning paired. These deaths show features that are different from homicides in which the assailant does not kill himself or herself. Although sometimes called murder-suicide, they are more correctly referred to as homicide-suicide, as murder has a specific legal definition, depending on the legal jurisdiction, and requires a full criminal trial for final determination. Killings that are followed by the suicide of the assailant will not come to trial and though in some legal systems an inquest may be held, the killer is not able to put a defense, which might have resulted in a manslaughter verdict on the basis of mental illness, provocation, or similar grounds that allow partial or complete defenses to murder.

Definition of Homicide-Suicide

Marzuk and coworkers classified murder-suicides as a homicide followed by the suicide of the assailant within a week. However, there are a number of patterns of homicide followed by suicide that include:

1. Typical cases where the victim(s) and assailant are known and the suicide of the assailant rapidly follows the killing of the victim or victim(s).
2. Where the assailant commits suicide after arrest. In these cases, factors that influenced the reason for killing may have changed and the suicide might be for different reasons.
3. Pseudo-commando pattern. In these cases, the killer will go on a destructive mission with the intent to kill as many people as possible before destroying himself/herself. The victims are typically strangers.
4. Political/religious motivation where there is a specific group of victims targeted and the assailant dies as an intentional part of the act.
5. Culturally based homicide-suicide episodes such as "amok," originally described in young Malaysian men, and "windigo," a pattern of homicide-suicide seen amongst the Ojibwa tribe in sub-Arctic Canada.

Homicide-Suicide Studies

West published his seminal work *Murder Followed by Suicide* in 1965. This study examined episodes of killing followed by suicide in London, England between 1948 and 1962. The study was based on inquest findings that recorded verdicts of murder and suicide. Until 1977, English coroner's courts could return verdicts of murder, rather than unlawful killing. Based on these data, West concluded that one-third of all murderers in England committed suicide. This figure has often been quoted to state that England has a high suicide rate of its killers. These data did not include those cases where there was a verdict of manslaughter and overstated the overall rate of suicide by England's killers. However, West's study was important as a large study of such episodes and pointed to important differences from other patterns of homicide. In particular, he found that women formed a large cohort of killers, and that their victims were their own children. In his study 40% of killers were women. Of the male killers, most killed their wife or girlfriend. Other early studies of homicide also included data on suicide rates. A high percentage of homicide followed by suicide was seen in Denmark, Israel, and Australia, but with lower percentages in the USA. Subsequent studies have shown both similarities and differences in patterns of homicide-suicide.

Assailants and Victims

In 1992, Marzuk and colleagues proposed a classification for homicide-suicide episodes (Table 1). Their classification has been used as the basis of other classification systems, notably that of Hanslick and Kopenon. The principal relationships can be divided into spousal, familial, and extrafamilial. The most common patterns are spousal and familial. In the study of West, it was suggested that women may form a large group of assailants in homicide-suicide episodes, but studies over the last three decades from a number of different countries have indicated that men are the principal perpetrators of homicide-suicide, with most survey's revealing the male perpetrator rate above 90%. The principal victim is the man's spouse or partner. The man may also kill his children. When women kill, the victims are most commonly their own young children. Extrafamilial killings are rare, but include work colleagues, random victims of mass shooting episodes, religious cults, and victims of terrorism.

Table 1 Classification of homicide-suicide

1 Spousal or consortial
  Perpetrator
  (a) Spouse
  (b) Consort
  Type of homicide
  (a) Uroxicidal (spouse-killing)
  (b) Consortial (killing of lover)
2 Familial
  (a) Mother
  (b) Father
  (c) Child (under 16 years)
  (d) Other family member
  Type of homicide
  (a) Neonaticide (child <24 h old)
  (b) Infanticide (child >1 day <1 year)
  (c) Pedicide (child >1 year <16 years)
  (d) Adult family member
3 Extrafamilial
  Class
  (a) Amorous jealousy
  (b) Mercy killing
  (c) Altruistic or extended suicide
  (d) Family, financial, or social stressors
  (e) Retaliation
  (f) Other
  (g) Unspecified

Methods of Killing and Suicide

In West's study of homicide followed by suicide, the most common method of killing and suicide was carbon monoxide poisoning. During the period of his study (1948–62), domestic gas in the UK was produced from coal (known as "town gas") and contained a high concentration of carbon monoxide. It was therefore relatively easy to kill young children and commit suicide at the same time using domestic gas. This raised the interesting question of whether a change in availability of method of killing would alter the pattern of killing. In the 1960s, the supply of domestic gas in the UK was changed to natural gas, which contains no carbon monoxide. This resulted in a significant drop in female suicide rates. A subsequent study of homicide-suicide in the UK examining deaths between 1975 and 1992 showed a low rate of female killers in the UK and revealed lower rates of carbon monoxide poisoning, with car exhaust fumes the source. Women formed a small proportion of the killers and used passive methods of killing, poisoning with medication or chemicals being the chosen method of the killing and suicide. The studies by West and Milroy identified a high rate of use of firearms in a country that has very restrictive firearms legislation. In the later study by Milroy, firearms accounted for nearly 40% of these killings, although fewer than 10% of all homicides involve the use of firearms. However, in a study from Hong Kong, firearms use in homicide-suicide was unusual.

In countries that have higher firearm ownership rates and where firearms are the principal weapon in homicides, such as the USA, there is a very high rate of use of firearms homicide-suicide episodes. In Victoria, Australia, where there is a higher rate of firearms-related homicide than the UK, this rate was found to be 70% whilst in studies from the USA rates of over 90% have been found. Thus availability of firearms does appear to have a significant effect on the pattern of killings as well as possibly the rate of these episodes. Even in low-ownership countries, firearms are an important factor in homicide-suicide episodes.

Epidemiology

An analysis of the studies of homicide-suicide reveals varying rates of homicide-suicide episodes between countries. In studying homicide-suicides some authors have looked at the percentage of homicide-suicides compared with total number of homicides. This however, does not always allow easy comparison between different jurisdictions. Examining the rate, that is the number of episodes per 100 000 people, allows more accurate comparison between countries and with time.

In 1983 Coid examined published data on homicide-suicide episodes and proposed three laws. They are:

> The higher the rate of homicide in a population, the lower the percentage of offenders who were found, (a) to be mentally abnormal and, (b) to have committed suicide.
> The rate of mentally abnormal offenders and those who commit suicide appears to be the same in different countries, despite considerable differences in the overall rates of homicide.
> There is some indication that the rate of mentally abnormal offenders, and those who commit suicide, remains the same, despite a fluctuation in the overall rate over time.

The rate of homicide-suicide episodes from published studies is shown in Table 2. It can be seen that the percentage of homicides to homicide-suicide episodes can vary quite significantly between countries, but an analysis of the rate of these episodes shows there is actually less variation in homicide-suicide episodes between different countries than overall homicide rates. The countries with the higher rates of homicide-suicide tend to have

Table 2 Epidemiology of homicide-suicide

Country/region	*Years of study*	*Homicide rate (per 100 000)*	*Homicide-suicide (%)*	*Homicide-suicide rate (per 100 000)*
Australia	1989–91	2.00	8.0	0.16
Australia (Victoria)	1985–89	1.87	9.0	0.19
Bermuda	1920–79	2.35	5.5	0.13
Canada	1968	1.50	18.0	0.27
Canada	1961–66	1.36	15.6	0.21
Denmark	1968–83	0.99	8.0	0.08
Denmark	1946–70	0.79	30.0	0.20
England and Wales	1980–90	1.11	7.2	0.07
England (Yorkshire)	1975–92	1.50	4.6	0.07
Finland	1955–70	2.20	8.0	0.18
Hong Kong	1961–71	1.57	5.0	0.07
Hong Kong	1989–98	1.50	13.0	0.09
Iceland	1900–79	0.72	8.5	0.06
Israel (Oriental Jews)	1950–64	1.07	25.6	0.27
Israel (Western Jews)	1950–64	0.59	67.8	0.40
New Zealand	1976–89	1.5	3.4	0.05
Scotland	1986–90	1.7	3.0	0.05
Sweden	1970–81	0.7	15.6	0.09
USA (Albuquerque)	1978–87	12.0	4.0	0.25
USA (Atlanta)	1988–91	38.8	1.4	0.46
USA (Houston)	1969	23.3	1.8	0.42
USA (Kentucky)	1985–90	5.0	6.0	0.30
USA (Los Angeles)	1970–79	17.1	2.1	0.36
USA (Miami)	1977–85	27.1	2.27	0.55
USA (New Hampshire)	1995–2000	1.7	14.7	0.26
USA (North Carolina)	1972–77	16.1	1–2	0.19
USA (Philadelphia)	1948–52	6.1	3.6	0.21
USA (Virginia)	1980–84	12.7	2.6	0.34
USA (Virginia)	1990–94	14.6	2.6	0.38
USA (Washington)	1974–75	29.3	1.5	0.43

a higher rate of overall homicide, with a greater availability of firearms. There is therefore some evidence to support Coid's contentions formulated above. In addition an examination of homicide data from England and Wales since 1945 reveals evidence to support the assertion that over time the rate of homicide-suicide episodes remains relatively unchanged, despite a significant increase in the overall homicide rates.

Reasons for Homicide-Suicide

Motives behind homicide-suicide episodes have been less studied than other episodes of homicide because of the non-survival of the assailant. However, suicide notes are left (in 27% of the cases in the series of Milroy), and other surrounding evidence allows elucidation of these events. Spousal/consortial killings account for greatest proportion of cases. In the study of Milroy they accounted for 50% of all episodes. The main reason for spousal killings is a breakdown in the relationship. In most cases the woman is about to leave, although in some cases the man returns to kill his partner. A depressive mood may be present. Often a degree of jealousy is present. These killings are motivated by anger and revenge and not remorse. In older couples, however, often stress factors are often present. Studies of homicide-suicide in Australia and England found ill health and financial stress to be important factors in elderly couples. In Hong Kong economic factors were also important. Cohen has also pointed to the importance of homicide-suicide in elderly couples. When these episodes are studied in the elderly, they show resemblance to suicide pacts. Mental illness is the principal factor in a small percentage, and avoidance of criminal responsibility is an unusual reason for committing suicide. These episodes appear to involve the intention of destruction of both victim and assailant *ab initio*, rather than as an afterthought by the assailant.

With female killers, where the victims are their children, the motive is typically a misplaced altruism founded on mental disorder in the mother. These cases have been called altruistic suicide or extended suicide.

Generally, the killers have a higher socioeconomic status than other killers, though in Hong Kong homicide-suicide episodes were seen in more deprived couples. Alcohol is well recognized as a factor in homicidal violence and this also applies to homicide-suicides; Milroy found that one in five assailants had a blood alcohol above 100 mg dl^{-1}. Felthous and colleagues found high concentrations of blood alcohol in assailants in cases in their study from Texas.

The Investigation of Homicide-Suicide

The investigation of a homicide-suicide episode should not be undertaken with the preconceived view that no assailant need be found as he or she is lying dead at the scene of the crime. A number of episodes have been recorded where an assailant has made one of his victims appear as though they have committed suicide (e.g., the English case of *R* v. *Bamber*). In approaching any homicide-suicide episode the pathologist and the investigating authorities should start from the basis that there is a homicide and then consider carefully whether the injuries seen in the apparent suicide are definitely self-inflicted. It is also important to exclude the deaths as being part of a suicide pact. Occasional cases of double natural deaths may occur as do accidental deaths from carbon monoxide poisoning. All these scenarios should be considered before a determination of the causes and manner of death is made.

Conclusion

Homicide-suicide forms a distinct subgroup of homicide that has been reported from many different societies. The assailants are predominantly men who kill family members, most commonly their wives. Firearms are the most common method of killing. Spousal breakdown is the most common triggering factor. The rate of occurrence of homicide-suicide is relatively uninfluenced by overall rates of homicide.

Further Reading

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