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Female Homicide-Suicide Perpetrators: A Controlled Study

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ABSTRACT: The record files of the Dade County Medical Examiner Department were reviewed and 133 homicide-suicides were identified. Of these, ten (or 7.5%) were female perpetrated. The chart data of these 10 female homicide-suicide perpetrators, chart data of 50 female homicide-suicide victims, and 50 female individual suicides systematically selected as controls were tabulated using a standardized instrument. The results were analyzed for differences using simple statistical methods. The comparisons revealed that female homicide-suicide perpetrators were more likely than female homicide-suicide victims to live in mobile homes, kill their lover or ex-lover, have their crime accidentally discovered, leave a suicide note, kill on a weekend, and be depressed, but are less likely than female homicide-suicide victims to live with a spouse. Additionally, female homicide-suicide perpetrators were more likely than individual female suicides to live in mobile homes but less likely to live alone and to be depressed.

KEYWORDS: psychiatry, suicide, homicide, surveys

Under certain circumstances, a murder may be closely followed by the suicide of the perpetrator of the murder. These dual deaths are called "homicide-suicides" [1] and are recorded in this way by medical examiners. Homicide-suicides are quite rare [2]: 0.23 per 100 000 population per year for Philadelphia, PA [1]; 0.19 per 100 000 population per year for North Carolina [2]; and 0.20 per 100 000 population per year for England-Wales [3]. The few studies of this form of dual death [1-7] have found "homicide-suicides" to have the following characteristics: murder perpetrators are of the same family as the victim, usually husbands who murder their wives; murder perpetrators are usually male, white, and over age 30; murder victims are usually female, white, and over age 30; perpetrators are generally older than the victims; and perpetrators choose a gun as the weapon to inflict trauma on the victim and on themselves [1-4].

Female homicide-suicide perpetrators (FHSPs) are rare and unusual. Their percentage of all "homicide-suicides" has been reported to be: 8% in Philadelphia [1]; 6% in North Carolina [2]; and 40% in England-Wales [3]. As a group, FHSPs have never previously been studied. Because FHSPs commit suicide, the study described below compares FHSPs to individual fe-

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male suicides (IFSs). Additionally, in order to understand the difference between FHSPs and female homicide-suicide victims (FHSVs), FHSPs were also compared to FHSVs. The study below is the first controlled study of a group of female homicide-suicide perpetrators.

Methods and Procedures

To identify all the homicide-suicides, the case files of the Dade County Medical Examiner Department were reviewed. The homicide-suicides had been differentiated by the medical examiner through investigation on a case by case basis in accordance with established principles of medicolegal death investigation [8]. FHSPs within homicide-suicides were then segregated for analysis. For each FHSP, five FHSVs were selected. These selections were made using a table of random numbers [9] and were usually in the same year, one year earlier, or one year later than that of the FHSPs. Control groups were chosen in this way in order to control for the changing demography of Dade County. The 5:1 matching of controls to subjects provided a Pittman's Efficiency Value of 1.67 compared to a unitary value from 1:1 matching [10]. The second control group was chosen in the same way as the first control group except that it was selected from IFSs.

FHSP charts and the charts of both control groups were analyzed and coded on a standardized coding instrument (available on request) specifically developed for that purpose. Using simple statistical methods [9], the tabulated data were analyzed for differences as follows: FHSPs versus FHSVs (Table 1), FHSPs versus IFSs (Table 2).

The charts of the cases selected usually contained the following information: death certifi-

TABLE 1—*Female homicide perpetrators of homicide-suicide versus female homicide victims of homicide-suicides.*

Item	Female Homicide Perpetrators	Female Homicide Victims	Chi-Squares and Degrees of Freedom (df)	p Value
Number of cases	10 (100%)	50 (100%)
Type of residence:				
House/apt	3 (30%)	34 (68%)	$\chi^2 = 21.962$ 2 df	<0.0001
Mobile home	4 (40%)	0		
Other	3 (30%)	16 (32%)		
Living with:				
Spouse	4 (40%)	29 (58%)	$\chi^2 = 16.177$ 3 df	<0.001
Lover	3 (30%)	—		
Parents	—	3 (6%)		
Other	3 (30%)	18 (36%)		
Object of homicide:				
Lover/ex-lover	6 (60%)	10 (20%)	$\chi^2 = 6.8182$ 1 df	<0.01
Type of discovery:				
Accidental	6 (60%)	6 (12%)	$\chi^2 = 9.188$ 1 df	<0.002
Expected	4 (40%)	44 (88%)		
Death on weekend	7 (70%)	11 (22%)	$\chi^2 = 7.00$ 1 df	<0.008
Left suicide note	4 (40%)	2 (4%)	$\chi^2 = 8.333$ 1 df	<0.004
Recent history of depression	4 (40%)	1 (2%)	$\chi^2 = 11.171$ 1 df	<0.001

TABLE 2—Female homicide perpetrators in homicide-suicide versus female individual suicides.

Item	Female Homicide Perpetrators	Female Individual Suicides	Chi-Squares and Degrees of Freedom (df)	<i>p</i> Value
Number of cases	10 (100%)	50 (100%)
Type of residence:				
House/apt	3 (30%)	43 (86%)	$\chi^2 = 19.381$ 5 df	<0.0001
Mobile home	4 (40%)	1 (2%)		
Other	3 (30%)	6 (12%)		
Living with:				
Spouse	4 (40%)	21 (42%)	$\chi^2 = 18.701$ 4 df	<0.001
Lover	3 (30%)	...		
Parents	...	6 (12%)		
Alone	...	11 (22%)		
Other	3 (30%)	12 (24%)		
Recent history of depression	4 (40%)	46 (92%)	$\chi^2 = 11.058$ 1 df	<0.0009

cate, report of the police officer investigating the deaths, medical examiner's autopsy report, toxicology report, suicide note if written, newspaper clippings, hospital records if patient lived for a while after the homicide or suicide, and previous hospital records if available. All available chart information was reviewed for all three (FHSPs, FHSVs, IFSs) victim groups and coded on the coding instrument. The items of the coding instrument were developed to reflect standard, reliable, routinely reported information of the various professionals investigating the deaths. Because of the number of professional reports reviewed and the fact that most of the information sought was required in the actual reports (for example, Death Certificate, Police Report, and so forth), the frequency of missing data for objective variables (age, religion, occupation, person in area of suicide, which room found, and so forth) was extremely small (approximately 1 to 5%). Missing data were coded as unknown and all calculations for those variables were done with the remaining positive data. This approach may have decreased the numbers of subjects in some variables causing nonsignificant results. The objective nature of the variables examined and the professional source of the objective data made it unlikely that any significant amount of the data was unreliable.

Nonobjective variables such as recent history of personal problems, arguments, marital difficulties, despondency, altruism, infidelity, separation, depression, and so forth, as precipitants of homicide were usually identified from the police report or from the medical examiner's report. Any mention of these variables in relationship to the victim (for example, despondency as described by neighbors or relatives) would be marked positive for the recent history of depression variable. Because both the witness and the investigating professional interpret the information available to them for these nonobjective variables, it is likely that a much greater percentage of information for these variables was unreliable. Because of this and because multiple comparisons of the data were anticipated, an adjustment for assigning significance was made after Bon Ferroni [9]. Thus, only tests resulting in a *p* value of <0.01 were deemed statistically significant. Tests of lesser value were, however, considered for clinical meaning and consistency between groups.

Results

One-hundred thirty-three homicide-suicides were identified within the case files of the Dade County Medical Examiner Department in the twenty-five-year period 1957 through 1981. Of

these homicide-suicides, the homicides were male perpetrated in 123 cases and female perpetrated in 10 cases. The percentage of homicide-suicides cases where the female was the perpetrator was therefore determined to be 7.5% for Dade County. Only one (10%) of the FHSPs killed more than one other person while ten (8.0%) of the male homicide-suicide perpetrators killed more than one other person. This difference was not statistically significant. Female-perpetrated homicide-suicide cases involved a total of 21 victims while the male-perpetrated homicide-suicide cases involved a total of 259 victims.

The comparisons of FHSPs versus FHSV and FHSPs versus IFSs were determined to be nonsignificant (n.s.) for the following items: age, season of birth, race/ethnicity, having an address, address being in Miami, permanent residency in Miami, place of birth, United States, U.S. citizenship, Catholic religion, marital status (currently married), victim having family, victim's family living in Miami, victim living with family, working full time, occupation housewife, occupation clerical, place of suicide victim's home (friend's home, family's house, or street), bodies discovered by nonspouse, found dead, others in area of suicide, person in area of suicide (spouse, family, friend, or other), suicide in bedroom, furniture used for suicide (bed, floor or other), dressed fully, partially, or nude, whom last seen by (spouse, friend, other family member, or other), method of death by firearm, alcohol in blood, barbiturates in blood, location of suicide note near victim, reason for death quoted in suicide note (depression, anxiety, illness or unhappy love affair), previous psychiatric history, recent history of personal problems, police record, and misdemeanors only on police record.

The following items were determined to be nonsignificant for FHSPs versus IFSs only: discovery of bodies was not expected, death on a weekend day or night, and suicide note found. The following items were determined to be nonsignificant for FHSPs versus FHSV only: dual death interracial, dual death with opposite sex, dual death with one other victim only, victim precipitated [11], partially victim precipitated, object of suicide ex-lover or ex-spouse, object of homicide older than perpetrator, object of homicide older than perpetrator by ten years or greater, and argument, marital difficulty, despondency, altruism, or infidelity/separation as precipitants of homicide.

The following items were determined to be significantly different between FHSPs and FHSV (Table 1): type of residence, living with whom, object of homicide, type of discovery, weekend deaths, presence of suicide note, and recent history of depression.

The following items were determined to be significantly different between FHSPs and FIS (Table 2): type of residence, living with whom, and recent history of depression.

Only significant results are presented in Tables 1 and 2. Both chi-squared values and *p* values are presented.

Discussion

The results of the comparisons of FHSPs versus FHSV and FHSPs versus IFSs will be discussed under a number of general headings previously addressed in the literature.

Female Homicide-Suicide Perpetrators (FHSPs) versus Female Homicide-Suicide Victims (FHSV)

Age—Husain [12] determined that female homicide offenders were made up of two groups: a young age group (mean age 24.7 years), and a midlife group (mean age 47.2 years). In our study the FHSPs mean age was 48.1 years, while that of the FHSV was 42.9 years. There was no statistical difference in mean ages between FHSPs and FHSV. In terms of age, therefore, both FHSPs and FHSV are like each other and both appear to be like Husain's midlife group.

Other Demographic Variables—FHSPs and FHSV were both as likely to be white and married, to be born in the United States and be U.S. citizens, to be permanent residents of Miami with an address, to have families living in Miami, and to be working full time. None of these

items were statistically different between FHSPs and FHSVs. Therefore, demographically, for some items, FHSPs and FHSVs appear to resemble each other.

Place of Homicide—Selkin [5] noted that homicide-suicides occurred in familiar surroundings, usually at home, while Wolfgang [1] noted that homicide-suicides frequently occurred in the bedroom. Studies of females who commit homicide only indicate that these crimes are usually committed in the bedroom or the kitchen [11]. In this study, FHSPs usually committed homicide at home and in the bedroom. FHSVs were not statistically different for these items. FHSPs, however, tended to ($p < 0.001$) live in mobile homes as compared to FHSVs. It is interesting to speculate that perhaps the cramped surroundings of the mobile homes tended to increase the stress on these women, thereby increasing the likelihood of homicidal behavior. Such speculation is supported by Goode's observation [13] that "restricted living quarters provide fewer places to escape conflict situations making violent behavior more probable." However, other interpretations of the mobile home finding are possible and correlate with other variables, for example, social class, social isolation, and geographic mobility.

Sex and Race of the Opposite Member of the Homicide-Suicide Pair—Wolfgang [1] observed that the ratio of opposite sex to same sex relationships among all homicides was 1 to 2, while it was 9 to 1 for homicide-suicides. He therefore concluded that the homicide-suicide phenomenon primarily involves persons of the opposite sex. Additionally, none of his homicide-suicides were interracial.

In this study, 100% of the homicide-suicides for both FHSPs and FHSVs involved the opposite sex. No cases were interracial. There was no statistical difference for these two items between FHSPs and FHSVs. These results support Wolfgang's observations.

Living Situation and Object of Homicide—The great majority of homicides involve family members or acquaintances [12]. Murder-suicides appear to involve an even greater number of family members or acquaintances, specifically wives or paramours [1,2]. In Wolfgang's sample [1], the relationship between the wives and paramours was extremely intimate, providing "a primary source of nurturance." Selkin [5] also found this type of relationship and added that the motive for homicide in the majority of cases was "jealous rage" precipitated by "frustration of sex role needs or goals." Typically, because of the strong affection for the victim, the murder perpetrator did not want to go on living without him or her and committed suicide.

It is interesting that in this study FHSPs were much less likely than FHSVs to live with spouses ($p < 0.001$). Additionally, the object of the homicide in female-perpetrated homicide-suicides was much more likely ($p < 0.01$) to be a lover or ex-lover than in male-perpetrated homicide-suicides. One would then wonder if the same dynamic would apply to the relationship between FHSPs and their lovers or ex-lovers as for Wolfgang's sample [1], that is, extreme intimacy providing a primary source of nurturance. Additionally, one wonders if Selkin's [5] concept of jealous rage applied to the FHSP cases. These two concepts need further investigation in FHSP.

Isolation and Homicide-Suicide Preplanning—Selkin [5] claimed that the homicide-suicide perpetrator acted unilaterally and impulsively in carrying out the homicide-suicide. This person was described as being impulsive, with poor judgment and frequent explosive outbursts. The homicide-suicide was then usually the culmination of chronic family quarreling and violence finally ending in death. It is highly likely that these family problems would be common knowledge to the victims's relatives, friends, and neighbors. Discovery of the homicide-suicide would therefore not be a surprise to these groups. Accidental discovery of the homicide-suicide may then indicate relative victim isolation, lack of impulsivity, lack of previous quarreling or violent behavior, and a degree of preplanning.

FHSPs were much more likely ($p < 0.002$) than FHSVs to be involved in a homicide-suicide where accidental discovery of the bodies took place. Therefore, it is possible that FHSP couples are more isolated than FHSV couples. This is interesting because Selkin [5] has claimed that the homicide-suicide couples were "very much involved with other people" and "had family members available to help them," while Berman [4] claimed that his homicide-suicide sample lived in "isolation of other important relationships." This issue needs further research.

Wolfgang [1] studied the degree of violence in homicide-suicides. He defined a violent homicide as one consisting of two or more acts of stabbing, cutting, shooting, and death by beating. According to this definition, 57.6% of his victims were killed violently. This may indicate a high degree of impulsive, violent, unplanned behavior. In our study, male victims of FHSPs were not studied, so statistics on the degree of violence in these homicides are not available. However, the female FHSP in the cases was much more likely ($p < 0.004$) to leave a suicide note than the male in the FHSV cases.⁴ This may indicate more of a greater tendency among female perpetrators to plan the homicide-suicide than among male perpetrators.

Alcohol—It is well-known that alcohol acts as a disinhibitor of impulsive and violent behavior and thus an association is noted between alcohol use and homicide [14]. Among 87 female homicide offenders, Suval [14] found that 61% drank frequently. Over half of those reported severe problem drinking or alcoholism, and 45% were under the influence of alcohol at the time of the crime. In a combined average for all U.S. studies, alcohol positive blood was found in 32% of homicide-suicide offenders [4]. In our study, 20% of the FHSPs had alcohol positive blood versus 12% of the FHSVs. This difference was not statistically significant. The low incidence of alcohol positive blood in FHSPs versus other homicide-suicide studies lends further support to the possibility that these women murder in a nonimpulsive, planned fashion.

Self-defense and Victim Precipitation of Homicide—Reports [15] indicate that female perpetrators of spouse/paramour homicides were seven times more likely to murder in self-defense than male perpetrators of spouse/paramour homicides. These women had abusive, unstable mates whom they killed while being beaten, using a weapon handy at the time, often one belonging to the victim [16]. The weapon usually was a gun and the murders were not violent in nature.

From another standpoint, Wolfgang [11] found that 26% of criminal homicides in Philadelphia were victim-precipitated homicides. In these cases, the victim was the first to resort to physical aggression against the perpetrator, resulting in the victim's death. Victim-precipitated homicides were significantly associated with mate slayings involving the husband as victim [11]. Wolfgang postulated that these husbands were suicide prone individuals who tease, taunt, abuse, and beat their wives until these women commit murder in a sudden outburst without premeditation and in self-defense.

If FHSPs murder in self-defense or because the murder is victim precipitated, one would expect a high percentage of the bodies of FHSPs to show evidence of recent trauma (beating). Such was not the case, as none of FHSPs showed evidence of beating. One could interpret this result as indicating a degree of planning in FHSP cases. However, it is possible that these women murdered in response to threats of violence from their spouse or paramours. These threats are quite frequent in battering relationships [17] and can result in "protective reactive" violence, where the women is not angry but is frightened and, believing she is going to be hurt, reacts violently first [17]. In these situations, it is obvious that the bodies of the FHSPs would be unmarked. These results, therefore, do not eliminate the possibility that FHSPs were reacting to male threats of violence, thereby committing homicide. However, as Wolfgang [1] points out, a wife who kills her husband after he has slapped or beaten her is less likely to feel remorse or guilt and is therefore less likely to suicide than if she had not been provoked, as in a planned homicide.

Method of Homicide—Combined average figures of three studies [1,4,5] indicate that homicide-suicides are perpetrated through the use of guns in 81% of the cases. In these studies perpetrators were male in 93% of the cases. By contrast, women who commit homicides have been reported [18] to use knives or a household instrument in 62.4% of the cases and guns in only 20.4% of the cases. In our study, FHSPs used guns in 70% of the cases versus FHSVs who were killed by guns in 95% of the cases. There was no statistical difference between FHSPs and

⁴By definition only perpetrators leave suicide notes, because if the victim left a suicide note the double death would be classified as a suicide pact.

FHSVs for guns as a method of homicide-suicide. These figures indicate that FHSPs appear to favor male homicide methods over female homicide methods.

Death on a Weekend—It is well-known that approximately 67% of all homicides occur on a weekend (Friday > Saturday > Sunday) [4]. However, Berman [4] found that only 40% of his murder-suicides occurred on a weekend and that 100% of these were male perpetrated. In our study, 70% of FHSP cases occurred on a weekend while 22% of the FHSV cases occurred on a weekend. The difference was statistically significant ($p < 0.008$). These results may indicate that in reference to death on a weekend as an item, FHSPs tend to be like single homicides rather than typical homicide-suicides. This area needs further research.

Depression in Homicide-Suicide Perpetrators and Victims—Reports [19] indicate that 81% of female homicide offenders have significant psychological disorders. Young female homicide offenders, when compared to midlife female homicide offenders, tend to have antisocial personality disorders or schizophrenia or both as psychiatric diagnoses [12] and to murder their children. Midlife female homicide offenders suffer from affective disorders and alcoholism and murder their spouses [12]. In our study, 40% of the FHSPs versus 2% of the FHSVs had a recent history of depression. The difference was statistically significant ($p < 0.001$). These results indicate that in reference to depression, FHSPs may be like Husain's [12] midlife female homicide offenders.

The Issue of Insanity—Cavan [20] has reported one out of 18 (5.5%) homicide-suicide offenders to be "insane," while Wolfgang [1] found 3 out of 24 (12.5%) homicide-suicide offenders to be "insane." West, in his study of English and Welsh homicide-suicides, claimed that 45 out of 78 (57.6%) offenders showed "mental abnormality" [3]. In this study, none of the FHSPs or FHSVs had a history of psychosis or bizarre behavior prior to the homicide-suicide. The wide variation in results in the previous studies is probably due to the difficulties involved in retrospective examination, differences in psychiatric nosology between countries and over time, differences in medicolegal interpretations of insanity, and cultural differences. For these reasons, the discrepancies noted in comparing the incidence of "insanity" in different reports of homicide-suicide may be more apparent than real.

Previous Criminal Activity—Prevalence of any kind of prior criminal activity among female homicide perpetrators varies from 30 to 67% [19]. However, some authors [19] claim that few women who commit crimes of violence demonstrate sociopathic psychopathology and suggest a possible negative relationship between violence and sociopathy. In support of this, when female homicide perpetrators were divided into young and middle age groups [12], the young age group contained all the patients with a diagnosis of antisocial personality disorder. However, when these two groups were compared for previous criminal activity, no statistical differences emerged [12]. Because, as noted previously, FHSPs appear to share some characteristics of Husain's [12] midlife women, their criminal records were examined. Twenty percent of the FHSPs versus four percent of FHSVs had previous criminal records. The difference was not statistically significant. FHSPs appear to have a lower incidence of previous criminal activity (30%) than that quoted (67%) for female homicide perpetrators [12].

Female Homicide-Suicide Perpetrators (FHSPs) Versus Individual Female Suicides (IFSs)

High Risk Factors for Suicide—Recent suicide literature [21] has delineated a number of demographic variables and suicide attempt characteristics which are associated with a high probability for suicide completion. These variables are called high risk factors [21]. Comparisons of FHSPs and IFSs for high risk factors (age, marital status, work status, history of physical illness, method of suicide, alcoholism, suicide at home, psychiatric disorder other than mood disorder, and suicide note) indicated no statistical differences between these two groups of women for these items. These results expose an amazing similarity between these groups of women.

Type of Residence—As noted previously, FHSPs were much more likely ($p < 0.0001$) than FHSVs to live in mobile homes. Similarly, FHSPs were much more likely ($p < 0.0001$) than

FISs to live in mobile homes. These results appear to complement each other, indicating the need for further study of this item.

Living Alone—Living alone is another high risk factor [21] for suicide completion. Comparing FHSPs to IFs for this high risk factor showed that IFs were much more likely ($p < 0.001$) to be living alone. These results are expected and are compatible with the rest of the data.

Mood Disorder (Recent History of Depression)—Mood disorder has been noted to be another high risk factor [21] for suicide completion. Forty percent of the FHSPs had this high risk factor versus ninety-two percent of the FISs ($p < 0.0009$). It was previously noted that only 2% of the FHSVs were positive for this high risk factor versus 40% of the FHSPs ($p < 0.001$). These results indicate that FISs are more likely to have a recent history of depression versus FHSPs who, in turn, are more likely to have a recent history of depression versus FHSVs. Thus, FHSPs may be intermediate, between FHSVs and FISs for this variable.

Conclusion

There appears to be no statistical difference between FHSPs and FHSVs for the following variables: age, race (white), marital status (married), birth place (United States), U.S. citizenship, permanent residency (Miami), address in Miami (yes), family in Miami (yes), work status (working full time), killing and being killed at home, killing and being killed in the bedroom, killing and being killed by the opposite sex, killing and being killed by an individual of the same race, frequency of alcohol positive blood, killing and being killed by the use of guns, and history of previous criminal activity. However, FHSPs appeared to be more likely than FHSVs to live in mobile homes, to kill their lover or ex-lover, to have their crime accidentally discovered, to leave a suicide note, to kill on a weekend, and to be depressed; but they are less likely than FHSVs to live with a spouse.

There appeared to be no statistical difference between FHSPs and IFs for the following variables: age, race, marital status, work status, history of physical illness, method of suicide, alcoholism, place of suicide, presence of psychiatric disorder other than mood disorder, and suicide note. However, FHSPs appeared to be more likely than IFs to live in mobile homes but less likely to live alone and to be depressed. These results indicate some interesting avenues for future research.

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