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Murder–Suicide

An Overview

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Murder–suicides form a distinct subset of homicides in which the perpetrator kills him or herself after dispatching his or her victims. More accurately called homicide–suicide, the most common scenario involves an estranged white male in his 40s killing his spouse and possibly children before committing suicide. Rates are relatively uniform among communities and are much less than simple homicide, or suicide, cases. A variety of categories have been identified that include spousal cases where *(a)* the action is precipitated by jealousy or concern over age or ill health, *(b)* familial cases where a parent usually kills all of the children and then themselves, and *(c)* a final mixed

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group consisting of disgruntled employees, cult members, and members of religious or political groups who target a large number of victims.

Key Words: Murder–suicide; homicide–suicide; dyadic death.

1. Introduction

Murder–suicide refers to a situation where the perpetrator of a homicide has taken his or her own life after the death of the victim(s) has occurred. It is well recognized, historically being described in the Ming dynasty in China and in Greek tragedies and has been known by a variety of names, including homicide–suicide and dyadic death *(1,2)*.

Although suicide may often immediately follow homicide, various authors have allowed up to 3 months between the events *(3)*. Most suicides, however, occur within a day or much less of the homicides *(4-7)*. It has been suggested that murder–suicides have distinctive epidemiological characteristics and overlap areas such as domestic homicide, mass murder, and suicide *(8)*. Generally, distinctive cultural conditions in which there may be multiple homicides followed by the suicide of the perpetrator, such as *amok* among Malays, are usually excluded from murder–suicide data, as are cases where a suicide attempt has failed, or where the victims were accidentally killed *(8)*.

2. Incidence

Murder–suicides are uncommon events and although suicides are a leading cause of death in many Western countries, murder-suicide rates are low, usually being much less than homicide rates *(6)*. Although rates of 0.2 to 0.3 per 100,000 persons per year have been cited *(5)*, determining exact numbers is often difficult because there is no standard classification and because cases tend to be recorded in official statistics as separate suicides and homicides. The percentage of homicides that are murder–suicides tends to be lower in countries and regions in which there is a high homicide rate and higher in regions in which homicides are rare *(9)*. For example, the percentage of homicides followed by suicide of the perpetrator in some series is 42% in Denmark, in which homicide rates are low, compared with 4% in the United States, in which homicide rates are much higher *(6)*. It was estimated in 1992 that there were about 1000 to 1500 such deaths per year in the United States, with relative stability in the numbers of such deaths in Western countries, although variations in definitions and reporting practices makes accurate assessment difficult *(8)*.

Table 1
International Rates of Murder–Suicide per 100,000 of the Population

Country	Years	Homicide-suicide rate	% of total homicides
New Zealand	1976–1989	0.05	3.4
Scotland	1986–1990	0.05	3
Iceland	1900–1979	0.06	8.5
England and Wales	1980–1990	0.07	7.2
Hong Kong	1961–1971	0.07	5
Sweden	1970–1981	0.09	15.6
Bermuda	1920–1979	0.13	5.5
Australia	1989–1991	0.16	8
Finland	1955–1970	0.18	8
Denmark	1946–1970	0.2	30
Canada	1961–1966	0.21	15.6

Data taken from ref *10*.

Looking at specific data *(10)*: the homicide rate in Atlanta from 1988 to 1991 was 38.8 per 100,000 of the population, compared with a much lower homicide rate of 1.11 per 100,000 in England and Wales from 1980 to 1990. The respective murder–suicide rates were 0.46 and 0.07, accounting for 1.4% of homicides in Atlanta and 7.2% in England and Wales. Murder suicides have accounted for between 1.4% of the total number of homicides in Atlanta and 67.8% in Israel. Homicide and murder–suicide rates have ranged from 2.35 and 0.13 for Bermuda, to 1.5 and 0.27 for Canada, and 0.72 and 0.06 for Iceland. The rates of murder–suicide and homicide for a variety of countries are summarized in Table 1 *(10)*.

3. Investigation

The investigation of murder–suicides is often difficult if family members are involved because the perpetrator is dead and those who are in the best situation to provide pertinent information to the investigators may also have been killed. Psychological autopsies with review of the medical records of the perpetrator and interviews with work colleagues and relatives may provide some insight into the events leading up to the fatal attack; however, this information is often not available on coroner's files *(11)*.

4. Characteristics

Although it has been suggested that the characteristic features of the perpetrators, victims, and the methods used tend to vary among communities and between countries, recent studies have shown similarities in rates among different ethnic, racial, and cultural groups *(6,10,12)*. For example, it was proposed that although the most common form of murder–suicide in the United States involved a married or estranged white male who shoots his female partner/spouse, maternal–child murder–suicides were more common in England *(8,11,13)*. This disparity has not been shown in more recent data, with the percentage of female perpetrators in many series ranging from only 3 to 8% and with shooting being the most common form of homicide in murder–suicides not only in the United States, but also in parts of England *(7,10)*. The percentage of female perpetrators does increase when murder–suicides involve child family members *(6,14)*. Perpetrators of murder–suicide also tend to be older than those who commit homicide alone and are usually about 40 to 49 years of age. There is usually a close personal relationship between the perpetrator and the victim; the killing of strangers is rare *(10,15,16)*. Characteristics of murder–suicide cases may, however, alter over time in the same community, with Hannah et al. *(17)* demonstrating a change from city-based, multiple killings by white perpetrators, to rural dyadic killings by black perpetrators in Central Virginia during a 10-year period.

Although homicides tend to occur more commonly within lower socioeconomic groups, murder–suicides have been found to be more a middle class phenomenon in several studies. Many deaths occur in the bedroom of family homes *(2,7,10)*.

Methods used may certainly vary depending on availability, with the high rate of murder–suicides involving firearms in the United States being attributed to the ready access to handguns in that country *(6)*. This may vary over time, with earlier studies from England showing a high rate of homicide using coal gas poisoning *(13)*, compared with later studies from the United Kingdom where domestic gas was no longer used once carbon monoxide had been eliminated *(18)*. Some studies have shown that murder–suicides may involve more violent methods than homicides alone, suggesting greater levels of frustration and aggression *(16)*.

5. Classification

A variety of classification systems have been proposed for murder–suicides. Marzuk et al. *(8)* proposed a classification system based on the type of victim–perpetrator relationship and possible motives or precipitating events,

Table 2
Classification of Murder–Suicide

Spousal or consortial
Perpetrator
a) Spouse
b) Consort
Type of homicide
i) Spouse-killing (uxoricidal)
ii) Murder of lover (consortial)
Familial
Perpetrator
a) Mother
b) Father
c) Child (<16 years)
d) Other adult family member (>16 years)
Type of homicide
i) Neonaticide (<24 hours)
ii) Infanticide (1 day to 1 year)
iii) Pedicide (1–16 years)
iv) Adult family member (>16 years)
Extrafamilial
Class:
a) Amorous jealousy
b) "Mercy killing"
c) "Altruistic or extended suicides"
d) Family, financial, or social stressors
e) Retaliation
f) Other
g) Unspecified

Data taken from ref. *8*.

dividing cases into those involving a spouse or partner, those involving other family members, and those that occurred outside families (Table 2).

5.1. Spousal

Spousal murder–suicides typically involve a male spouse or lover who suffers "morbid jealousy" or jealous rage precipitated by frustration *(5)*. The reported age range is 18 to 60 years and there often is a history of suspicions,

or knowledge, of spousal infidelity. Although some relationships are typified by abuse and actual infidelity, in others the suspicions may be delusional and involve psychotic breakdown. The "Othello syndrome" refers to a situation where delusions of infidelity lead to irritability, depression, and aggression. More than 90% of murder–suicides involving couples are perpetrated by males, who may also murder their spouse's lover. This has been termed triadic death *(8)*. Recent separation from a spouse has been noted in one Canadian study to increase the risk of murder–suicide, with 35.3% of estranged males who murdered their wives subsequently committing suicide, compared with only 21.6% of nonestranged spouses who committed suicide after spousal homicide *(8)*.

The other characteristic scenario of spousal murder–suicide involves an elderly couple who may have been married for many decades who are both suffering from significant illnesses, financial problems, and/or social isolation. Often the husband will either shoot or suffocate his wife and then commit suicide. This type of activity overlaps with so-called "mercy killings" and suicide pacts and also has been described in partners of acquired immunodeficiency syndrome victims who perform a "mercy killing" and then commit suicide *(8)*. Differentiating a suicide pact where a partner has been coerced to commit suicide, from murder–suicide may be difficult, and so-called "suicide pacts" between a parent and child may well be disguised murder–suicides *(6)*.

5.2. Familial

Familial murder–suicides often involve a parent who murders their children and then commits suicide. Suicide following infanticide is very uncommon in most countries, with only 10.5% of fathers and 2.3% of mothers who murder their infants committing suicide in some series. A higher incidence has been reported in Japan, where about 500 cases are documented annually *(2,6,8,14)*.

As noted, there are often higher numbers of females involved in murder–suicides with children, and it has been hypothesized that the action of killing the children is an extension of suicide and that the perpetrator is acting altruistically to "save" her children from the dangers of the world. Certainly, the methods used by mothers tend to be less violent than those used by fathers, consisting of poisoning, suffocation, and carbon monoxide exposure, compared to shooting, strangling and stabbing, methods favored by males *(13,14)*. Females may sedate their children prior to causing death and are also less likely to kill their spouse or other children who are not members of the family. This contrasts with males who often kill their own children, visiting children, their spouse, and family pets. The degree of violence exhibited by these individuals has led to the term "family annihilators" *(19)*.

Another form of familial murder–suicide may occur if a dependent adult child suffering significant physical or mental impairment is murdered by a parent who no longer feels capable of providing the necessary care because of age, infirmity, or financial problems. This has "altruistic" features in common with elderly spousal murder–suicides.

5.3. Extrafamilial

Murder–suicides involving individuals outside the family often take the form of a disgruntled employee or ex-employee seeking vengeance for real or perceived insults, harm, or ill-handling. These have been called "adversarial" murder–suicides *(6)*. Failure to achieve job promotion or attain monetary payment for services may be motivating factors that can reach the level of persecutory delusions. Cases also occur among peers when relationships have been characterized by antagonistic or competitive qualities, and several highly publicized cases of high school shootings have occurred in the United States involving disgruntled students who returned to school properties with firearms and sometimes with lists of potential victims.

In the "pseudo-commando" type of murder–suicide, a number of firearms may be used, including semiautomatic weapons, and a number of bystanders or so-called "secondary targets" may be killed. Perpetrators sometimes have stockpiled a small arsenal and intend to die in a "blaze of glory" *(6)*. These events often occur in public places where there is an opportunity to kill many victims. There is usually no escape plan for the perpetrator, who often forces the police to kill him. Pseudo-commando murder suicides have been divided into "indiscriminate" and "pseudo-community" subtypes. In the indiscriminate type, the perpetrator kills as many people as possible, their only common characteristic being proximity to the killer. In the pseudo-community subgroup a perpetrator targets a specific group. This was clearly demonstrated by Marc Lepine, who killed 14 female engineering students at Montreal's L'Ecole Polytechnique in December 1989. He had separated out the female from the male students and had said that he was fighting "feminism" *(6,11)*.

Murder–suicides occasionally occur in the setting of cults and may achieve considerable media coverage when a large number of deaths occur. Whether these types of deaths should be classified as murder–suicides, homicides, or suicides is often unclear, particularly given that most, if not all, witnesses are dead. The leaders of such cults have been described as charismatic and paranoid, and often may have persuaded their followers that death is a desirable outcome.

A final group consists of those involved in terrorist actions such as the Bali bombing that have been designated "kamikaze" murder–suicides *(5)*, where

the perpetrator dies as a result of the device or action that he or she has used to kill a large number of others. Suicide bombings in the Middle East would also fall into this special subcategory.

The logistics involved in cases where there may be hundreds of victims located in less-than-ideal circumstances may be highly complex, with issues such as preservation of the scene, preservation of bodies, preservation of evidence, and protection and provision of adequate working conditions for investigators being of paramount importance.

This classification system has been criticized on the grounds that it is difficult sometimes to determine what terms such as "consortial" mean. In addition, there is no provision for the inclusion of information such as race, gender, weapon type, and living arrangements. Hanzlick and Koponen *(4)* have therefore proposed an alternative typological system that enables the recording of much more circumstantial information on the demography and epidemiological features of individual cases, listed in the following sections.

5.3.1. Relationship of the Victim to the Perpetrator

Relationships are defined as spouse by marriage, common-law spouse, unmarried partner in relationship, extramarital consort (lover), real or perceived rival lover, parent, offspring, sibling, grandparent, grandchild, niece/nephew, aunt/uncle, cousin, family member other than those listed, acquaintance, stranger, same gender as perpetrator, opposite gender of perpetrator, same race as perpetrator, different race than perpetrator, lives in same household, lives in different household, no living witness(es), living witness(es), shot, stabbed/cut, beaten, other (asphyxia, drugged, etc.).

5.3.2. Cofactors

Cofactors are impending divorce, previously divorced, real or perceived loss of nonmarital partner in a relationship (boyfriend, lover, etc.), jealousy or retaliation for partner's real or perceived involvement with another person, retaliation against a real or perceived rival lover, mercy killing, altruism (to save from "evils of the world"), financial stressors, family stress or dysfunction, perpetrator intoxicated with alcohol, perpetrator intoxicated with drug(s) other than alcohol, perpetrator had known history of psychiatric illness, unspecified, and other or unknown factors.

5.3.3. Special Classifications

Special classifications are characterized as family annihilator, dyadic, triadic, followed a mass murder or serial murders committed by the perpetrator.

6. *Motivation*

As can be seen from the previous discussion, motivations for murder–suicide are quite complex and probably differ markedly from case to case. Determining the incidence of underlying psychological disturbance among perpetrators also is complicated by differences in psychiatric diagnostic approaches and mental illness classifications *(20)*. There are, however, some generalizations that can be made.

Psychological illness appears to play a major role in a number of the categories, although the literature does not contain abundant information on the psychological profiles of perpetrators prior to the fatal events. Psychological problems may take the form of paranoia, morbid jealousy, and psychosis in cases of spousal murder–suicides, or in familial cases where there has been recent estrangement. Alternatively, depression may play a significant role in cases where a parent murders his or her children; the incidence of depression has been reported as much higher generally in perpetrators of murder–suicide than of homicide alone. For this reason, it has been suggested that murder–suicide may merely be an extension of a suicidal act *(6)*. There may be a history of previous suicide attempts and consultation with mental health professionals *(11)*. There also may be delusional or psychotic elements with religious overtones, as in a case where a father murdered his children and then cut his hand off with an axe before fatally shooting himself (*Wherefore, if thy hand or thy foot offend thee, cut them off, and cast them from thee*, Matthew XVIII, 8). Perpetrators have been described as being impulsive with poor control of aggressive impulses and antisocial personalities; those who kill a large number of victims are more likely to have exhibited paranoid ideation. Loss of self-esteem, frustration, and low personal achievement have all been documented *(5,11)*.

Stressful life events also may be contributory factors, with cases occurring when there have been financial or work-related problems, including loss of employment. Marital discord with feelings of rejection may play a role in spousal and familial murder–suicides, as may significant physical ill health. Histories of domestic violence by the perpetrator toward the victim may be elicited *(21,22)*. Cases of elderly spousal murder–suicides may be consensual if there has been an agreement that this course of action is preferable to living with debilitating illness or unfavourable living conditions.

Alcohol and drug use may also be exacerbating factors in these cases, although drugs or alcohol are not always detected. Indeed some studies have shown lower levels of alcohol in victims and perpetrators compared to those involved in homicide alone *(6,14)*. Substance abuse has been reported in 17% of perpetrators *(11)*, with intoxication by psychoactive drugs being found in

10%, alcohol intoxication in 21% and both drugs and alcohol detected in 13%, in another series *(5)*.

Revenge may be a significant motive in cases of estranged spouses and also particularly in cases of disgruntled employees. Recently separated spouses may feel that if they cannot have their children or their spouse, then no one else will. Employees or individuals who have a particular issue with authorities may return to a work place or school and target a number of specific individuals. In these cases, it is not uncommon for bystanders to be injured or killed. Rather than killing themselves the perpetrators may place themselves in situations where it is inevitable that death will occur from police gunfire. This further extends the number of victims who may be psychologically traumatized by such an event.

Studies have attempted to determine whether murder–suicides represent either homicide with a suicidal element or suicide with a homicidal element. Cases are, however, often carefully planned ahead of time and so it is unlikely that the decision to commit suicide is only entertained once the significance of the act of killing has been considered. Analysis of cases also reveals that the demographic features of murder–suicide differ significantly from suicide. It is most likely, therefore, that murder–suicides form a separate entity to both suicide and homicide, although there are aspects that obviously overlap.

7. Conclusion

Murder–suicides are uncommon events that require careful investigation. Confusion of double or more homicides with murder–suicide is possible and therefore characteristic features of murder–suicide should be carefully looked for both in the history and at the death scene. Many perpetrators have histories of depression and contact with mental health services, and so cases may represent an extension of suicide. Cases that involve a large number of victims may lead to considerable logistical problems.

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