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# Homicide Followed by Suicide: Paris and Its Suburbs, 1991–1996*

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**ABSTRACT:** Homicide-suicides (HS) are relatively infrequent events. Yet, they are of great concern because they often result in the death of family members, young children, and cause additional morbidity, family disruption and childhood psychological trauma. The aims of our study were (*a*) to examine the sociodemographic, clinical, and autopsy characteristics of HS in Paris and its suburbs from 1991 through 1996, and (*b*) to analyze the psychodynamic determinants leading up to the onset of HS. Our findings are compared with those obtained in other international studies. For the purpose of the present study. HS was defined as a violent event in which an individual committed homicide and subsequently committed suicide within a few hours. The main results are as follows. During the six-year study period, 56 HS involving 133 victims were investigated at the Institute of Forensic Medicine of Paris. Seventeen events occurred in Paris and 39 in its suburbs. Paris has a population of approximately 2,200,000 while its suburbs are home to another 8,500,000. Of the 56 offenders, 48 (85%) were males. The mean age of offenders was 51 years in males (range, 24 to 83) and 40.5 years in females (range, 33 to 56). In 45 events (80%), the offenders used a gun for both the homicide and suicide. A knife was used in only 4 murders, strangulation in 4 other cases, with poisoning, arson, or beating occurring in one case each. In 9 cases, the offender used a different weapon for homicide and suicide. Among firearms, handguns were more likely to be used (26 cases) than shotguns (6 cases) or rifles (13 cases). In 40 cases the offender killed one victim, in 11 cases 2 victims, and in 5 cases 3 victims. The homicide victims consisted of 34 children (21 boys), mean age 8 years (range, 1 to 16), 29 spouses (26 females), 2 girlfriends, 10 strangers, and 2 relatives. Five pets were killed. HS were most likely to be committed in the home. A suicide note was found near the victims in 29 cases (50% of events). In 42 cases the offender was found to be severely depressed. Familial HS were the most frequent events followed by suicidal pacts. When male sexual proprietariness and amorous jealousy were involved, the HS perpetrators acted often impulsively in carrying out the HS. There had been a chronically chaotic relationship and frequent physical violence and verbal threats. The triggering event was often the female withdrawal or estrangement. Only in a few cases, other motivations such as occupational or money problems were involved. Chronic alcoholism was found in 16 cases. In conclusion, the offender was more likely to be a male, severely depressed, violent and jealous who killed his spouse, and often his children, with impulsiveness, but after numerous threats. Our findings suggest that HS differ from both homicide and suicide and thus occupy a distinct epidemiological domain requiring specific prevention programs.

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Homicide-suicides (HS) are relatively rare events (1–3). Yet, they are of great concern because they often result in the death of family members, young children, and cause additional morbidity, family disruption and psychological trauma. Some profiles of the individuals at greatest risk and causative psychological mechanisms have been identified, but certain psychodynamic determinants of HS remain to be elucidated (2,4). Thus, it is unclear whether HS more closely resembles a suicide with a homicidal component or a homicide with a suicidal component. Marzuk et al. (2) and Hanzlick and Koponen (5) have recently proposed classifications based on victim-offender relationship and motive or precipitant for better understanding of psychopathological mechanisms of HS and for epidemiological purposes. In a recent paper, Milroy studied the international rates of HS and found considerable variation, though not as great as overall homicide rates (3). However, no data from France were available. To fill this void, we designed the present study (*a*) to examine the sociodemographic, clinical, and autopsy characteristics of HS in Paris and its suburbs, and (*b*) to analyze the psychodynamic determinants and the circumstances leading up to the onset of HS. We used the abovementioned classifications of HS to evaluate how Paris HS fit into this typology (2).

## Population and Methods

### *Study Population*

Demographic information for Paris and its suburbs was obtained from the 1990 national census. In France, a national census is done every 7 to 8 years. Paris has a population of approximately 2,200,000, while its suburbs are home to another 8,500,000. All HS deaths occurring in Paris and 5 of the 7 ''departements'' of its suburbs (Seine-Saint-Denis, Seine-et-Marne, Val-de-Marne, Val-d'Oise, and Hauts-de-Seine) are autopsied at the Institute of Forensic Medicine of Paris.

All events meeting the following criteria were considered as homicide-suicide (HS) and were included in the present series: A HS has occurred when, on the basis of medical examiner autopsy and police investigation, a person has committed a homicide (codes E 960 through E 969 of the International Statistical Classification of Diseases, Ninth Revision {ICD-9}) and subsequently commits suicide (ICD-9 codes E 950 through E 959) within three hours of the homicide. We have excluded individuals who only assault others prior to suicide and conversely, those who commit homicide but fail to complete a suicide attempt. Individuals who accidentally

kill others and then commit suicide were also excluded, as were excluded mass murderers (an offender who willfully injures five or more persons, of whom three or more are killed) and serial murderers (an offender who kills others in three or more separate incidents). Suicide pacts (6) have been included since circumstances of deaths and autopsy findings showed that one person killed the other before turning the weapon on himself.

*Methods*

All victims of HS (perpetrators and victims) were autopsied at the Institute of Forensic Medicine of Paris. The cause and manner of death were determined by a medical examiner after complete autopsy, analysis of police reports and in some cases toxicological findings. We analyzed suicide notes left by the offenders, interviews of victims relatives, friends, or neighbors, as reported in police and judicial files. Psychiatric illnesses and offenders' personality disorders were categorized using the DSM-IV classification. Moreover, cases were categorized using the classification system proposed by Marzuk et al. (Table 1) (2) and modified by Hanzlick and Koponen (5), and based on victim-offender relationship (type) and principal motive or precipitant (class). We further examined the psychodynamic determinants leading up to the onset of HS and the circumstances surrounding the final tragic event, and determined whether the HS had been planned, or had been the unpredictable result of an impulsive act.

Age, gender, marital and professional status, alcohol, methods of HS, location, time interval between homicide and suicide were also determined in both homicide and suicide victims.

## Results

During the six-year period from 1991 through 1996, 56 HS occurred in Paris and its suburbs, involving 133 victims. In addition, in 4 of the 56 events one of the victims survived. Seventeen events involving 38 victims occurred in Paris and 39 involving 95 victims in its suburbs. Six HS involving 13 victims occurred in 1991, 4 HS involving 8 victims in 1992, 19 HS involving 48 victims in 1993, 12 HS involving 27 victims in 1994, 8 HS involving 18 victims in 1995, and 7 HS involving 19 victims in 1996.

*Perpetrators*

Of the 56 offenders, 48 (85%) were male. The mean age of offenders was 51 years in males (range, 24 to 83) and 40.5 years in females (range, 33 to 56). Figure 1 shows the distribution of homicide and suicide victims by age. Only six male but also six female perpetrators were unemployed. Of the 48 male offenders, 38 (80%) were married, 4 were divorced, and only 6 were single. Four female offenders were single and 4 were married. In 45 events (80%), the offenders used a gun for both the homicide and suicide. A knife was used in only 4 murders, strangulation in 4 murders, with poisoning, beating, or arson occurring in only one case each. In 9 cases, the offender used a different weapon for homicide and suicide (H/S: strangulation/knife, beating/gunshot, gunshot/asphyxia, knife/jump from height, strangulation/hanging). Among firearms, handguns were more likely to be used (26 cases) than shotguns (6 cases) or rifles (13 cases). Bullets were found in the head of 75 of the 102 subjects killed by gunshot. In 40 cases (70%) the offender killed one victim, in 11 cases 2 victims, and in 5 cases 3 victims.

*Homicide Victims*

Fourty-four of the 77 homicide victims (60%) were female. The homicide victims comprised 34 children (21 boys), mean age 8 years (range, 1 to 16), 29 spouses (26 females), mean age 54 years (range, 33 to 83), 2 girlfriends, aged 22 and 26, 10 strangers and

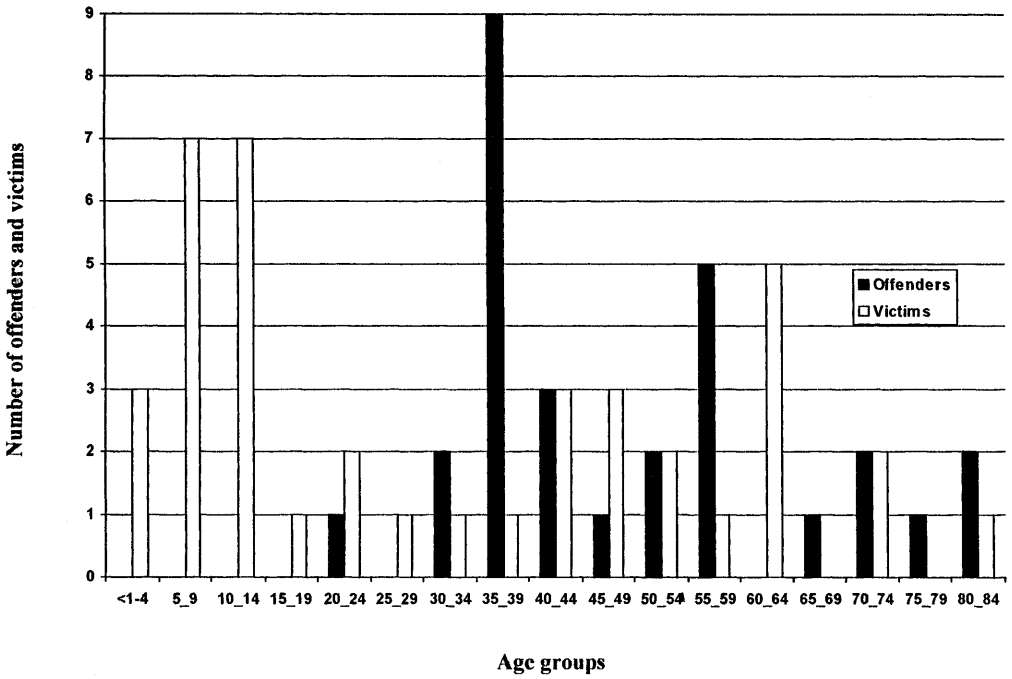


FIG. 1—*Distribution of homicide and suicide victims by age.*

2 relatives (the offender's 20-year-old sister and 26-year-old brother-in-law, both killed in the same event). The mean age of adult homicide victims was 50 years (range 20 to 83). Five pets were killed. In 21 of the 25 events involving children, those were the only victims, whereas in the other four cases, the spouse was killed along with the children. All HS but two were committed in the home (one HS occurred in a hospital room, and another on the street).

*Psychological Data*

A suicide note was found near the victims in 29 cases (50% of the events). In 42 cases (75%), the offender was found to be severely depressed. In addition, according to the DSM-IV, offenders met the criteria of paranoïd in 2 cases, of antisocial personality in 16 cases, of paranoïa in 3 cases, of psychotic spell in 2 cases, and of borderline personality in 5 cases. Chronic alcoholism was found in 16 cases. No case of illicit drug consumption was found. Twelve offenders had been known as violent men.

Table 1 lists the different victim-offender relationship (type) and principal motive or precipitant (class).

TABLE 1—*Proposed clinical classification of HS based on victim-offender relationship (type) and principal motive or precipitant (class) (2). Classification of HS is specified by type (roman numeral) with subtypes of perpetrator, number and subtype of homicide (lower-case roman numeral) as well as by letters to denote principal motives or precipitants. See Marzuk et al. (2) for complete details.*

| Type of Relationship | |
|---|---|
| **I Spousal or Consortial** | **25 events** |
| Perpetrator | |
| 1. Spouse | 23 events |
| 2. Consert | 2 event |
| Type of Homicide | |
| i. Uxoricidal (spouse killing) | 23 events |
| ii. Consortial (murder of lover) | 2 event |
| **II Familial** | **27 events** |
| Perpetrator | |
| 1. Mother | 5 events |
| 2. Father | 22 events |
| 3. Child (under 16 yr) | |
| 4. Other adult family member (over 16 yr) | |
| Type of Homicide | |
| i. Neonaticide (child < 24 h) | |
| ii. Infanticide (child > 1 day, <1 yr) | |
| iii. Pedicide (child I through 16 yr) | 25 events (34 victims) |
| iv. Adult family member (>16 yr) | 2 events |
| **III Extrafamilial** | **4 events** |

| Class | | |
|---|---|---|
| A | Amorous jealousy | 10 events |
| B | Mercy killing (because of declining health of victim or offender) | 9 events |
| C | Altruistic or extended suicides (includes salvation fantasies of rescue and escape from problems) | 4 events |
| D | Family financial or social stressors | 3 events |
| E | Retaliation | 28 events |
| F | Other | 2 events (psychotic spell) |
| G | Unspecified | |

In 35 cases, the HS had been carefully planned and was carried out according to the plan detailed in notes. In 15 cases, the HS had been planned but circumstances made the offender change his plan and subsequently commit the homicide impulsively. In only six cases, the HS had not been planned and was committed impulsively. Be it planned or not, the HS was committed as the result of an outburst of violence in 42 of the 56 events.

## Discussion

In many respects, our data are similar to those obtained in other studies and show (*a*) a predominance of male perpetrators (85%), (*b*) usually one victim (70%) who was most often female (60%) and younger than the perpetrator ( − 20 years), (*c*) a spousal relationship between the perpetrator and victim (50%), (*d*) frequent involvement of children (45%), (*e*) the use of a firearm as the weapon (80%), (*f*) a close temporal proximity between the homicide(s) and the suicide (less than one hour), and (*g*) depression in the perpetrator as a major factor of HS (75%). Furthermore, the present study provides new insights into the psychodynamic determinants leading up to the onset of HS. Information provided by suicide notes, which were available in half of our cases, and interviews of the victims' relatives, friends, and neighbors suggest that in most cases the HS had been planned but the final tragic event occurred suddenly, triggered by a violent altercation or other unplanned incident.

Our series confirms that HS are rare events (1–3). The few American studies conducted over the past three decades suggest an annual incidence of 0.2 to 0.3 per 100,000 persons in certain localities (1–3). In the United States in the 1980's HS represented 1.5% of all suicides and 5% of all homicides, annually (2). In a review of 17 studies spanning different periods from 1900 through 1979 and involving ten nations, Coid (1) found that the incidence of HS was remarkedly constant, averaging 0.2 to 0.3 per 100,000 (range 0.04 in Scotland to 0.4 among Israeli Western Jews), although the countries studied showed marked variation in overall suicide and homicide rates. One limitation of our study is that we were not able to calculate mortality rates because our data do not include Paris or suburban residents who died outside of Paris. However, it seems that the annual incidence of HS in Paris does not exceed 0.1 per 100,000, and is similar to those found in other countries (1–3).

One may ask whether HS more closely resembles a suicide with a homicidal component or a homicide with a suicidal component. Some authors (1–3) have pointed out that: (i) the higher the rate of homicide in a population, the lower the percentage of offenders who are found (*a*) to be mentally abnormal, and (*b*) to have committed suicide; and (ii) 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. Marzuk et al. (2) pointed out that HS as a percentage of all homicides differed dramatically across nations. In nations with high homicide rates, HS accounted for a relatively small proportion of total homicides. More recently, Milroy (3) confirmed that there is less variation in the rates of HS than in those of homicide.

Several lines of evidence suggest that HS occupies a distinct epidemiological domain that displays similarities to and differences from both homicide and suicide. First, the short time span; often less than one hour in our series, between the murder and

suicide, suggests that neither act is ''incidental'' to the other. Thus, it seems unlikely that HS is primarily a homicide in which the murderer commits suicide after several hours of remorseful brooding. From the available notes it appeared that many of the events in our study had been carefully planned as a unified two-stage sequential act. In several studies 15% to 30% of offenders left notes often detailing the motives behind both the suicide and the homicide (2). In our series, 50% of offenders had left notes providing useful information on motives and offender's personality. In some cases, victims were stalked by the murderer. Second, whereas suicide is distributed across all ages from adolescence to old age for both men and women, HS is confined principally to middle-aged men with marital, common-law or live-in relationships with women. Two factors believed to protect against suicide, marriage and parenting, are apparently crucial to the dynamics of HS. Moreover, most homicides involve same-sex disputes (10). Men almost never commit suicide immediately after killing unrelated men. Compared with men, women are very unlikely to commit suicide after murdering anyone other than children (11). Thus HS differs from both homicide and suicide in that it is committed against a specific family target by a member of a very distinct group with demographics that differ from the typical suicide and homicide offender.

Despite differences of profile between those who commit suicide and those who commit HS, all studies constantly emphasized the role of depression in HS (2,4). Although in most series HS offenders have been found to be severely depressed, no definitive answer has been brought to the questions of whether and how depressed individuals with homicidal potential differ from non-homicidal depressed subjects (4). Whether HS offenders also have a preexisting violent tendency is uncertain. Most case histories suggest that male offenders, while less likely than murderers to have an arrest record, do have a history of domestically perpetrated violence and chronic spouse abuse (2). In the present study, a history of domestic violence was present in half of the cases. It has not been established whether mothers who commit suicide after killing their children had a history of violence or child abuse (11). The murder had often been carefully planned, and the victims, mostly wives, who had been frequently threatened, but had not believed the murder would happen. Actually, the final act was impulsive and committed during a violent outburst often triggered by a separation. Furthermore, our study, as in others, stressed the importance of psychosis (2,4). Some suicidal murderers have well-circumscribed delusions of jealousy, paranoïa or rescue, schizophrenia or paranoïd disorders.

Few studies have examined the role of drugs or alcohol in these events. In several, 12% to 50% of offenders and 14% to 30% of victims had alcohol detectable in their blood at autopsy. In our study alcohol was detectable in the blood of 25% of the offenders. It is unlikely that alcohol differentiates these events from other homicides or suicides.

Motives and victim offender relationships are possible factors which differentiate HS from other homicides or suicides. In 1992, Marzuk et al. (2) proposed a classification of HS. This classification is based on the type of relationship between the victim and offender. The most common type (IA/E) which represents one-half to three-fourths of all HS in the U.S., but only ten cases in our series, involves morbid jealousy with the man killing his wife or his female partner because of the breakdown of the relationship with resultant revenge (12–17). Typically, a male between the ages of 18 and 60 years develops suspicion or knowledge of his girlfriend's or wife's infidelity, becomes enraged and both murders her and commits suicide usually using a firearm. In only one case in our series did the assailant kill the other man (tryadic murder). While some HS occurred shortly after the onset of morbid jealousy, more often there had been a chronically chaotic relationship fraught with jealous suspicion, verbal abuse and physical violence. The triggering event was often the female's rejection of her husband and her immediate threat of withdrawal or estrangement. From our available suicide notes it appeared that another frequent scenario was a man who killed his spouse after waiting for her to return alone to pick up her belongings or children or both. In our series, as in Rosenbaum's, the large majority of these perpetrators suffered from depression (4). In Rosenbaum's series, none of the perpetrators in the homicide group suffered from depression.

From a psychodynamic point of view the depression may be viewed as a defense against the underlying aggressive and murderous impulses. However, if the trigger incident produces intense enough aggressive impulses, the depressive defense is breached and the murderous impulse is released. The perpetrator's immediate realization that he or she has committed the crime leads to intense guilt, return of the depressive defense and suicide.

Note here the role of the suicide note. In our study it was not possible to determine when the notes had been written, but from their content it appears that some of them had been written between the murder and the suicide. In the other cases in which the note had been written a long time before the murder, one could assume that this note participated, like depression, as a defense against the underlying murderous plan.

Type I (1) i-B usually comprises elderly men who have either poor health, ailing spouses, or both, who shoot their wives and then commit suicide (2,3,8). Often suicide notes describe the inability of one or both partners to cope with declining health or loneliness, or inform the family of wills, burial plots and insurance. Depression was obviously a major factor in this pattern, but the immediate precipitants and the triggering event were difficult to determine since both the offenders and the victim were dead. This pattern was involved in nine cases and thus was too rare in our series to draw any conclusion. Fishbain and Aldrich (6,18) have identified different patterns by international comparisons but failed to answer to this issue.

The third pattern was filicide-suicide. In the U.S., at least half of all pedicides (children aged 1 through 16) and infanticides (children under the age of 1 year) are perpetrated by parents; 16% to 29% of mothers and 40% to 60% of fathers commit suicide immediately after murdering their children (filicide) (2). In the present series, familial HS were the most frequent types of HS, representing half of the cases. In a previous study from our laboratories dealing with childhood homicide in Paris, offenders were found to be most likely parents, the father being more likely to be the offender than the mother (11). Among the 81 children homicides, HS occurred in 12 events. The father had been the perpetrator in 8 cases, and the mother in 4 cases. The murder usually occurred suddenly during a violent altercation between the parents. No premeditated act was found. As a result, in our previous study we found battering to be equally involved as firearms (25% of cases). Knives were also frequently involved (20% of cases). Firearms, rarely used by mothers, were more commonly used by murderous fathers. In simple child killings, mothers are more likely to kill infants than are fathers but, as children age, the child's risk of dying at the hands of his or her mother or father appears to equalize

or even reverse. The father is the most common perpetrator, though West's study (20) found women to be the assailants who most frequently killed their children (11). In our previous study, we found boys and girls to be at nearly equivalent risk, and parents unlikely to commit suicide after murdering their children. The most important diagnosis in maternal filicide-suicides is depression, often with psychotic features. In maternally perpetrated murders of children who are older than one year but usually under age 5, the primary motive appears to be a deluded altruism. In effect, the mother perceives the child as solely dependent on her for care and sees a need to escape and save herself and her children from a painful ruinous world. In contrast, when the murderer is the father the pattern encountered is more likely a familicide suicide (I(1) i/II (2) i–iv) (2). Typically, the senior male who is a depressed paranoïd kills every member of his family including his spouse, children, other relatives and sometimes pets. Often the precipitants include cumulative financial, marital, or other social stresses on the family. Suicide notes suggest the murderers often see themselves as altruistically delivering the family from continued hardships. In other cases the perpetrator suspects marital infidelity.

A killing because of financial stress is less frequent, found in only three of our cases. In rare cases, HS were extrafamilial. In these cases disgruntled individuals who have paranoïd traits believe they have been slighted in some way. There are strong elements of possessiveness and control. Two victims were killed by a man during an uncontrolled psychotic spell; the victims were unknown to their killer.

It is uncertain why nations display a comparable annual incidence of overall HS, yet vary in the distribution of these events across typological categories. For this reason, the research strategy proposed by Marzuk et al. (2) and modified by Hanzlick and Koponen (5) is worthy of pursuit and we have followed it partially by trying to validate their classification. Because most individuals with either depression or these specific motives do not commit suicide, diagnosis and motives are insufficient to explain HS. Most depressed people do not commit suicide. Among those, only a small proportion commit homicide before turning the weapon on themselves. Among those who are violent, only a small proportion commit homicide and turn the weapon on themselves. The reconstruction of the victims' relationship and of the final circumstances leading up to the murder may provide warning indices that could be helpful in preventing such tragedies.

## References


1. Coid J. The epidemiology of abnormal homicide and murder followed by suicide. Psych Med 1983;13:855–60.
2. Marzuk PM, Tardiff K, Hirsch CS. The epidemiology of murder-suicide. JAMA 1992;267:3179–83.
3. Milroy CM. The epidemiology of homicide-suicide (dyadic death). Forensic Sci Int 1995;71:117–22.
4. Rosenbaum M. The role of depression in couples involved in murder-suicide and homicide. Amer J Psych 1990;147:1036–9.
5. Hanzlick R, Koponen M. Murder-suicide in Fulton County, Georgia, 1988–1991. Comparison with a recent report and proposed typology. Amer J Forensic Med and Path 1994;15:168–73.
6. Fishbain DA, Aldrich TE. Suicide pacts: International comparisons. J Clin Psych 1985;46:11–5.
7. Camilleri G, Lazergues C. Atlas de la Criminalité en France. Reclus. La Documentation Française. Collection Dynamique du Territoire. 1992
8. Laroche B. Les Homicides Volontaires de 1986 à 1990. Ministère de la Justice. Direction de l'Administration Générale et de l'Equipement. Sous Direction de la Statistique, des Etudes et de la Documentation.
9. Debout M. Le suicide Conseil Economique et Social. Direction des Journaux Officiels. 1993.
10. Fornes P, Druilhe L, Lecomte D. Homicide among youth and young adults, 15 through 29 years of age. A report of 138 cases from Paris and its suburbs, 1991–1993. J Forensic Sci 1996; (in Press)
11. Fornes P, Druilhe L, Lecomte D. Childhood homicide in Paris, 1990–1993. A report of 81 cases. J Forensic Sci 1995;40:201–4.
12. Allen NH. Homicide followed by suicide: Los Angeles, 1970–1979. Hum Sci Press 1983;13:155–65.
13. Fishbain DA, Rao VJ, Aldrich TE. Female homicide-suicide perpetrators: A controlled study. J Forensic Sci 1985;30:1148–56.
14. Buteau J, Lesage AD, Kiely MC. Homicide followed by suicide: A Quebec case series, 1988–1990. Can J Psych 1993;38:552–6.
15. Easteal P, Homicide-suicides between adult sexual intimates: An Australian study. Suicide and Life-Threatening Behavior 1994;24: 140–51.
16. Santoro JP, Dawood AW, Ayral G. The murder-suicide. A study of the postaggressional suicide. The Amer J Forensic Med and Path 1985;6:222–5.
17. Milroy CM. Homicide followed by suicide (Dyadic death) in Yorkshire and Humberside. Med Sci and the Law 1993;33:167–71.
18. Fishbain DA, Goldberg M, Rosomoff RS, Rosomoff HL. Homicide-suicide and chronic pain. The Clin J Pain 1989;5:275–7.
19. Bourget D, Bradford JMW. Affective disorder and homicide: A case of familial filicide theoretical and clinical considerations. Can J Psych 1987;32:222–5.
20. West DJ. Murder followed by suicide. Heinemann, London 1965.


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